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COTTON

FROM

SEED TO LOOM.

A HAND-BOOK OF FACTS

FOR THE

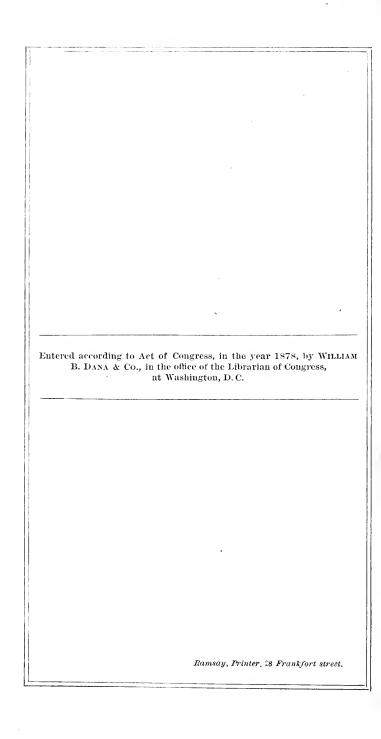
Daily Use of Producer, Merchant and Consumer.

ΒY

WILLIAM B. DANA,

Elitor Commercial and Financial Chronicle.

NEW YORK:
WILLIAM B. DANA & CO., 79 & 81 WILLIAM STREET,
PUBLISHERS,
1878.



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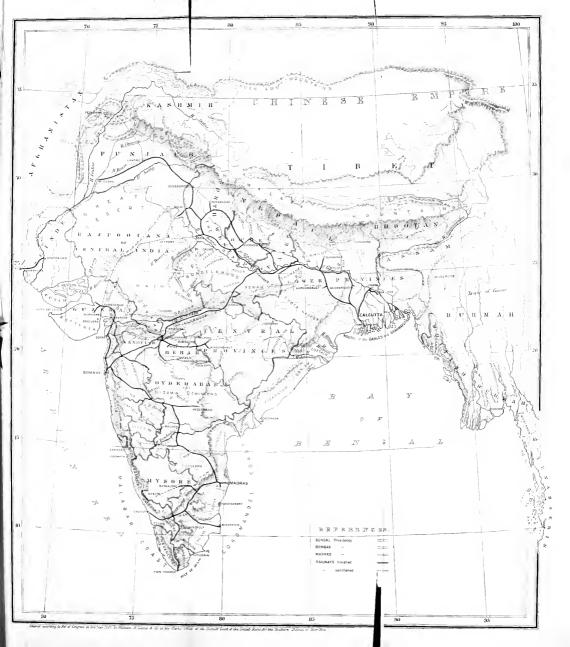
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CHAPTER I.

COTTON FROM SEED TO LOOM.

INTRODUCTORY.

The efforts of merchants to acquire facts, so as to be able to forecast the future of markets—Cotton crop estimates stall, however, unreliable—This is a result of imperfect observation—Hinstrated by error with regard to spinners consumption—Estimates, to be useful, must take in the whole growth—If simply founded on fall appearance, they are of no value—Early or late frost of unch less importance than many think—What is the secret of a full yield—The effect of a good and a poor stand on the fruitage of the plant, &c.—Other features of the book.

The merchant and manufacturer in all their business ventures must depend, in some measure at least, upon facts not yet accomplished. Hence, each is unceasingly seeking to outstrip his neighbor in acquiring information, through which he may obtain a better forecast of the future. In the search, every market has its scouts out in all directions; you meet them, for instance, in the extremes of South America, the plains of India, the tea-fields of China, tapping the very sources of supply. The unobserving sometimes think that it is the mere turning of the kaleidoscope that has fixed the events which have responded with such perfect nicety to the plan put in execution months ago. They do not see the method, but the result only, and therefore call that good fortune which is simply the legitimate fruit of vigilance.

While, however, in every industry, so much is depending

upon a right conception of coming conditions, and efforts so persistent and painstaking are put forth to get at even an inkling of their significance, it is truly surprising that so little advance has been made in solving or limiting the doubts with regard to cotton supply. Every year we pass through just the same round of confusion, uncertainty and suspense. And yet the growth and fruitage of a plant is an assured process, and as capable, with fixed conditions, of being foreshadowed as the motions of the planets. All that is required are undisputed facts to base our conclusions upon. With past experience and conditions accurately given, future results could not be doubtful. The weak point in the problem, and the only doubtful one, would arise from imperfect observation; and that is almost wholly the result of unnecessary ignorance.

By unnecessary ignorance we mean simply to indicate

the omission during past years to keep a perfect record of facts as they transpired. A very good illustration in another department of the same trade has been furnished within a short period through the figures for European consumption. The deliveries to spinners have been for a long time regularly and carefully preserved and studied, but not so spinners' stocks, the deliveries until recently being understood by the general reader as the measure of consumption. This error was the prime factor in most of the disasters to the cotton trade for many years. evident truths were thus ignored or only partially accepted: (1) That consumption for spinning purposes cannot exceed the spinning capacity of each country; (2) that the spinning capacity cannot be enlarged faster than the spindles can be made and set up; (3) that such increase in spindles can only progress at a certain ascertainable rate per month, and will not go on to any extent when the goods trade is not profitable; and (4) that spinners naturally stock up when crops are abundant and prices low, and run on that stock when supply is short. The opinions of those who insisted upon the truth of these propositions during the years of 1871 and 1872 were thought faulty, and therefore were not accepted until in the summer of 1872, when, in spite of our very small crop, there was a wonderful abstention from the market on the part of spinners, and it was then found that there was a supply which had been invisible, and that deliveries and consumption were by no means synonymous; so a much closer observation and analysis of the conditions began to be made, and at this date spinners' stocks of raw cotton are followed as vigilantly as the deliveries, or even more so.

We use this piece of history simply as an illustration. The experience of that year and the facts which subsequent investigations have brought out, have greatly simplified the problem of consumption. Yet we daily need more light even in that direction. Our information, to meet the requirement, must be aggressive, the result of incessant research. In this spirit we have endeavored, in subsequent pages, to push this inquiry with regard to the future spinning demand one step further, by figures and suggestions which will, we think, prove timely.

But that portion of our work is secondary. Our first and main effort has been directed to elucidating the question of American supply, and here we have been compelled to explore in a field almost new. Not that there has been any want of reports of the condition of previous crops, faithfully made from month to month; but simply that such reports of themselves prove nothing, or, if followed, lead us anywhere but to the truth. This is not said in a spirit of criticism. If any one questions the assertion, let him read through a few years of such compilations, and it will be found that they are a mass of contradictions, and

one will rise from the task simply bewildered. In a certain year it will be stated that drought has reduced the crop fifty per cent, or that rain has had the same effect, or that shedding has utterly ruined it, or that caterpillars have eaten it up; and yet in those years, perhaps, and in those very States, there would be an abundant yield. On the other hand, another season, the very same summer and fall conditions may be apparent, and the same results predicted and prove nearly correct. How can these statements and results be reconciled? Not by pronouncing one informant false and the other true. They both stated what they saw, and intended to represent the condition faithfully. Neither had studied the lessons which the cultivation of past crops might have taught them; their report in each ease was simply a reflex of the outward appearance at the moment.

And in this connection we might as well note the fact which even the most cursory examination discloses, that no man can estimate correctly the extent of a cotton crop from its appearance in the field in any fall or summer month.) This point is very important, because in the misconception with regard to it lies the great error of estimates. Planters of even thirty years' experience, in making the attempt, have at times varied over fifty per cent from the actual yield. Many amusing illustrations of this could be given. remember one of a farmer who, to use his own expression, "planted for forty bales." On a Sunday in August some of his neighbors paid him a visit and, as their custom was, went out to look at his crop. All pronounced it sure for fifty bales. Later in the month the plants began to shed, and the half-ripe bolls seemed literally to rain upon the ground, while the leaves drooped under the scorching sun as if utterly discouraged, no doubt imparting a like feeling to the beholder. Not twenty bales would that field produce, was the unanimous, unhesitating verdict of these same sage judges; and they believed it so fully that the farmer immediately told his family to purchase nothing more at the grocer's, for his cotton was a failure. Late in September our friend wrote that his crop was actually turning out better than he expected, and he should not wonder if he made thirty bales. In November he wrote again, saying he had picked thirty-five bales, and hoped to secure four or five more. When the season closed, his final report showed a total yield of forty-one bales. This is not an exceptional case. It represents the blunder of every person who attempts to draw a year's results out of a day's experience—not unlike the endeavor to describe the history and achievements of a long war by an instantaneous photograph at a set moment in the progress of one battle.

The first assumption of the careless observer, after studying the above case, will be that the extra yield was the fruitage of a new growth. Belonging to the same class of hasty conclusions is the remark, frequently heard, that if frost holds off for ten days it will be five hundred thousand bales added to the crop, and some, not to be outdone we suppose in romancing, make it a million bales if the frost will grant thirty to sixty days' grace beyond an average. In other words, the opinion of these wise men is that the frost is the arbiter of the yield. This is a very mistaken notion, for a healthy, regularlydeveloped cotton plant, like every weed or shrub, has a fixed growth, with a limit to it, ending in maturity. The date, therefore, when vegetation is killed, has very much less to do with the result than most imagine, for all the fruit the plant can carry will have been previously perfected. In 1875, ice formed at Memphis (see CHRONICLE of October 16, 1875, page 375.) on Monday and Tuesday nights, the 11th and 12th of October; the Mem-

phis Cotton Exchange report issued in November states that, out of all their correspondents in Tennessee, Mississippi and Arkansas, being 154 in all, eighty, or more than onehalf, "report a killing frost from the 9th to the 20th "of October, the average date being October 14th." yet, notwithstanding frost came so early, Memphis received of the crop of that year 487,376 bales, being over 160,000 bales more than in the previous year, and over 100,000 bales more than in 1871-2, when the date of frost was November 17, the very latest in that district of any year in our record. Certainly there was something in the growth of the summer of 1875 which even an early killing could not destroy; and when we come to consider the weather data of that autumn we shall also find that even floods of rain, equal to those of 1877 at very many points, had not their accustomed power over it.

It was not, therefore, out of a second growth, as it is called, nor out of a prolonged autumn, that our friend secured so good a crop. All he ever knew or understood was that he made it, and from plants that about the first of September looked to him and his friends, in every particular, like those of a previous year which proved a failure. And in that apparent contradiction between results and conditions lies the very point upon which we desire our investigations to throw light. We call cotton a dryweather plant, and so it is; but the drought it passes successfully through one year will perhaps almost kill it the next. It is said that rain is its destruction; and yet a crop is often made of surprising proportions which has endured just such floods of rain as another crop succumbs to, of apparently equal promise. To test, therefore, all our conclusions relating to these matters, we need facts which shall reflect past experience through a series of years, from the first ploughing of the field to the picking of the last boll; and we need to apply such facts to the nature, habits and production of the plant, so as to bring out as far as possible the reasons for the failure and success of different crops during those seasons.

This is what we have attempted to do in later pages. As a preliminary, however, we have investigated anew the problem of acreage, showing and proving its growth or progress in the past and its extent and production during recent years, thus giving the data for determining the outside limits or possibilities of any season. After that, follows a detailed account of the routine in cultivation during the first six months; this includes a recital of the methods of preparing the soil, planting the seed, working the crop, with a history of the early growth, the diseases and dangers encountered at that period, and the nature and kind of labor necessary in securing a stand. This detail may at first sight appear unnecessary, but is really the basis of our inquiry, as these facts, disclosing the weaknesses and strength of the cotton plant, prepare us to study and understand the data subsequently given of weather and growth while passing through these many stages of development, thus enabling us to determine with great accuracy the effect of certain peculiarities of weather and the reasons for it, and also what has been the precise condition of the several crops on the first of July. In subsequent chapters we similarly analyze and examine the last six months of each year.

Young life is synonymous with weakness and frailty. All plants then need nursing, protection, cultivation. Every faithful gardener watches over and tends his seed when once planted; if the weather is dry, he waters it; if cold, he covers it; if wet, he protects it. And when the little shoot has pushed above the ground, his care increases lest insects shall pierce or weeds choke or rain blight the

tender growth. He could omit much of this labor if he were content in getting only sickly plants, irregularly established. His aim, however, is to secure an abundant crop, which he knows is only attainable through a perfect early development; but when such a development is gained, he considers the time of trial and doubt passed, the harvest assured, and the plant almost able to take care of itself. Is not this, in vegetable life, the universal experience? Of course, in extensive cultivation, with acres of corn or cotton, no such nursing is possible; the gardener secures a crop always, because, in his limited domain, he can constantly supply the deficiencies or irregularities of nature; the farmer, however, is in bondage to the weather. If it is so dry his seed does not germinate, he cannot water it; if too cold, he cannot cover it; if excessively wet, he cannot protect it. also, when the plants are up, they need care and cultivation, but can receive it only if the weather permits. sequently, his crops will sometimes be well started and sometimes poorly started. And precisely here lies the point of first interest. The cotton plant in June is brought to a stand; in suitable weather the stand is strong, clean and healthy; in unsuitable weather it is weak, grassy and sickly. The inquiry suggested is, how far does the stand or the condition on the first of July control the yield. Can a weak, sickly stand ever be cured? Does a strong, healthy stand, within any definable limits, guarantee a successful season? For answers to these questions, we must refer to the facts given; first, as to the early growth of the plant, next, with regard to the summer development and trials, and finally as to the maturing, picking and marketing of the crop. All the explanations and data included under these heads are needed to enforce the truth which the facts appear to disclose. After carefully studying them, the reader may find much less contradiction than heretofore

supposed between the conditions and results of different seasons. The ancients represented the Goddess Fortune blind-fold turning her wheel, now up, now down, and fixing the deepest events of life with fickle impulse and random hand. In our day, cotton-crop estimates have come to be considered as peculiarly under the supervision of this same divinity. We trust, however, that in the future this will be true to a much smaller degree, and that, when a few years more of accurate weather observations have been preserved, the ventures of the cotton merchant and manufacturer will be still less the football of blind chance.

The other features of this book it is unnecessary for us to refer to at any length here; they sufficiently explain themselves. With regard to India, however, we may say that our purpose has been to unfold another point in the cottonsupply problem which is but little understood. We believe the facts and figures we have brought together, will, with the help of the map of the cotton districts which we give, be found of frequent use. Next to America, India is likely, for a considerable time at least, to hold prominence as a source of supply, and hence we cannot fail to be interested in anything that helps us to measure that supply. The map, which is more fully explained hereafter, has been prepared under our direction for the purpose of supplying a want often expressed and widely felt to exist. Though not as complete in some of its details as we intended—and very likely containing minor inaccuracies with regard to the boundaries of some smaller districts—vet the information it does convey can be obtained from no other published source, and is of such a practical nature as to make it of special service to a large circle of readers. Whether the world's supply of cotton from India is to continue unchanged, or is to suffer decline or gradually to increase,

are points very frequently discussed, and-because there have been so few helps accessible to guide one's judgment -often without knowledge. May we not believe that for the future these and kindred questions will be more generally and clearly understood.

CHAPTER II.

COTTON CROPS OF THE UNITED STATES.

1621 TO 1877.

Cotton Tree indigenous in America—Cortes' present to Charles V., from Mexico—Cotton Plant first cultivated in Virginia, 1621—When in South Carolina; Georgia; Peunsylvania; Maryland; New Jersey—Louisiana and Florida invent machines for separating seed from fibre—Progress in cultivation to 1793—Exports, 1739 to 1793—Cotton Gin invented, 1793—Bowed Cotton—Inventions of Hargrenves, Arkwright, and Watt—Impulse given to Cotton production—Exports, 1791 to 1826—Crop in America from 1826 to 1877.

The wide subject of cotton supply may very properly be introduced by a summary of the production of cotton in America each year since its first cultivation in the South: such a review will, we are persuaded, be of general. and, to some extent, of practical, interest. Previous to 1826-27 there were no complete returns, either commercial or official. Pretty full statistics were prepared in October, 1825, and also in October, 1826; but with 1827 the figures became more detailed and exact. We begin, therefore, with that year our tables of the crop movement, which will be found on subsequent pages of this chapter. It will be noticed that from that date (1826-27) we give every result in each annual report down to the present year, 1876-77, so that the reader has before him, in convenient form, easy for reference, and covering the entire period mentioned-a full

*half century,—(1) the receipts at each port; (2) the exports to Great Britain, France, and other countries; (3) the stock at the beginning and the end of the year; (4) the consumption in the North; (5) the consumption in the South; (6) the overland movement; (7) the other lesser items, such as the cotton burnt, exported to Canada by rail, etc. In each year's column, therefore, each bale is accounted for, and beginning with the stock on hand at the commencement of the year, we have, after adding the production and deducting the exports, consumption, etc., which appear there, a balance left, which is the stock at the close of the year.

For the period previous to 1826-27 we can do no more than to give the shortest possible summary of results. They have no practical interest, and hence do not come within the purpose of this book; but still, as in cotton matters we are all in one sense antiquarians, a brief historical review of the attempts and results of previous years will furnish a suitable introduction to the years when more exact statistics began, and such a summary is perhaps desirable to complete the record.

CULTIVATION FROM 1621 TO 1793.

Cotton was indigenous in America. It was found by the Spaniards when they discovered the continent, the Mexicans at that time using it very largely as an article of clothing. Clavigero, in his history of Mexico, states that Cortes sent as presents to Charles V. "cotton mantles, some "all white, others mixed with white and black or red, "green, ye'low and blue; waistcoats, handkerchiefs, counterpanes, tapestries and carpets of cotton." Columbus also found the plant in Central and South America in great abundance, the inhabitants using it for clothing, and also for making fishing nets. It is presumed, however, that it was the cotton tree which was native in America, and

not the annual herbaceous plant now grown in the South. Ward in his "Mexico" speaks of the cotton tree propagating itself there, in the same chapter in which he refers to the advanced state to which the inhabitants had early carried the manufacture of the staple. He nowhere mentions the plant, but implies that the tree was their only source of supply of the raw material.

As to the cultivation of cotton in the United States, Virginia has the credit of making the first experiment. This original venture is generally credited to 1621. seeds, which are supposed to have come from the West Indies, are stated to have been planted as an experiment, but the historian remarks that "their plentiful coming up "was at that early day a subject of interest in America and "England." It would seem, however, that very likely 1621 was not the first year of its cultivation, for in a list of articles growing and to be had in the Virginia colony in that year (1621), we find mentioned cotton wool, at 8d. per pound. It could scarcely have been for the first time planted, grown, cleaned, and got into a price list all in the same nine months, at a period of our history when movements, to say the least, were not over-rapid. It is barely possible, however, that the cotton tree mentioned above was before that growing and utilized there, and that the "cotton wool" of the price list was some of its product. But whether this was so or not, there can be no doubt of the fact that it was in Virginia and in 1621, or very near that date, that the first experiment in cultivating the cotton plant within the bounds of the colonies was successfully tried

From such a beginning the production spread, but in a very limited way. In Carroll's "Historical Collections of South Carolina" mention is made of the growth of the cotton plant in that State in 1666. Again, in the

same State, Mr. Peter Purry settled a Swiss colony in 1733, and brought cotton seed with him. In 1734 the seed was planted in Georgia, being sent to the trustees by Philip Miller, of Chelsea, England. About this time, also, the cultivation had been extended more northerly. In 1736 cotton is stated to have been raised on the eastern shores of Maryland, and subsequently in Delaware, and finally even in Pennsylvania and New Jersey. All this was of course in a small way, and yet it is recorded that the home-grown cotton near Pennsylvania was, about the time of the Revolution, sufficient for the domestic wants of the State, which, however, were by no means large, as woolen and linen were then generally used for clothing. In 1775 the Assembly of the Province of Virginia, "in view of the changing relations with Great Britain," resolved that "all persons having proper land "ought to cultivate and raise a quantity of hemp, flax and "cotton, not only for the use of his own family, but to "spare to others on moderate terms."

In the meantime, that is from 1700 onward, the cultivation of this staple was further extended southward beyond South Carolina and Georgia. We find, for instance, that in 1742 a French planter in Louisiana, M. Dubreuil, invented a machine for separating the seed from the fibre. The need for such a machine would indicate that the production of cotton had at that time made considerable progress there. In 1772 a similar contrivance was made by one Crebs, of Florida. But the extent to which the Southern States at about the latter date had developed this industry is best described in a letter by Mr. Jefferson, addressed to M. de Warville, under date of August 15, 1786, in which he says "the four southernmost States make "a great deal of cotton. The poor are almost entirely eclothed in it in winter and summer. In winter they wear

"shirts of it, and outer clothing of cotton and wool mixed.
"In summer their shirts are linen, but the outer clothing "cotton. The dress of the women is almost entirely of "cotton manufactured by themselves, except the richer "class, and even many of these wear a great deal of home-"spun cotton. It is as well manufactured as the calicoes "of Europe."

Too much, however, must not be predicated on this letter of Mr. Jefferson. Cultivation was then, without doubt, widely spread over the States named, but was still very limited as to the quantity each produced, the cotton being as vet almost wholly used to supply domestic wants. About that time, however, a change in this respect took place, as is well indicated by a letter of Richard Teake, dated Savannah, December 11, 1788, and written to Tench Coxe, of Philadelphia. In it he says: "I have been this "year an adventurer, and the first that has attempted, on "a large scale, in the article of cotton. Several here, as "well as in Carolina, have followed me and tried the "experiment. I shall raise about 5,000 pounds in the "seed from about eight acres of land, and the next year I "expect to plant from fifty to one hundred acres. The "lands in the southern part of this State are admirably "adapted to the raising of this commodity. The climate "is so mild, so far to the south, scarce any winter is felt, "and—another grand advantage—whites can be employed. "The labor is not severe attending it—not more than rais-Thus, from this date the progress "ing Indian corn." made in cultivation was more decided. In 1790 it is recorded that William Elliott was very successful with a crop of cotton at Hilton Head, S. C., so much so that it gave a marked impetus to the production in that section; and in 1791 the total yield in South Carolina and Georgia was at the time estimated at 2,000,000 pounds (threefourths in South Carolina and one-fourth in Georgia), or, at 440 pounds net to the bale, say 4.545 bales. Such was about the condition in which we find cotton cultivation at the period of the invention of the cotton gin, in 1793. But, before proceeding further, let us note the early beginnings in the export movement, bringing that account down to the same date.

EXPORT MOVEMENT FROM 1739 TO 1793.

The following is a brief statement of events in this department of the trade, so far as we have been able to collect the facts, down to 1793:

- 1739—Samuel Auspourguer, a Swiss living in Georgia, took over to London, at the time of the controversy about the introduction of slaves, a sample of cotton raised by him in Georgia. This we may call, in the absence of a better starting point, the first export.
- 1747—During this year several bags of cotton, valued at £3 11s. 5d. per bag, were exported from Charleston. Doubts as to this being of American growth have been expressed, but as cotton had been cultivated in South Carolina for many years, there does not seem to be any reason for such doubts. Besides, English writers mention it as an import of Carolina cotton.
- 1753—"Some cotton" is mentioned among the exports of Carolina in 1753, and of Charleston in 1757; and a London publication in 1762, quoted in "Bishop's History of American Manufactures," says: "What cotton and silk both the Carolinas send us is excel-"lent, and calls aloud for the encouragement of its cultivation in "a place well adapted to raise both."
- 1764—Eight (8) bags of cotton imported in Liverpool from the United States.
- 1770—Three (3) bales shipped to Liverpool from New York; ten (10) bales from Charleston; four (4) bales from Virginia and Maryland; and three (3) barrels full from North Carolina.
- 1734—About fourteen (14) bales shipped to Great Britain, of which eight (8) were seized as improperly entered, on the ground that so much colton could not have been produced in the United States. This act of our English coasins looks, under the circumstances, a little more like sharp practice than ignorance.
- 1785—Five (5) bags imported at Liverpool.
- 1786-Nine hundred (990) pounds imported into Liverpool.
- 1787—Sixteen thousand three hundred and fifty (16,350) pounds in aported into Liverpool.

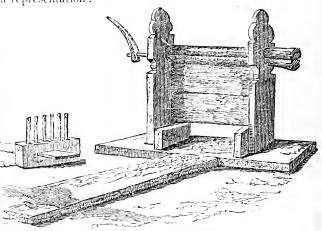
- 1788—Fifty-eight thousand five hundred (58,500) pounds imported into Liverpool.
- 1789—One hundred and twenty-seven thousand tive hundred (127,500) pounds imported into Liverpool.
- 1790--Fourteen thousand (14,000) pounds imported into Liverpool. We can find no reason for this marked decline in the exports, except it may be that the crop was a failure that year. Our first supposition was that the cause was one of price. But on examining the quotations in Took's work on "high and low prices," we do not see any marked decline in the values of other descriptions of cotton, and the American staple is not given in his list until 1793. We would refer the reader to Took's table of quotations which will be found in our chapter on prices.
- 1791—One lumdred and eighty-nine thousand five hundred (180,500) pounds imported into Liverpool, the price averaging here 26 cents.
- 1792—One hundred and thirty-eight thousand three hundred and twenty-eight (138,328) pounds imported into Liverpool.

It should be stated in connection with the foregoing that although the amounts named above are the imports into Great Britain each year from the United States, they were not in all cases wholly American cotton. Not till 1802 did our Custom House returns distinguish home-grown from foreign cotton, and we were for many years importing as well as exporting. For instance, in 1795 we imported 4,107,000 pounds, and exported 6,276,000 pounds. What portion of the 4.107,000 pounds of foreign entered into our exports that year it is impossible to say; but the only reasonable supposition is that a considerable portion, if not all of it, did, since the total crop of South Carolina and Georgia in 1791 was estimated, as stated above, to be only 2,000,000 pounds; and it is scarcely probable that the crop would have increased during the four years so rapidly as to leave such an increased surplus. So also in 1796 a very considerable portion of our exports must have been foreign cotton; but for subsequent years they were almost wholly American.

PRODUCTION FROM 1793 TO 1826.

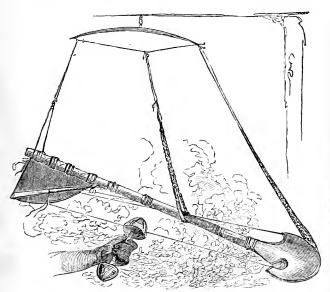
With 1793 a new era in cotton production opened. In

that year Whitney invented the cotton or saw gin. Previously very rude instruments were used for the purpose of separating the seed from the lint. We have already referred to the invention of Dubreuil, of Louisiana, in 1742, and of Crebs, of Florida, in 1772. Each invention was probably a combination of rollers, not unlike the mill long before that in use in India, of which the following is a representation:



This, as will be seen, is a hand-mill, and was worked by the women. The two rollers were of teak wood, fluted longitudinally with five or six grooves, revolving nearly in contact. The upper roller was turned by a handle, and the lower carried along with it by a perpetual screw at the axis. The cotton was put in at one side and drawn through by the revolving rollers; but the seeds, being too large to pass through the opening, were torn off and fell down on the opposite side from the cotton. This rude apparatus, however, did not prepare the staple for market or for use. Another operation was still necessary, which was called "bowing the cotton," to clear it from dirt and knots. This was done by an instrument called a bow, a very simple contrivance of wood, the elasticity of which

was increased by a combination of strings. It was used by being first placed in contact with a heap of cotton, and then the workman struck the strings with a wooden mallet, the result being that the vibrations opened the knots of the cotton, shook out the dust and dirt, and raised it to a downy fleece. This contrivance was early introduced into Georgia, from India, and its use in Georgia gave rise to the term "bowed Georgia cotton," a term then and still applied in commerce, although it is now more than half a century since any instrument of that description was used in this country. The following is a representation of the East India bow, which was probably the model from which our own Georgia bow was first made, though subsequently modifications in the way of improvements were added.*



One can easily see that with such rude machines for preparing the staple for market, any large increase in the cotton crop of America was almost out of the question;

^{*} See Bain's "History of Cotton Manufacture," pages 66 and 67.

and yet the manufacturing industry had reached such a stage of development that it required a speedy and decided addition to the supply of the raw material. First-the spinning machines of Hargreaves and Arkwright were only brought to perfection in about 1780, and through defects in the patents were thrown open to the public at the close of 1785. After the latter date, and as a result of the setting aside of the patents, an astonishing extension of manufacture immediately followed. ond-at very nearly the same time the factory system took its rise in England. Up to about 1785 cotton manufacture had been almost entirely carried on in the houses of the workmen. No larger apartments than a cottage were required for the hand or stock cards, the spinning-wheel and the loom. But after the improvements in machinery above referred to were made, more room than a cottage, more strength than an ordinarilybuilt house, and more power than the human arm were required. Out of these necessities extensive manufacturing establishments grew up, which further assisted in the development of this industry. Third—the first steam engine made for a cotton mill was made in 1785, but it was not till 1790 that Richard Arkwright adopted Watt's invention, and not till 1792 that the first steam engine was set up in Glasgow. The total number of steam engines in use in Manchester up to the year 1800 is stated by Farey to have been 32, of 430 horse-power. From the latter date the adoption of steam as a motive power in cotton factories was more rapid.

Thus at about the time Whitney's cotton gin came into use, spinning machinery had re-created cotton manufacture; the factory system had organized and developed its new life, and Watt's steam engine had forced it into a vigorous growth. As our readers are familiar with the

workings of the saw gin, it is unnecessary to describe it. The fact of its invention in 1793, its speedy adoption, and the subsequent rapid development of cotton cultivation, just in time to meet the growing necessities of the manufacturer, are the points of interest—admirably illustrating the working of that divine law of progress notably conspicuous in the whole history of the human race, under which each want as it arises finds its complement ready at hand.

The effect of the combined circumstances above indicated on the production of this staple in the United States may be seen from the following table of exports of cotton from the United States from 1791 to 1826, both inclusive:

EXPORTS OF COTTON FROM THE UNITED STATES.

Years.	Quantity.	Years.	Quantity.	Years.	Quantity.
	Lbs.		Lbs.		Lbs.
1791	189,316	1803	41,105,623	1815	82,093,747
1792	139,328	1301	38,118,041	1816	81,747.116
1793	457,600	1805	40,383,491	1817	85,649,328
1794	1,601,700	1806	37,491,282	1818	92,471,178
1705	6,276,3001	1507	66,212,707	1819	87,997,045
1796	6,196,729†	1808	12,034,066;	1820	127,860,152
1797	3,788,429	1809	53,210,225	1821	124,893,405
1798	9,360,005	1810	93,874,201	1822	144.675,095
1799	9,532,263	1811	62,186,081	1823	173,723,270
1800	17,789,803	1812	28 952,544§	1824	142,339,663
1801	20,911,201	1813	19,399,9115	1825	176,439,907
1802	27,501,075	1814	17,806,4798	1823	204,535,415

[†]The years 1795 and 1796 include a quantity of foreign cotton in the exports.

Leaving out the years 1795 and 1796, when so considerable an amount of foreign cotton was probably included, it will be seen from the foregoing how rapid must have been the actual growth of production in this country. In 1793 we exported only 487,600 pounds; but in 1797 the export had increased to 3,788,429 pounds, in 1798 to 9,360,005 pounds, and in 1803 to 41,105.623 pounds. At the same time, with these decided additions to the foreign

¹¹⁸⁰⁸ was the year of the American embargo on foreign trade.

[§] The years 1812, 1813 and 1814 were those of the war.

movement, the uses of the staple were being widely extended in our own country, so that the production increased in even a larger proportion. During these years, however, no full figures of the actual growth were kept.

COTTON PRODUCTION FROM 1825 TO 1877.

The first attempt at a crop report approaching complete ness was made in October, 1825, when the totals for the previous year, as well as the year closing at that time, were given. In October, 1826, the second report was made, and in the following October (1827) full statistics were prepared, not only of production, but also of the exports and Northern consumption. In the latter year the Northern consumption reached 103,483 bales, and it probably did not vary much from that amount in 1825. The crops for the three years, from 1824 to 1826, may be stated as follows:

	Year ended October 1.			
	1824.	1825	1826	
New Orleans.	126,481	200,453	251,959	
Florida	4,500	3,000	2,817	
Alabama	44,924	58,796	74,201	
Georgia	152,735	138,000	190,592	
South Carolina	134,518	97,000	111,978	
North Carolina	46,000	72,000	88,480	
Total crop, bales	509,158	569,249	720,027	
Estimated Northern consumption	100,000	100,000	100,000	
Leaving for export	409,158	469,249	620,027	

As the exports given on the previous page are for the calendar year and these figures are for the crop year, no comparison between them can be made.

Commencing with the following season, a very convenient summary of every item of each statement, down to Sept. 1, 1877, will be found on succeeding pages. Until 1841–42 the crop year was brought down to October 1; after that it was changed so as to close as at present, September 1.

COTFOR CROP OF THE UNITED STATES.	1826-27.	1827-28.	1828-29.	1829-30.	1830-31.	1831-32.	1832-33.
Receipts at Wilmington, &c., North Carolinabales	112,811	77,422	40,515	36,862	36,540	28,461	30,258
Receipts at Norfolk, &c., Virginia do	:	:	31,500	35,500	33,895	37,500	30,829
Recenpts at Charleston, &c., South Carolina do	179,810	109,733	195,365	188,871	185,166	173,872	181,876
Receipts at Savannah, &c., Georgia do	233,920	.153,749	246,000	253,117	230,502	276,437	271,025
Recents at Apalachicola, &c., Florida do	4.163	3,940	4,146	5,787	13,073	22,651	23,641
Recents at Mobile, Alabama do	89,707	71,563	106,67	102,684	113,186	125,921	129,366
Receipts at New Orleans, Louisiana, &c do	336,870	301,186	260,314	351,024	426,485	322,635	403,4-13
Total Crop of the United States do	957,281	720,593	857,744	976,845	976,845 1,038,847	771,477	1,070,438
Exment to Great Britain	616,139	421,743	498,001	595,713	618,718	638,148	630,145
	157,952	148,519	184,821	200,791	127,029	207,209	207.517
Export to other countries	49,707	26,738	66,178	42,212	27,036	46,371	29.793
Total export do	853,798	600,000	7.19,000	838,716	775,783	891,728	867,455
Deduct foreign cofton included in export do		:	:	5555	909	1001	586
Total American cotton exported do	x63,79x	600,000	000,61.7	838,194	772,177	891,501	867,169
Consumed Northdo	103,483	120,593	92,182	126,512	168,145	173,800	196,663
Consumed South do	:	:	:	:	:		
Total United States consumptiondo	103,183	120,593	92.182	126,512	168,145	173,800	196,663
Burnt or lost in United States			16,562	7,503	119,423	41,599	48,205

COTTON CROP OF THE UNITED STATES.	1833-31.	1833-34. 1834-35. 1835-36.	1535-36,	1836-37. 1837-38.	1487-84	1838-39.	1839-10,
Receipts at Wilmington, &c , North Carolina Bales	Hes. 33,220	31,399	32,057	18,001	21,130	11,136	163,0
Receipts at Norfolk, &c., Virginia.	do 41,725	33,170	29,197	25,63 x	32,000	003,22	000,00
Receipts at Charleston, &c., South Carolina	do 227,359	203,166	702,182	196,377	294,3331	210,171	312,194
Receipts at Saxannah, &c., Georgia	do 258,655	222,670	270,121	170,202	301,210	205,112	2007,000
Receipts at Apalichicola, &c., Florida	do 36,738	52,085	79,762	83,703	106,171	75,177	106,257
	do 149,978	197,692	236,715	535,543	509,805	251,712	445,725
Receipts at New Orleans, Louisiana, &c	do 451,719	511,146	477,972	600,877	731,256	541,001	953,672
Receipts at Galveston, &c., Texas	do		3,564	2,645	3,300	1,871	3.911
Recepts overland from Tennessee	do		100	137	2,280	:	3,250
Total crop of the United States	do 1,205,394	1,254,328	1,360,725	1,425,575	1,801,797	1,363,403	2,181,749
Export to Great Britain	do 756,291	722,714	771,1-15	850,786	850,786 1,165,155	708,118	1,246,791
Export to France	do 216,424	252,470	266,15%	260,722	321,480	2.12,2.13	447,465
Export to other countries	do 55,236	.18,311	79,267	56,917	1.00,22	34,028	181,747
Total export from United States	do 1,027,951		1,023,490 1,116,603	1,168,125	1,575,629	1,077,689	1,876,003
Deduct foreign cotton exported	do 38.2	97	559	629	71	1,751	2,595
Total American cotton exported	do 1.027,560	1,027,569 1,023,013 1,116,011		1,167,805	1,167,805 1,575,348	1,072,935	1,873,408
Consumed North.	do 196,413	216,888	236,733	922.540	249,363	276,018	205,193
							:
Total United States consumption	do 196,413	216,888	236,733	222,540	2.19,363	276,01	295,193
Burnt or lost in United States	do	2,421	6,230	2,751	15,001	2,51	6,950
Stocks in United States ports, August 31	do 29,617	41,623	43,311	75,850	40,305	52,23	58,442

COTTON CHOP OF THE UNITED STATES.	1840-11.	1841-12.	1842-43.		1813-14, 1844-45.	1845-46.	1846-17.
Receipts at Wilmington, &c., North Carolina Ba	Bales 7,865	5 9,737	9,039	8,618	12,487	10,637	6,061
Receipts at Norfolk, &c., Virgmia	do 20,800	19,013	12,139	14,500	25,200	13,285	13,991
Receipts at Charleston, &c., South Carolina	do 227,400	260,161	351,658	301,870	426,361	251,405	350,200
Recenpts at Savannah, &c., Georgia	do 148,947	7, 232,271	101,002	255,597	295,440	1194,911	212,789
Receipts at Apalachicola, &c., Plorida	do 93,552	2 114,416	161,088	115,569	188,693	1.11,184	127,852
Receipts at Mobile, Alabama	do 320,701	318,315	481,714	467,990	517,196	421,966	323,462
١, ١٥.٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠٠	do 814,680	0 727,658	1,060,246	832,172	929,126	1,037,114	705,979
Receipts at Galveston, &c., Texas	do 4,408	5,101	15,328	14,170	25,159	27,008	X.S.
Total receipts at the ports	do 1,638,353	1,638,353 1,686,675 2,390,703	2,390,703	2,017,479	2,410,662	2,097,537	1,778,651
n constincts				000,00	000,60	70,00	80,000
Total crop of the United States	do 1,639,35	1,639,353 1,684,675	2,391,203	2,108,579	2,481,662	2,170,537	1,860,479
Export to Great Britain	do 858,742		935,631 1,469,711	1,202,498	1,439,306	1,102,369	830,909
	do 348,776	398,129	316,139	0.80,080	359,357	359,703	241,136
Export to other countries	do 105,759	131,489	194,287	1.11,307	255,093	201,720	168,883
	do 1,313,277	7 1,465,219	2,010,137	06F,629,1	2,083,756	1,666,792	1,241,222
urted		15	2,005,395	1.6	2.07	1,666,113	1,210,869
Consultated North	2017:00 2017:00 100 100 100 100 100 100 100 100 100	277,136	825,129	150,055	900,418	407,516	102,011
	9			150.07	000.0	i	105,000
dion	do 297,288	3 277,139	325,129	406,711	451,006	488,303	509,795
	_	1,510	1,000	10,584	16,5541	2,795	5,160
Stock in United States ports, Amest 31	300.05 ob	7.15	7	10000	91.16	107.153	11.837

COTTON CROP OF THE UNITED STATES.		1817-18.	18.18-49.	1848-49. 1849-50. 1850-51. 1851-52.	1850-51.	1851 - 52.	1852-53. 1853-54.	1853-54.
Receipts at Wilmington, &c., North Carolina Bales.	ales.	1,518	10,011	11,861	12,928	16,212	23,496	11,524
Receipts at Norfolk, &c., Virginia	do do	8,952	17,550	11,500	19,910	20,820	25,783	21,936
Receipts at Charleston, &c., South Carolina	ę	261,752	458,117	381,265	387,075	476,614	163,203	416,754
Receipts at Savannah, &c., Georgia	Ę	254,825	391,372	313,635	322,376	325,714	349,490	316,005
Receipts at Apalachicola, &c., Florida	ą	153,776	200,186	181,344	181,204	188,499	179,476	155,411
Receipts at Mobile, Alabama	e e	436,336	518,706	350,952	451,748	5-19,449	545,029	538,684
Receipts at New Orleans, Louisiana, &c	ş	1,190,733	1,093,797	781,856	933,369	1,373,464	1,580,875	1,346,925
Beceipts at Galveston, &c., Texas	op	39,742	38,827	31,263	45,850	64,052	85,790	110,325
Total receipts at the ports	ę	2,347,634	2,728,596	2,728,596 2,096,706	2 354,460	3,014,854	3,253,142	2,917,597
Receipts overland from Tennessee	de G	1.479	:	:	797	175	9,740	12,430
Taken from plantations by Southern consumers	ą	75,000	80,000	75,000	000'09	75,000	90,000	105,000
Total crop of the United States	qo	2,121,113	2,508,596	2,171,706	2,415,257	3,090,029	3,352,882	3,035,027
Export to Great Britain.		1,324,265	1,537,901	1,106,771	1,118,265	1,668,749	1,736,860	1,603,750
Expert to France	ę	279,172	368,259	729,682	301,358	421,375	426,728	374,058
Export to other countries	ą	254,824	321,684	193,757	269,087	353,522	364,812	341,340
Total export from United States	do	1,858,261	2,227,844	012,844 1,590,155 1,988,710	1,988,710		2,443,646 2,528,400	2,319,148
Deduct foreign cotton exported	qo	372	1,122	1,341	1,077	543	1,855	1,565
Total American cotton exported	ę	1,857,889	2,226,722	2,226,722 1,588,814 1,987,633 2,443,103 2,526,545	1,987,633	2,443,103	2,526,545	2,317,583
Consumed North	qo	525,321	503,201	475,702	393,788	592,074	660,000	599,485
Consumed South	e e	82,530	888'16	87,067	70,320	85,955	101,000	116,086
Total United States consumption	do do	608.201	598,039	562,769	461,108	620,879	761,009	715,571
Burnt or lost in United States	g _o	1,392	550	6,916	3,142	6,025	20,861	1,913
Stock in United States ports. Arreast 31	g	171 168	151 753	10000	100 501	01 176	195 6/9	125 603

Corton Chop of the United States.	182	1854-55.	1855-56.	1856-57.	1857-58.	1858-59.	1859-60.	1860-61.
Receipts at Wilmington, &c., North Carolina. bales Receipts at Norfolk, &c., Virginia. do Receipts at Charleston, &c., South Carolina. do Receipts at Savannah, &c., Georgia. do Receipts at Apalachicola, &c., Florida. do Receipts at Apalachicola, &c., Florida. do Receipts at Apalachicola, &c., Georgia. do		26,139 31,000 499,272 378,694 136,597 451,595	26,098 29,458 495,976 389,445 114,101 659,738 1,661,433	27,117 23,773 397,331 382,111 1136,314 503,177 1,435,000		337,73 335,01 475,053 4775,778 1775,788 1760,480 1,669,474	510,194 510,194 525,087 525,019 192,719 813,719 9,139,419	56,295 7,4132 336,339 477,581 121,172 516,791
Receipts at Galveston, &c., Texas	9 9 9 9 2 31 32 33	80,737 7,661 7,661 85,000	3,513,630 11,215 117,500	2,931,765 2,931,765 4 751 117,000	3,101,338 9,621 125,000	3,766,160 85,321 1-13,000	4,561,091 108,676 154,000	3.512,662 3.512,662 3.13,124 170,000
:	do 2.933	2,932,339	3,615,345	3,056,519	3,238,962	3,991,481	4,823,770	3,826,086
222	de 1,549 do 408	,549,716 409,931 284,562	1,921,386 480,637 552,583	1,428,870	1,809,966 384,002 396,187	2,019,252 -150,696 551,455	2,669,432 589,587 515,151	2.175,225 578,063 371,280
Total export from United States	99 1111	2071125 108	2,951,606 835	2,252,657	2,590,155	3.021,103	8.774.173 917	8,127,568 701
Total American cotton exportedd	de 2,21;	2,213,318	2,958,771	2,251,496	2,589,732	3,020,519	3,773,256	3,126,867
ਰ 	do 57	573,843	631,991 138,248	683,597 135,541	452,185 142,666	760,218 155,941	786,521 173,107	650,857 188,893
Total United States consumption	do 67	67 5,581 2,701 113,336	770,239 500 61,171	819,138 798 49,538	591,851 711 102,926	916,159 11,192 149,237	261.69 21.61 21.71	839,050 4,390 1,1,157

COTTON CROP OF THE UNITED STATES.		1561-65	1865-66.	1800-07.	1867-68.	1868-69.	1 569-70.	1870-71.
Receipts at Wilmington, &c., North CarolinaBales.	1 2 2		61,653	34,623	34,613	35,008	59,612	025.1.0
	ę	:	39,083	107,601	100,084	140,971	202,593	312,353
Receipts at Charleston, &c., South Carolina	go		112,462	162,2317	240,431	100,072	216,500	1350,000
Receipts at Savannah, &c., Georgia	ą.		7.35. 7.37 7.35. 7.37	13,601	455,959	357.25	101777	207/207
Receipts at Appliache of a Receipt Torida	£ -	:	12,421	101.70	535,535	200.00	100,000	20101
Keceipts at Monite, Manahua	Ξ.	:	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	010,000	500,135	100,000	1110000	20.12.1
Receipts at New Orients, Louisiana, &C.	3 -		0100111	100	999 150	1177	770	
Received at New York, Boston, Baltimore, &c	3-3		25.35 2.35 2.35 2.35 3.35 3.35 3.35 3.35	211,340	194,970	12.17.1	196,591	331,578
To see I was a seed of the second of	1		11.00	11.	00000100	201 1001	101 111 6	1.030 153
Overland direct to manufactures	2	:	10,000	000 (-1)	100 01	119803	137	5 7 7
Taken for consumption South	- Op		30,000	10,000	60,00	000,0%	000,00	91,210
Total crop of the United States	÷		1. 10. X 10. X	172,050,2	2,494,895	2,439,039	3,154,946	4,352,317
	1							
Export to Great Britain	Ę		1,258,277	1,216,472	٦,	529,622	1,174,695	2,367,440
Export to France	9	:	555,555	198,117		221.527	346,450	138,703
Extwel to other countries	ą	:	11,584	138,112	229,730	533.816	357.775	660,000
Total export from United States	do of		1,552,457	1,552,761	1,657,015	1,448,020	2,178,917	3,166,742
Deduct foreign cotton experted	ခ္			:	:	:	:	
Total American colton exported	- e		1,552,457	1,552,761	1,657,015	1,448,020	2,178,017	3,166,7.12
	1							
Consumed North.	95	:	587.292	656,307	825,015	918,806	806,890	1,008,956
Constants and the constant and the consta	3		, 111, 110	Oran'raT-	Outino	and the	and the second	
Total United States consumption	do		617,292	696,307	885,015	998,806	896,890	1,100,196
Burnt or lost in United States	<u>ء</u>	:	2,896	10,740	1.890	_	4,172	io i
Sent to Canada by railroad	<u>.</u>	:	:	:	:	18,000	27,363	3 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
Stock interior Northern ports, negatining of year	9 -			:	:	:	:	30,02
Stock in Thital States entired Angust 21	9 5		600 600	0.2 1 5.5	36 130	19 313	59.717	2 2

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The foregoing pages present a brief recital of the more prominent events and facts which together make up the lustory of cotton production in this country. It would have been of interest to have further extended this sketch, or at least to have noted the peculiar circumstances and conditions which attended and assisted in the speedy revival of this industry, subsequent to the war. But the crop statements we give since 1865 are really all that is necessary for our present purposes. In future chapters, however, we may have occasion to introduce some other facts covering that period.

CHAPTER III.

INDIA COTTON SUPPLY.

PAST AND FUTURE.

Early history of cotton in India—Herodotus—Christian era—Early exports of cotton manufactures—Extreme beauty and fineness of cloths—Rude machinery used—Cotton manufacture carried on everywhere—The reason for excellence attained—History of Indian exports to England and her acts of prohibition—Present spindles in Iudia—Total present production of cotton—The monsoons and their effect—Map of India—A statement of each cotton district and its capabilities—Aggregate results—Facts limiting production—Other crops pay better—Shipment from each district—Receipts in Europe—Bombay receipts and exports.

Since India, as a source of cotton supply, has ever ranked—and probably always will rank—next to America in importance, a few facts will be useful here, to refresh our minds as to its past position and future capabili-And yet in a work of this description it is not possible, nor do we conceive it desirable, to enter upon a detailed account of all that is imagined or known with regard to the cotton plant and cotton productions of that country. Both have a history dating back several thousand years. Even at the time of Herodotus (484 to 424 B. C.) the inhabitants appear to have been so long in the use of this staple that their garments, when they were any, were commonly made of cotton. historian, speaking of the things for which they were then peculiarly celebrated (Book 11, c. 105), says that "they possess a kind of plant which instead of fruit,

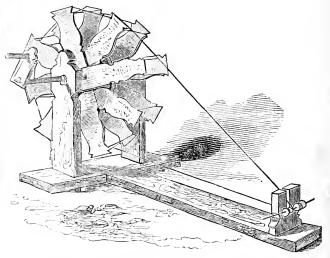
"produces wool of a finer and better quality than that of "sheep; of this the Indians make their clothes."

But, passing by the earlier records and coming down to a later period, about the Christian era, we find India engaged in the export of cotton manufactures. That stage in the development of this industry, where supply had out-run domestic wants, had been passed, and a large surplus was being absorbed by other countries. In the "Periplus Maris Erythæi," written probably in the early part of the second century, the author, Arrian, an Egyptian Greek, says that the Arab traders at that time made a business of bringing India cottons to Adule, a port of the Red Sea, and that a very considerable trade had been established in them with the ports beyond the Red Sea. He also speaks of the Bengal muslins as being even then of superior excellence. Of a still later date were the journeyings of Marco Polo. He wrote probably late in the thirteenth century, and asserts that he found cotton manufactured everywhere in India, indicating the flourishing condition in which the outside trade must then have been. But not till we reach about 1660 do we have mention of the extreme beauty and wonderful fineness and texture of these goods. Previous writers we have quoted, to be sure, speak of the excellence of the manufactures and also of their beauty; but Tavernier, in his "Travels," written at the date last mentioned, goes more into detail at least, and we should think, from his descriptions, saw a more wonderful make of goods than previous historians. He states that some of the muslins which he saw, or "calicuts" as they were then called, were ·· so fine you could hardly feel them in your hand, and the "thread, when spun, was scarcely discernible." One sort he mentions as being of so delicate a texture that "when a man "puts it on, his skin appears as plainly through it as if he

" was quite naked; but the merchants are not permitted to "transport it, for the Governor is obliged to send it all to "the Great Mogul's seraglio and to the principal lords of "the court, who use it to make the Sultanesses and noble-"men's wives shifts and garments for the hot weather; "and the King and the lords take great pleasure beholding 'them in these shifts and seeing them dance with nothing "else upon them." We have not the space to give other authorities on these points, and vet, as corroborative and undoubted evidence of the extreme skill the Indians displayed in their work, we may cite the Rev. William Ward, who was an English missionary at Serampore in the early part of the present century. He says, in describing a kind of muslin then manufactured there, that it was so "exceeding fine that when laid on the grass and the dew "has fallen upon it, it is no longer discernible." We might lengthen out this branch of our inquiry almost indefinitely by numberless citations from other authors. Suffice it to say, however, that all bear evidence to the one fact of India's early perfection in cotton manufactures, her goods having become celebrated the world over for their remarkable beauty and texture.

This degree of perfection in manufacture is the more noteworthy when we remember what rude machines for spinning and weaving were then in use. There were of course no factories, or what we now call factories, in those early days, and, in truth, in India there were none until very recently. Every house had its spinning wheel, and the women of the household spent a part of their time each day at it. Weavers also were to be found in every village. Orme, in his "Historical Fragments of the Mogul Empire," says, "on the coast of Coromandel and in the "province of Bengal * * it is difficult to find "a village in which every man, woman and child is not

"employed in making a piece of cloth. At present, much the greatest part of the whole provinces are employed in this single manufacture." And yet, as we stated, although every one was a producer, and their cloths were unrivalled, their machines were only of the rudest description. The following cut is given by Bain in his "History of Cotton Manufactures." It represents a heavy one-thread spinning wheel in general use, made of teak wood of the roughest carpentry, on which the coarse yarn is spun by the women, the finer yarn being spun on a metallic spindle, but equally primitive in style.



With such uncouth and cumbersome instruments it is certainly remarkable that results so wonderful were obtained. But it is claimed that this superior excellence was very largely due to the delicacy of touch possessed both by the men and women. Mill in his history of British India says that "the weak and delicate frame of the Hindu is "accompanied with an acuteness of external sense, particularly of touch, which is altogether unrivalled; and the "flexibility of his fingers, is equally remarkable. The hand

"of the Hindu, therefore, constitutes an organ adapted to "the finest operations of the loom, in a degree which is "almost or altogether peculiar to himself."

But we must leave this interesting part of our subject. There is one point in the early and later history of India manufactures, however, which has at present a peculiar and practical interest. It seems that after India had entered upon the export of her muslins, the trade had a vigorous and rapid growth. These muslins first went to the Red Sea only, then beyond the Red Sea, and finally they were so cheap and so beautiful that they found an entry everywhere. Woolen manufacture had obtained an early lodgment in Europe, becoming an important industry in England. When, however, the East India companies brought these inexpensive and finely-wrought cotton fabrics there, they were caught up by the people and used in every way; for "dresses for the women." "for children's frocks." also "for lining for men's coats and for petticoats, too." This, of course, crowded out woolens and other English home-made goods. At once the cry was raised that the woolen trade was being destroyed, for the people "wear foreign commodities" instead of "our own English woolen fabrics." The government was therefore appealed to and asked to "lav a very high impost upon all such commodities." So in 1700 an act was passed by Parliament which forbade the introduction of "India silks and printed calicoes for "domestic use, either as apparel or furniture, under a "penalty of two hundred pounds." This, however, did not appear to stop the trade, and other acts were subsequently passed, more stringent, but for the same purpose. Still, smuggling continued, and the India export continued, and the complaints continued.

In the meantime England began the manufacture of cottons herself, and the industry grew rapidly under the

Then she, in skill and inventive genius of the nation. turn, had a surplus for export, and freer trade principles took root rapidly. Old acts of prohibition were repealed and a more liberal policy was adopted. Now, in turn, English fabrics found their way into India. ments in machinery had enabled her to undersell the market. They quickly supplanted the native goods, so that India lost her ascendancy, and with it much of her former skill. But the inhabitants did not quietly submit to being crowded out of their own peculiar field of industry, and more especially from their own territory, so they sought protection against the cheaper productions of the mother country. These efforts were fruitless how. ever, and even a ten per cent duty on the import of Indian manufactured cottons remained on the statute books of England until 1833, we believe.

Still, it seems that India's turn has come at last. As a measure of revenue, a few years since a customs duty on the import of cotton goods was imposed by the Indian government. Of course, under this all English goods imported were required to pay the duty. The net customs revenue of India, according to the last financial statement, issued March 15, 1877, which we now have before us (page 41), was only £2,475,530, and of this amount the duties on cotton goods yielded £850,000. Hence, although Her Majesty's government is constantly saying that the "interests of India" (it might be added of Great Britain, too.) "imperatively require the timely "removal of a tax which is at once wrong in principle, "injurious in its practical effect, and self-destructive in its "operation," yet the financial officer of the Indian government yearly has to "regret" that "for reasons similar to "those which prevailed a year ago it has been decided that nothing can be done at the present moment towards the

"abolition of these duties." In the meantime, the tax, which was so easily put on, but is so difficult to get off, is very decidedly fostering the cotton manufacturing industry in India, and the alarm of Manchester can be easily understood. The India financial statement, before referred to, of the Hon. Sir John Strachey (page 73), contains the following statement of the mills now at work in India for spinning and weaving cotton. We also have before us the report, for the year 1868–69, of Harry Rivett-Carnac, Esq., Cotton Commissioner, and from that work (page 156) we take for comparison a list of the spinning and weaving mills in operation that year.

COTTON MILLS IN INDIA.

		In operation	on in 18	77.	In	perat'n ir	1869.
India Provinces.	Mills.	Spindles.	Throstles.	Looms,	Mills.	Spindles.	Looms.
Bombay	40	932,530	21,476	8,390	1-4	338,000	3,732
Bengal	-4	101,191	3,352	100	3	52,500	220
No.West. Provinces	2	27,350		275			
Madras	3	26,800		44)
Nagpoor	1	30,000		450			
Hyderabad	1	15,172		200			
Indore	1	No	report.				
Total	52	1,133,046	24,828	9,459	17	390,500	3,952

This is certainly a remarkable exhibit. Probably the consumption of these mills does not fall much short of 300,000 bales of India weights. We notice that Harry Rivett-Carnac gave the consumption of the 17 mills in 1869 at 77,400 bales of 400 pounds weight, which would equal 82,000 of the average India weights. Such a growth in spinning capacity as this, suggests the possibility, after a few years more, of some remarkable changes in the cotton supply of that country and in its power to consume English manufactures. In fact, is it mere fancy to imagine India, with that natural "acuteness of touch" and "flexibility of

finger" so "peculiar to herself," recovering, under the stimulus of modern machinery, at least a share of the trade in which she once, and for so long, led the world? Such a result does not necessarily pre-suppose that this industry in England will suffer a corresponding decay. Hand-made goods must give place to machine-made goods throughout the East. That movement is progressing constantly, and will continue with accelerated speed, permitting progress in India and preventing decline in England.*

We now pass to the point of chief interest in this discussion, and that is the present production of cotton in India, about which much confusion exists, because so little is generally known as to the exact sources of supply. In truth, it seems to be quite difficult to acquire exact information on this subject. The official India documents have of late years contained more details; but outside of them, though very much has been written, little that is of use to the cotton consumer is to be found. We know, for instance, that the India outports receive so much cotton each year; but where it comes from—that is, what districts

^{*} Since the above was written we have received Messrs. Ellison & Co.'s Annual Cotton Circular, and give it in full in subsequent pages. The following table, taken from it, shows the growth in consumption of these Indian factories, and will be of interest in this connection.

	Spindles at	Сотто	N CONSUMED.	
Year.	work.	Pounds.	Bales of 390 pounds.	Bales 9 week.
1861 1871 1875 1876 1877	593,000 886,000	25,350,000 41,475,000 66,450,000 84,300,000 92,395,000	65,000 114,000 170,000 216,000 237,000	1,250 2,190 3,270 4,150 4,560

Mr. Ellison, in giving this statement, says that "it is not easy to ascertain the weight of cotton consumed by these spindles, as many of the mill companies have declined to fill up the government forms with the necessary particulars; but the returns received show an average of 75 lbs. per spindle per annum. On the basis of this average the present rate of consumption is about 92,395,000 lbs., or 237,000 bales of 390 lbs., per annum."

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produce it, whether those that the next year are visited with drought and famine and no crops, or those that have abundant rain—are points familiar to a few, but about which the cotton public in general have very indefinite For our own satisfaction, and to supply this need, which we felt existed, we have had constructed the map found in the front of this book. There are numberless maps of India, and we have consulted a great many, but have been able to obtain none which lavs down more than a few of the cotton districts, and even those very imperfectly. Undoubtedly, defects will be found in our map, but we think it will be of more practical use to the cotton consumer than any heretofore published. It is the result of information brought together in very many ways. As a basis we have taken the "Map of Routes in India," published by Edward Stanford, of London, copying the boundaries there indicated of the three great Presidencies and the completed and contemplated railroads, as that map gives them. Our next step was to insert the Central Provinces and the Berars, as described and carefully laid down by H. Rivett-Carnac in his report above referred to. The rest of the information has been collected from so many sources as to make their mention impracticable.

In studying this map and interpreting and weighing the facts we receive each season respecting the production of cotton in India, it is first of all necessary to remember the physical features of the country, and the local influences affecting the climate and the crops. The simple statement that this peninsula is 1,830 miles in length, from the Himalayas to Cape Comorin, extending from the eighth to the thirty-fifth degree of north latitude, expresses much on this point. But when we think of its mountains, not alone on its northern, but also on its eastern and western boundary, and through its very centre; its immense

rivers, a result of its mountains; its volcanic origin and its deep "regur" soil (sometimes fifty feet in depth), the product of that igneous conflict; and finally, its monsoons, bringing with them 150 inches of rain in some districts (at one place 600 inches) and from that graded down till it becomes nothing in others;—when we remember that such are the physical conditions of that country, can we wonder that in our information confusion at times exists. The key to the mystery is the rainy seasons, and it is necessary, first of all, then, to consider their nature and effect.

We all know in general terms that monsoon is the name given to the wind blowing half the year in one direction, and the other half in the opposite direction, and that rains follow it. The southwest monsoon breaks at Bombay and south of there on the 5th to the middle of June, and a little later north of that point, and continues, with intermissions, until about the middle or last of September. An average of about seventy-five inches of rain falls at Bombay during those months. After the first heavy burst the weather usually clears up, and days of sunshine follow, which are improved by the cultivators to complete their plantings, the fields being prepared for the crops before the monsoon sets in, but the sowings deferred until after a rainfall.

These are well-known facts; and if they were all the facts, the question of raising crops in India would be simple enough. Prepare your land; wait for the rain; put in your seed; cultivate as occasion permits; then gather your cotton;—such would be the yearly routine. But, as with us, there are disturbing influences which do not make it either so easy or so successful. First, even in the district tributary to Bombay, this southwest monsoon is sometimes very partial. Weeks will intervene during

which the cultivators will be anxiously expecting rain, with scarcely a sign of it to satisfy their longings. Then many of the fields must be resown, and that makes the crop late; and even if the remainder of the year is fairly favorable, the later plantings are not sure on all soils to furnish strong, healthy and fruitful plants; or if the monsoon fails to return in sufficient force, a short crop becomes a certainty. This is the first possible contingency which may disturb calculations with regard to the season's result.

In the next place, the conformation of the land in portions of India, already referred to, is such that this southwestern monsoon does not visit at all some sections, and in others is a very uncertain dependence. along the Malabar coast run the Western Ghauts, with an elevation at the highest point of about 7,000 feet above the sea. These hills or mountains appear to act as a partial cut-off to the rains coming from the southwest, so that over the country lying east of the Ghauts the rainfall is much less than on the western side, and it decreases very rapidly as you go inland. Cotton, however, does not need an excess of rain, so that Dharwar and Belgaum, for instance, are benefitted by their situation, being shielded from the force of the storms, and yet near enough to the coast to ensure about forty inches of rain during the year, the average for all the best cotton lands.

For the sections south and east of the districts named, very little advantage is obtained through the rains from the southwest. In October, however, the northeastern monsoon begins, and continues along the Coronandel Coast into December and sometimes into January. This is the rainy season for a large portion of the Madras Presidency, upon which the success of its crops depends. But the rainfall from the northeast is never as abundant as from

the southwest monsoon. The Eastern Ghauts, too, though not so high, yet act in some degree as the Western Ghauts to keep back the rain, and frequently over a considerable section it is very light indeed. In this fact we have the explanation of the terrible famines, of which the past year Irrigation has has given us such a fearful illustration. always been practiced to a considerable extent in this Presidency, and, under the influence of late experience, renewed efforts are being made to extend the system, so that a recurrence of these crop failures over so large a section may be prevented. In the northwest is another extensive district, which also comes within what is called the "Dry Zone" of India. But to assist in understanding our map, and to make it more useful, we will give very briefly such data as we have been able to obtain with regard to annual rainfall and usual cotton production of each district, beginning in our review with those sections which contribute the least to the world's supply.*

BENGAL PRESIDENCY.

The cotton raised in this Presidency has usually been called by the general name of Bengal cotton. During our war the production was very considerably increased under the influence of high prices; but since then grain, jute, sugar, rice, &c., have paid better and been raised almost to the exclusion of cotton. There is a very considerable portion of land in this Presidency suitable for this staple; with low prices, however, there is little chance of its cultivation being again extended. The Presidency is divided into Upper and Lower Bengal, or the North West Provinces and the Lower Provinces.

The North West Provinces embrace within their limits the eelebrated Doab country, lying between the Ganges and the Jumna rivers. The Ganges Canal, which connects the Ganges and the Jumna, passes through the plains of Doab. The canal is used for irrigation and also for the transit of merchandise. In a great part of Upper Bengal it is so dry that cultivation is impossible, very little rain falling, and even in the Doab the rainfall is very uncertain and very irregular, so that the main dependence for water is irrigation.

The information contained in this summary of the India cotton districts has been drawn from many sources, among them:—A series of articles on India in London Collon; Thornton's Gazetteer of India; Reports of the Cotton Commissioners of the principal cotton districts; Public bocuments of the British-Indian Government; circulars of cotton merchants at the principal ports.

Of these North West Provinces the Doab country (which includes the Onde) and the Bundelkhund country would appear to be the most promising regions for cotton, and in fact the only ones where more is grown than sufficient for their own consumption. In times past much has been raised there, and now we suppose the small exports from Calcutta are shipped mainly from Calpee, on the Jumna. As is well known, the Banda district in Bandelkhund gives its name to a good description of cotton. Altogether the North West Provinces raised during our war fally 250,000 bales, and in 1864 ran the production up to nearly if not twice that amount. But, of course, very much of this was used within the Bengal Presidency, as they have always been large producers of goods in Bengal. H. Rivett-Carnac estimated the annual cotton consumption in the whole Presidency in 1869 at about 180,000 bales; others, however, put it higher. Now production is decreased, so that they export scarcely any cotton. The reason for this is, as before stated, other crops pay better.

Lower Bengal has much more rain; it comes from the southwest monsoon; the northeast monsoon is the dry one here, as it blows from the land. At Calcutta the rainfall averages about 75 inches, and on the Khassi Hills 600 inches have been measured. Cotten is grown in the uplands, not in the marshy deltas; it cannot be raised unless you get above the level of the Ganges. But Lower Bengal furnishes now no cotton for export, being really a cotton-importing country, and is likely so to remain. The little that is shipped at Calcutta is, as we have said above, brought down the Jumma and the Ganges from distant provinces.

MADRAS PRESIDENCY.

It is within the limits of the southern half of this Presidency that the severe famines have lately prevailed. Shut in by the Eastern and Western Ghauts near its coasts, and the Neilgherries uniting with the Western Ghauts in Mysore, this section always has very little rain. It possesses good black, cotton soil, but drought makes production impossible. A system of irrigation has long been in existence, and at present there is a movement to extend it. Two fine rivers, besides lesser streams, pass through Madras from west to cast—the Godavery and the Kistna. There are only about five or six States in the Presidency (if we except Berars, Central Provinces, and Hyderabad, elsewhere noticed) which produce cotton for export, and the principal of those are Bellary, Tinnevelly, Coimbatore, and Guntoor. The others, including Mysore, are not to any considerable extent cotton-exporting, and the most of them are not cotton-raising States.

Tinnerelly has an area of 5,700 square miles. The Ghauts, on the west, are there only 4,300 feet high. Tinnevelly cotton is said to be the best staple raised in Madras Presidency. Tuticorin is the scaport through which shipments are made. The exports at Tuticorin in 1871 reached 92,769 bales, which must have been the surplus production of Tinnevelly and neighboring States.

Coimbutore lies a little north of Tinnevelly, and has 8,280 square miles, and some rich soil. A railroad to Madras passes through it.

Bellary is between Mysore and Nizam's Hyderabad, and contains 13,056 square miles. It has a large quantity of good soil, and exports probably not to exceed 30,000 bales.

Guntoor is 4,960 square miles in extent, and on the Bay of Bengal. It has good cotton land, but other crops pay better, so that cotton production has fallen off.

BENGAL AND BOMBAY FEUDATORIES.

Punjaub, Scinde, Cutch and Central India (or, as the latter is sometimes called, Rajpootana) are only a part of the tributary States of these Presidencies, but we group them together, as they are all in the Northern portions of India, and have conditions in many respects somewhat similar. In the first place, Kurrachee is the port through which their products would naturally seek the ontside world; to some extent, however, the trade of Cutch and of Rajpootana has of late years, we believe, been diverted towards Bombay. In the second place the rainfall throughout this entire district is very small, it all being within the "dry zone;" but Central India is far more favored in this respect than the others. Third-Irrigation is resorted to, more or less, in each; and if cotton culture is to be extended, this system of watering the ground must receive further attention. Fourth-They all have within their borders excellent cotton lands, and yet they raise very little more cotton than to supply home consumption. The prominent characteristics of each may be briefly stated as follows.

Panjaub.—This is frequently called the Land of the Five Rivers, and has an area of 135,000 square miles. It is almost rainless and has extensive deserts, ten inches of rain being about the outside limit. There are splendid cotton lands near the rivers, and with a proper extension of the system of irrigation they might be brought under cultivation. The ladus also furnishes excellent water carriage to Kurrachee, so that any surplus crops raised could be easily sent to market. Frost, however, in those sections where the land is best would probably prevent cotton from ever being a profitable crop. They sow in February and March generally, but at points as late as June.

Scinde.—This State has an area of 52,120 square miles. Want of rain is the great enemy to production here; from three inches to ten inches is the extent of the fall for the year. Canals are used for watering. The sowing is from February to June, according to the time the rivers rise and fill the canals. About 40,000 bales is the usual production of a good year, the yield being about 40 lbs. to the acre; but much of it is used on native looms. An enlargement of the system for watering the fields is needed to extend cotton cultivation, and even then the frost would be a serious obstacle; besides, with present prices for cofton, other crops would pay better, for the staple is quite inferior.

Cutch.—A splendid strip of very rich regur soil lies between the two

ranges of mountains which pass through Cvtch from east to west, and there is another strip south of the lower range. But this State, like the last two, has very little rain, only a few inches, and must depend upon canals and wells for water. It produces now about 40 lbs, to the acre, or say a total of 20,000 bales. The staple is said to be good, decidedly better than that of Scinde. The total area of Cutch is 6,744 square miles.

Central India.—This State has an area of 118,947 square miles, and is more favored with rain than either of the others mentioned, though the rainfall (which is from June to September) seldom amounts to 30 inches. In the valley of the Nerbudda the soil is rich and black, well adapted to cotton cultivation. The total production is said to be about 50 lbs. to the acre, the total yield being about 100,000 bales. Under present prices there would seem to be no inducement for an extension of production in any of these States named. With irrigation, the yield per acre is in some sections increased, but at so great an expense that it appears to leave no profit. A collector of one of the North West Provinces made a calculation of raising an acre of cotton there, as follows:-he put down the three ploughings at 34 rupees; three waterings at 2 rupees; seed, 14 rupee; weeding, 134 rupee; picking, 134 rupee; average rental, 5 rupees; making, altogether, 14 rupees, or 28s. per aere; so that at 3d. per lb, an average of 112 lbs, per acre would have to be raised to pay expenses.

BOMBAY AND THE STATES SHIPPING TO THAT PORT.

(Within the limits of these districts, about all the cotton exports of India are now produced. The entire section receives, to a greater or less extent, the southwest monsoen. At Bombay the average rainfall is about 75 inches; in the Central Provinces the average for 15 years was 40 inches; in Dharwar and Belgaum the average is about 50 inches; and in Guzerat about 60 inches; below Bombay, on the coast west of the Ghants, it is very much more—too much for profitably producing cotton. The *Decean* is an elevated plateau of varying height, generally described as extending from the Nerbudda to Cape Comorin. Throughout the Decean country the celebrated regue soil is largely found, and within its limits are the chief cotton-producing sections; it is very rich, retains moisture a long time, and is very productive. We give a short statement of the leading features of the different sections.

The Central Provinces have an area of 56,151,234 acres, of which about 20,000,000 acres are cultivated, and about 1,000,000 acres are in cotton. This shows that cotton is a secondary crop, grain taking nearly 8,000,000 acres. The Hingunghaut cotton comes from the Central Provinces, and is raised in the valley of the Wurdah. Rivett-Carnae says that, the great difficulty in the way of enlarging cotton cultivation in this country is the scanty population (the total population being only about 10,000,000) and want of capital; until these increase he does not

expect further extension of the cotton area. The present production is about 200,000 bales.

The Berars adjoin the Central Provinces, and have the same rich soil as the Hingunghant District. Oomraottee e atton is raised in the Berars. The total area is 10,916,797 acres, of which about 4,750,000 acres are cultivated, and of this the cotton area is about 1,700,000 acres. Thus, although it is only one-fifth the size of the Central Provinces, it has under cotton 700,000 acres more. It raises about 300,000 bales.

Guzeral has an area of 41,536 square miles, including the Kattywar Peninsula. The area in cotton is said to be about 1,500,000 acres. Dhollera is in British Guzerat, and gives the name to the cotton from the whole State, and to some also from neighboring districts. The rainfall averages about 40 inches. Production of cotton is about 70 pounds to the acre.

Kantesh contains 9,311 square miles. It is a very good and promising cotton-producing State, the soil through the valley of the Taptee being the rich regur so favorable for cotton. About 1,000,000 acres are in cotton, and produce about 70 pounds to the acre. The Berar seed have been introduced during the past fifteen years, and the result is a great improvement in the staple. The rainfall, it is said, averages about 60 inches.

Surat.—This collectorate has about 250,000 acres in cotton, producing about 55,000 bales, at an average of about 75 pounds to the acre. The town of Surat is at the mouth of the Taptee river, and for a long time was the leading India port. From this fact all India cotton was formerly called Surats. The rainfall in this collectorate is about 40 inches.

Browch contains 1,319 square miles, of which about 525,000 acres are cultivated, and about 120,000 acres are in cotton, exporting about 35,000 bales. The rainfall averages about 50 inches.

Hyderabad (Nizam's Dominions) has an area of 95,000 square miles, forming part of the Decean, possessing a large proportion of the rich regur cotton soil. The rainfall, however, is insufficient, as the southwest monsoon is in part cut off by the Ghauts, the total averaging less than 30 inches, and consequently irrigation is necessary. Notwithstanding these disadvantages it exports considerable cotton in a favorable season.

Dharwar is one of the very best cotton districts in India, and is the chief one in which American seed has been successful. It has an area of 3,837 square miles, two-thirds of it being under cultivation, and about 609,000 acres under cotton, and more than half of it American seed. The yield per acre, however, is only 80 pounds "American acclimatized," and 60 pounds of native sorts, with a total both kinds of 100,000 bales. It is within the Decean country, and has the same regur soil which there prevails so largely.

Belgaum is north of Dharwar, and has an area of 6,515 square miles,

and a rainfall of about 40 inches. It is also within the Decean, but produces not over 45 pounds to the acre, as cultivation is very poorly conducted. Its aggregate production is not over 50,000 bales.

Kolapoor, Kulladgee, and Kiltoon each raise some cotton. Kolapoor plants about 200,000 acres in cotton, and gets about 60 pounds to the acre; Kulladgee plants 150,000 acres, and gets about 70 pounds to the acre; Kittoon plants about 80,000 acres and gets about 50 pounds to the acre.

Poona contains 5,298 square miles. It is not important as a cotton district. The rainfall is very deficient at times, being shielded from the monsoon. Grain crops are more productive and pay better than cotton.

Concan, Ahmednuggur, Tanna and Rutnagherry, produce very little or no cotton.

Sattara—This collectorate is south of Poona. It is very wet on the western side, one of the wettest on the Malabar coast; while the eastern side often suffers from drought. Some cotton is raised there. About 60,000 acres is said to be given to cotton, with about 50 lbs. to the acre.

With this very imperfect account of the cotton districts in India, we can arrive at an approximate statement of the limits, under present prices, of the cotton supply from that country. Formerly it was imagined that production might be indefinitely extended there; but our war dissipated that illusion. Under the influence of very high values and special encouragements from Liverpool and Manchester, it was at one period carried up, as is claimed. to the neighborhood of 2,600,000 bales—that is, if we allow for home consumption at that time the usual estimate from six to seven hundred thousand bales. Many, however, do not believe India ever raised so large a crop, insisting that during those years of largest export the high price was so strong a temptation to sell cotton that the family loom, in great part, lay idle, so that the shipments to Europe were swollen at the expense of home consumption.

Without deciding which of these views is the correct one, the fact remains that the money received for the cotton sold was sufficient to induce the cultivators to push production to its utmost limits, exciting them even to such a degree that they committed all sorts of absurdities; "silver ploughshares and tires of solid silver for cart"wheels made their appearance here and there; fancy
"prices were paid for bullocks of a favorite color or pos"sessing some peculiarities of tail, and enormous sums
"were squandered on marriage ceremonies."* These acts
vividly illustrate not only what large profits had been
realized, but also furnish a fair measure of the stimulus
which must have been applied to production. During the
same time, also, the present railway system was developed,
and connecting wagon-roads were made or improved, so
that extensive districts, hitherto almost beyond the reach
of a market, became easily accessible; while everywhere
improvements in cultivation were encouraged and taught.

In a word, about every conceivable force was applied to push India into a position for furnishing a large permanent supply of cotton to the world. But evidently the effort has failed.' India, of course, has been vastly benefitted through the civilizing agencies England has so lavishly planted there; still, not as a cotton-producing State will she repay the debt. She has an ample supply of suitable soil, but not the climate. Of two-thirds of India it may with too much truth be said that hot winds, drought, short crops and famine are certainties; plentiful rain and prosperous harvests are accidents. Irrigation possibly in time might cure these defects—though as yet it is a disputed question whether it is of any benefit to cotton—could it be attained and used without adding too largely to the cost. But that is not likely, except in special instances, since the same labor can produce what will pay better; and for the very good reason that other commodities she raises are in quality equal to the best the

 $^{^{*}}$ Report for 1860 of Harry Rivett-Carnae, Cotton Commissioner of India, page 132.

world affords. That is to say, labor in Bengal applied to wheat, linseed or indigo produces an article which in the markets of the world commands as high a price as any other wheat, linseed or indigo, but applied to cotton produces a staple only about two-thirds the value of other cotton. This is the explanation of the failure hitherto to respond to the stimulus applied, and is in truth a barrier which must ever check production except in sections where the soil is better suited for this staple than for other crops, or when an unnatural relation exists between the prices for cotton and for her other productions.

But judging from the past, what may we take as the extreme outside limits of supply in India, with prices satisfactory and the weather conditions at their best in all sections? The above details with regard to the various districts furnish, an answer somewhat as follows.

	Exported from—	For export.	For home consumpt'n	
BENGAL-				
Northwest Provinces	Calcutta	100,000	225,000	325,000
Lower Provinces	Calcutta	3		
British Burmah	Rangoon	25,000	50,000	75,000
MADRAS-				
Guntoor Hyderabi d,				
&c	Madras	175,000		
Godavery River, &c	Coconada	20,000	> 75,000	370,000
Tinnevelly, &c	Tuticorin	100,000	J	
Вомвач-			ĺ	
Punjaub	Kurrachee	1		
Scinde and Cutch	Kurrachee	25,000	50,000	75,000
Rajpootana	Kurrachee			
Guzerat, &c		ĺ	(375,000
Broach, Surat, &c	Bombay			160,003
Centr'l Provinces and	·			
Berars	Bombay	1,150,000	400,000	500,000
Kandeish				200,000
Sholapore, &c			1	150,000
Dharwar, &c		1	!	165,000
Persia to Bombay		20,000		20,000
Total		1.615,000	800,000	2,115,000

We give in the foregoing the home consumption at

800,000 bales. It was estimated by different authorities, seven or eight years ago, at from 625,000 bales to 750,000 bales. Probably the development of the manufacturing interest at Bombay and elsewhere since that date has added at least 175,000 bales to the home requirements. We make the total, therefore, at 800,000 bales. As an indication of the extent to which home consumption is increasing, we have the receipts and exports at Bombay the last two years, from January 1 to December 31, as follows:

Вомвач.	Receipts.	Exports.	Differ'nco
From Jan. 1 to Dgc, 31— 1877	1,107,101 1,121,993	888,829 1,015,132	218,272 106,861
Increase			111,411

These figures show that the Bombay mills must have taken from that port this year 111,411 bales more than for the same months last year. May it not be possible that this growth in spindles will have in the near future a material effect on the exports of the raw material from India. We see no way to avoid such a conclusion, except on the improbable supposition of an enlarged production of cotton.

The statement of possible exports given above is made on the basis—First, of a favorable year in all parts of India. The past two seasons have proved this to be the exception and not the rule. In fact, the whole history of India shows, as we have before stated, that, outside of a very few districts, the result must ever be extremely uncertain, making almost impossible a union of favorable conditions such as we have supposed. Second, that prices are satisfactory and no special inducement exists to cultivate any other commodity. At present, wheat is at a premium, and cotton production therefore is at a discount. Third, that consumption will not grow faster than production will increase.

What the actual European supply has been for five years may be seen in the following, prepared from circular reports of shipments from the different ports.

EXPORTS OF COTTON TO EUROPE FROM INDIA.

Port and Year.	To Liver-	To London	Total Great	To France	To other Continent l Ports.	Total all Europe.
	pool.		Britain.		Ports.	
Bombay— 1873	-01 -01	2,150	733,874	58,637	166,300	958,811
		10,867	842,648	179,823		1,248,411
1874					273,701	1,266,069
1875	796,818	13,286	810,104	182,261		
1876		7,631	530,935	161,217	243,649	985,80
1877	383,233	5,772	389,005	172,836	278,328	840,169
Kurrachee— 1873	4.890	4.410	9,300			9,300
1874	108	475	583		15	5.)
1875	6.010	6.269	12.279	4,100	1.098	17,473
1876	1,885	647	2,532	4,100	1,00	2,53.
1877	1,550		8,368		6,125	14,49
Carwar—	1,430	6,918	8,005		0,120	1-1,-17
1873					19,127	19,127
1874	2,547		2,547		16,411	18,95
1875	7,504		7,504		26,388	33,59
1876	7,304		1,504		6,410	6,110
					0,410	None.
1877	;					NORG.
Madras— 1873	. 1 199	112,318	116,451	1,366		117,81
1874		101,739	114,872	2,746		117,61
1875		131,067	132,112	37,141		
1876	1 '			$\frac{37,141}{27,911}$	\$10	
		97,274	97,274	27,3711	010	2,90
1877	100	2,804	2,904			-,50
Coconada— 1873	9,950	7,000	16,950	5,000	1	21,95
1874	13,100	4 '	21,100			35,22
1875	15,100	10,500	10,500	11		39,30
1876		6,070	6,070			29,07
1877		13,452	13,452	1,712		15,16
		13,432	15,452	1,11-		10,10
Tuticorin— 1873		65,841	65,841	1,900	983	68,72
1874		85,559	85,889	6,880		92,769
1875		41.127	41,127		6,956	48,08
1876		41,825	41,825		1	61,38
1877		13,007	13,007	5,160	1	18,46
Calcutta—		13,007	10,001	, 0,200		
1873	27,449	74,618	102,067	8,607	5,134	115,80
1874		7,814	7,814	300	2,66€	10,780
1875	500	35,763	36,263	6.029	9,163	51,45
1876		18,414	18,461		l	18,46
1877	1,283	51.598	52,881	1,577	1,799	56,25
Rangoon—	1,233	01,000		-,0.,	1	
1873	12,246	3,587	15,833	2,584	1,271	19,68
1874	7,158	2,975	10,173			10,173
1875	12,706	6,555	19,261		1,312	20,573
1876	4,661	530	5,191			5,19
1810	21,035	030	21,035		1,000	22,03

		REC	CAPITILLATI	ON.		
Port and Year.	To Liver- pool.	To London	Total Great Britain.	To France.	To other Continent'l Ports.	Total all Enrope.
All Ports- 1873	700 300	260 021	1 060 316	78.004	100 815	1,331,225
1871	865,167	220,759	1,085,926	203,875	245,032	1,534,833
1875 1876						1,650,542 $1,234,851$
1877						969,487

These statements sufficiently show the capabilities of India, what she can do and what she has done in the way of cotton production. Of the actual exports to Europe previous to 1873 we have not the material at hand for preparing a full statement. The following, however, gives the imports of India cotton into Europe and the deliveries of the same to European spinners each year since 1865–66.

IMPORTS AND DELIVERIES OF EAST INDIA COTTON.

Year.	Net Imports	DELIVI	ERIES.	Total
iear.	into Europe.	Great Britain.	Continent.	Deliveries.
1876-77	1,136,000	407,000	862,000	1,269,000
1875-76	1,220,000	479,000	916,000	1,395,000
1874-75	1,544,000	668,000	947,000	1,615,000
1573-74	1,421,000	660,000	874,000	1,534,000
1-72-73	1,270,000	737,000	790,000	1,527,000
1571-72	2,039,000	658,000	726,000	1,384,000
1870-71	1,202,000	558,000	753,000	1,311,000
1×69-70	1,419,000	834,000	623,000	1,457,000
1868-69	1.856,000	913,000	850,000	1,763,000
1807-68	1,307,000	799,000	723,000	1,522,000
1866-67	1,524,000	815,000	777,000	1,592,000
1865-66	1,991,000	878,000	755,000	1,633,000
Total	17,929,000	8,406,000	9,596,000	18,002,000

The deliveries to spinners of India cotton for previous years will be found in a subsequent chapter on the consumption of cotton.

THE BOMBAY COTTON MOVEMENT.

In considering the India movement, special interest is of course felt in Bombay, as through that port the most of the supply must reach the European spinner. The following statement, therefore, of receipts for five years, will be of much interest, as it gives the amount of each descrip-

tion of cotton contained in the total arrivals. They are the figures prepared by Messrs. Wallace & Co. of Bombay, and, on account of these details, are more useful and instructive than any other compilation we have seen.

RECEIPTS OF COTTON AT BOMBAY, 1873-1877.

In Bales of 3½ Cwts.	1977.	1876.	1875.	1871.	1373.
From-					
Oomraottee distr's	461,154	404,529	507,51%	531,352	£ 112 520
Hingunghaut dist's.	30,539	15,326		531,352 37,217	
Dhollera districts	377,673	416,106	457.862	(610,640	458.195
Broach districts	175,052	137,722	167,626	3010,040	205-(10)
Dharwar districts.	1				
Compta districts.	37,297	133,473	141,030	122,065	109,637
Madras & Bengal.					
Persia	14,533	7,≾03	4,512	3,235	6,259
Kurrachee	10,803	9,031	12,409	19,938	12,370
Total	1.107.101	1 121 993	1 313 719	1 324 197	1.030.033

Through the kindness of Messrs. Wallace & Co. we are also able to furnish our readers with the following explanation of the sources from which these different descriptions of cotton are received.

Oomraottee.—The cotton which comes under the head of Oomraottee comprises the production of Kandeish, the Berars, a portion of the Central Provinces, and portions also (the Barsee and Nugger districts) of the Sholapore and Ahmednugger collectorates.

Hingungnaur.—This cotton is received at Bombay from the Central Provinces.

Dhollera.—The Peninsula of Kuttywar (in Guzerat) supplies the bulk of the Dhollera crop; the eastern half of the Peninsula produces the better style of cotton, which goes to make the higher classes, and the western half the lower grades of the description shipped under the name of Dhollera. The larger proportion of the production of the western half of the Peninsula is shipped under the name of and known in Liverpool as "Mangaroles."

Broach.—Under the head of Broach is included the

production of the collectorates of Broach and Surat and of the native State of Baroda.

Coompta and Dharwar.—The bulk of Coompta and saw-ginned Dharwar comes by sea from the ports of Coompta, Carwar and Vingarlah, but a portion also reaches Bombay by rail via Sholapore.

The foregoing information with regard to the Bombay districts, with the help of the facts, figures and Map of India given previously, should serve effectually to disentangle the India supply problem, and enable the reader, with more satisfaction than has ever before been possible in America, to follow and understand, year by year, the weather and crop reports from that country published during the cultivating and maturing season. We also give the figures furnished by Messrs. Wallace & Co. of Bombay exports to Europe each year since 1858:

BOMBAY EXPORTS TO EUROPE.

Year.	Great Britain.	Con- tinent.	Total.	Year.	Great Britain.	Con- tinent.	Total.
1877.	3-9,005	451,161	840,169	1867.	1,061,651	73,362	1,135,013
1876.	555,542	427,913	983,485	1866.	912,432	35,945	948,377
1875.	786,072	455,454	1,241,526	1865.	1.084.578	35,570	1,120,148
1874.	842,842	391,010	1,236,882	1864.	871,923	57,073	928,996
1873.	736,275	264,593	944.873	1863.	926,513	48,604	975,117
1872.	660,061	247,737	907,801	1862.	932,617	23,453	956,070
1871.	798,893	334,570	$1,\!133,\!163^{\dagger}$	1861.	930,039	26,986	957,025
1870.1	851,596	164,530	1,019,126	1860.	478,820	17,773	496,593
1869.	945,768	175.269	1,121,037	1859.	596,176	26,143	622,319
1868.	1,015,859	169,539	1.185.398	1858	338,224	12.178	350,402

To the above we now add the receipts and exports at Bombay each month since 1872, and the percentage of total receipts received at the close of each month. In this form the figures will be of use in comparing and estimating the movement during future months. The totals, it will be noticed, differ slightly from the above, having been prepared from the circulars of Finlay, Mur & Co. and Nicol & Co.; the differences, however, are immaterial.

Month.		X-16			1875.			1.77		-	17.13		_	I KILK	
	Month.	Total.	Per et.	Month.	Total.	Per et.	Month.	Total.	Per et.	Month.	Total.	Per et.	Month, Total, Per et	Total. 1	1.1.2
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Feb	103,000	175,000			320,000	13 13 13	1.17,000	000 000		÷		77.00	100,000 1.00,000	30,000	7.1
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July	16,000	000,578	26.52	1000	00051571		000			_		1 - 1	000,000,000,00		7
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	15,000			6,000	6,000 1,225,000	-	000	000 000			0000 1 000		000,000,000,000,000	0000	
Cel	000'08			13.000	13,000 1,238,000	05.00		000 000		_			000,000,000,0	000,7	2
Nex	15,000	1.076,000	17.96	000 88	200,000	00 / 6	3		_	_	000,000		000,000,000,	000,0	×
Dec	42,000		_	39,000		100.00	300			- =	1,027,000	-	10,000 963,000		
Total.		1,118,000 100:00	100.00		00.001 000.662,1	100.00		1,316,00	1,316,000 100-06	==	00.001 0002,000 100.00		963,000 100.00	33,000	9
					EXPOR	rs Fre	M BOM	IBAY 1	EXPORTS FROM BOMBAY DURING 1872.	1872.					
Month	-	Expo	rt to Gr	Export to Great Britain.	n.		Expo	Export to Continent	ontinent.			Tota	Total Exports.		
	_	inoc.	Sucz	Month	Tedal	ours,)	-		T (f.			:	- ;		
							-	1	- ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	Total.	-: -: -: -: -:	ZECZ.	Month.		T: 131.
January	-		000.5	103,000	103,000	6,000	_	13,000	19,000	19,000	16,000	76,000	0.00		THE COLUMN
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Total.	:	227,000 13	000,781		661.000	0.10	000,791 000,16	000		000 750	318,000 601,000	5011 000			000 000

EXPORTS FROM BOMBAY DURING 1873 AND 1871.

1877; 1970	Month.	E	Export to Great Britain.	reat Britai	ń		Export to Centinent	Continent.			Total F	Total Exports.	1
4,000 29,000 33,000 17,000 </th <th></th> <th>Cape.</th> <th>Suez.</th> <th>Month.</th> <th>Total.</th> <th>Cape.</th> <th>Shez.</th> <th>Month.</th> <th>Total.</th> <th>Cape.</th> <th>Suez.</th> <th>Month.</th> <th>Total.</th>		Cape.	Suez.	Month.	Total.	Cape.	Shez.	Month.	Total.	Cape.	Suez.	Month.	Total.
1,000 25,000 35,000 1	17.73												
\$\begin{array}{ c c c c c c c c c c c c c c c c c c c	January	4,000	000.62	33,000	33,000	:::::::::::::::::::::::::::::::::::::::	50,000	50,000	20,000	000,1	49,000	53,000	53,000
12,000 35,000 12,000 13,000 1	Pebruary	30,5	000'/	300	115,000		17,006	17,000	37,000	000.5	905,76	900.66	152,000
\$3,000 \$7,000 \$17,00	March	15,000	999	000,001	000'01.	999	3007	900.98	90:::	19,000	117,000	136,000	000,77
\$3,000 \$7,000 \$17,000	April	000:/::	000.5	25,000	317.000	0.0.	500,71	37,000	11,000	18,000	122,000	170,000	158,000
66,000 25,000 35,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 15,000 25,000 15,000 25,000 15,000 25,000<	May	83,000	000.68	1,0,000	517,000	10,000	30,000	000'01	151,000	93,000	117,000	210,000	000,599
26,000 3,000 35,000 65,000 13,000 13,000 13,000 13,000 13,000 13,000 13,000 13,000 13,000 13,000 25,000 13,000 25,000 </td <td>June</td> <td>000,00</td> <td>000.71</td> <td>93,000</td> <td>900 019</td> <td>12,000</td> <td>10,000</td> <td>000,22</td> <td>173,000</td> <td>00070</td> <td>37,000</td> <td>115,000</td> <td>783,000</td>	June	000,00	000.71	93,000	900 019	12,000	10,000	000,22	173,000	00070	37,000	115,000	783,000
10,000	July	000:97	000.0	35,000	000,510	10,000	000,4	14,000	147,000	36,000	13,000	000'61	200,000
10,000 12,000 55,000 55,000 50,000 5	Angust		11,000	11.000	656,000		900,51	000,5	189,000		13,000	13,000	x15,000
11,000 15,000 201,00	September.	10,000	12,000	22,000	000719		3,000	3,000	192,000	10,000	000.01	000,52	000,013
3.000 15.000 731,000	October	:	11,006	11,000	000.079		000.6	0000	201,000		000,02	000'05	890,000
\$3,000 \$27,000 \$30,000 \$731,000 \$17,000 \$17,000 \$22,000 \$25,	November		15,000	15,000	000,107		5,000	5,000	206,000		000'03	50,000	910,000
249,000 485,000 <t< td=""><td>December</td><td>3,000</td><td>27,000</td><td>30,000</td><td>734,000</td><td></td><td>19,000</td><td>19,000</td><td>000,622</td><td>3,000</td><td>46,000</td><td>49,000</td><td>959,000</td></t<>	December	3,000	27,000	30,000	734,000		19,000	19,000	000,622	3,000	46,000	49,000	959,000
5,000 36,000 41,000 47,000 </td <td>i</td> <td>10000</td> <td></td>	i	10000											
5,000 35,000 11,000 41,000 41,000 5,000 5,000 55,000 <td>Total</td> <td>000.G±2</td> <td>000,084</td> <td>:</td> <td>731,000</td> <td>47,000</td> <td>178,000</td> <td></td> <td>552,000</td> <td>506,000</td> <td>000,839</td> <td>:</td> <td>959,000</td>	Total	000.G±2	000,084	:	731,000	47,000	178,000		552,000	506,000	000,839	:	959,000
5,000 36,000 41,000 41,000 41,000 41,000 41,000 52,000 55,000 </td <td>1531</td> <td></td>	1531												
28.000 29.000 15.000 25.000 18.000 17.000 17.000 133.000 17.000 1	Tannary.	5,000	36.000	11 000	000 11		000 66	000 00	000 66	2000	000000	0000	0.00
64,000 43,000 107,000 265,000 32,000 47,000 57,000 107,000 56,000 285,000 285,000 37,00	Pehruary	000 %	000.65	27.000	000,75	:	000 62.	000000	000	500,30	000,13		150,000
100,000	March.	000.19	-13,000	10.000	000 206	3.000	000117	000	000 22.1	000 95	000,00	0000	900 888
53.000 115.000 168,000 578,000 37,0	April	100,000	105,000	200,000	110,000	000	9000	000	217 000	1 12 000	1000	000 683	000,740
72,000 31,000 41,000 753,000 15,000 1	Mary	53,000	115,000	000,791	578,000	37,000	000.77	000	301.000	000'06	162,000	000,555	600,000
31,000 13,000 35,000 15,000 25,000 15,000 15,000 2	June	20000	31,000	103,000	6-1,000	15,000	10.000	000.00	356,000	000'5%	71.000	155,000	1,037,000
5,000 33,000 13,000 15,000 </td <td>July</td> <td>31,000</td> <td>13,000</td> <td>41,000</td> <td>000,527</td> <td></td> <td>10,000</td> <td>10,00</td> <td>3.6,000</td> <td>000.18</td> <td>000.55</td> <td>51,000</td> <td>1,091,000</td>	July	31,000	13,000	41,000	000,527		10,000	10,00	3.6,000	000.18	000.55	51,000	1,091,000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	August	5,000	33,000	38,000	763,000		4.000	000.1	370,000	5,000	000.75	00.5	1,133,000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	September.	3,000	12,000	15,000	000,877		0.00	000'	376,000	3,000	18,000	000,12	1.154,000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Octuber		15,000	15,000	793,000		4,000	000.1	380,000		19,000	19,000	1,173,000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	November.	000:	13,000	15,000	200,70%		12,000	12,000	000.568	2,000	25,000	000,23	1,200,000
363,000 489,000 843,000 126,000 250,000 406,000 459,000 760,000	December	:	35,000	35,000	843,000	:	14,000	14,000	406,000	:	49,000	49,000	1,249,000
	Total	363,000	480,000		843,000	126,000	000,082		406,000	489,000	760,000		1,249,000

Month.	E	xport to G	Export to Great Britain	in.		Export to Contin nt	Contin nt.			Total 1	Total Exports.	
	Cape.	Suez.	Month.	Total.	Cape.	Suez.	Month.	Total.	Cape.	Suez.	Mouth.	Total.
1875.						-						
Jameary	900.5	20,000	000.79	000,55		00007	10,000	10,000	000;	000,00	102,000	102,000
Venrany	000.00	0000	2000	000 570	COUNTY OF		00000	9000	900'61	900	200	900 200
And I	000.5	00010		000 002	0000		1:1000	0000000	000.001	000,71	000000000000000000000000000000000000000	100
Mark	10:000	000	191,000	200 000	000.55	99	200	200 000 200 000	000 95	000 2	000 515	000.000
June	000.17	000.1	717	000,707		000'08	30.000	390,000	2000	71,000	5	1.094.000
July	12,000	000,00	37,000	715,000	3,000	7,000	10,000	100,000	15,000	35,000	17,000	1,145,000
Angust		13,000	13,000	158,000		000%	7,000	107,000		20,000	90,000	1,165,000
September	7.000	000'9	13,000	771,000	:	10,000	10,000	000'11	7,000	16,000	000037	1,133,000
October	:	5,000	5,000	776,000	:	10,000	10,000	000727	:	15,000	15,000	1,203,000
November	3,010	7,000	10,000	3,46,000		16,000	16,000	-113,000	3,000	53,000	26,000	1,229,000
December	200.121	: ::	000,15	x10,000		13,000	13,000	156,000	000,12	13,605	37,000	1,266,000
Total	315,000	162,000		810,000	127,000	329,070		156,000	475,000	791,000		1,266,000
1816												
January		000'65	000,65	000.65		55,000	99,000	000.25		51,000	51,000	51,000
Pebruary		37,000	35,000	000,19		29,000	000'65	51,000		61,000	61,000	115,000
March	000'.	000,51	905.7	126,000	10,060	56,000	36,000	000,7%	000,71	71,000	000.76	5.000
April	000.51	0007	905,151	000,055	900,55	900'07	000'6'	162.000	600,15	999	179,000	900.23
May	0.30.57	000.77	00.	00017	000,000	0007	67,000	000.022	107,000	100,000	000,17	003,000
	000.00	920.15	000.551	000.500	0000	27.000	0.30,67	£5.700	000.001	000,4	000,700	90.7
July		13,000	3,005	516,006	000.55	30.7	000.08	232.000	000'55	50,000	-1:3.000	900,109
Angust	:	17,000	000.7	000,555	:	9951	5.000	310,000		19,000	19,000	200.81/2
September	:	000,1	1,000	517.000	900,	16,000	000.15	331,000	2,005	30,000	38,000	911,000
Ortober	:	1:000	12,006	559,000		15,000	990,51	376,000		999:17	51,000	932,000
November	:	16,000	16,000	0.000,010		18,000	2007	0007160	:::::::::::::::::::::::::::::::::::::::	31,000	0000') ::	969,000
December		6,000	000'9	000,1%	:	11,680	11,000	105,000	:	17,000	17,000	000,976
Total	.11000	000 1372		000 71 000 177	17.1	1000				-		

BOMBAY RECEIPTS AND EXPORTS TO GREAT BRITAIN IN 1877.

Month.	-	of Cott	1	Exp	ort to Ga	eat Bri	tain.
	Mouth.	Tetal.	Per Ct.	Cape.	Sucz.	Month	Total.
January	98,000.	98,000	08:85		31,000	31,000	31,000
February	107,000	205,000	18.52		54,000	54,000	85,000
March	1226,000	431,000	38.93		57,000	57,000	142,000
April	255,000	686,000	61.97	24,000	52,000	76,000	218,000
May	o204,000	890,000	80.40	58,000	19,000	77,000	295,000
June	\$0,000	979,000	85.44	40,000	16,000	56,000	351,000
July	15,000	991,000	89:79	8,000	6,000	14,000	365,000
August		,001,000	90.42		5,000	5,000	370,000
September .	4,000 1	,005,000	90.79		2,000	2,000	372,000
October	15,000 1	,020,000	92.14		2,000	2,000	374,000
November	26,000 1	,016,000	94.49		2,000	2,000	376,000
December	1	,107,000			13,000	13,000	389,000
Total	ii	,107,000	100.00	130,000	259,000		389,000

ROMBAY EXPORTS TO THE CONTINENT, &C., IN 1877.

Month.	Expor	t_to Con	tinent.		Total I	Exports.	
Month.	Cape.	Suez.	Total.	Cape.	Saez.	Month.	Total.
January	2,000	13,000	15,000	2,000	44,000	46,000	46,000
February	19,000	35,000	69,000	19,000	89,000	193,000	154,000
March	20,000	27,000	116,000	20,000	81,000	101,000	258,000
April	17,000	77.000	210,000	41,000	129,000	170,000	428,000
May	74,000	67,000	355,000	136,000	86,000	222,000	650,000
June	31,000	16,000	105,000	74,000	32,000	106,000	756,000
July	1,000	2,000	103,000	9,000	8,000	17,000	773,000
August	1,000	6,000	115,000	1,000	11,000	12,000	785,000
September.		3,000	118,000		5,000	5,000	790,000
October		7,000	125,000		9,000	9,000	799,000
November		12,000	437,000		14,000	14,000	813,000
December		14,000	451,000		27,000	27,000	840,000
Total	172,000	279,000	451,000	302,000	538,000		840,000

CHAPTER IV.

ACREAGE IN THE UNITED STATES.

1869 TO 1877.

How far can acreage figures be relied upon—Immaterial what ones are used, so long as they conform to the progressive conditions of the industry—How the figures of 1874-75 and 1875-76 were determined--Figures for 1869--Total cotton crops show growth in acreage—Crop of 1870-71 proves growth—Acreage from 1869 to 1877—Yield per acre—Lurgest and smallest yield on acreage of 1877—Agricultural Burean figures—Percentages of yield and acreage in éach State.

We have given in a previous chapter of this work such details as we could gather with regard to the early plantings of cotton in the United States, and of each year's crop, and of the disposition of the same down to the present time. Much of interest will, we are persuaded, be felt in thus following the stream up to its source, and bringing before us anew the facts which show from whence and by what steps the wonderful development in this country of this single industry has come.

But, although such a historical review is inspiriting, the real purpose of this volume, as we have already stated, is a more practical one. The planter, the merchant, the spinner are all far more deeply interested in the events of to-day than in the past, except as that past bears upon the future. The hourly inquiry is, how are prices to rule; and the first in interest, because the chief element in that problem, must

always be the probable extent of the American crop. Light on that point is, as every one will admit, especially important. But there is no royal road for obtaining it. We can, of course, easily jump at a conclusion in accordance with our wishes as most do; but if we desire to act intelligently, our only way is to begin at the bottom and work up. Hence, if we would reach an enlightened conclusion with regard to the extent of any growing crop, it is necessary for us to know at the outset the possibilities of the crop, and that involves a determination, as nearly as can be, of the amount of land which has been put into cotton. The preliminary question then at once arises:—

HOW FAR CAN ACREAGE FIGURES BE RELIED UPON?

And right here let us say that we have no regard or preference for any set of figures, representing the cotton area, except as they appear to be the true ones. Τf exception is taken to those we use, all we would say is, substitute any others you may see better reasons for adopting. Our argument is in no way affected by the change. There is a maximum and a minimum yield from any given area planted. Deduce those results from your own figures, and then study the subsequent portions of this book on your own basis; only remember that the actual yield of the past seven years and the actual conditions of weather are fixed facts and relative facts, and the like results can and must always be predicated on the same facts, whenever they recur. If you take a smaller acreage than we give, the effect, as to the yield of previous years, will be that the pounds per acre are proportionably larger. most carnestly hope, however, that the objector will not satisfy himself with objecting simply, but will accept some figures of acreage, and work out on them the very processes we have worked out on these. This will at least serve to place limits to the guesses which fly about

our markets every year. We repeat, therefore, that we do not wish any one to follow our acreage figures unless convinced that they are as nearly correct as it is possible for such statements to be; the rejection of them in no way weakens the force of the subsequent facts we present.

But let us, before proceeding further, consider briefly what grounds there are for accepting as approximately correct the statistical results which have been current during late years as to the extent of land under cotton. It is well known that the first facts on this subject were supposed to date back to the census of 1870. If that supposition is correct, an error has always been made in the use of those figures. For if they were deductions from the census returns, they should have been applied to the summer of 1869—as that is the crop covered by the census—instead of 1870; or, if they are not from the census, but were made up from returns obtained by the Agricultural Department, even then they could not have applied to 1870, as that year's Agricultural report is dated before that crop was gathered or even perfected, and hence before the yield per acre could be known or determined. It would seem, therefore, that the date of those figures should be changed to the crop of 1869-70. With this amendment, may we not feel some confidence in their approach to accuracy. They were prepared at a time when there was no contest about them, and no interest to make the result large or small, and, as is believed, from data procured in gathering the census returns. We should say that such conditions make a presumption in favor of the substantial correctness of the statement.

Nor does the fact (if fact it be) that the acreage is fixed now, through a second census or otherwise, at a considerable increase, impeach the former census figures or negative the presumption in their favor. The two statements are not incompatible. Growth is plainly marked on every industry in this country. Compare the acreage in corn, oats, wheat, or the spindles in cotton or woolen factories, or the statistics of any other employment or business, from any two succeeding census reports, and rapid progress is everywhere the feature, and in a wonderful degree. Or, if we confine ourselves to cotton, only pass the eye over the following statement of the crops of the United States, and we cannot fail to see that the increase in acreage must have always been decided.

TOTAL CROPS OF THE UNITED STATES.

Years.	Quantity.	Years.	Quantity.	Years.	Quantity.
	Bales.		Bales.		Bales.
1826-27	957,281	1842-43	2,394,203	1858-59	3,994,481
1827-28	720,593	1843-14	2,108,579	1859-60	4,823,770
1828-29	857,744	1814-15	2,484,662	1860-61	3,826,080
1829-30	976.845	1845-46	2,170,537	1861-65	*
1830-31	1.038,847	1816-47	1,860,479	1865-66	2,228,987
1831-32	987,477	1847-48	2,424,113	1866-67	2,059,27
1832-33	1,070,438	1848-49	2,808,596	1867-68	2,498,893
1833-34	1,205,394	1819-50	2,171,706	1868-69	2,439,039
1834-35	1,251,328	1850-51	2,415.257	1869-70	3,154,940
1835-36	1,360,725	1851-52	3,090,029	1870-71	4,352,31
1836-37	1,425,575	1852-53	3,352,882	1871-72	2,974,35
1837-38	1,801,797	1853-54	3,035,027	1872-73	3,930,50
1838-39	1,363,103	1854-55	2,932,339	1873-74	4,170,38
1839-10	2,181,749	1855-56	3,615,345	1874-75	3,832,99
1840-11	1,639,353	1856-57	3,056,519	1875-76	4,669,28
1841-42	1.688,675	1857-58	3,238,962	1876-77	4,485,42

^{*} Years of Civil War; no record of crop.

The foregoing indicates certain seasons, all through the series, when there was a set-back in production, generally following an extreme crop. This has been owing in some cases to less favorable conditions of growth; and in other cases to a temporary decrease in acreage, succeeding an excessive increase of the previous years, or to both these circumstances. Progress is never uniform; it is always secured by just such pulsations, not unlike the rising of the tide, first encroaching, then receding, but in each beat gaining. To see the net result take a decimal period; and

clearly-looked at in that way-the teaching of this statement of crops secured, is, that there must have been in each period a very decided addition to the land under cotton. Nor are the figures for the last ten years any exception. The objector may urge in opposition the large crop of 1870-71; but the explanation of that is, we had an unusual season—every condition favorable—and the land planted produced all it was capable of producing. We have had no such season since, and still we raised in 1875-76 and in 1876-77 several hundred thousand bales in excess of that year. Does not this very fact then, even if we had no other, furnish positive evidence of there being now considerably more land under cotton than in 1870-71, and of course, therefore, a still larger excess over 1869-70. The argument is this—and we can see no escape from the conclusion—that if we could raise but 4,352,317 bales in 1870-71, with the weather almost perfect everywhere throughout the season. and with a very free use of fertilizers in the Atlantic States, certainly there must have been a very decided increase of acreage between that date and 1875-76 (our figures show less than 16 per cent) to produce in the latter year 4,669,288 bales, with the conditions very much less favorable. This advance, of course, is never equal in all portions of the State. In fact, we are familiar with sections where there has been no increase of late years, but a retrograde movement, and vet for the State at large the result is progress.

Thoughts like these led us in the spring of 1876 to reexamine the question of acreage. Up to that date the only information had with regard to the extent of the planting in any season was simply a result of comparisons—by means of percentages of increase and decrease—with previous years, starting always with the accepted figures of 1869-70. Of course each succeeding spring we were one step further

removed from our base; and as in the percentages, during those years, we sought never to over-estimate the planting. the results were constantly and obviously becoming more and more inaccurate. In the spring of 1876, therefore, we started an investigation for determining what was in that and the previous year the actual amount of land put into cotton in each Southern State, and the yield per acre. For several of the States absolute proof was at once found of the inaccuracy of the figures being used:—in three cases the evidence was through the tax returns and the county assessors' statements; in one case the Agricultural Department of the State had revised and perfected the figures through its agents; and in one other instance there was a complete State census. We not only obtained all this information, but also sent several letters of inquiry (with blanks enclosed) into every county of the South; and the replies received to them, in each case contained six special instances, located within the county replying, of acres planted and bales raised on those acres for the two years, together with the estimate of two or more persons as to the average yield per acre-And finally, through returns from the railroads, we sought to establish the actual crop of each section of each State. are thus particular in re-stating these matters now, because our results have been lately attacked, and it is only proper, therefore, in using them as a basis for our calculations, that we should give our mode of preparing them and reasons for believing in their approximate correctness. We may add as a further proof of their substantial accuracy, and a very satisfactory confirmation of our work, that the June report of the Agricultural Bureau at Washington, contained this sentence, "the estimated area now in cotton slightly exceeds $\sim 12,000,000$ acres." If the Department has really passed through processes similar to those we have recited, and reached a very similar conclusion, our readers will scarcely

be able to hesitate longer, even if any of them have before, in fully accepting our figures.

We start, then, with at least this fact clear we think to all minds—that the acreage statements for 1874-75 and 1875-76, prepared as we have indicated above (although not free from error) are as near the truth as it is possible for such statements to be.

EXTENT OF PLANTING FROM 1869 to 1877.

No excuse is needed for dwelling at so great length upon the matters already discussed, since we thus secure the means for impeaching or confirming the figures for 1869, and for establishing those for the intervening years. First, however, let us note the points in the problem which now appear to be clear. (1) The acreage results for 1874-75 and 1875-76, which were reached through our investigations, are substantially correct. (2) If the figures of 1869 were prepared from census data or by means of any other thorough inquiry at the time made, there is a presumption in favor of their accuracy. (3) But whether there is any such presumption or not, the simple statement of the actual yield each year given above, shows that there must have been growth in acreage during the last nine years, and this conforms with the general truth. proved by each succeeding census, that every industry in this country is constantly on the increase. (4) Besides this, we have positive evidence of such growth in a comparison of the two crops of 1870-71 and 1875-76; the figures we have adopted show an increased acreage between the two periods of less than 16 per cent. and no statement which can be made of the weather and other conditions surrounding the two crops taken in connection with the actual yield, can be reconciled except by admitting new land in cotton to that extent at least.

None of these positions can, we believe, be questioned; and yet, feeling that upon a point of this importance one cannot have too much evidence, we have pushed our investigations one step further and obtained whatever particulars we could on the subject of every previous year's planting, back to 1869, thus determining as nearly as possible what has been the actual percentage of increase or decrease in each State each season. And first, as a guide in this inquiry, we have taken the information gathered at the time by ourselves for the purpose of making our several annual acreage reports; and second, we have supplemented that with new facts where we could obtain them. In this way, and after a thorough examination of the data thus collected, we have reached the results as to acreage found on the next two pages. We do not, however, even now claim perfection for our work; only this is claimed, that we have given the surroundings of each year's planting season as careful a study as we were able to give them, and the conclusions reached are at least sufficiently accurate for the purposes of this inquiry. The annual totals may be stated in brief, as follows.

YEARS.	Acres planted.	Crop, pounds net.	Pounds per acre.	Bales in the erop.	Net weight per bale.*
1869-70	8,766,653	1,369,200,000	158	3,154,946	434
1870-71	9,955,000	1,906,306,000	191	4,352,317	438
1871-72	8,911,000	1,305,700,000	147	2.971,351	439
1872-73	9,780,000	1,729,400,000	177	3,930,508	440
1873-71	10,816,000	1,830,800,000	169	4,170,388	439
1874-75	10,982,000	1,682,700,000	154	3,832,991	439
1875-76	11,635,000	2,035,800,000	177	1,669,288	436
1876-77	11,500,600	1.964,600,000	171	4,455,423	438

^{*}These are the net weights of American cotten imports into Liverpool according to the Liverpool Cotton Brokers' annual circular.

The details of these figures will be found on the two following pages.

	3	1576-77.		180	1875-76.		x 1	1874-75,		7	1873-74.		
STATES		Propretion.	O.N.		PRODUCTION	ON.		Propererios.	ž S		PLCER CHON.	e. No.	
	Total	Total Bales.	Per acre.	Total Acreage.	Total Bales,	ber aere.	Total	Total Bales.	ber aere.	Total Aercage.	Total Bales,	Per acre.	
North Carolina	009,700	225,000 163	163	620,000	260,000 185	<u>2</u>	591,000	273,000	503 803	000,000	265,000	3	
South Carolina	000'186	315,000 148	<u>x</u>	000,059	830,000 153	153	866,000	360,000 153	ŷ	866,000	350,000 177	177	
Georgia	1,581,000	178,000 133	<u>::</u>	1,700,000	420,000 109	100	1,650,000	460,000 122	122	1,700,000	500,000 129	67.	
Florida	000,022	55,000 109	86	000,622	60,000 117	11.7	000'077	011 000'55	011	200,000	75,000 165	165	
Alabama	1,557,000	560,000 130	130	000,058,1	900,000 1.13	113	1,500,000	520,000 127	127	000,008,1	575,000 140	1.10	
Mississippi	1.919,000	911 000'689	116	1,900,000	670,000 155	22	1,8-0,000	550,000 129	671	1,900,000	675,000 156	156	
Louisjana	1,912,500	578,000 209	800	000,052,1	650,000 229	Si	1,150,000	520,000 199	198	1,100,000	510,000 201	103	
Texas	0.313,000	735,000 216	512	1,300,000	14:5 000,000	- -	1,175,000	585,000 200	900	1,000,000	500,000 220	077	
Arkansas	0.00,080,1	288,000,005	X H	000,001.1	650,000 260	995	950,000	400,000 185	G	0.00,000	420,000 191	191	
Tenhessee	000'012	310,000 181	ž	7 10,000	202 000,088	01	700,000	001 000'09!	901	700,000	200,000	$\frac{\chi}{\chi}$	
Total	11,500,600	1,185,000	121	11,500,ca0 1,485,000 171 11,635,000 4,669,000 177 10,982,000 3,835,000 151 10,816,000 4,170,000 1.0	1,669,000	177	10,982,000	0,433,000	13	10,816,000	4,170,000	10.9	
W. Washington and M. Carlotte, C. Carlotte,		The state of the s			1	1		1					

1.3 We have averaged the bafes in above totals at 1.60 pounds net, that being very mear the average net weight of the imports of American cotton at Liverpool during the years 1869 to 1877.

										_				
1		N.	ber aere.	201	160	115	1.10	154	134	900	157	158	\overline{z}	158
	1×69-70.	PRODUCTION.	Total Bales.	210,000	256,000	350,000,115	45.000 140	505,000 154	500,000	425,000	322,400 157	321,500 198	220,000	8,766,653 3,154,900 158
	Ĭ		Total Aerenge.	1117,131	701,700	1,330,991	140,909	1,137,272	1,644,512	002,020	500.037	711,734	526,184	8,766,653
		N	Pounds per aere.		021	152	173	9	172	9.10	195	097	213	191
	1470-71.	PRODUCTION	Total Bales,	275,000 223	318,000 170	600,000 152	00,000	615,000 150	650,000 172	000,000	100,000 195	474,000	300,000	4,352,000
	9		Total Aereage.	543,000	000,000	1,740,000	153,000	1,569,000	1,660,000	1,100,000	000,000	800,000	620,000	9,985,000 4,352,000 191
		Ä.	Pounds per aere.	171	110	101	125	155	146	181	140	159	171	147
4	1871-72.	PRODUCTION.	Total Bales.	175,000 171	255,000 110	328,000 101	40,000 122	505,000 155	495,000 146	396,000 181	280,000 140	290,000 159	210,000 171	2,974,000
	<u>x</u>	NAME OF THE OWNER, OWNE	Total Acreage.	450,000	800,000	1,425,000	111,000	1,422,000	1,190,000	000,000	880,000	800,000	510,000	8,911,000 2,974,000 147
		CN.	ber acre.	176	136	139	165	151	167	525	231	150	190	121
	1872-73.	Proprection.	Total Bales.	200,000 176	260,000 136	505,000 139	60,000 165	550,000 151	625,000 167	520,500	495,000	455,000 227	260,000 190	3,930,500
	7		Total Aerenge.	500,000	810,000	1,600,000	160,000	1,600,000	1,650,000	1,010,000	910,000	850.000	000'009	9,780,000 3,930,500 177
		STATES.		North Carolina	South Carolina	Georgia	Plorida	Alabama	Mississippi	Louisiana	Texas	Arkansas	Tennessee	Total

[F] We have averaged the bales in above totals at 440 pounds net, that being very near the average net weight of the imports

of American cotton at Liverpool during the years 1869 to 1877.

The preceding two pages show then sufficiently near, for all practical purposes, what have been the acreage planted in each State each spring since 1869, the actual total yield of each State from such acreage, and the yield per acre in each State. The item usually put in under "Other States" is in all cases omitted, as we could obtain no sufficient information for late years to make a just comparison. It was small and immaterial even in the figures of 1869, and most think it smaller and of less importance now. From these statements we see how the production per acre differs in the various States and in different seasons. That this feature may be presented more clearly, we give below the pounds per acre each year, independently of the other figures, adding, however, the acreage in 1877, which does not appear in the previous tables.

YIELD PER ACRE, 1869 TO 1877.

	10== 5.7			Pot	inds 1	er Ac	re,		
STATES.	1877-78. Actual Acreage.	1876-77.	1875-76.	1871-75	1273-11.	1872-73.	1871-72	1870-71.	1.69-70.
No. Carolina,	577,220	163	185	203	194	176	171	223	20
So.Carolina.	893,760	1.1%	153	183	177	136	140	170	160
Georgia	1,612,620	133	109	122	. 129	139	101	152	113
Florida	220,500	109	117	110	165	165	122	173	1.16
Alabama	1,9<1,350	130	143	127	140	151	155	180	. 15
Mississippi .	1,995,760	146	155	129	. 156	167	146	172	13
Louisiana	1,285,250	209	229	199	204	226	1 ~ 1	210	200
Texas	1,444,300	246	234	200	220	231	140	195	15
Arkansas	1.089,000	235	260	185	194	227	159	260	. 19
Tennessee	725,200	151	505	100	188	190	171	213	18
Total	11.824.960	171	177	151	169	177	117	191	1.5

Nothing could more plainly illustrate than the foregoing how diverse our climate is; and further—which is a fact of special importance in observing and interpreting weekly weather reports—that a good or bad season in one State by no means ensures, or is concurrent with, a good or bad season in any other. This latter point should always be kept carefully in view, for very much of the error made in crop estimates has arisen from giving too extensive an application to comparatively local disasters.

But suppose with the present acreage (that is with the acreage of 1877), we should have in any year as successful a season in each State as the best in that State during the record we give, or as unsuccessful as the worst, what kind of crop, in each contingency named, would the year This question is interesting and useful, furnish us. because it covers a possible, though not a probable, contingency; that is to say, such a statement would give us the crop possibilities upon the present acreage in case of an extremely good year, and also the extent of disaster possible in case of an extremely bad year; or to express it briefly, it would show upon a fixed acreage what must be the actual extreme limits of the yield. Perhaps, however, it would be better, instead of taking in the whole eight years, to confine the inquiry to periods of four years, as that would give us two statements for comparison, and one of them only would include the unusual figures of 1870-71. Thus, for instance, the most per acre North Carolina has produced was in 1874-75 when the result was 203 pounds; South Carolina the same year returned 183 pounds, which was her greatest yield during the same four years; to indicate, therefore, the possibilities and capabilities of the country on the present acreage. we have in this manner grouped together this best yield in each State for the last four years, and also the best yield in each State for the previous four years, and have worked out the following results on that basis, which, as already stated, may be said to represent about the largest crop the land now planted is capable of yielding, providing every condition was favorable from the beginning to the end of the season.

POSSIBLE CROP WITH PRESENT ACREAGE ON THE BASIS OF

	Best yield f	rom 15	873 to 1377.	Best yield i	rom 1	869 to 173,
STATES.	1877-78. Actual acreage.	Best product'n peracre, 1873 to 1877.	Possible crop, if all conditions are favor- able.	1877-78. Actual aoreage.	Best product'h peraere, 1869 to 1872.	Possible crop, if all conditions are favorable,
		Lbs.	Bales.		Lbs.	Bales.
No.Carolina.	577,220	203	266,30≤	577,220	223	292,540
So, Carolina.	\$93,760	183	371,723	893,760	170	345,310
Georgia	1,612,620	133	487,450	1,612,620	152	557,087
Florida	220,500	165	82,633	220,500	173	86,690
Alabama	1,981,350	143	613,939	1,981,350	180	\$10,552
Mississippi	1,995,760	156	707,583	1,995,760	172	780,161
Lousiana	1,285,250	220	668,914	1,285,250	210	701.017
Texas	1.414,300	216	507,195	1,141,300	231	758,259
Arkansas	1,089,000	260	613,500	1,059,000	260	643,500
Tennessee	725,200	2)2	332,933	725,200	213	351,06
Total	11,821,960	180	5,012,538	11,821,960	193	5,326,22

The other contingency mentioned may be illustrated by the following statement, which may be called the worst crop that, under any circumstances of weather considered possible from past experience, the land now planted will produce.

POSSIBLE CROP WITH PRESENT ACREAGE ON THE BASIS OF

	Poorest yie	ld from	n '73 to '77.	Poorest yie	ld fron	a '69 to '73 _.
STATES.	1877-78. Actual Acreage.	Poor'st pr'due- tion per acte, 1873 to 1877.	Possible erop, if all conditions are unfav- orable.	1877-78. Actual Acreage.	Poor'st pr'duc- tion per acte, 1869 to 1872.	Possible erop, if all conditions are unfavorable.
		Lbs.	Bales.		Lbs.	Bales.
No.Carolina.	577,220	163	213,834	577,220	171	224,329
So. Carolina.	893,760	118	300,628	893,760	136	276,253
Georgia	1,612,620	109	399, 190	1,612,620	101	370,170
Florida	220,500	109	51,621	220,500	. 122	61.139
Alabama	1,931,350	127	571,890	1,981,350	151	679,961
Mississippi .	1,995,760	. 129	585,121	-1,995,760	131	607,500
Louisiana	1,285,250	199	581,283	1,285,250	181	525,705
Texas	1,441,300	200	656,500	1,444,300	140	459,550
Arkansas	1,039,000	155	457,875	1,089,600	159	393,523
Tennessee	725,200	100	161,919	725,200	171	251,839
Total	11,321,960	148	3,986,063	11.821,960	144	3.550.272

Since the foregoing was in print the Agricultural Department has issued its annual volume for the year 1876, of which we have just received a copy. In it we find the full details of its revised acreage figures, now for the first time made public. Its report published in June, only gave the percentages of increase and decrease on last year's totals, with this sentence (which we have quoted above), that "the "estimated area now in cotton slightly exceeds 12,000,000 "acres." In the present volume we have all the figures, which are as follows.

AGRICULTURAL BUREAU'S ACREAGE FIGURES FOR 1876 AND 1877.

STATES.	Acres, 1876.	Acres per bale.	Per (age. Cent. Dec.	Acres, 1877.
North Carolina	609,000	2.9		-4	584,640
South Carolina	945,500	3.05		3	917,135
Georgia	1,515,000	3	1		1,530,150
Florida	165,000	3.3	1		166,650
Alabama	1,732,250	3.25	2		1,766,895
Mississippi	1,976,000	2.6	4		2,055,040
Louisiana	1,260,000	2.25	6		1,335,600
Texas	1,483,500	2.15	15		1,706,025
Arkansas	1,133,000	2.2	5		1,189,650
Tennessee	741,000	2.85	2		755,820
Indian Territory and			-		
other districts	117,000	5.6			117,000
Total	11,677,250	2.63	-1		12,124,605

These results, made up by the Bureau independently and by a process in many respects quite different from that by which we obtained ours, and yet so close an approximation to them, show conclusively that our statements must be very nearly correct. It is satisfactory to have the questions which have been raised on this subject thus finally and completely put to rest. We close our analysis of our acreage figures by one more table, which is, we think, a very interesting exhibit, showing the percentage of total acreage and total crop raised in each State for eight years.

State Stat		1876-77.	-77.	1875-76	-76.	1874-75.	-75.	1873-71.	1-7 L.	1872-73.	-73.	1871-72.	-73	1870	1870-71.	1869-70.	-70.
05-28 05-39 05-57 05-38 05-12 05-55 06-63 05-11 05-09 05-05 05-05 05-11 06-00 05-00 <th< th=""><th>STATES.</th><th>-949B fishof</th><th>qore fistor</th><th>-9798 Islot</th><th>dore fator</th><th>-919B Isto1</th><th>qore Intot</th><th>-9T9B 1BJ0J</th><th>qora listot</th><th>-9'19B Istor</th><th>(1049 4stot</th><th>-949B listor</th><th>total erop</th><th>-9T9B fistof</th><th>qoas Intor</th><th>-919B [BJ0]</th><th>qore fistor</th></th<>	STATES.	-949B fishof	qore fistor	-9798 Islot	dore fator	-919B Isto1	qore Intot	-9T9B 1BJ0J	qora listot	-9'19B Istor	(1049 4stot	-949B listor	total erop	-9T9B fistof	qoas Intor	-919B [BJ0]	qore fistor
18.75 10-66 11-61 09-00 15-03 12-00 15-72 11-99 16-36 08-59 08-95 08-95 08-95 09-90 08-9	No. Carolina.	82.00	05.01	05-33	05:57	05.38	07.12	05-55	06.35	05:11	05.09	05.05	0.53 XX	05.11	06:32	05.15	99.90
a 1375 10466 11461 0900 1570 1572 1129 1636 1579 1799 1799 1799 1799 1799 1799 1791 1799 1571 1771 1772 1757 1671 1759 1759 1579 1579 1579 1579 1579 1570 1750 1570 1750	So, Carolina	60-80	20.70	08:17	20.20	68.20	68.60	08:01	08:30	66.80	59.90	30.30	10.20	10.60	90.70	08.00	0.4.11
10-192 01-22 01-23 01-23 01-36 <t< td=""><td>Georgia</td><td>13.75</td><td>10.66</td><td>11:61</td><td>00.00</td><td>15.03</td><td>15.00</td><td>15.72</td><td>11-99</td><td>16:36</td><td>15.85</td><td>15.99</td><td>11.03</td><td>17:13</td><td>13:79</td><td>15:18</td><td>11.09</td></t<>	Georgia	13.75	10.66	11:61	00.00	15.03	15.00	15.72	11-99	16:36	15.85	15.99	11.03	17:13	13:79	15:18	11.09
ua 1641 1248 1540 1255 1641 1375 1636 1636 1596 1698 1571 1F82 1640 sppin 1669 1425 1673 1471 1737 1649 1687 1596 1672 1661 1663 1793 1876 ma 1674 1258 1071 1223 1073 1879 1671 1876 1671 1876 1671 1876 1671 1876 1671 1876 1671 1876 <td>Florida</td> <td>01.93</td> <td>01-55 0</td> <td>01.93</td> <td>:: :: ::</td> <td>00.50</td> <td>91.13</td> <td>62-10</td> <td>01.80</td> <td>19.10</td> <td>89.10</td> <td>79.10</td> <td>60.10</td> <td>01.53</td> <td>01.38</td> <td>01.61</td> <td>01.43</td>	Florida	01.93	01-55 0	01.93	:: :: ::	00.50	91.13	62-10	01.80	19.10	89.10	79.10	60.10	01.53	01.38	01.61	01.43
sippi 16:69 11:25 16:33 14:35 17:57 16:19 16:75 16:79 16:75 16:79 16:75 16:71 16:79 16:71 16:79 16:71 16:79 16:71 16:79	Alabama	16:41	12:12	06-21	12:53	16:39	13.57	19.91	1:3-79	16:36	13.99	15:96	16:98	15-21	38.	16:40	16.01
ma 10-51 12-88 10-71 13-92 10-71 13-92 11-90 10-96 11-90 10-96 11-90 10-96 11-90 10-96 11-90 10-97 13-92 11-90 10-90 11-58 10-97 10-91 10-90 11-58 08-95 08-95 08-01 10-90 08-19 10-90 08-19 10-90 08-19 10-90 08-19 10-90 08-19 08-95 08-95 08-95 08-91 08-10 10-90 08-19 08-95 08-95 08-95 08-95 08-90 10-90 08-19 08-95 <th< td=""><td>Mississippi</td><td>69.91</td><td>11.25</td><td>16.3.3</td><td>14.35</td><td>17.12</td><td>11:35</td><td>17:57</td><td>16.19</td><td>16.87</td><td>15.90</td><td>16:72</td><td>19.91</td><td>16.63</td><td>11:93</td><td>21.3</td><td>15.85</td></th<>	Mississippi	69.91	11.25	16.3.3	14.35	17.12	11:35	17:57	16.19	16.87	15.90	16:72	19.91	16.63	11:93	21.3	15.85
808 005-12 1639 11-17 11-78 10-70 13-96 09-21 11-99 09-61 12-59 09-87 09-87 09-01 09-19 10-28 808 005-13 065-11 005-13 065	Louisiana	10.91	ž ži	10.71	13.95	10.17	13:57	10.17	12.23	10-33	13.5	10.22	13:32	11.05	13-79	10:20	13:47
009-47 139-15 009-46 139-92 08-65 10-44 08-75 40-07 009-00 11758 08-95 009-75 08-91 10-89 08-12 06-13	Texas	21-11	16:39	11.17	711.17	10.50	13.96	15.60	11.99	19.60	69.51	58.60	99-15	09-01	00.10	20-01	10-22
06-13 06-91 06-86 07-26 06-87 01-17 06-47 07-20 06-13 06-61 06-06 07-06 06-21 06-89 06-00 100-00	Arkansas	21:60	13:15	91-60	13:92	9.80	10.41	71.70	20.01	00.60	i.	5. 3. 3.	67-60	08.01	68:01	5	10.13
	Tennessee	06:13	06:91	96.36	02.50	06:37	01:17	21.90	02.50	06:13	19.90	90.90	90.20	06.21	69.90	00.90	26.90
		100:00	100.00	100.00	100.60	100.001	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.001	100.00	100-00	00.001

We have not compiled these figures with any purpose of expressing or intimating through them an opinion as to what the present crop is to be. Our processes and information are intended only as suggestions of thought to the reader, rather than as substitutes for thought—to incite investigation, not to limit it. Thus far but one point in the problem has been presented, and the simple conclusion from it is that if an intelligent opinion is desired as to the probable results of any year, the actual acreage for that year applied to the acreage and results of former years, as has been done here, would seem to be the first step in the inquiry;—an important step, however, as it sets absolute limits to the action of subsequent influence; favorable and unfavorable. But that is all it does. Within those extremes the final result is still in unrest: and to an extent this continues all the season through, yet not, as many appear to think, with the same range of possibilities. The limits within which development or damage is possible narrow constantly as each stage of growth passes. And it is our object in future chapters to use the experience of the past so as to detect its teachings on this very point;—that is, to learn from that experience, so far as may be, to what extent we may accept any fact or condition of growth as influencing or determining the season's yield.

CHAPTER V.

PLANTING-CULTIVATION-STAND.

JANUARY TO JUNE.

Importance of Signal Service Bureau data—Cotton lands, how divided—Production of each—Mode of cultivation—Trees girdled and ground prepared—How seed planted and fertilized—Old lands being reclaimed—Early growth of seed—Chopping out—Securing a stand—A good stand a good yield, &c.—Cotton plant tender in early life and tough afterwards—Its early enemies and diseases—Crab grass—Wel May and June—Rainfall, thermometer, Chronicle weather reports and Agricultural Burean reports from 1870 to 1877—Deductions and conclusions.

Cotton cultivation covers four stages of progress:--first, the planting period; second, the early development, including the stand secured; third, the summer growth; and fourth, the maturing and picking season. In each period weather is the prime factor. To collect, however, the facts forming a weather record of the Southern States for a series of years, is a work of much difficulty. This is so because the data preserved have generally been so partial and local in character that, although they may indicate, with some degree of accuracy, the situation in special districts, vet, as a guide for crop comparisons, they are almost valueless. Since the organization of the Signal Service Bureau this defect has in great measure been remedied. Through it we have the controlling conditions officially determined; and by supplementing their observations with the Chronicle's weekly weather reports given

during the past seven years, the surroundings in each district are pretty faithfully indicated. Yet, even such a record requires an acquaintance with the nature and habits of the cotton plant and its modes of cultivation, before its teachings can be correctly read. Let us, therefore, first briefly consider these preliminary points.

Cotton lands in the South may be grouped under two great divisions—the uplands and the bottom lands. former are sub-divided into light sandy soils, and red or clay soils, and the latter embrace river bottoms, basins, the banks of small streams, the prairies and canebrakes, and the valleys of the Mississippi River and its branches. A still further division of the light sandy lands is sometimes made, it being stated that if the native growth on such soils is pine timber, they will generally produce only one bale to three acres, but if the native growth is oak and other hard woods, commonly known as oaky woods, the production will be about one bale to two acres. Red lands or clay soils are usually in the hilly and rolling portions of the country, the native growth being hard wood, and the soil quite fertile, producing from one-half to two-thirds of a bale to the acre. The foregoing estimates of production are on the basis of good cultivation, and cover the third to the sixth year after being brought into use. Bottom lands will produce from one-half a bale to one bale (and sometimes even two bales) per acre, according to the age and fertility of the lands.

Since the war, changes have been made in the mode of managing upland plantations. Formerly every planter brought new land under cultivation every year, and left the used-up portion of his old land to go to waste. At present, fertilizers on the old land keep it productive, and new clearings, therefore, are much less frequent. Whenever such clearings are made, the first step is to girdle

with the ax, two or three feet from the ground, all the trees over six inches in diameter; and the next is to cut down the small trees and brush, pile them in heaps and burn them. The Northern farmer thinks the sooner he is rid of the trees and stumps the better for his crops, but the Southern planter claims, that the decaying wood keeps his land fruitful, so the girdled trees are left to die and decay standing in the fields. There they remain for many years, dropping their branches from time to time with each succeeding storm of wind, until finally the old trunk falls, leaving the stump to waste itself away even more slowly.

As soon as the girdling and brush-burning is completed, the earth is broken up with a scooter plough, which is a long piece of steel, about four inches wide. This process is repeated several times, until the ground between the standing trees is pretty thoroughly pulverized. With such preparations, hardly half a crop can be expected the first year; the next year, perhaps three-quarters of a crop or more will be raised, and the third year a full crop. After that, for three or four years, the land will produce a full crop each season, but subsequently the uplands require fertilizing to make them pay for cultivation. The bottom lands will produce fine crops for many years by planting them in corn every three years.

It will be seen, from this description, that the early cultivation of such a field must be largely with the hoc. After the third year, however, the greater portion of the work can be done with the plough. A thorough farmer, if the weather gives him time, will always use his turn plough in January to break up the ground. In March—or earlier or later, according to the section referred to—a shovel plough, which is like the scooter, except in being six inches wide, must be run through the field to lay off the rows

for the cotton, the distance between the rows varying according to the quality of the soil; in rather thin uplands they are made three feet apart, on better soils they are four to four-and-a-half feet, while in the valley of the Mississippi the distance between them is five to five-and-a-half feet. So, the richer the soil the farther apart the rows are made.

Next, the fertilizers are put into these furrows. zers are used only in small quantities except in the Atlantic States, and are never put in with the seed, but in the bottom of this first furrow, as otherwise they would destroy the germinating qualities. They are supposed, in a general way, to add to the out-turn of the crop fifty per cent. Nor does the effect all pass off with the first season, but in about the proportion of seventy per cent for the first year, twenty per cent the second year and ten per cent the third Until the close of the war such a thing as putting manure of any kind on cotton fields was scarcely thought of. The plan previous to that time was to cultivate the land as long as it would pay; then let it lie fallow, and purchase and clear up new fields in the manner we have described above. Consequently, to-day thousands of acres are to be seen in the South thus thrown away, with the fences rotting down, the soil being considered too poor to Fertilizers, however, have brought in a new era, and at present one by one the old fields are being redeemed from the briers, brush and young trees; for, when ploughed deeply and supplied with either homemade or commercial manures, though hitherto considered of no use for cultivation, they are made to produce now a half a bale or more to the acre.

After the fertilizers have been put in as stated, a turn plough turns in the earth on each side of the furrow, leaving a bed or bank about two feet broad, raised two to

three inches, the ground between these beds being broken with the common shovel plough. This leaves the land ready for the seed. Planting opens, in the earlier sections of Texas, in February, but later and later as you come east and north, not beginning in North Carolina until after the tenth of April and closing after the first of May; so that the season may be said to be about two months and a half in length. Of course, in case of overflow or frost or a very backward spring, planting is continued later, sometimes even into June. When the farmer is ready to sow his cotton, he opens in the centre, with his scooter plough, the bed or bank we have described, and scatters the seed in the bottom of the furrow sufficiently thick to ensure about fifteen or twenty plants to the foot. Patent planters, which open the furrow, plant the seed and cover them by one movement, are sometimes used, but not commonly, on account of the trees, stumps and general roughness in many of the fields.

A cotton seed is something like a beau in its early Within it are two leaves and a tap root, and after lying in the ground about a week the tap root strikes down into the earth while the two leaves open above, growing in a few days from two to three inches high, according to the strength of the land. During the next ten days two more leaves appear, and in the following two weeks from four to six additional ones. Then begins the process of chopping out. This work is done first by using a turn plough, with the bar side next to the cotton, and running it within a few inches and on each side of the young plants, so as to throw the earth and grass away from them and leave them standing in a ridge of earth only about six inches wide and two to three inches high. Immediately following the plough are the hos hands, by whom these ridges are chopped through, cutting out the grass and

leaving only three or four plants in a bunch, the bunches being from twelve to twenty-four inches apart, according to the poverty or richness of the land. After a few days the same plough is again used, but with the shovel side next to the cotton, and the earth which was taken away is thrown back to the plant, and then the ploughing is continued between the rows until the land is all turned over and the grass is either cut up or covered up and killed. This is the first and most important working of the crop, for if it is done successfully there will be very little more trouble with grass in any ordinary season.

For about two weeks the plants are now left to grow, then the ground is again ploughed, and the hoe hands follow, cutting out all the grass they can find and all the plants but one in a hill. When this is completed, the plants are standing in the row twelve inches apart in the poor lands and twenty-four inches in the rich lands. The intention is to have the land entirely covered and shaded in July and August; and as the poor soils will produce a plant about three feet high, with lateral growth of limbs about eighteen inches on each side, and the rich lands will produce plants from five to six feet high, with limbs thirty inches long, the desired result is attained in each case. stand is secured when this working of the crop is finished, and is said to be perfect when there is one stalk to every three square feet on the poor lands and one stalk to every ten square feet on the richest lands.

Of course, it will never happen that a condition so faultless as we have described can be everywhere attained. But when only one plant is missing in a place, even though the total should reach to one-tenth of the bills in the field, the loss is not as serious as many would imagine, since if the remainder are strong and healthy, they will, with the additional light and air, develop into a larger growth, fill-

ing up to a considerable extent, the vacant places, and therefore fruiting more abundantly. A much greater injury is sustained when two, three or more plants close together die out. One-tenth missing in that way would be an absolute loss, as there would be no compensating advantages.

We have been thus particular in giving these many details, because only through them can it be understood in what way and how easily the plant can be injured while young. In its early life it is very tender and delicate, but when well started it becomes tough and hardy, and a stand secured is a point of the utmost importance passed. In fact, we might almost say, as the stand is, so will the yield be; that is, a poor stand ensures a short crop, and a good stand almost ensures a full crop. But this thought will need development later on, in connection with our weather record for the different seasons. Before we pass to that, let us notice the principal causes of irregularity and of sickliness in the plant at this stage of growth.

These two defects are generally concurrent; that is, a very irregular stand is also usually a weak and sickly one. Yet it is quite possible to be otherwise, for irregularity may arise from several causes. First, the seed may be imperfect, either from not maturing properly, or from being heated and partly rotted by lying too long in a very large pile when damp, or from injury received in some other way. This cause for a defective stand would be merely local in its operation, and not have any appreciable effect on the size of the crop. But, again, sometimes in the spring there are very heavy rains; these, more especially on the clayey and richer soils, cause the earth to melt, as it is called, and run together, making a solid mass, so that the seeds in germinating cannot break through the surface, and therefore die for long spaces together.

Then, too, the stand is often greatly injured by careless chopping out; and sometimes on light sandy soils the moles in dry weather loosen the earth so that the sun burns the roots; or when the spring is backward and cold, the plant is attacked by the cutworm, a little later by the disease known as the sore shin, and by lice.

All these troubles are as nothing, however, compared with the injury and harm done by wet weather through May and June. The greatest enemies of the young plant in the South, and also in India, are the tough native grasses. Crab-grass is the name generally given to this kind of growth in our Southern States. It runs along the ground, putting down its strong, fibrous roots at every joint, so that one bunch soon covers and literally fills up several feet of ground in diameter. Of course, if this grass were left to develop itself, the more tender cotton plant would soon die out. We have already noticed the usual steps taken to clean the fields of this enemy. In dry weather there is no difficulty in doing this. But if the time for chopping out comes when it is raining, and the weather continues wet, this grass grows very rapidly, and it is almost impossible to kill it. A weed can be cut down and killed; this grass, however, in rainy weather, does not seem to even have its growth checked by being cut up and moved; it grows right on, and soon is as tall as the cotton above ground, and with roots deeper down in the earth. Under such conditions, the plant must necessarily become sickly; many die, others spindle up without branches, and consequently without fruit, while very many more are cut up by the cultivator's hoe.

A wet May and June, therefore, are sure to be followed by a short crop. The only difficulty is to determine accurately the fact. Our cotton section is so large in extent, and so varied in climate, that exact information from all parts of it is very hard to obtain, and a bad stand in one district is no indication of the same condition in another. But if we can be sure of our fact, we can, within well-defined limits, make some pretty safe deductions.

For the purpose of illustrating this truth, we have brought together a detailed history of the weather and early surroundings of each crop since 1871. These records are made up from the data of the Signal Service Bureau, wherever they have a station, and where they have no station, from our Chronicle weather reports.

1871.

For the first six months of 1871 the monthly record of rainfall and weather is as follows:

6:05 6:01	4:25 5:20	5·22 7·17	8:20
5:81	6.63	5.77	5·97 4:31
6:11	2.75	5:72	5:18 9:89 11:74
	9·79 6·11		

CHRONICLE WEATHER REPORTS SUMMARY.

January.—Weather generally pleasant, and favorable for farm work.

February.—Weather more rainy in Atlantic States and interior of Gulf States, but less rain on the Galf Coast.

March.—Weather too wet for active farm work, except the third week of the month. Thermometer averaged 60 to 65 in all the Atlantic States, about 60 at Memphis, and up as high as 69 at Galveston, until the last week, when it went down to 52 at Galveston, 56 in the Atlantic States and 49 at Memphis.

April.—First week of April weather greatly improved; very little rain fell, and the thermometer went back to an average of about 66 throughout the greater portion of the cotton belt. After that it was somewhat rainy again, except in a portion of the Southwest; but the last week rain was confined mainly to the coast half of the States. But little rain at Galveston; more needed. Thermometer average l in the cotton belt about 68 to 70. The month was, on the whole, favorable for an early start.

May.—Weather generally cold and rainy for the season. Rain in the Atlantic and Gulf States on about fen days of the month, and cloudy more days. May 11 it was so cold at Macon Georgia, that our correspondent telegraphed they had to have fires. The same was true at other points. Our Charleston correspondent wrote, under date of May 22, that "there has hardly been a night when fires have not "been found comfortable, and in no case has thick covering for beds "been discarded." Thermometer was reported at 52 at Memphis in our telegram of May 5, and averaged 59 for week ending May 12. Our Columbus, Georgia, correspondent wrote, May 15: "Continued excessive

"rains and cold, frosty nights have created a necessity for replanting, "some having been replanted a third time;" and on May 12, our Memphis correspondent stated "that the cold, wet weather is making the young "plant die out."

June.—A very stormy mouth over much of the South, with excessive rainfall at many points. Grass complained of greatly in parts of South Carolina, almost all of Georgia, and about half of Alabama, Mississippi and Louisiana, the plant looking weak and sickly. Our Macon correspondent states that the "crop is completely overrun with grass," and that is a good sample of all the information from the districts named. Galveston had some very hard rains, but the interior of Texas still complains of drought. Memphis, Nashville and the most of Arkansas send much more favorable reports the last three weeks.

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report (for the month of May) says-"The condition of the "growing crop is below average in nearly every State. The spring has " been unusually wet and cold, retarding growth, causing the plants to "turn yellow and die, and obstructing cultivation. To a large extent "replanting has refilled the vacant spaces of imperfect stands. The "weather has recently been more favorable, and it is not impossible "that an average condition may be attained by the commencement "of the picking season. * * * * The percentage below an aver-"age condition is respectively as follows in the several States-North "Carolina, 10 per cent; South Carolina, 8; Georgia, 18; Alabama, 17; "Mississippi, 16; Louisiana, 10; Texas, 7; Arkansas, 17; Tennessee, 10." The July report (for the month of June) says—"The July returns do not "materially change the cotton crop prospect reported in June. Severe "rain storms have combined to obstruct cultivation and check growth in "the States upon the Gulf coast. The States of Louisiana, Mississippi, " Alabama and Florida average lower in condition than at the date of the " last report : the Georgia and Texas averages remain unchanged, and an $\,$ "improvement is indicated in the Carolinas, Tennessee and Arkansas."

The foregoing statements establish certain important facts:—

First—That three weeks of April, and the whole of May and June (except the last three weeks of the latter month in the Memphis and Nashville districts), were cold and rainy in every Southern State but the upper half of Texas.

Second—In Texas a drought began in April, and, with the exception of the coast belt, continued with but little interruption through May and June, in the latter month becoming very severe.

Third—As a result of these facts the plant everywhere (except in the upper half of Texas) was first stunted, checked and largely killed by the cold, and after that by the very grassy condition of the fields; consequently the stands

proved in June to be weak, sickly and very imperfect. In the Memphis and Nashville districts an improvement was recorded during the last three weeks of June.

It will be remembered in this connection that the crop in 1871–72, on a decreased acreage of 10 per cent, was over 31 per cent less than the previous crop, being only 2,974,000 bales, against 4,352,000 in 1870–71.

1872.

The average thermometer, rainfall and weather conditions for the first six months of 1872 were as follows:

1872.	Jan.	Feb.	March.	April.	May.	June.
WilmingtonRainfall	3.62	5.20	6.42	0.97	4.89	2.87
" Av. therm.	43.5	45.9	44.8	63.2	73.2	78.3
CharlestonRainfall	3.78	5.13	9:78	2 46	6.30	1.87
" Av. therm	45.0	48.5	51.0	65-6	74.9	79.7
AugustaRainfall	5.20	5.97	10.88	2 95	5:36	4.77
. Av. therm	41.0	46:0	50.0	66.0	74.0	79.0
Atlanta Rainfall	2.94	5.23	7.66	3.09	3.75	1.82
" Av. therm.						
SavannahRainfall	2 09	1.65	10:18	2:75	5 22	9:52
" Av. therm	46.0	50.0	53:5	67.0	76.0	80.0
MontgomeryRainfall	5.83	6.75	8:50	4.17	4 29	2.68
" Av. therm						
Mobile Rainfall	3.69	8:00	12.76	4:35	3:79	6.33
" Av. therm	45.1	51.7	51.4	69.2	75:7	80.6
New Orleans Ra ufall	5:10	1.77	9:18	5:01	3 14	5:34
" Av. therm	48.7	56.2	59.2	70:4	75 8	505
VicksburgRainfall	3.21	5:34	7.82	7:79	13.23	3.82
" Av. the m	12.7	52.6	56.0	69:2	75.2	81.6
Shreveport Rainfall	5.25	5.89	4.11	7:18	9.10	2:70
" Av. therm.	40.7	50.6	54.4	66.5	73:5	80.4
Memphis Rainfall	2:17	4.24	5:19	6-99	4.16	4.44
Av. therm.	35.0	43.0	47:0	61.0	71 0	76.0
Nashville Rainfall	2.32	2.11	3:09	5.91	3 09	5:17
" Av. therm.	35.0	43 0	44.2	62.1	71.3	77.1
GalvestonRainfall	4.61	2.27	2.77	5.96	2.21	3.39
" Av. therm.		55.0	61.4	71.7	7 × 1	83.0

CHRONICLE WEATHER REPORTS SUMMARY.

January.—Early in month mild, with rain; last week cold, with snow and sleet almost everywhere, from Galveston to Memphis and from Mobile to Charleston.

February.—A cold month. Early in the month snow and sleet almost everywhere; thermometer, for instance, averaged 38 the week ending February 3 at Galveston and 37 at Mobile, &c., and 26 at Memphis. Subsequent weeks cold, but moderating gradually, thermometer averaging at Galveston the next week 47, and 56, 59, 62 the three following weeks.

March.—Planting in Texas at end of month nearly completed; elsewhere backward, with weather cold and rainy, except the early part of the month. Four inches of snow at Memphis the third week and flurries of snow the last week of March.

April.—The second week there was a severe storm in Alabama, which extended into a ljoining States but was less severe there; and apparently another storm from the northwest, which extended into Tennessee. Rivers overflowed in Montgomery district and very high in Memphis

district, but soon receded. Balance of month weather very much improved everywhere, so that planting made good progress. In the Atlantic States fairly favorable all the month.

May.—Texas reports crop developing promisingly. Very heavy showers in the upper half of Louisiana, extending through the Vicksburg and Shreveport districts. Elsewhere, the first three weeks too dry; but hast week splendid showers almost everywhere, having a magic effect on crop, and the month closed with the start good and the fields clean.

Juny.—Until the last week weather favorable, with occasional showers, and stand reported good. Towards last of month complaints of too much rain at very many points, and caterpillars at several points, but no minry done as yet was the general report, the fields being clean and well cultivated.

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report (for the month of May) says: * * * * "Planting" was generally decayed by a protracted season of drought, and fields "that were planted late occasioned some trouble in obtaining perfect "stands; but the recent rains and renewed efforts in planting have "finally secured stands of average completeness," * * * "The condition of the plant throughout the cotton section is very nearly a full "average. Separating the Atlantic from the more western States, the "former stand a little below an average; the latter are fully up to a "standard of a fair condition. The drought which prevailed in April "an I the lirst half of May delayed the growth, and the cold nights in the more northern belt had a further retarding effect; but the abundant "rains and genial temperature which followed, have wonderfully "invigorated and advanced the crop."

The July report (for the month of June) says: "The past month has been generally favorable to cotton. Limited areas have been affected by drought, but rains were quite general during the latter part of June. On the Atlantic coast, showers have been so frequent and heavy since "June 20 as to delay cultivation and promote the growth of weeds and "grass. Before that date a season of comparative drought of seven or "eight weeks had been suffered in a portion of this district, while other "counties represent the weather as having been uniformly unfavorable."

These statements show:—

First—That the weather during April, May and June was on the whole very favorable for the development of the cotton plant, far more favorable than during the same months of the previous year.

Second—That the stands in June were reported very good from almost all parts of the South.

The crop grown during this year of 1872–73 was (on about 10 per cent more acreage) 3,930,500 bales, against 2.974,000 bales the previous year.

1873.

For the first six months of 1873 the rainfall, average thermometer and weather summary were as follows.

1873.	Jan.	Feb.	March	April.	May.	June
WilmingtonRainfail	4.13	5:55	1:68	1.75	8.63	3.00
" " Av. therm	50.2	51.6	62.9	71.2	75.0	81:4
Charleston Raintail .	4.13	2:27	3.02	1:33	1.50	6:29
" Av. therm	48.1	53.4	. 53.6	64.2	74:9	7~1
AngustaRainfall	5:03	4.16	3.62	2.00	8:63	3.1
" Av. therm.	44.8	19.9	52:3	61.2	72:1	75.6
Atlanta Raintall	3:36	12.01	2.23	1.96	6.02	().~
" Av. therm.						
SavannahRaintall	350	0.55	4.37	1.37	5:12	4.0
" Av. therm.	49.0	55.0	55.1	67:0	74.0	74.4
MontgomeryRainfall	4.97	9:97	4.21	5:57	10.25	11.0
4 Av. therm.,		52.1	61:2	67.1	70.2	51.8
MobileRainfall	4.19	3:15	3.30	0.88	11:17	0.4
" Av. therm.	46.3	564	57.0	65:7	73.9	79.4
New Orleans Rainfall	5.06	1:93	5:10	1.71	18.68	6.0
" Av. therm	49.5	60.2	60.1	66.9	73.7	20.1
VicksburgRainfall	1.77	4:16	1557	1.76	5:79	4.1
" Av. therm	43.0	51:0	55.5	66:2	73.0	20.0
ShreveportRainfall	3.13	7:17	2.67	1.94	1.58	7:9
Av. therm.	45.5	520	580	64.4	72:9	79.6
MemphisRainfall	5.85	7.07	3:14	1.47	1.85	65.7
" Av. therm.	35.0	11:0	50.0	60.0	69.0	79.0
Nashville Rainfall	2:96	7:14	-1.11	3:59	1.11	4.5
" Av. therm	35.4	43.6	47.1	59.4	70.0	77.9
GalvestonRainfall	3.13	0.20	2.20	2.27	5.36	2.0
" Av. therm	49.3	59.3	63:2	65.0	75.0	25.0
Indianola Raiufall	1:51	1:13	2534	0.35	6.96	3.7
" Av. therm.	51.5	60.3	65:3	67.6	75.5	82.3

CHRONICLE WEATHER REPORTS SUMMARY.

January.—A cold month. On the 29th thermometer at Indianola, Texas, went down to 15. On the 19th it touched 19 at Mobile and 11 at Montgomery, etc;

February.—Continued cold west of the Alleghanies. At Memphis three days snow in the first week, and excessively cold and snow at Nashville and below. Subsequently temperature moderated. The first week thermometer averaged at Memphis 23; second week, 41; third week, 42, and fourth week, 51. In the third week there was an unusual rainfall, and the rivers in Alabama overflowed, and also the Mississippi at a few points.

Murch.—Weather generally favorable for crop preparations, the rivers falling and temperature gradually moderating until the last week, when there was a cold turn again, with snow at Memphis and Nashville, and frost at Selma, &c.

April.—A good month for getting in the crop, though too cold and too dry for an early start. In the second and third weeks slight frost was reported as far down as Mobile, and some small amount of replanting made necessary in several districts.

May.—The first two weeks favorable, the fine showers doing good, except in the second week an unusually severe storm in the Galf, especially at New Orleans. More rain than necessary the balance of the month, but not to any considerable extent actually injurious until the last week, and then mostly in the lower half of the Galf States and the lower half or two-thirds of Georgia. In those sections the grass had at that time become very troublesome; elsewhere the stand secured was from fairly good to excellent, though generally backward and late in portions of the Gulf States on account of the lower temperature in those sections during the month.

June.—Too much rain this month in the lower half of the Galf States and Georgia, and in the coast counties of South Carolina and Eurough a comparatively narrow tract from Galvestin over Shreveport to Memphis. Grass troublesome in all those districts; but as the rain was

(over much of the territory named) not continuous but in the shape of showers, better progress than anticipated was made in fighting the grass. The last week in the Galf and Atlantic States weather improved materially.

Chronicle acreage report (see Chronicle, June 11, 1873), gives the weather up to June 1st in different States as follows.

Terres-Early weather cold, plant very backward in southern half of State, but less so in upper half. Since from about the 5th of May the weather has been all that could be desired. Louisiana-Early weather very similar to the weather in Texas. Since first week of May there has been a decided improvement, and in the northern half of the state up to the last of May everything was progressing favorably; southern half of State more rainy, so that in some sections quite choked up with grass. Mississippi and Alabama-Early weather better than in last two States, but since then too much rain in the lower half of the State. In the northern portions there has been much less rain, and consequently the condition at present is good. Georgia-Early weather cold and plant backward, but by last of May condition of crop good, nearly all being chopped out, the plant small but strong and healthy. South and North Carolina-Much the same report as given for Georgia. Tennesses and Arkansus-Taking whole of these States together, we should pronounce the present condition of the cotton plant good.

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report says: "Twelve months ago an increase over the previous year in the cotton area was reported in every State; an increase over that of last year is now reported in every State," * * * * The acreage cultivated will fall considerably below that planted. A cold, backward spring, causing much seed to rot in the ground, a very wet May preventing work and increasing the subsequent demand for it, and the impossibility of obtaining sufficient labor to subdue over the whole breadth sown the excessive weeds and grass consequent upon the extraordinarily wet season, conspire to make this result mevitable." * * "But it will be seen from the extracts below that very generally the weather in the last days of May was favorable, and there was a hopeful prospect that the condition would rapidly improve."

The July report says: ** * "But throughout the cotton States, for a period varying from twenty-five to thirty-five days, according to blocality, and ending between the 20th and 30th of June, the weather was wet beyond precedent." * * * "In consequence of this excess of rain and luck of labor, weeds and grass have been overshadowing the cotton plant in every State, and in almost every county reported." We add the Bureau's figures of condition for June and July since 1871.

	1477.	1876.	1875.	1874.	1873.	1872.	1871.
States.	June. July.	June.	June.	June. July.	June. July	June. July.	June.
No,th Ca. oiina. SoathCarolina. Georgia. Florida. Alabaurt. Miss ssippi. Louisiana. Texas. Arkansas. Tennessee.	31 87 89 90 92 95 90 91 91 93 38 102 31 91 01 94	$\begin{array}{c} 103 103 \\ 82 98 \\ 91 100 \\ 92 91 \\ 89 92 \\ 90 99 \\ 95 95 97 \end{array}$	$\begin{bmatrix} 97 & 99 \\ 94 & 97 \\ 94 & 101 \\ 101,102 \\ 100,103 \\ 95,105 \\ 96 & 93 \\ 90,104 \end{bmatrix}$	80 91 90 96 82 92 78 87 70 73 97 102 75 94	\$ 499 \$ 499 \$ 92 93 83 94 80 94 86 92 96 96	$\begin{array}{c c} 92 & 97 \\ 96 & 101 \end{array}$	$ \begin{vmatrix} 92 & 100 \\ 82 & 82 \\ 103 & 88 \\ 83 & 81 \\ 84 & 80 \\ 90 & 75 \\ 93 & 93 \\ 83 & 90 \end{vmatrix} $

We may gather from the above:

First.—That the start was everywhere late. April was a cold and dry month. The warm rains of the early half of May were therefore needed. Subsequently during May, and also during June, there was too much rain in the coast half of the Gulf and Atlantic States, and in large sections the plant was choked with grass. Upper half of all these States and the whole of Tennessee and Arkansas was in good condition.

Second.—The text of the Agricultural Bureau Reports, makes the condition everywhere very bad, but its figures, even for whole States, show very great differences, and are, except for Tennessee, North and South Carolina and Texas, much more favorable than for 1871; its statement also that June "was throughout the Cotton States wet beyond precedent" would seem from the official reports of rainfall to be maccurate. There was a great excess of rain at Mobile, Montgomery and New Orleans in May, and also at the two former places in June; but elsewhere it would appear that the average for the two months, though large, was by no means so extreme.

Third.—That the stand in June was good in the upper half of all the States, and in the most of Arkansas and Tennessee, and generally poor and grassy elsewhere.

The crop grown during this year, 1873-74, was (on about 11 per cent more acreage) 4,170,000 bales, against 3,930,500 bales last year.

1874.

The temperature, rainfall, number of days of rain and weather summary for the first six months of 1874 were as follows:

1	₹74.	Jan.	Feb.	March	April.	May.	June,
	Rainfall No. days rain. Ther \(\begin{align*} \text{Atzh} \\ \text{Aver} \end{align*} \)	11	4:79 11 77:0 29:0 43:1	4:26 10 7:0 2:1 4:9	5:97 11 80:0 32:0 5:2	3:97 -10 91:0 4 vo	3·19 12 10±9 55:0 77:7

. 1	874.	Jan.	Feb.	March.	April.	May.	June.
Wilmingt'n	Rainfall	5:14	6:54	3.72	2:33	5.07	2.81
••	No. days rain.	7	16	12	13	9	12
	Ther Law	73 0 19 0	74.0 31.5	30	34.0	91.2	97:5 63:0
**	Ther	50.1	48.1	17:1	62.8	70·1	80.1
Charleston.	Rainfall	3.15	10.15	3:45	2-95	5.50	3.50
**		7	1.1	10	- (9	9
	(Hi:h	6 ·0 27·0	76:0	51:0	52.0	93.0	96.)
**	Ther	27.0 1.2.1	3 ·0 51·5	40° i : 9°9	4 0 67 7	: 15) 71:4	81·0
Angusta	Rainfall	3.11	7.22	7.73	6.23	3.33	3.28
	No. days rain.	12°	11	17	13	7	8
	(igh.					95.9	99.5
	Ther $\begin{cases} L \stackrel{\text{1gh.}}{\text{ve}} \\ ve \end{cases}$	5(+2	50.5	£9:0	63.3	5 : 0 72: 5	6 v) 8 : 4
Atlanta	Rainfall	3:11	6:33	7:38	10.42	3.00	$\frac{874}{7.71}$
	No days min	3 1 1	5	10	12	2	13
	. II ch	63:0	72.0	76.0	77:0	$9 \cdot \frac{2}{0}$	95.0
	Ther	1 <)	25-()	31:0	49.0	ž()·)	70.0
	Daineau Aver	50:0~	5 9:71	57°° 2.85	65:0	78:0	8. 0
Savannalı .		$\frac{2.07}{12}$	9.71	2.89	$\frac{2.69}{11}$	$\frac{4.85}{11}$	4.85
••	No. days rain.	73.1	78.0	86	540	9.70	9.0
4.	Ther	58.0	3 .0	: 7.0	46.0	52.0	66.0
	/ vver.	53.4	5 ∴3	1.5-3	66.0	73.2	8 .7
	K dingui		7.0	1			6:55
••	No. days rain	9	10	11	13	8	27
	Ther. Low.			• ••			
	Aver.	500	55.0	61.0	67.0	73.0	82.0
	.Rainfall	1.77	6.20	7.33	9.28	1.45	3.48
••	No. days rain.		73.1	750			
.,	Thur (digh.	54.0	73° ± 3)∗0	75:0 36:0	83·0 40·0	92.0	950
•	Ther. Low.	57:0	5.0	6.0	71:0	50:0	70 0 87 0
Montgom'v	R tinfall	3.69	6:57	10.66	9.45	2.03	4.31
	No days min	6	11	13	15	7	22
,	(41121)	77.0	7 · 0 8 · 0	83.5	82.0	45.5	95.0
	Ther Lew	27:0 51:3	5.0	61.0	45.0	73.3	70.5
Mobile	Rainfall	2.14	$\frac{54.5}{2.72}$	10.57	10-92	1.23	5.69
44	No. days rain.	~ s	-9	15	15		12
	elizh.	71.0	75.0	8.0	83.0	9':0	93.0
••	Ther. Low	31:0	330	43.0	4.0	10:0	70.0
V Colombia	Rainfall	133 1368	56.7 3.68	63·3 7·57	61:3 13:62	$\frac{7.98}{0.22}$	80:1
A. Orieans.	No. days rain.	10	12	12	13.62	3	$\frac{9.62}{17}$
	(High.		7703	811.	7 20	89:0	91:0
**	Ther Stigh.		42.0	5 '0	4 .0	5 · 1 75 · 7	72.0
VI 1. 3	(Aver.,	56.0	59.1	63.3	65.6	75.7	81.3
Vicksburg.	Rainfall	5:27	3:17	9.86	22:21	0.16	3.43
	No. days rain. (High.	13	10	15	$\frac{16}{81.0}$	95:0	94·0
	Ther. Ther. Y				41:0	52.0	67:0
	/ Aver	52.3	54.0	62.5	41:0 57:7	75.4	81.9
Shrevep'rt.	Rainfall	3:51	7.58	9:27	10.61	1.19	1.35
	No days rain.	12	11	11	10	. 5	3
	Ther (High.	72.1 2 :0 50:4	76·0 3 · 0	82·0 44·0	82.0	95:0 : 3:0	63:0 96:0
	Ther low	50°4	51.6	60.5	61.0	75.2	82.7
Memphis	Rainfall	2033	4.10	6.61	10.16	0.93	82.7 - 22
	No. days rain.	6	7	7	$^{-8}$	3	(G
	(tigh						94.5
••	Ther Low Aver.	40	45.0	53.0	55.0	72.0	60°0 81°0
Nashville	Rainfall	$\frac{4}{5}.\frac{3}{2}$	9.23	5.26	11.31	1.19	2.87
**	No. days rain	19	14	19	115	7	7
	(Hizh.)						99.0
**	Ther Low.	42.3	44.5	= 1.~	54.7	20.0	60.0
Galveston	Rainfall	$\frac{12.3}{1.37}$	3.11	51·7 3·09	3.33	73:0 5 80	83.5
	No. days rain	9	10	10	8	∂ 30 3	6
	(Hgh			10		89:0	95.0
**	Ther (H gh Low Ave		1	1		63:0	73.0
tadianale	Paintal (Ave	55.0	54.0	67:0	66:0	7 '0	81.7
Indianola .	Rainfall	1:18	2·92 7	4.30	$\frac{6.71}{5}$	0.13	6.80
	No. days rain.	$\frac{6}{74.5}$	76.5	$\begin{array}{c} 14\\ 81.5\end{array}$	83:0	3 90·5	92.4
44	Ther High	140	33.0	45.0	41 0	55.0	70.0
	Thermal Lyw	55%					

CHRONICLE WEATHER REPORTS SUMMARY.

January.—The first and last weeks but little rain fell; the balance of the month there was more; generally, however, not enough to interfere materially with the marketing of the crop. Month opened cold and closed warm. The second week there were sleet and snow at Galveston.

February.-Weather seasonable, with considerable rain, but no ex-

cessive cold. Plantation work made good progress.

M. reh.—Very heavy rains this month, especially in the Gulf and Southwestern States. The Mississippi River very high, and in the third week breaks were reported in the levee on the west side below Menphis. Planting much delayed, being pashed forward under great difficulties in all that section.

Apri'.—Continue I heavy rains through the month (reaching 22 inches and 24 hundredths of an inch at Vicksburg), closing up with a frost the last of the month, from Mobile to North Carolina; the frost was rejected killing in the northern parts of Georgia, Sonth Carolina and North Carolina, making replanting necessary to some extent in the two former States, but much of the seed was not sufficiently started to be harmed. Nearly all the Southern rivers overflowed—5 of the Mississippi and its tributaries and the Alabama and its tributaries—being one of the most extensive overflows on record, the number of acres under water in the Mississippi Valley not heaving been equaled probably during the last thirty years, and did not fully subside until in June.

May:—The last few days of April the weather changed to day, and continued with but very little rain the first week of May, and in some considerable sections throughout the entire m with. For instance, the rainfall for the whole mouth of May was only 22 hundredths of an inch at New Orleans, 16 hundredths at Vicksburg, and 63 hundredths at Memphis. As a result of such prolonged drought following the excessive rains, the ground became baked and the seed could not germinate, except very irregularly; or where the plant was up it did not develop healthfully, dying out in many cases and making very imperfect stands.

June.—Weather during June was more favorable, especially the last half of the month, showers then becoming quite general. The dry weather enabled the planters to keep the fields clean, but the stands were, as a rule, imperfect, and the plant not strong and stocky. Planting in the overflowed districts not completed till after the first of June.

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report says (reporting the condition to June 1st): "The sea" son has been remarkable for heavy and frequent rains during the month "of April throughout the cotion States." * * * * * "From the first "week in May to its close drought was almost universal." * * * * * "The stand is therefore very poor, many plants not having made their "appearance on the 1st of June."

The July report says: "The cotton planters report" * * * * * "an "improvement in the condition of the plant in every State." * * * *

"As compared with July of last year, condition is higher, except in "Florida, Louisiana and Arkansas."

From the foregoing we learn:

First.—That there were all through April excessive rains, resulting in the most extensive overflows known for thirty years.

Second.—That throughout the whole of May there was

scarcely any rainfall west of Georgia and North Carolina, only sixteen hundredths of an inch at Vicksburg, and sixty-three hundredths of an inch at Memphis, &c.

Third.—That in the overflowed sections in the Mississippi Valley planting was not completed until after the first of June.

Fourth.—That on account of the excessive rains, and then of the excessive drought, the stands in a very considerable section were very irregular, imperfect and poorly rooted; and, further, that the late start in the Mississippi Valley made the crop late, and the early frost in the Fall cut the plant before it had matured.

The crop grown during this year (1874) was only 3,833,000 bales, against 3,930,500 bales in 1872, although the acreage was over 12 per cent in excess of 1872.

The weather summary, including temperature, rainfall and number of days on which it rained, is as follows for the first six months of 1875:

1	875.	Jan.	Feb.	March.	April.	May.	June.
Norfalk	Rainfall,inch.	5:89	2.95	8:00	2:24	2.29	1.38
44	No. days rain	18	10	1.0	12	8	8
	i H gh	51.0	76.0	71.0	80.0	95.0	98.5
44	Ther	14.0	9:0	250	27.0	45:0	57.0
		36.3	37:9	49.7	25.5	65.3	71.9
WilmingEn	.Rainfall,inch.	5.25	1.97	4.55	3.92	2.84	11.67
**	No. days rain.	1 🕆	9	19	11	4	12
	Ther \ \\ \text{litch.} \ \text{low} \ \text{ve}	70.0	73:0	75.0	89.0	99.0	91.0
44	Ther Low 1	51.0	15.0	25.0	54.0	43.0	53.0
		43:3	45.9	54.4	58.5	63.1	74.2
	Rainfall,inch.	7.77	4.27	6:37	4:56	8:51	3.15
**	No. days rain.)	18	10	16	10	1.)	9
	III h.	67.0	73.0	73.0	83.0	85.0	95.0
**	Ther	3):0 47:3	230	35.0	330	50.0	61.0
	7 ve]	4/3	4.123	571	60.8	71:7	75.8
Augusta	.Bainfall,inch.	6:77	5:17	11.33	4:71	1.10	6:59
	No. days rain.	17	. 9	15	10	6	1.1
**	Ther. Hgh ow.	68.0	75.0	76.0	83.0	91.0	97.0
	Ther. ow.	26:0 44:9	22:0 43:9	33·0 55·4	35·0 60·0	490 73 0	530
4 +1	Rainfall.inch.	5:60	6.92		4.79	1.84	784
Acidici		11	7	10:27	7		4:58
	No. days tain.		67:0	70:0	780	5	8
4.6	The transfer	63:0 11:0	14:0	320	35.0	0.0 95.0	93:0 63:0
	Ther, Wgh.	41:0	46.0	58.0	85.0	77:0	65.0
Sawannah	Rainfall, inch.	8:51	3.20	6.83	5:11	3.20	4.10
	No. days rain	17	9	15,	- ''3'	12	6
	. Hugh	710	89.0	81.0	810	90.0	99.0
**	Ther. , High	330	80.0	35.0	40.0	54:0	63.0
	Ave	49.7	50.7	59-2	63:5	72.9	79.4
	Rainfall,inch.	5.83	5:57	14-11	3.47	3.68	- 3·62
	No. days rain	19	8	12	٠,٠	5	8
	High	75:0	62.0	76.0	80.0	94.0	98.0
	Ther High.	33:0	53.0	32.6	40.0	53.0	62.0
	/ \ \ \	47.0	49:0	57.0	62-0	76.0	83.6

1875.	Jan,	Feb.	March	April.	Мау.	dune.
MaconRainfall,inch.	5:33	4:37	12:95	5:56	2:13	3:10
" No. days rain.	22.52	2133				
High.	70:0	78.0	79.0	89.0	5910	(5.0)
" Ther Low.	25-0 50-0	184) 56:0	30:0 65:0	3 °0 72°0	28:0 80:0	63:9
Montgom'y, Rainfall, inch.	6.71	7:33	11:56	3.51	1:57	87:0
No. days rain.	21	16	16	9	_	11
H gh.	74.5	785	78-5	86:0	95.0	99:5
" Ther	18:0	55.0	3F5	39:0	51.0	61.5
/ ver.	47.2	49.6	57.1	62-6	71.5	80.7
Mobile,Rainfall,inch.	47:2 5:79	7:15	8.3)	7:51	1.16	2.17
" No. days rain.	12	9	13	6	5	- 3
H gh.	72.0	74.0	73.0	77:0	91:0	95:0
" Ther ow.	25.0	250	37.0	41.0	50.0	63:0
/ Aver.	49.8	50.9	60.5	63.3	75:3	818
N. Orleans. Rainfall, inch.	8.14	13.85	10.81	8.05	2:53	1:9:
" No. days rain.	22	9	15	8	ς.	13
(i h.	75.0	77:0	79.0	79:5	835	92.0
" Ther { ow ,	28.5	32.2	3<.0	49.5	65.0	68.0
/ \ver.	54.3	55:9	63:5	653	7672	80.1
Shreveport Rainfall,inch.	3:93	2 67	4.01	3.16	0.51	1.73
" No, days rain.	20	11	16	11	Ď	9
Then high.	75.0	78.0	89.0	90.0	101:0	101:0
THUT, IOW.	13.0	55.0	27:0	30.0	48.0	59:0
Aver.	41.0	50.0	57.0	63:0	75.0	83.0
Vieksburg . Rainfail,inch.	5:18	7:01	11:51	5.07	1:69	-[*():
No. days rain.	16	13	17	3	91:0	12
" Ther Low	75.0	76.0	74.0	\$3:0 43:0	51:0	95°0 60°0
" Ther Low	1 (0	21:0 50:0	330 544	61:8	74:6	835
Columbus, Miss.	-15 17	50.0	014	01.0	1.4.0	(117.13
" Rainfall,inch.	8:11	11:15	7:61	6.52	1:30	8:33
" No. days rain.	7	7	13	7	. 1 i'''	~
Nashville Rainfall,inch.	6.15	3.06	8:14	4:25	2.03	5.63
	15		15	13	10	13
" No. days rain.	60:0	75:0	74:0	80:0	800	92.0
" Ther. High.	-5.	9:1	24.0	25.5	40:0	53.0
1111-111-7150	33.7	352	40.1	56:3	653	76:9
Memphis Rainfall, inch.	7:15	331	8.60	3.18	4:21	2.7
" No. days rain.	16	13	19	10	12	- 6
(H g).	68:0	72.0	79:0	81:0	91.0	95:0
" Ther, ow.	5.0	13.0	26.0	85.0	44:0	55.0
ver.	34.1	40.3	50.6	57.7	155.15	79.1
GalvestonRainfall.inch.	4.31	2.94	3:51	2.55	1.50	0.3
" No. days rain.	1:3	10	, 9		1	, 5
(Hig.,	70:0	74.0	78.0	80:0	01.0	97.0
" Ther ow.	24.0	35:0	310	48.0	62.0	15.0
/ \ver.	4 + 3	55:3	65.1	65.8	77.0	835
Indianola . Rainfall,inch	1:17	1.23	1.02	2:51	1/15	0.3
" No. days rain.	8	8	6	G	1	3
(H gh.	75.0	80.0	80.0	82.0	89.0	95:0
THOT GW.	17.0	33:0	37:0	35.0	59:0	71:0
Considers Pointalliant	40:0	56.1	63:4		2:03	0.7
Corsicana Rainfall,inch	1:98	0.76	2:33	2:26		0.4
No. Gays ram.	11	10	11		9	103.0
the Thon Inleh.	73.0	794)	86:0	33:0	93.0	1030
THEFT STOW.	3°0 36'3	19·0 49·5	21·0 55·8	61.3	72.9	79:5
Aver.	3015	49.9	20.79	0.1.9	150	1070

CHRONICLE WEATHER REPORTS SUMMARY.

January.—The whole month of January was rainy. It opened warm, sultry and wet, with heavy rain in Texas and Gulf States, becoming more severe, not only in the Gulf States, but also in the Aflantic States, closing up with ice and snow at Gulveston. Balance of the month was disagreeable, with light rains or drizzle at all points, making roads in many sections impressable.

February.—The first week the rains were light at all points, but subsequently there were heavy rains, especially in the Galf States, followed by ice and snow in the north of Texas.

Morch.—Very heavy rains in the South this month. Weather cold. In the second week there was a very heavy snow-storm, snow falling to the depth of 14 inches at Me uphis, and in the north of Texas was the hardest known for years. April.—The first week of April w s unfavorable for planting, it being quite cold, with frost near Sureveport. Mississippi River overflowed and Arkansas River threatening. Seco. A and third weeks were more favorable, although the temperature continued lower than desirable. Some, but little, replanting was necessary in portions of Texas, on account of previous frost. Fourth week the weather was satisfactory, except some severe frosts, doing, however, very little damage. There were frosts during the month at Galveston, Mamphis, Augusta, Charleston, Shreveport, Selma, Macon and Atlanta, which were killing at some places, but no material damage done, as cotton was not generally up.

May.—The early part of month was cold, but subsequently it turned warmer and more favorable, with seasonable rains, but not excessive, and the plant made very good progress, the fields being kept clean.

June.—Weather was very favorable almost everywhere, the temperature being higher and showers very general. Crop reports, therefore, were satisfactory, growth being rapid, stands unusually good, with the fields remarkably clean. A bloom was reported in Monroe county, Ala., June 8. In our acreage report on the 12th June, we state that the condition was very satisfactory. "Without doubt, taking the country "as a whole, there has not been since the war a more promising crop" than this one. The stand is as nearly perfect as possible, &c."

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report says: "In a larger portion of the cotton area, at the "usual time for planting, the soil was wet and cold in Atlantic coast districts, and in a less degree in more western areas, and germination was "relarded, but not destroyed. Afterward the weather became more father vorable for growth and the chopping-out process, with a tendency in "places to an injurious lack of moisture." * * * "The stand is much "better than that of last year, and the plants are more advanced in "growth, notwithstanding their late start, and the crop is generally quite "clean."

The July report says: "The condition of the crop approximates a full "average, showing an improvement during Jane in all the cotton States "except Texas, where the prevalence of drought in some localities, and "some local injuries by cut-worms, cotton-caterpillars and grasshop-"pers, reduced the promise of the crop 3 per cent."

From the foregoing we learn:

First—That the weather was cold in April and during the first week of May, but subsequently was very favorable.

Second—That the stands secured were excellent, the best since the war, and the fields were very clean and well worked.

The crop grown during this year (1875) was 4,669,000 bales, against 3,833,000 bales in 1874, on an acreage increased only about 6 per cent.

1876.

The temperature, rainfall and number of days of rain for the first six months of 1876 were as follows:

1876.	Jan.	Feb.	March.	April.	May.	June.
NorfolkRainfall,inch.	1:37	3.96	4.10	2.72	4:42	5:09
" No. days rain.	7 75:0	11	9	1.4	11	6
" Ther; I w.	21.0	73:0 19:0	73·0 19·0	83:5 37:0	89.0	100
/ Averal	47:7	45.0	46.5	55:3	38:0 65:7	73:0 75:1
Witmingt'n . Rainfall,inch.	0.52	3.04	4.54	12.50	$^{3.14}$	12.14
" No. days rain.	6	10	11	8	9	9
" No. days rain. " Ther \ ow	76:0 20:0	77·0 24·0	55.0	87:0 3:0	93:0 38:0	99:0 53:0
Aver	51.9	51.1	52.6	60.8	67:5	76:6
Charleston . Ramtall,inch.,	0.63	2.13	2.54		67:5 3:77	11.98
" No. days rain."	76:0	78:0	11	9	10	11
" Ther \\\ \frac{\text{II} & h.}{\text{Low}} \\ \text{Ave} \\ \text{Ave} \end{area}	28:0	31.0	76·0 25·0	850 460	88:0 47:0	97:0 66:0
Ave	55.4	54.6	Educa-	$\begin{array}{c} 64.3 \\ 4.72 \end{array}$	71.1	79.9
AugustaRainfall,inch.:	1.20	2.98	2.96		1.97	7.96
" No. days rain.	$\frac{6}{78:0}$	$\frac{12}{78:0}$	10 81:0	. 8	.12	10
" Ther Lo	55.0	25:0	25:0	85:0 42:0	95·0 43·0	97:5 62:0
/ ver	53.6	52.3	54.8	63.0	72.1	78.7
AtlantaRainfall.inch.	3.32	5 37	-5.91	6.01	5.00	3:25
" No. days rain.	71:0	9 74:0	74:0	80:0	10 80:0	93:0
" Ther High.	20.0	16.0	22.0	45.0	46.0	65.0
/ ver	56.0	51.0	55.0	66.0	75.0	80.0
Savannah Rainfall,inch,	2:39	2:21	2:71	5:74	2.25	15.50
" No. days rain.	78:0	9 80:0	80:0	9 86:0	0.46	20 99:0
Ther tow.	27:0	50.0	30.0	46.0	50:0	65:0
	56.8	56.5	58.7	66.7	74.0	80.8
Columbus . Rainfall, mch.	$\frac{4}{4}$	2:42 5	7:90	9·19 7	4.15	. 1 ~1
" No. days rain.	70.0	73.0	78.0	82.0	88:0	96:0
" Ther \ L.w	25.0	55.0	56.40	44.0	46:0	64.0
MaconRainfall,inch.	52·0 1·46	52·0 4·23	50·0 4·06	61:0 7:10	73:0 1:35	80.0
Maria Maria Maria Maria	1 40			7 10	1 20	5.88
(Hi h.)	76.0	7.0	77.0	88.0	92.0	90
" Ther) cow.	31:0 6 :0	53.0	24.0	40.0	46.0	64.0
Montgom'y, Rainfall, inch.	3.70	60:0 5:07	6 ·0 7·33	74:0 10:99	$\frac{8.0}{6.55}$	$-8.0 \\ -1.87$
" No. days rain	9	12	9	9	1.1	10
" Ther I m	77:0 27:0 54:8	79.0	77.0	89 0	92·5 46·5	99·0 61·0
" Ther Low.	54.8	24·0 54·5	25:0 51:6	45:0 65:4	73·5	79:6
Mobile Rainfall,inch.	3.14	4.32	8.01	3.43	4:33	3.35
" No. days gain,	6	11	9	10	6	7
" Ther High. ow.	32·0	75·0	76:0 31:0	82·0	89:0 48:0	63:0
\Aver.	56.6	28-0 55:3	55.8	66.5	70:0	80:3
N. Orleans . Rainfall,inch,	4:43	8.20	11.32	6.41	7:10	
" No. days rain.	77.0	16 78:0	79:0	82·5	15 86:0	93.5
" Ther High.	38.5	36.0	36.2	53:5	51:0	(55.0)
(Ave.)	60:3	59:0	59.9	69:1	74.8	80.6
Shreveport. Rainfall, inch.	$\frac{7.26}{14}$	2.68	11.67	5.83	$\frac{9.17}{12}$	2.09
" No. days rain. (High.	78:0	80.0	$\frac{14}{79.0}$	88:0	90:0	95:0
THEF. LOW.	30.0	21·0 55·0	56.0	47:0	47.0	61.0
	54.0 3.31	55.0	51:0	67.0	73:0 6:24	79.0
Vicksburg . Rainfall,inch, "No. days rain,	6	5:18	11.21	$\frac{4.89}{10}$	12	i i 7 1
(nigh.	79.0	77:0	81.0	85.0	89.5	97.0
" Ther high.	25.0	24.0	27.0	47:0	49.0	63.0
Columbus, Miss.— (Aver.	56:1	55.4	21.5	66:0	25.12	79.4
Rainfall,inch.	4.69	3.11	9:57	6.79	1:96	1:50
" No. days rain.	9	G	()	8	7	7
Little Rock . Rainfall,inch	8:17	2.56	9.05	4.02	5:96	3:71 5:76
Nashville Rainfall, inch.	5.16	5.35	5·70 11	9.56	4.94	= 5:76 = 14
" No. days rain.	73:0	5 73:0	76:0	80:0	90:0	94:0
" Ther High.	170	9:0	14.0	37.0	45.0	58:0
MemphisRainfall,inch.	17-0 47-3 7-6-5	46.5	46.6 11.03	60:5 4:51	70°3 8°19	76:5 2:70
No. days rain.	7·65 6	-1	11	6	9	13
(II gh.)	73:0	75:0	78:0	85:0	8891	97.0
" Ther Low	53.0	17:0	180	41:0	45.0	55:0
Iner Low,	47.9	48.6	47.1	63.2	70.0	77:1

1876.	Jan.	Feb.	March	April.	May.	June
Galveston Rainfall,inch.	1:49	4.79	5.91	2.65	10.27	2.63
" No. days rain.	7	8	9	- 6	8	11
(High.	75.0	74.0	76:0	84.0	89.0	94.0
Ther. Low.	43.0	35:0	36.0	55.0	54.0	70.0
/ 1/6"	60.9	60.0	61.0	69:7	76.1	82.2
Indianola Rainfall,inch.	1.30	1.89	5.86	0.35	0.35	1.1
" No. days rain,	9	9	6	2	3	9
(High.	78:0	79.0	80:0	85.0	87.0	94.0
" Ther, Low,	45.1	33.0	41:0	51.0	58.0	70.0
/ Aver.	61.2	60.0	65.8	194	75.5	82.5
Corsicana Rainfall,inch.	3.16	1.81	3.61	3.96	4.26	3.0
" No. days rain.	13	. 5	9	5	12	- 8
(High.	77:0	78.0	81.0	80.0	95.0	99.0
" Ther ow.	26.0	24.0	25.0	41.0	43.0	58.0
/ ve:	25.3	55·1	53.9	67.0	71.8	77.3
Dallas Rainfall,inch	6:19	3.05	1.82	0.84	0.83	3.5

CHRONICLE WEATHER REPORTS SUMMARY.

January.—During the latter part of December, 1875, there were heavy rains in the Southwest, and these were continued in the second, third and last weeks of January, the greatest rainfall being in the section of country marked off by taking in Dallas, Shreveport, Little Rock, Memphis and Nashville. Crop movement was interfered with in much of that district by bad roads.

February.—Rains continued in portions of the South during much of this month, but covering a different section, being chiefly confined to the lower half of the Gulf States. On the 19th our Galveston correspondent telegraphed that they had not had a particle of frost yet; oranges, figs, grapes, apples, peaches to a moderate extent still maturing.

March.—The greater portion of the first two weeks of March was favorable, with seasonable showers, and satisfactory progress was made in farm preparations. The third week was rainy, and during the following week a very severe storm passed over a large portion of the South, attended with snow. It snowed 8 inches at Little Rock; 6 inches at Columbus, Miss., &c.; and was followed by severe frosts everywhere, except in some of the extreme southern sections.

April.—Excessive rains in the West and Northwest early in the month resulted in an overflow of the Mississippi which at one time threatened to be the most disasticus ever known. There were also rains in Alabama, causing the rivers there to overflow. But the waters quickly receded, and towards the end of the month the fears had subsided, though the Mississippi had not wholly returned to its banks again. Subsequently the weather was almost everywhere favorable, and good progress was made in getting in the crops, so that the month closed with the condition good, though the start, especially in the Gulf States, was late.

May.—The weather during May was quite favorable everywhere and the plant made good progress. A limited portion of the Mississippi Valley between Memphis and Vicksburg remained overflowed till towards the close of the month. But this did not materially decrease the planting. The cotton came up well and the fields were clean.

June.—There was a very heavy rainfall at many places this month, but it came in severe local showers and did not appear to harm cotton much, as the fields began the month well worked and clean, and the rain was generally confined to the Atlantic coast. In Georgia and Sonth Carolina there was a flood which carried away bridges and destroyed wheat and corn, but not much cotton. Elsewhere the showers were mostly reported as beneficial. The month closed with good stands everywhere, though not quite equal to the condition of the previous year, as that was very perfect. Our Galveston correspondent telegraphed June 17 that "crop accounts throughout the State are surprisingly favorable,

"and, despite the late planting, the prospect is, up to this date, the best "we have enjoyed for years."

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report says: "The June returns indicate a slight reduction "of area in cotton, comparatively late planting, good stands, except in "cases of too early planting or inundation; growth not up to the average "for the season; healthy and improving condition, and clean culture, with the exceptions caused by heavy rains stimulating growth and "preventing work."

The July report says: "Cotton in the first week in July is in a condi-"tion of healthy growth—less favorable than in July of last year—well "cultivated and reasonably clear of grass."

From the foregoing we learn:

First.—That the weather early in the season was very rainy, especially in portions of the Southwest. This weather culminated in an overflow of the Mississippi and the Alabama rivers in April, subsiding rapidly, however, and almost wholly in April, though not entirely until late in May. During May good weather prevailed almost everywhere, and in June, also, except along the Atlantic coast; and even there the showers did not work much harm, as the fields in those States were in excellent condition.

Second.—That the start was late in the West and Southwest, but the fields were clean and well worked everywhere, and the stand, though not as perfect as in 1875, was yet very good.

1877.

The temperature and rainfall for the first six months of 1877 have been as follows:

1877.	Jan.	Feb.	March	April.	May.	June.
Norfolk Rainfall,inch.	3.85	1.47	4.85	9.93	2.84	4.79
" No. days rain.	1.4	5	16	17	13	17
"	73.0	66.0	77.0	83.0	86·0	£ 8.m
" Ther Low .	16.0	27.0	29.5	35.0	43.0	59.0
(Aver.	39.)	43	47-4	55.9	63.1	75.5
Wilmingt'n.Rainfall,inch.	2:37	1.65	4.25	6.61	2.36	7:48
" No. days rain.	10	6	12	11	10	13
" Ther High.						
" Ther \ i.ow .		11-1	54.4			
	46.1	45.1		6 1	64.5	16.5
CharlestonRainfall,inch.	4.14	2.96	7:86	15.00	2.71	10:31
" No. days rain.	11	8	12	12	9	12
" Ther $\left\{ \begin{array}{ll} \text{Hi h} \\ \text{Low.} \\ \text{Vyer} \end{array} \right\}$	71· 26·0	70.0	74:0	85.0	90-1	100.0
" Ther Low.	26.0	35.0	35.0	43.9	: 0.0	63.0
/ Ayer	51.2	51.7	56.8	63.0	6 8	8 .2
AugustaRainfall,inch.	-4.76	4.30	5.98	5.63	1.18	6.62
" No. days rain.	15	7	11	15	4	1
(gh	73.0	73.0	79:0	85.0	94)	
" TherLow.	200	35.0	3.0	43.0	4 .0	
/ ve	45.1	49.5	56.0	(4.1	20.3	81.7

1877.	Jan.	Feb.	March.	April.	May.	June.
Atlanta Rainfall,inch.	4.45	2.17	5.35	8:14	0.95	4.07
	13	4	7	13	6	9
* · T[: 1.	65.0	66: 1	70.0	89:0	8 .0	92.0
" Ther $\begin{pmatrix} H_{120} \\ L_{20} \\ Ver \end{pmatrix}$	10.0	31.0	24.0	46:0	46.0	60.0
	53.0	5 0	5.0	67-0	76.0	£3·0
Savannah, .Rainfall,inch.	2.63	1.71	4.25	8.82	2.01	8:51
	10	7	12	14	8	14
High.	78.0	72.0	79.0	£5·0	94.0	90
" Ther. L w.	270	35.1	37.0	42.0	48.0	₹9.0
" No. days rain. High. L w. Aver. Solumbus Bainfall inch.	54° i	52.5	1 9 1	65.1	70%	81.3
	6.80	3.59	10.17	7:96	1.00	-7.16
" No. days rain.	8	8	7	8	2	8
High.	71.0	65:0	10.0	80.0	9 0	95.0
	18:0	37·0 4:#0	35.0	46.0	49:0	6 . 0
	46.0	9:50	55.0	65:0	72.0	82.0
MaconRainfall,inch.	4.40	2.50	5.23	4.64	1.20	4.38
" No. days rain.	72.0	4.7.7.	2:55	81.0	6	66.0
" No. days rain. (High.) ow. (Ave.	16.0	70·0 30·0	74.0 24.0	42.0	$\frac{9 \cdot 0}{42 \cdot 0}$	96.0
" Ther (Ave.	47:0	4 0	53.0	51:0	6 0	80.0
(AVE.)	40.00	2.63	7.17	10.36	0.82	2.9.
Montgom'y.Rainfall,inch.	6:67	8	9		3	13
" No. days rain.	1.5 7 ·0	cs:0	76.0	82·0	94.0	995
Ther Mizh.	16.0	31.5	20.0	455	450	57.0
" Ther $\left\{\begin{array}{l} \mathbf{a} \\ \mathbf{c} \\ \mathbf{c} \end{array}\right\}$	490	52.3	5 3	614	72.0	₹0.8
Mobile Rainfall, inch.	6.30	1.40	5.94	8.40	1.68	7.07
6 Va days min	16	5	9 ./4	11	3	- '9'
" No. days rain.	70.0	72.0	76.0	83:0	91.0	100.0
" Ther	1 .0	3.0	33.0	49.0	51.0	£2.0
iner	50·1 5·30	58.4	57.5	65.9	72.8	82.8
N. Orleans. Rainfall, inch.	5 30	0.98	4.94	4.79	1.48	2.75
" No. days rain.	16	8	10	14	8	8
(High.						
" Ther } cw.						• •
Aver.	58.7	55.9	60:7	6 6	7 5	F1.3
Shreveport . Rainfall, inch.	2.84	2.48	3.87	5.42	1.24	2.53
" No. days rain.	4	-4	12	16	8	14
(righ.	72.0	72.0	83.0	8 .0	65.0	96:0
" Ther Low .	19.0	35.0	31.0	48.0	47.0	5 0
· (ve .	44.0	-2.0	58.0	65**	470	80.0
Vicksburg Rainfall,inch.	3.61	3.56	4.83	8.38	0.69	3.76
" No. days rain.	18	12	12	16	4	13
(High.	73.0	73.0	79.0	79.0	9.0	97.0
" Ther Low.	10.0	31.0	50.0	47.0	46.0	59.0
(_ve.	41.6	5.8	57:2	64.1	72.9	79.4
Columbus, Miss.—	0.00	0.01		0.00	0.74	
" Rainfall,inch.	2:22	3.01	5:61	9:22	2:51	2:33
" No. days rain.	11	.5	9	11	3	10
Little Rock. Rainfall,inch.	3.05	3.01	2.00	13.84	0.70	10.6
" No. days rain.						
igh.						
" Ther w.						
(ver.	1, 1: 2				4000	0.00
Nashville Rainfall,inch.	4.05	1:08	4.95	9:17	1.25	6:0
" No. days rain.	12	. 5	12	14	5	14
" Ther. High.	66:0	66.0		50.0	••••	
" Ther Low.	-7.0	2 .0	47-1	3S·0 (9·2	67:3	77:0
(Aver.	37.0		464	13.90		
Memphis Rainfall,inch.	4.31	1:54	4·21 17	19.90	1.81 8	18:19
" No. days rain.	17	9	1.7	17		17
igh.	69.0	67:0 30:0	79·0 23·0	80·0 40·0	92.0	94.0
There Low .	7:0 39:3			5) 3	70.5	£5.0 77.8
Galveston Rainfall,inch,	4.23	46·I 1·12	50.0 1.35	8.36	1:80	5.6
	4500 S	5		339	5	- 8
" No. days rain.	64.0	6-0	~ 5	8:0	950	92.0
Ther. Migh.	76.0	46.0	3 -0	54.0	59 0	64.0
(Aver.	50.7	56.2	65.1	68.8	4.8	81.5
IndianolaRainfall,inch.	0.91	1.58	2.71	1.61	2.20	4.8
" No. days rain.	9	7	10	6	2·20 5	8
H oh l	J	72.0		,		
" Ther: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		4~0	1	,	1 .	}
Aver.	49.6	77.0	63.6	70.1	75.3	81:0
CorsicanaRainfall,inch.	1.06	6.84	4.81	6.01	75·3 4·75	4.5
" No. days rain.	12	9	12	14	12	1.0
(High.	74.0	72.0		1	95:0	56.0
" Ther low.	1 .0	36.0			47.0	50.0
/ \ Y T.	40:0	51.3	55.1	63:5	71:3	78°6 2°6
Dallas Rainfall,inch,		2.77	2.87		4.32	

For the sake of easier comparison, we here insert the rainfall each month for the past four years.

RAINFALL FOR FOUR YEARS, JANUARY TO JUNE, INCLUSIVE.

STATIONS.		Jan.	Feb.	March.	April.	May.	June
		Inches,	Inches.	Inches.		Inches.	
Wilmington 1	1877	2.37	1.65	4:52	6.61	2:36	7:15
**	1876	0.52	3.04	4.21	5.25	3.11	1294
**	1875	5.25	1.97	4.22	3 92	2.81	11.67
	1874	5.14	6.24	3:72	2.53	5:07	2.81
Charleston		4.44	2.96	7:86	15.00	2.71	10.31
**	1876	0.63 7.77	2·43 4·27	2:54 6:37	4.93	3.77	11.98
	1875 1871	3.15	10.45	3.42	4.56 2.95	S 51 5550	3.15
Augusta	342	4.76	4:30	5.93	5:63	1.18	6987
augustu	376	1 112/1	2.98	2.96	4.72	1.97	7:90
44	1875	6.77	5.17	11.88	4.71	1:10	6.59
4.	1×74	3.44	7.55	17.78	6.23	3.44	3.29
Atlanta	1877	4.45	7.55 2.17	7·78 5·35	8:14	0.95	4.07
**	LS76 . I	3.30	5.37	5:91	6.01	5.00	3:25
44	18 <u>7</u> 5	5:60	6.92	1007	4.79	1:84	4:55
**	1 4 / 1	-3.11	6.38	7.38	10.42	3.00	7:71
		2.83	1:71		8.82	5.01	8.52
••	1876	2.39	2.21	5.71	5:71	2.25	18:80
	L ~ (1)		3:50	6.44	5:11	3.50	4.10
	1874	2.07	9.71	2385	2.60	1.85	4.35
Columbus, Ga]	1877	6.80	3.90	10.17	7.96	1.00	7:1:
	1876	4:63	2:42	7.90	9.19	4:15	1.81
VT	875	5.44	5:57	11.11	3.17	3.68	3.65
Macon	346-1	$\frac{4.40}{1.46}$	2 20 4:23	5.23 4.06	4.64	1.20	4.39
**	1876 1875	5:33	4:37	12.95	7·10 5·56	2:13	3:16
	874	1.77	6.80	7:88	9.26	1:45	3.1
Montgomery		6.67	2.68	7:17	10 36	0.82	2.91
**	1876	3.70	5.07	7.33	10.99	6.55	1.8
•• (1	1975	6.71	7.86	11:56	3.54	1.67	1.91
	874	3.69	6.57	10.66	9.45	2.03	4.31
Mobile1	877	6.30	1.40	5.94	8:10	1.68	7.07
]	L×76	3.14	4.32	3.01	3.55	4 33	5.35
••	1875	5.79	7.15	×:39	7:51	1.46	2.15
••	1×71	2·18 5·30	2.72	10:57	10.92	1.23	5.69
New Orleans1			0.93	1.94	4.79	1:18	2.77
	1376	4.43	5.20	11.32	6.11	7:10	6.20
	1875 1874	8-11	13:85	10.37	5.05	2.53	4.95
27	5/4	1.63	3.68	7:57	13.62	0.22	9:62
Shreveport 1		$\frac{2.84}{7.26}$	2.43	3:87	542	1.24 9.17	2.55
	1576	3.93	2.63 2.67	11.67 -1.94	5.≅3 3.46	0.01	1:79
	1875 1874	3.22	7.53	9.27	10.64	1.19	1:35
Vicksburg	344	3.61	3.26	4 33	3.35	0.69	3.70
vicksmirg	376	3.31	5.13	11.21	4.89	6.21	1.7
	\$75	5.18	7.01	11:51	5.07	1.69	10.
" j	874	5.27	3.47	9.86	22.24	0.16	3.43
Columbus, Miss1	1877		3.01	5.64	9.22	2.51	2:33
1	l 876	4.6.)	3.11	9.57	6.79	4.98	1.86
" 1	L×75	8.14	11:45	7:61	6:52	1:30	8.39
Little Rock1	[877]	3.02	3.01	2.90	13.41	0.70	10.64
	S76	8:47	2.56	9.05	4.02	5.96	3:71
Nashviilel	77	4.05	1.08	4.95	9.47	1 25	6.07
,,	876	5.16	2.32	5.70	2.36	4.91	5:70
	1875	6·15 5·22	3.06	8:14	4.25	2:03 1:49	5:63 2:87
Memphis	871	4:31	9.23	5°26 4°24	11:84 13:90	1.41	15:17
stempus	376.	7.65	1:33	11.03	1551	\$-19	49.74
	875	7.15	3.31	5.60	3:18	4-21	2.7
44	371	5.44	4.10	6.61	10.16	0.63	5.65
Galvestoni	877	1.53	1.12	1:35	S:36	1.50	2.65
44	S76	1.19	1.4.79	5.94	2.65	10.27	$-\frac{5}{2}$ 6:
**	87.0	4:31	2:94	3.51	2.55	1:50	0:59
"	1874	1.37	3.11	3.09	3:33	5.50	1.65
Indianolai	1477	0.91	1:5×	2:71	1.64	2.20	4.51
indianolai	1876	1.30	1.89	5.86	0.32	0.32	1.19
	1 7 (.)	1.14	2.23	1.02	2.51	1.45	0.35
	1871	1.1 <	2.92	1:30	0.74	0.15	(5.~()

CHRONICLE WEATHER REPORTS SUMMARY.

January.—The weather during January was unprecedented for severity, it being extremely cold all through the month, with heavy snow and rain at very many points, interfering with the movement of the crop and making the roads impassable. Snow fell to the depth of several inches at Shreveport, and ice formed three inches thick. Killing frosts were reported from Texas and Florida. The snow in the northern part of Texas was eighteen inches deep, the heaviest ever known at that point. The cold was especially remarkable in the Southwest; the thermometer at Little Rock fell to 4 degrees below zero. Ice and frost were general. There were also very heavy rains in some sections later in the month.

February.—Weather seasonable and warmer, with light rains through the month. Ploughing and other preparations made good progress, and an early start was anticipated, especially in the Southwest. Ploughing was slightly retarded by rains in upper Texas the latter part of the month, and at Dallas by frost. Hatching out of grasshoppers was reperted

from Texas and caused considerable anxiety.

March.—Weather fairly favorable during the month. The rainfall was quite large in the Atlantic States, reaching at Columbus, Ga., a depth of 10·17 inches. Grasshoppers were still very abundant in Texas, and caused considerable uneasiness, but very little harm had been done. There were killing frosts during the month at Corsicana, Dallas and Mobile, but no harm done. Ice in Alabama and Corsicana, and snow at Little Rock. Cold interfered a little with progress in Mississippi and Arkansas. Work generally well advanced, and crops made good progress. Month closed warmer.

April.—The month opened with seasonable weather and farm work well advanced. After the first week heavy rains were very frequent, causing a suspension of planting in upper Mississippi, Arkansas and Tennessee. At Columbus, Miss., the lowlands were under water, and from Alabama and Tennessee also came reports of lowlands submerged, and damage was feared by overflow of the Mississippi and tributaries. The last of the mouth the grasshoppers in Texas took wing and commenced migrating northwest. The conditions towards the close were generally favorable in the Atlantic States and Alabama, and lower half of Louisiana and Mississippi. The heaviest rainfalls of the month were at Charleston, 15 inches, and Montgomery 10°36 inches. Also a severe storm at Galveston.

May.—The first two weeks of May continued rainy, but much less so than during April, with temperature somewhat higher, though too low at some points. During the remainder of the month the weather was decidedly more favorable, there being very little rain, but the erop was everywhere at least two weeks late. This dry time gave good opportunity for chopping out, and our correspondents generally reported the fields well cultivated and the plant developing promisingly, though small and backward.

June.—The month of June was showery everywhere, with very heavy rains at a few places. Memphis reported thirteen inches and forty-four hundredths on the 8th and 9th of June. It proved to be quite local, however, and crop reports continued increasingly favorable funtil towards the close of the month, when some sections began to complain of too much rain. The Arkansas River overflowed the first of the month, covering a very considerable section, but receded, and the land was again planted, though late.

Cironicle acreage report for June 10 says (see Chronicle, June 23): "Generally speaking, the crop is everywhere, except in the lower half of "Texas, more backward than last year, say from ten to twenty days.

"That, however, is, we think, the only unfavorable circumstance in the "present surroundings, outside of North Carolina, a part of South Carolina, and the flood in the Arkansas Valley. Excluding these limited sections, the plant is almost everywhere strong, healthy, unusually clean, "and well cultivated, though small, but growing vigorously since the "late rains."

FROM THE AGRICULTURAL BUREAU REPORTS.

The June report (for the month of May) says: "The condition of "cotton was lower in June than at that date in the two past years, "but higher than in 1874." * * * * * * "In a word, the season "has been too cool for cotton, too wet at the time of planting, and too "dry since in all of the area except Texas. The plant is now gener-"ally small, but healthy, free from weeds, and in condition to improve "rapidly with favorable weather."

The July report (for the month of June) says: "The July returns, "covering an area of 361 of the best counties in the cotton belt, and "representing six-tenths of the entire production, indicate a general "condition represented by 93 4-10—four per cent less than the July "condition of 1876, and seven per cent better than the returns of 1873 "and 1874."

From the foregoing we learn:

First—That the early season was cold and rainy, and the seed was, in general, planted late; that the crop was two weeks late in starting. Good weather in May gave opportunity for chopping out, so that on the first of June the fields were clean and well worked, and the showers in June, though very heavy at places, were more local than usual and developed the plant, while sufficient time was found to keep the weeds down.

Second—That the stand, though late, was at the same time very satisfactory, with the fields almost everywhere well worked and clean.

DEDUCTIONS FROM THE ABOVE STATEMENTS.

We have, in the above, brought together all the important details of weather and crop development during the first six months of each year since 1870. For the earlier portion of this record some of our data are less full than for later seasons, but they are all sufficiently complete to illustrate the importance of special conditions in the cultivation and growth of the cotton plant. The account we gave, in the opening of this chapter, of the habits of the plant and modes of cultivation, prepared us for the results

which are here made evident. A growth so tender in its early life showed that it required careful working and watching, and favorable conditions every way until it had safely passed its younger days, to bring out its highest capabilities. If the reader will recall the trials from seed to stand, enumerated in previous pages, and interpret each season's weather record, given above, in the light of those facts, the connection between those conditions and the final results will be easily and clearly understood. To see, however, just where our facts lead us, let us recapitulate the leading features of the planting and germinating season each year.

1871 April was more favorable than the last half of March, the whole of March being cold and rainy. May very cold and rainy, except Texas, where there was very little rain. June very rainy every-

where, except a portion of the interior.

1872 April very favorable, except the second week, when there was a severe storm, making the rivers overflow. May, first three weeks too dry, but the last week splendid showers everywhere. June, fine month for growth and cultivation. The last week some complaints of too much rain.

1873 April cold and dry. May, first two weeks favorable everywhere, but last two weeks rainy, more especially in coast half of States. June, too rainy in about same half of the Atlantic and Gulf States, but upper half, and almost all of Arkansas and Tennessee,

favorable

1874 April, like March, was very rainy. All rivers overflowed. Worst flood for 30 years. May, a severe drought in almost all the South, except Atlantic States. June, more favorable, especially last half of month; but planting in the flooded district of the Mississippi Valley and its tributaries not completed till after June 1st.

1875 April, like March, was all of it too cold, especially the first week; otherwise the month favorable, the temperature gradually moderating. May continued cold first two weeks, but subsequently was warmer and otherwise very favorable. June, fine growing

weather nearly everywhere.

1876 April, excessive rains in the Western and Gulf States early part of month, causing rivers to overflow, but they quickly receded in good part; last twenty days generally favorable. May very favorable almost everywhere, except heavy local showers at few points; fields well worked. Junc, some very heavy showers, but almost wholly confined to the counties near the Atlantic coast; elsewhere favorable.

In connection with this summary of the weather conditions for the months named, let us bring before us in concise form the results as to each crop. We omit from

this table, as well as from the previous statement, this year's record, as the actual yield is still a matter of estimate.

Year	Stand.	Acreage Planted.	Total Crop.	Yield pe Acre.
1870	Plant well acvanced and stand excellent. Fields clean.		4 352,000, 37 94 p. ct. increase on 1869.	191 lbs
1871	Start carly, but stand very poor. Fields grassy. Plant weak and siekly.	8,911,000, 10.75 p. ct. decrease on 1870.	2,974 000, 31.66 p. c. decrease on 1870.	147 lbs.
1872	Start about average date. Stand very good. Fields well worked and clean. Plant strong.	9,780,000, 9.75 p. ct. incr ase on 1871.	3.930,500, 32:13 p. ct. increase on 1871.	177 lbs.
1873	Start was late. Stand was good and fields clean in two-thirds of the South; in the other third, poor and grassy.	10.816,000, 10.59 p. ct. increase on 1872.	4.170,000, 6.09 p. ct. increase on 1872.	169 lbs.
1874	Start late everywhere, Stand generally very ir- regular and imperfect, and in the Mississippi Val- ley very late. Fields clean.	10,982 000, 1.54 p. ct. increase on 1873.	3 833,000, 8 08 p. ct. decrease on 1873.	154 lbs.
1875	Start at first late, but sub- sequent progress rapid. Stand excellent—the best since the war. Fields clean and well worked.	11 635,000, 5:95 p. ct. increase on 1874.	4,069,00 . 21.81 p. et increase on 1874.	177 lbs.
1876	Start late in West and Southwest, out elsewhere early. Stand very good, but not quite as good as last year. Fields generally clean and well cultivated.	11,500,600, 1·16 p. ct. decrease on 1875.	4,485,000, 3.94 p. ct. decrease on 1875.	171 lba.

This table is very interesting. Of course, until the weather data and progress of the plant during the subsequent six months have been similarly analyzed, we cannot fully read the lessons of the record before us. Yet, even now, we can see that there is a wonderful coincidence between a stand gained and a yield secured, the former being apparently a guaranty of the latter. We can imagine, however, that the conditions subsequent to June might be such as to destroy this guaranty. All that can be absolutely affirmed at this point in our inquiry, is, the subsequent conditions never have been sufficiently unfavorable during the years covered by our record; on the contrary, there is a constant

and remarkable relation each season between the final yield and the reported stand. For instance:

- In 1870 when the STAND was *perfect* an *increase* in the acreage compared with the previous year of 13:90 per cent gave an *increase* in the yield of 37:94 per cent.
- In 1871 when the STAND was poor, sieldy and grassy, a decrease in acreage compared with the previous year of 10.75 per cent gave a decrease in the yield of 31.66 per cent.
- In 1872 when the Stand was rery good, an increase in the acreage compared with the previous year of 9.75 per cent gave an increase in the yield of 32:13 per cent.
- In 1873 when the Stand was two-thirds *good* and one-third *poor*, an *increase* in the acreage of 10:59 per cent gave an *increase* in the yield of 6:09 per cent.
- In 1874 when the STAND was irregular and imperfect, but clean, an inercase in the acreage of 1.54 per cent gave a decrease in the yield of 8.08 per cent.
- In 1875 when the STAND was excellent, an increase in the acreage of 5.95 per cent gave an increase in the crop of 21.81 per cent.
- In 1876 when the STAND was rery good, a decrease in the acreage of 1·16 per cent gave a decrease in the crop of 3·94 per cent.

But we shall gain more light on these points in subsequent chapters; and before dwelling longer upon this feature of the earlier growth, it will be desirable, perhaps, to bring out in the same manner the later development.

CHAPTER VI.

SUMMER AND FALL GROWTH.

JULY TO DECEMBER.

Formation of the bud, its shape, etc.—The blossom, changes in color, when it shuts and falls—Formation of the boll—Habits of the blossom and plant in relation to the sun—The roots and their growth—The tap root and what develops it—Definition of bottom crop, middle crop and top crop—Cotton enemies, lice, rust, shedding, boll worms, caterpillars, etc.—Number of bolls to make a pound of lint, etc.—Weather data from July to December, 1570 to 1877—Date of killing frost and end of picking season in each State—Explanation of influences affecting each crop, from seed to picking, etc.

We have next to consider the summer growth of cotton, in conjunction with its later progress and ingathering, that we may know the precise effect on the crop of each successive condition, and may measure accurately the relationship between the earlier and later development.

When the cotton plant is about twelve inches high it begins to throw out limbs, with leaves about four inches apart, having at every joint a form, square or shape;—all these names being used for what is really the bud. This bud, on its first appearance, is triangular in outline, with three leafy bracts on the outside, the same green leaflets so often found in the lint, being carelessly picked off with the cotton. The blossom opens after sunrise in the morning, pure white, with three petals, being not unlike the hollyhock in appearance, though

more delicate. It begins to close at about two o'clock, when a pale-rel streak may be seen running up each petal, and at sundown it is wholly closed. The next morning, at about sunrise, it is again open as fresh as ever, but, instead of being white, is now a beautiful pink. It lasts the day out, but with the setting sun again closes.—this time, however, wilting and falling off, leaving at its base a little boll about the size of a small bean.

Cotton is truly a sun plant. Cloudy, rainy, wet weather is, at every stage of its growth, undesirable. Thus we see the blossom opening and shutting with the sun;—a very necessary provision, for if dew or rain falls into it, a gluey substance forms at its base, which makes it stick to the boll, and it all rots together. The whole plant also shows its nature and its longings by turning even its green leaves toward the east in the morning, and following the sun in its course, until they face the west as it sets; and then they droop, as if the day's work were finished, and nothing remained but to rest and await the coming of the sun again. With its long tap-root deep in the ground, it flourishes even when the weather is so dry as to be very harmful to most other vegetation; and after its limbs are grown so that the whole ground is well shaded, it becomes even better able to endure prolonged drought. Yet through the summer, showers are very needful to secure the full fruit-bearing capacity of the plant, that the development of fruit may be rapid and uninterrupted after the blossoms once begin to set. About six weeks are required for the little boll, which we stated was found at the base of the flower when it dropped, to mature and open, ready for picking, the general rule being, during summer and early fall, from square to bloom three weeks, and from bloom to open boll six

weeks. The cotton usually planted (the green seed or short staple) displays in each boll, when it opens, from four to five separate locks of the staple, though some descriptions show from eight to ten. Sea Island (the black seed or long staple) has a much larger stalk, fewer and smaller bolls, with three locks, and a light-yellow blossom, never changing. Of the green-seed cottons there are many kinds, some of them very prolific in the production of bolls, but for good reasons their cultivation has not extended.

The terms of bottom crop, middle crop and top crop are in common use. To some minds they convey the idea of distinct and separate growths. They are, however, only imaginary lines. We may define them pretty accurately by saying that the bottom crop is produced by all the blossoms that come before or about the 20th of July, and if the crop has a gool, strong, clean start, this is always a full one; the middle crop is the portion which blooms subsequent to that date and up to about the 1st of September, and is frequently shortened by longcontinued drought, and this is especially so in seasons when the stand was grassy and poor; the top crop is the portion that blooms after September 1st, and is often cut off by an early frost or wholly destroyed, with a portion of the middle crop, by the caterpillar. Of a good year's full production, we may call the middle crop one-half the total vield, and the top and bottom crops one-quarter each.

Many are the enemies of the cotton plant during the summer and fall months. First are the lice, which come upon it when it is from twelve to twenty-four inches in height; they cover the plant entirely, and temporarily stop its growth, sometimes killing it, but not often. At a later period is the disease called the rust, or, more properly, the blight. Its nature apparently is not clearly under-

stood, as people account for it in different ways. General Toombs, whom many call the best planter in Georgia, says "rust means poverty." Others claim that a want of moisture and an excess of moisture are both at times its However this may be, its effect is to make the plant drop its leaves, and the fruit withers and dies. Generally the damage done from this cause is not serious being less than reported under the influence of the fears it excites; vet there have been occasions when the injury was great. Next comes shedding; this is the same thing that always happens to every kind of fruit-bearing tree or plant, when fruit forms in excess of its strength to ripen. Not more than a half to two-thirds of the blooms make cotton. It would be impossible for the plant to mature them all, as a square forms at every joint on every First, many of the buds fall; next, some die while blooming; then the bolls drop at all stages of develop-This is a natural and healthful mode of relief for the over-burdened plant. Of course, very frequently the shedding is in excess of the necessities of growth, as, for instance, when a long wet period is followed by an unusually dry time. But the harm done even then, is seldom as serious as imagined, though the occasions when it proves very serious are just frequent enough to make the "scare" always effective.

It is evident from this brief description, that all these disorders would attack much less virulently a vigorous, firmly-rooted plant, than one which, although apparently healthy (for so long as it has moisture enough it may grow luxuriantly), has less vigor because less depth of root. In our previous chapter we have shown that rain and grass in May and June prevented, or at least discouraged, the full growth of the tap root and induced a larger development of surface roots. This is only the common

course of nature. The object of the tap root is to obtain moisture. When the ground is full of it everywhere, there is no need for deeper growth; the causes which necessitate it are not present; hence it does not develop fully. This same habit pervades all vegetable life, and even may be observed in trees grown in swamps, the excessive moisture resulting in great increase of surface roots and very little root lower down. We readily see that such a tree or such a plant never can be strong to resist disease, and especially such diseases as are intensified by the heats and droughts of summer. A study of the seasons and of the trials cotton passes through every year, will, we think, be much simplified if we keep in mind the fact here illustrated.

But of all scourges cotton endures, none equals in destructive force the ravages of the caterpillar. We must not confound this pest with the boll worm. The latter is a small worm that cuts a hole in the boll itself. As one worm, however, is said by some to destroy only one boll, and the worms are never very numerous, they cannot be very injurious. The caterpillar or army-worm, on the other hand, has an appetite which is never satisfied, and destroys every green thing, sweeping through a planta. tion from one end to the other in an incredibly short space of time, leaving not a leaf, nor a small boll, nor a twig behind. Their first appearance any season, is the very last of June or in the early days of July. When fully grown they are about one-and-a-half inches in length and as large around as an ordinary lead pencil. As soon as hatched they begin to eat and continue to eat until they web up. In a few days the moth is out again, lays her eggs and dies. The successive broads follow one another at intervals of from three to four weeks, and it is only when they have reached the third generation that they are

sufficiently numerons to wholly strip the leaves from the plant. Then they become an army, indeed, and well deserve the name, for they leave absolute desolation behind them, and can be gathered up by the bushel. In case they come in full force as early as the tenth or fifteenth of August, they are very destructive to the crop. When, however, it is not till the first of September that they appear as an army, their power for evil is much shortened, though still great.

Fortunately the caterpillar does not flourish in all kinds of weather. Every year they are to be found in the cotton fields, but they never multiply largely except in rainy seasons. A wet July and August are pretty sure to fill the fields with them. Experience, however, would seem to teach that even caterpillars never make as thorough work when the spring start and stand are perfect. There may be several reasons for this. In the first place the more natural and healthful the early growth is, the more abundant the early crop must be, and, as the caterpillar eats only the leaves and young fruit, in such case there are more bolls matured, and hence more left uneaten. Then again any shrub with a good root may be cut, bruised, eaten off, and yet give it favorable weather and it will send out a strong new growth bearing fruit, while under similar circumstances a less sturdy weed would die. But whatever the reason or reasons may be, the fact remains that a plant well started in the spring never suffers so fatally even from caterpillars' visits, as one that had an unfavorable beginning. They are very destructive always, but fairly extinguish a weak plant.

In this connection it will be of use to remember that a good crop can be made off of fewer bolls to each stalk than many imagine. About three hundred full bolls, such as an average season produces, will turn out a pound of lint,

Hence if on the poor soils there was a plant in every three square feet, and nine well-developed bolls on each plant. the product would be about a bale of cotton to the acre.* Of course, there never is a good plant to every three square feet, so the proposition is defective: but it at least serves to illustrate the possibility of some recovery in a strong plant, if so small an average of fruit produces in the aggregate so much; also it explains why the farmer after telling us, and honestly too, that all was lost by shedding—because he saw so many bolls upon the ground often wakes up subsequently to find, perhaps hidden away beneath the leaves, bolls enough to surprise even his practiced eye. Before, however, pursuing this thought further, it is necessary to analyze the weather data during the summer and fall of the years covered by our previous inquiry.

1871.

For the last six months of 1871 the monthly record of rainfall and weather is as follows:

RAINFALL.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Caarleston				4.76	4.09	3.07
Angusta				1.62	7.78	4.9
Savannah	3.86	18.01	6:42	3.55	2.22	1:59
Atlanta		6:49	4.41	2.09	3:10	3:36
Montgomery		6.00	2.10	0.23	5.80	3.00
Mobile	1.24	2.71	3.95	5.33	6.68	1:34
New Orleans	6:12	8.61	6:98	9.09	7:14	1:40
Shreveport					3 0 1	1.36
Memphis			3.35	4.01	2.23	1.65
Nashville				1:31	2.13	1.6
Galveston	9.43	4:32	3:66	17:81	5:67	2.40

CHRONICLE WEATHER REPORTS SUMMARY.

July.—During this month the weather everywhere was extremely favorable, except a drought in Texas and an excess of rain at New Orleans; consequently cultivation and growth progressed satisfactorily and crop accounts greatly improved. The rains at New Orleans were confined almost wholly to the immediate coast. From the interior of Texas complaints of drought continued.

August.—Very heavy rains the fourth week of this month (from the 19th to the 26th) at Savannah, Charleston and Wilmington, but did not extend inland; on the contrary, a want of rain was complained of at

^{*}Taere being 43,560 square feet in an acre, one plant to every three square feet would give 14,520 plants to the acre; 9 bolls to a plant, therefore would make 130,680 bolls; which divided by 300 (the number required to yield one pound), gives the result—135 pounds to the acre.

almost all other points (except in the immediate vicinity of New Orleans), accompanying shedding and rust.

September.—Texas injured very materially by the continued drought. Some counties scarcely any rain from May to the middle of September. Heavy rains along the Gulf and Atlantic coasts, but generally quite local and not extending inland, except in the Atlantic States. The Sea Islands of Georgia and Florida reported greatly injured from the rains and wind of August and September. Frost, but not a killing frost, at Memphis and Nashville, September 30.

October.—During the first week of October a very severe storm, beginning in the Gulf and decreasing in violence, passed up the Atlantic; was not felt far inland. The remainder of the month the rainfall was generally small, except in the vicinity of Galveston and New Orleans. Cold weather on the 12th, with slight frost over a large portion of the South; we see it mentioned at Montgomery, Mobile, Columbus, Macon, etc., but everywhere stated to be of no importance.

November.—Slight frost at Galveston Nov. 4. A killing frost and freeze on the nights of the 15th, 16th, 17th and 18th over almost the entire South, entirely destroying vegetation. Snow fell at many points—at Nashville, for instance. Picking generally finished before the close of the month, except in Memphis district and in the neighboring sections.

December.—Fall of snow at Memphis, ten inches deep, on the last day of November. On the 7th and 8th killing frost in Northern and Middle Texas, and very cold all over South; for the week ending December 8, average thermometer at Memphis 31. Last half of month weather much more favorable and less severe.

FROM THE AGRICULTURAL BUREAU REPORTS.

From the August and September reports, issued as one: "There are "reports of injuries by the boll-worm and caterpillar, mainly in Missis-sippi and Loiisiana, but no evidence that a general or very serious loss "from insects is probable. Rust is common in the Atlantic States and, to some extent, on the Gulf coast. Drought has been injurious in the "Carolinas and in Texas, though the reports of rainfall through the "South indic ite a fair supply of moisture, the distribution of which has "been somewhat more unequal than usual."

From the October report: "The cotton returns are no more favorable "than those of the preceding month. * * * * The injuries reported "are from rust, shedding of bolls prematurely, sufficiently low temperature to check the development of bolls in more northern latitudes, "floods and immulation in Florida and Georgia, sprouting or rotting of "bolls from rains, drought in some sections of Georgia, and the boll and "army worms in portions of Mississippi and more western States. It "does not appear that the losses from insects are general or very scrious," with a few isolated exceptions. Drought should be credited with a "larger proportion of the depreciation than any other assigned cause, "notwithstanding the fact that cotton endures lack of moisture better "than any other crop."

From the November and December reports, issued as one: "The "November returns relative to the condition and yield of the conton" erop indicated a larger product than was expected in O tober, promising fully to make good the moderate expectations of July and "August. There were no killing frosts up to the date of these reports, " * * * The cotton returns received in December are similar in tenor "to the November reports, fully sustaining the moderate promise of "improvement upon the somewhat gloomy views in October, Yet the "change in condition is not so marked as to modify materially the prosupect foreshadowed in the monthly reports for July and September,

"except that the growing season has been from seven to tend tas longer "than the average of seasons, increasing the erop prospect at least " 200,000 bales."

From the foregoing we learn—

First.—That July was generally very favorable; that August was also favorable, except—(1) a severe storm along the Atlantic coast, not extending far inland; (2) a severe drought in Texas; and (3) severe shedding and rust almost everywhere, the latter the result of too little rain, although the records show that there was no want of rain, and the Agricultural Bureau says. "the reports "of rainfall through the South indicate a fair supply of " moisture."

Second.—That the picking season was entirely satisfactory.

Third.—That the short crop of this year can therefore only be accounted for by the fact that the stand was defective, grassy and sickly, and, as a consequence, poorly rooted; so that when the ordinary summer weather came, although the plant looked well, it succumbed and dropped its fruit under conditions of weather which to a vigorous plant would have been satisfactory.

The weather record, rainfall, &c., were as follows for the last six months of 1872:

1872.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
WilmingtonRainfall	5:54	11.15	_3.22	2.83	3:37	4.10
" Av. therm. CharlestonRainfall	$\frac{83.6}{2.30}$	80°8 7°81	75.7 7.88	$\frac{62.4}{4.21}$	$\frac{51.7}{3.40}$	$\frac{41.5}{2.46}$
" Av. therm. AugustaRainfall	81·1 6×7	81.8	77.8 1.33	64:8 1:36	53 ≺ 3·90	45°8 3'48
Atlanta Rainfall	$\frac{81.0}{3.91}$	80.0 5.84	75:0 2:26	62:0 0:74	48.9 2.12	41.7
" Av. therm. SayannahRainfall	4.36	12:31	 18:52	3:35	2.43	2-29
" Av. therm. Montgomery, . Rainfall	83.0 10.50	84:0 2:30	76·0 3·65	64.0	54 0 5:73	46.5
MobileRainfall	13:37	1.69	2 15	63.3	50·2 5·65	45.5 3.70
" Av. therm.	80.7	81.2	77°G	65 6	54.0	47.9
New Orleans., Rainfall " Av. therm.	$\frac{6.43}{82.1}$	3:75 82:6	$\frac{2.10}{79.3}$	3:18 68:4	$\begin{array}{c} 7.43 \\ 57.4 \end{array}$	51:4 51:4
VicksburgRainfall Av. therm.	$\frac{2.11}{83.5}$	$\frac{0.49}{84.6}$	0:72 79:7	$\frac{1.74}{65.1}$	$\frac{1.85}{51.3}$	$\frac{10.44}{45.0}$
ShreveportRainfall " Av. therm.	$\frac{1.62}{84.0}$	815	2:91 78:6	3·41 65·5	1°39 50°0	$\frac{703}{420}$

1872.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Memphis Rainfall Av. therm. Av. therm. Nashville Rainfall Av. therm. Galveston Rainfall Av. therm. Indianola Rainfall Av. therm. " Av. therm.	83:0 4:90 79:6 0:34 85:6 1:49	0.54 81.0 1.65 80.5 2.63 84.9 2.84 83.4	3:62 73:0 4:50 71:7 2:33 82:1 0:81 81:5	3·23 59·0 1·58 58·5 1·86 71.9 1·32 71·5	1:67 44:0 2:25 42:8 7:98 58:2 1:72 57:5	3:4 34:0 2:4 33:9 5:3 51:4 6:5 50:3

CHRONICLE WEATHER REPORTS SUMMARY.

July.—Very heavy rains this month, especially during the second and third weeks, over about one-half the South. They were most severe in Atabama, the lower half of Louisiana and Mississippi, and about a third portion of the Atlantic States; our Selma, Montgomery and Mobile correspondents speak of the great damage done by the overflow of the Alabama, Bigbee, Warrior, Coosa and Tallapoosa rivers and their tributuries; other sections also complained of damage from rain, but the better weather the last of the month relieved the fears. Caterpillars are reported from Alabama and a few other points, but no damage as yet.

August.—Complaints of damage by caterpillars in Montgomery district and fears expressed elsewhere, but all the wet section during July was comparatively free from rains during August, so that the caterpillar scare grew less threatening, except in that portion of Alabama through which the Schna, Rome & Dalton Railroad passes, and a few other limited sections, where considerable damage was done. In August there were very heavy rains in Georgia, North and South Carolina, far more severe on the coast, however, than inland; but from all parts of those States, and also from some other districts, injury from shedding and rust was reported.

September.—Our Mobile and Montgomery correspondents telegraphed the first week of September that the rains, the flood, the caterpillars, and the rust have worked with pretty severe effect on the cotton plant, in some portions of the State leaving very little. Damage from same causes also reported from Mississippi and parts of Georgia; and from the Menaphis district in the same week our correspondent stated that by reason of drought, rust and worms the crop in that section would be one-fourth less than anticipated August 1st. Unfavorable estimates of the yield continued to be received later in the month, but the weather was fairly favorable for mituring and gathering the crop.

October.—Weather everywhere fairly favorable for picking, and good progress made. A frost, but not a killing frost, except at Memphis, reported as low down as Mobile during week ending October 19.

November.—A cold month, particularly in the Gulf States, with considerable rain in the same sections; but picking progressed favorably, though only moderately fast. The horse disease (epizootic) prevented free marketing of crop from September to December.

Descember.—Considerable rain in sections and weather cold through much of month, and closed very cold, with snow and sleet over a very considerable portion of the South.

TROM THE AGRICULTURAL BUREAU REPORTS.

Angust and September reports in one.— The county reports of the "condition of cotton are less favorable in September than were the "returns made in the earlier part of the season. Vigorous growth, stimulated by fertilizers and sufficient moisture, characterized the fields of the Atlantic States up to the season of the first picking, and gave "promise of unusual fruitfulness. The plants were in many fields too "stocky and succulent to withstand well the recent local droughts or to

"endure the draughts upon vitality consequent upon the maturing of "their heavy burden of bolls, causing forms to drop and young bolls to "wither. In exposed bottom lands where sudden and heavy rains "occurred, damage by flooding resulted. While a few reports allude to "the presence of insects injurious to cotton, losses from that cause, in "all the States east and north of Alabama, are less than usual. Local "droughts of considerable severity have prevailed for several weeks in "portions of the territory west of Alabama, while a sufficiency of "moisture has been reported of the Atlantic States, and in many places "an excess of rain is observed. * * * * * Thus the prospect "throughout the entire cotton area, which favored (August 1) a yield 5 "per cent larger than an average product, promises at the present time " (September 1) 9 per cent less than an average,"

October report: "The weather has been generally favorable for "picking. No violent storms are reported, and drought has not pre-"vailed, * * * The devastations of the caterpillar have extended "farther north, even into North Carolina, and have involved the top "crop partially and in many places wholly. The influence of drought "in the later summer months has been cumulative in its effects, and "exhausted vitality is more apparent than in September; yet there are "districts which report exemption from this premature decay, and

"promise enhanced results."

November and December reports in one.—"The present may be classed "with the unpropitious seasons for cotton production, but it is not a "more unfavorable year than the preceding one. It has been pro-"ductive of somewhat less than average results, not from the failure "of the stand of plants nor from excessive cold and moisture in the but from the wide prevalence of insect depredations "and from local droughts of more or less severity. * * * The weather " has been fine for picking."

From the foregoing we learn—

First.—That July and August were much more rainy in certain districts than July of the previous year, and that the drought of August, 1872, was more severe over a large section than the drought of August, 1871, the rainfall at Vicksburg for August, 1872, being only fortynine hundredths of an inch, at Shreveport forty hundredths, at Memphis fifty-four hundredths.

Second.—That caterpillars did more harm in 1872 than in 1871, and the fall seasons were not very dissimilar being fairly favorable in both cases.

Third.—Under these circumstances can we account for the difference in yield the two years—being on 9.75 per cent increased acreage, 32.13 per cent increased crobexcept from the fact established in the last chapter, that the stand in 1872 was very good, strong, clean and well

rooted, and the very opposite of those conditions the previous year.

1873.

For the last six months of 1873 the monthly record of rainfall and weather is as follows:

1873.	July.	Aug.	Sept	Oct.	Nov.	Dec.
WilmingtonRainfall	4.93	7:42	9:97	2.79	3.18	4.69
· Av. therm.	81.4	79.6	74.1	61:4	52.5	49.2
Charleston Rainfail	6.97	12.94	8.18	2.07	5.0S	4.94
" Av. therm.	80.0	77.7	76.0	63.9	54.8	51.4
AugustaRainfall	3.34	5:36	3.27	2.58	{ 4·70	2.66
" Av. therm.	80.8	78.3	74.4	60.7	[51.5]	48.1
AtlantaRainfall	3.87	2.03	5.40	1.23	3.15	2.41
" Av. faerm.						
SavannahRainfall	5.44	5.45	4.03	1.09	5.74	3.68
" Av. therm.	81.0	80.0	76:4	63:4	55.3	51.8
MontgomeryRainfall	1.17	2.56	2.38	0.47	4.58	2.61
Av. therm.	51/8	80.2	75 0	64.4	54.2	50.2
MobileRainfall	8.75	10.35	8:07	1.85	3.23	2.97
Av. therm.	82.2	80.2	76.1	65.2	57.7	54.1
New Orleans. Rainfall	6.27	8.30	3.19	1.89	5.95	1.79
" Av. therm	824	81.2	73.7	68.2	61.2	56.6
VicksburgRainfall	$\frac{1}{2}$ 86	3.67	1.60	2.20	2.91	2.05
" Av. therm.	82.0	82.0	76.0	63.0	57.0	52.4
ShreveportRainfall	์ รัชา	1:59	2.31	4.15	8.35	4.93
" Av. therm.		81.7	75.7	62.6	56.2	49.9
My, therm.	0.82	4.53	3.53	5.95	3.87	3.18
MemphisRainfall Ay, therm.		79.0	71.0	56.0	49.0	44.0
NashvilleRainfall	1.63	2.36	1.81	$\frac{1}{4.26}$	4.36	5.94
Nasnyme Ramgar	80.0	80:1	72.5	56.8	47.1	41.6
" Av. therm				2.26	8.91	2.53
GalvestonRainfall	6.83	8.04	7:37	71:0	77.0	77.0
Av. therm.	83.0	83.0	80.0		3.35	3.53
Indianola Rainfall	3:49	5.00	9:18	2:12		
" Av. therm.	82.2	82.1	79.8	70.1	63.0	58.3

CHRONICLE WEATHER REPORTS SUMMARY.

July.—The first three weeks of the mouth were quite favorable, except too little rain at Memphis, giving excellent opportunities everywhere to clean and cultivate the fields; after that it turned rainy, but did no harm, as the showers were needed, and the crop closed the mouth in apparently good condition in almost every section.

August.—For the first three weeks of August there was too much rain in the lower half of the Gulf States, and considerable injury in all that section and parts of Georgia by caterpillars was reported. In the other

portions of the South the weather was satisfactory.

September,—There was generally less rain-fall during September, especially the last half, but the caterpillars were still complained of in limited districts; the drier weather, however, in some sections made them less destructive than feared. Rust and shedding reported Memphis district. This was the month of the great panic in Wall street; the failure of banks and bankers North and South interfered materially with the early movement of the crop.

Ortober.—This month was almost everywhere favorable for maturing and gathering the crop, and crop reports grew increasingly favorable. The yellow fever at Shreveport and vicinity and the derangement in money matters in consequence of the panie and failures, check the free movement of the crop.

November,—Considerable rain fell the first and third weeks in November, and the weather was cold through the month, but picking made about average progress.

December.—A fairly favorable month for picking. Generally speaking, but little rain fell, though there were many cold days.

FROM THE AGRICULTURAL BUREAU REPORTS.

Report for Angust-September: "The present season can scarcely be "deemed quite an average one for cotton; but when we recall the fact "that drought, severe rains, wind-storms, insects, rust—all these, or "most of them—are recorded of every crop that is made, it will be seen "that seasons worse than the present are almost as numerous as those "that are better. Should the autumn prove unusually favorable, an "average yield might yet be obtained. The only drawbacks are rains "and worms—the former no more destructive than severe droughts of "some former years, the latter less so than in some former visitations, "While caterpillars have been more abundant than last year, their "ravages have been really disastrous or sweeping in few locations."

From October report: "The average condition of cotton in the first "week of October, as compared with October reports of 1871 and 1872, "stands as much higher than that of the former as it falls below the "records of the latter. * * * * The average this year has fallen of "* * to 78½, * * * The general average in October, 1871, was "76; it was 82 in October last year. * * * * The season must be of "average length and comparatively favorable for picking to ensure a "crop equal to that of last year."

From November and December report: "The weather has been "generally favorable for cotton picking during the past month, as well "as for ripening of the later bolls. Some of the reports are exception—ably favorable. In the more northern portion of the cotton belt, fields "that were planted late were caught by the frost, but the area thus "injured has nowhere been large." After some other remarks and a detailed estimate by States, the Burean continues: "This argregate, "with the small quantity grown outside of the limits of the cotton "States, will make the total estimate of the November returns as nearly "as possible 3,700,000 bales."

From the foregoing we learn—

First.—That the weather during the months of July and August, 1873, was every way about as favorable to the development of the crop as the weather during the same two months of 1872. To compare the rainfall for the two seasons, we bring together the following data:

Monthly		1872.		1873.				
Rainfall at-	July.	August.	Total.	July.	August.	Total.		
Wilmington	5:54	11:15	16:69	4.93	7:42	12:37		
Charleston	2:30	7:81	10:11	6:97	12:94	19:91		
Augusta	6:87	4.10	10.97	3.34	5:36	×:70		
Atlanta	3.91	5:81	9:75	3.87	2.08	5.97		
Savannah	4.36	12:31	16:67	5:44	5.45	10.35		
Montgomery	10:50	2.30	12:50	4:17	2.56	6.73		
Mobile	13:37	1:69	15:06	8.75	10.35	19:16		
New Orleans	6.43	3.75	10.18	6.27	8:30	11:5		
Vicksburg	2.11	0:49	2.60	2.46	3.67	6:5:		
Shreveport	1.62	0.10	2.02	3.31	1:59	1:90		
Memphis	4.23	0.51	4.77	0.25	4:53	5:33		
Nashville	4.90	1. 15	6.55	1:63	2:36	6-93		
alveston	0.34	2.63	2.97	6.83	\$.01	14.8		
ndianola	1.49	2.81	4.33	3:49	5.00	8:49		

From this statement we see that rain was in some sections in excess of the needs of the plant both seasons, but that where it was in excess, except on the very coast of South Carolina, Alabama, Louisiana and Texas, less rain fell in the two months of 1873 than in the same two months of 1872. Rain was not in excess either year at Vicksburg, Shreveport, Memphis and Nashville. So that, in this particular, 1873 was as favored as 1872. Caterpillars were more widely reported in 1873 than in 1872, but the main injury they did was confined to about the same sections the two seasons, and the loss to the two crops from this cause would not differ materially.

Second.—There was no excessively dry weather anywhere during any portion of the summer months, except at Memphis in July: thus the sections where the plant started weak, grassy, and short rooted, had sufficient moisture all summer; and hence the most that could be obtained from a defective stand was obtained from it. With a grassy start or stand, a very dry summer is, for the reasons already stated, especially disastrous.

Third.—Do not these facts with regard to the planting season and summer growth point to a yield very similar to the result reached? In about one-third of the South the stand in June was grassy and poor, but even that portion was well cleaned and cultivated the first three weeks of July. Elsewhere the season was fairly favorable, except in the limited districts—mainly in Georgia and Alabama—which the caterpillars injured; while the portion where the stand was poor, having, as stated, been well cleaned and improved in July, probably went through the remainder of the summer better than it would have done had it been a dry season. Consequently, although there was an increased acreage planted in the richest cotton sections of 10:59 per cent, there was an increase in the

crop of only 6:09 per cent. Had the stand been everywhere perfect, we could have looked for a much larger increase in the crop.

1874.

The temperature, rainfall, number of days of rain and weather summary for the last six months of 1874 were as follows:

1	\$71.	July.	Aug.	Sept.	Oct.	Nov.	Dec
Norfolk	Rainfall,inch.	8:-1	5:01	3:78	0.01	3:39	4:5
٠.	No. days rain.	1.5	1.1	9	-1	11	12
44	(High	96.0	96.5	8.0	80:0	74.0	73.9
**	Ther High Low.	62 0 76 9	580 73:2	54°) 70°4	41:0 50:8	≥1°0 50°5	21°5 43°9
Wilmingetin	Rainfall,mch.	5.51	4.01	9:35	3.3	0.91	2.6
wmmagen		15	12	6	5	5	13
	No. days rain.	92.0	910	9 0	- Chi	76:0	78:0
44	Thomas I I come	64.0	56:0	55.0	400	33:0	26.0
	Aver	79.1	76.7	74.1	(3.4	56.6	49:1
Charleston	Rainfall,inch.	13.74	7.06	6.66	1.55	2.11	2.9
	No. days rain.	17	10	10	.5	7	~
	Hi h	(5.0)	95.1	• 7:0	810	75.0	7:3: 1
44	Ther \ Lew	6 1	8:0	57:1	4 .0	37:0	33.0
	/ Aver.	79:3	79.1	75.5	1617	54.8	53.1
Augusta		5:35	6781	5.85	1.05	2:21	4.0
**	No. days rain.	_13	10	9	6	10	11
**	(Figh	97.0	101 0	92.0	86:0	7 °0 30:0	27.0
••	Ther Low.	68:0 75:5	61:0 78:8	5'::0 74:7	- 0°0 €3.5	56.7	49:1
Atlanta	, Rainfall,inch,	1.70	10.00	0.17	0.20	3.19	3.0
anama		9	9	5	3	9	11
	No. days rain.	.90:0	95.0	s=0	800	74:0	62.0
4.6	TherLow.	6 0	66.0	55.0	40.0	54.0	29.0
	(Aver.	85:0	850	78:0	70.0	60:0	€0:0
Sayannah .	Rainfall.inch.	10.14	6.228	5:30	1.42	1.50	1.6
**	No. days rain.	16	1.1	11	5	9	11
	(car h	94.1	96:0	901	£9*0	81:0	76.0
4+		65.0	€510	57.0	45.0	37:0	37:0
	Ther Low .	79.0	7.0	75:3	66.3	5 66	54.6
Columbus .	. I. CHIII (III , HICH.	6945	3:82	1:37	3.02	6.01	6:9
	No. days gain.	10	9	5	6	4	1 (
44	Ther H gh.						
	Aver	83.0	83:0	78:0	67:0	59:0	50.0
Macon		5.68	5.23	5:27	1:42	2.03	4.0
**	No. days rain.						
	(High,	94:0	9701	87.0	81:0	79:0	710
**	Ther Low	70.0	70.0	65.0	30:0	26.0	261
		86.0	8,00	81.0	720	66.0	55.0
Montgom'y	. Rainfall,inch.	3:57	1:25	0.39	1.97	5.60	5.1
••	No. days rain.	10	10	10	2	4	1
44	Ther High.	970	103.0	90:0 53:0	40:0	80.5	76:0 32:0
••	Ther Lew.	68:0 79:.1	7.2.6	76.5	£5:15	55.5	51.7
Mobile	. Rainfall,inch.	10.21	3.79	2.51	0.00	2.01	4.1
Mobile		10	"3"	10	0.00	77.	1
	No. days rain.	96:0	100:0	91:0	86:0	9.0	71.0
4.6	Ther. Low.	69:0	71.7	510	44.)	3.2	310
	Aver	80.8	83:3	77.9	67:4	+0.3	543
N. Orleans	. Rainfall,inch.	12.93	4.32	1.21	0.00	1/12	312
6.	No days min	17	13	1 ~		10	1
	(High.	93.0	965.3	871	85:0	£1:0	76:0
44	Ther Low	72.0	7 . 1	63.0	25.0	40.2	410
	(Aver.	51.4	83.9	78-9	70.1	663	E 94774
shrevep'rt	. Rainfall,inch.	5:59	0.19	6:33	0.10	2:10	63
44	No. days rain.	11	6	11	1	6	
4.	The The High	9.0	100.0	94:0	57:0	84.0	33:0
**	THEFT LOW	66:0	79.0	56:0	39:0		53.0
Columbus	ATime (Aver	85.0	86.0	75.0	000	99.0	
Columbus,						1:-0	2.7
44	Rainfall,inch. No. days rain.					4	- 6

1874.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Fayette, Miss.—						
Rainfall.inch.	7.60	1.50	7.20	0.50	3.30	5.00
" No. days rain.	10	4	11	2	7	7
(High	92.0	101.0	93:0	84.0	80.0	7.0
" Ther. Low	65.0	0.17	51.0	40.0	30:0	3 .0
Aver.	77:2	81.2	71-3	63.1	5 1	51.7
Vicksburg, Rainfall,inch.	7:39	0.06	6.20	0.00	3.21	4.7
" No. days rain.	11	4	10	2	6	10
(High.	96.5	98:0	53.0	86.0	81.0	78.0
" Ther\Lew.	66:0	70.0	53.0	39.0	30.0	33.0
(Aver	81-1	84.6	77:0	64.7	58.6	53.3
Nashville Rainfall,inch.	2.65	3.52	3.12	2.63	-6.12	4.18
" No. days rain.	8	6	1 7	5	9	12
(High.	101:0	106:0	91.0	80.0	77.0	75.0
" Ther Low .	03.0	66.0	49.0	34.0	54.0	27.0
Aver.	83.1	81.5	73.4	59.8	49.8	44.0
MemphisRainfall,inch.	0.47	4.60	4.72	1.07	3.67	2.94
" No. days rain.	5	5	i s	2	12	3
(Edgh.	97.5	101:5	90.0	85.0	80:0	72.0
" Ther \ Low.	66.0	66.0	52.2	34.0	25·0	27.0
(Aver.	83.8	82.9	73.2	60:3	52.0	45.6
GalvestonRainfall,inch.	9:30	-7.19	5.84	0.12	[-1.58]	6.95
" No. days rain.	14	7	15	2	9	18
(lligh	96.0	98.5	91.0	83:0	81.0	72.0
" Ther Low.	72.0	73.0	66:0	5 :0	45.0	39.0
(Ave.	82.2	84.4	79.9	71.8	65.1	59.5
Indianola Rainfall,inch.	5.76	1.25	12.89	0.62	2.56	4.86
" No. days rain.	8	3	1.5	2	7	6
	97.5	100:0	89.5	86.0	83.5	77.0
" Ther. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	71.0	73.0	65:0	51.0	38.0	40.0
(Aver.	82.3	84.3	79.2	73.5	66.4	59.1
CorsicanaRainfall,inch.				0.07	2.94	9.52
" No. days rain.				3	9	1.5
, High.				87:0	83:0	75.0
" Ther. Low				31.0	30.0	35.0
/ Aver.				67.3	58.3	51.1

CHRONICLE WEATHER REPORTS SUMMARY.

July.—During this month there were heavy rains on the Atlantic and Galf coasts, among them a very severe storm reported at Savannah, doing much injury to buildings, but not reaching far inland except in a much modified form. A drought also began in the Memphis district the first of July, the rainfall there being only forty-seven hundredths of an inch during the month. Neither of these causes had, however, acted to any considerable extent injuriously to cotton up to August 1. At that date the crop may be described as developing very satisfactorily almost everywhere.

August.—Towards the latter half of July the district where dry weather prevailed extended beyond the Memphis district, taking in, first, Nashville, then Vicksburg, Shreveport, Dallas, &c.,—in a word, covering (through the whole or the first three weeks of August) all of Tennessee and Arkansas, and the northern portions of Louisiana, Alabama, Mississippi and Texas, being in great part the very section where the May drought prevailed most severely. In portions of that large section very considerable harm was done by shedding, and done in some cases in a wonderfully short space of time. The rain recorded in our tabic, at Memphis and Nashville, for August fell during the last week of the month, too late to prevent injury. The Atlantic States had some very heavy showers all through the month, but no special harm resulted to cotton from them.

September.—Rains returned early in September through all the dry district, doing good in some sections, especially in case of a late frost; but in others the plant was beyond redemption. The weather, however, was everywhere fairly favorable.

October.—This month was as perfect as possible for gathering in the crop. But in the dry section, where expectations were being built upon a second growth, and in the Mississippi Valley, where the plant was so

very late on account of the flood, an early frost did great harm. At Memphis and Nashville there was a killing frost October 13th and 14th, and from October 29th to November 1st a killing frost is recorded in all the remainder of the district referred to.

November.—Weather continued generally very favorable for picking. December.—Month favorable for picking, but very little cotton anywhere left to pick.

FROM THE AGRICULTURAL BUREAU REPORTS.

The August and September report, issued as one, says: "Our Septem-"ber returns indicate a heavy decline in the prospects of the cotton "crop in all of the States except Virginia. * * * In North Carolina "the leading complaint in several counties on the coast and in the north-"ern part of the State is cold nights, * * in some cases accompanied "by late rains, producing rust. * * * In several counties in the "interior a damaging drought set in about the middle of August, "which caused copious shedding of forms, * * * The same general "conditions are apparent in South Carolina. * * * In Georgia * * "protracted drought is the leading cause of this decline, but in many "counties it was accompanied by extreme heat and hot, blasting winds. "In Dooley county some promising fields were parelled within half an "hour. * * * * In Florida, * * * in some counties, as Levy, alter-"nate flood and drought ruined the crops on the best lands, causing "great discouragement among farmers and a desire to emigrate. * * * "In Alabama, though the injurious causes have been operative, the "general decline * * has been smaller than in any other great "cotton State. * * * Mississippi. * * The general cause of "injury here was drought, which manifested itself more destructively "upon upland than upon bottom crops. * * * In Louisiana "the drought appears to grow in virulence toward the southwest, "The intense heat and blasting, hot winds are more frequently noted. " * * * Texas. * * The untoward influences that had affected the "crop in the other Gulf States here found their colmination. In some "counties no rain had fallen since May. * * * In Arkansas and Ten-"nessee the drought of August combined with that of the earlier season "previously reported; in several localities no rain has fallen since April, "and in some of these the injury was aggravated by hot winds." The October report says: "Our October returns show a slight improve-"ment in the condition. * * * North Carolina, South Carolina and

The October report says: "Our October returns show a slight improvement in the condition. * * * North Carolina, South Carolina and "Alabama showed a decline; Mississippi and Louisiana remained "stationary; Georgia, Florida, Texas, Arkansas and Tennessee raised "their averages."

The November and December report, issued as one, says: * * "The "weather for ripening and gathering the top crop has been very favor-"able. The reports are nearly unanimous in stating that the proportion "of lint to seed is large."

From the foregoing we conclude—

First.—That July was fairly favorable almost everywhere, so that on the first of August the plants, take the country as a whole, were in excellent condition. This does not mean that cotton in the Valley of the Mississippi and its tributaries (the overflowed districts) was well advanced, for much of it was a month late; nor does it

mean that the very defective stands and poorly developed roots by reason of the May drought, had been repaired; they looked as if they were repaired, because the plants had grown so large and luxuriantly under the abundant June and early July rains as to conceal such defects. Two harmful agencies, however, rain and drought, had in this month in different sections begun to excite fears; the first did not do the harm anticipated, mainly because the fields were unusually clean when the rains began; the second developed disastrously in succeeding weeks.

Second.—During August the drought continued, and the heat, in portions of the dry zone, became excessive. The former point we have remarked upon above in detail; to illustrate the latter, we give the following table, showing the variations in the thermometer for August for four years:

THERMOMETER FOR AUGUST.

Stations.	1871.	1875.	1876.	1877.	Stations.	1874.	1875.	1876.	1877
Norfolk.					N. Orleans.				
Highest.	96:5	93.0	96.5	91.0	Highest	96.0	99:0	97.0	964
Lowest	580	66.0	63.0	66.0	Lowest	72.0	70.0	69 0	66.0
Average.	73:2	76.1	7812	77.1	Average.	83.5	79.3	82.5	83.1
Wilmingt'n					Shrevep'rt	İ			
Highest.	910	92.0			Highest	100.0	.04.0	96.0	99.0
Lowest	: 6.0	65.0			Lowest	72.0	61:0	69.0	65:0
Average	76.7	76.6	78.3	78.5	Average.	86.0	70.0	83.0	824
Charleston					Favette,				
Highest.	92.0	91.0	97.0	93.0	Highest.,	101.0	90.0	91.0	88.0
Lowest	18:0	67.0	72.0	71.0	Lowest	71.0	63.0	70.0	53.0
Average.	79.1	79.9	82.4	82.5	Average.	81.2	74.1	77.2	72.1
Augusta.	4.7.1		· ·		Vicksburg.				
	101.0	91.0	97:0	100.0	Highest	98.0	92.0	97.0	99.0
Lowest	61:01	63.0	70.0		Lowest	70.0	65.0	67.5	66.0
Average	74.5	76.2	81.6	80.5	Average	816	78.3	80.2	81.1
Atlanta.	(,)	/ // _	- C-1	12.0	Nashville		1.5.0		0.1
	98.0	90.0	95.0	98.0	Highest.	106:0	89.0	99.0	91.0
Highest .	66.0	665	72.0	67.0	Lowest	66.0	57.0	64.0	62.0
Lowest	85.0	82.0	90.0	87.0	Average.	81-5	74 e	78.7	77.4
Average	ט טרן	52 V	17(7)	27.0	Memphis.	171 0	7.1 (1.5	,,,,
sayann (h. 🕆	96.0	9.00	0-0	100.0	Highest	101:5	91.0	95.0	94.0
Highest	65.0	65.0	70.0	71.0	Lowest.	66.0	63.0	65.0	62.0
Lowest						82.0	75.0	75.1	-78.0
Average.	79.0	78.4	82.1	81.6	Average.	020	100	731	100
'olumbus.			000		Galveston.	98.5	96.0	91.0	97:0
Highest.		90.0	96.0	95.0	Highest	73.0	71.0	71.0	70.0
Lowest		61.0	70.0	73.0	Lowest				
Average.	83.0	79.0	82.0	82.0	Average.	81.1	82.9	83.7	84.0
M'tgomery [Indianola.	*		00.0	100.0
	[03-6]	910	95.0	99.0	Highest	100.0	97.0		100.0
Lowest	69.5	65.0	63.2	66.2	Lowest	73.0	71.0	71.0	73.0
Average.	82.6	78.6	80.9	81.8	Average.	813	83.2	83.4	85.6
Mobile,			1		Corsicana.				
Highest.	100:0	91.0		100.0	Highest			101.0	
Lowest	71.0	68.0	71.0	70.0	Lowest		64.0	68.0	61.0
Average.	83.3	78.4	sol 1	82.0	Average.		80.5	82.7	81.8

This statement discloses what was meant by the "hot winds" so frequently spoken of at that time in connection with the drought, and added to the want of moisture, indicates the extent of the trial to which the crop was subjected in August, 1874. But the reader will be surprised perhaps to see that it by no means struck all points injured by it with this extreme of severity; and judging from other dry seasons, it ought not to have done the extensive harm it did, had the plant been well rooted and started in the spring. In fact, if we leave out a few points, it has been much hotter other years when the crop was an excellent one; compare, for instance, with 1876. Besides, even at Memphis the average in 1874 was only 82.9. Thus is not a high average for cotton.

Third.—Early frost prevented the maturing of the later growth in the Valley of the Mississippi and its tributaries (the overflowed district) which was planted so late. An early frost was especially harmful in 1874 in that district.

Fourth.—These facts furnish, we think, a full explanation of the short yield. 1. The stand was over a considerable section very imperfect, irregular and short rooted on account of the excessive and constant rains in April, and the extreme drought in May. 2. The plantings in all the overflowed district were very late, and the frost in the fall was very early, so that the plant in those rich sections did not have time to mature the later growth. 3. The excessive heat and drought together did great harm, but their power for harm was greatly enhanced, because in nearly all that section the plant rooted poorly in the spring.

1975.

The weather summary, including temperature, rainfall and number of days on which it rained, is as follows for the last six months of 1875:

1	875.	July.	Aug.	Sept.	Oet.	Nov.	Des.
Norfolk	Rainfall,inch.	4:72	10:37	2:05	3:21	3.64	3.11
**	No. days rain.	13	23 93 0	92.0	9 81:0	12 70:5	14
66	Ther,	101:5 57:0	63:0	50.5	02.0	27:0	73· 1 17·0
	(Aver	81.2	76-1	69.7	543	49.0	48.3
Wilmingt'n.	Rainfall,inch.	1.95	7:11	2.23	2.93	1.77	-3.50
••	No. days rain.	10	$\frac{15}{92.0}$	95:0	83:0	79:0	77:0
44	Ther	65.0	65.0	50.0	36.0	250	18.0
Cl	Aver /	81.9 1.05	75°6 1°91	71.5 4.13	3.90	55·5 3·3·3	$\frac{51.8}{1.92}$
Charleston.	Rainfall,inch. No. days rain.	5	12	10	9	15	14
	(High.	98:0	91.0	52.0 57.0	8:50	79:0	74.0
44	Ther \ Low .	$\frac{75.0}{81.6}$	67:0 79:9	57:0 75:1	41:0 63:3	33·0 5∂·7	25.0
Augusta	Rainfall,inch.	2.35	5.11	3 12	1.06	3.3)	$\frac{54.1}{3.55}$
in a second	No days vain	12	1.6	11	8	12	13
4.	(High	100.0	9 - 0 63:0	97:0	81.0	81.0	77.0
••	Ther	71:0 81:6	78.3	53·0 73·4	81·0	33·0 53·6	21.0 52.1
Atlanta	Rainfall,inch.	3.31	3.42	4.64	1.20	3.12	6.14
4.	No. days rain.	9	7	6	(i)	7	11
4.	Ther High.	95·0 75·0	90:0 63:0	90:0 50:0	73.0 3.0	72·0 23·0	71·0 12·0
	(Ave:	90.0	83.0	74.0	66.0	5+0	55.0
Savannah	Rainfall, inch.	1.51	6:11	3:95	2.87	1:49	1.41
**	No. days rain.	3	91:0	95:0	85:0	83:0	80:0
**	Ther High	72:0	65:0	55:0	43.0	31:0	25.0
O to a	/Ave.	81.7	78.4	74.7	63.5	60.9	55.0
Columbus .	Rainfall,inch. No. days rain.	1.65 5	5·95 - 4	$\begin{bmatrix} 7.25 \\ 7 \end{bmatrix}$	2.61	$\frac{4.52}{10}$	3.83
	(High.	98.0	93:0	94:0	83.0	73.0	74.0
٠.	Ther High. Low. Ave.	78:0 83:0	61:0	51:0 75:0	4')·0 61·0	33:0	22.0
Macon	Rainfall,inch.	1.61	7:18	3.94	0.67	57:0 4:48	54·0 1·63
44	No. days rain.						
	(High.)	950	65:0 93:0 {	93.1 57.0	7 ·0 33·0	7+0 33:0	$\frac{7}{18.0}$
••	Ther Low .	74:0 93:0	83.0	79 0	650	610	60.0
Montgoin'y	.Rainfall,inch.	0.99	2.11	8.13	1.68	5.90	6.0 7
**	No domernia	9 103:0	10	97:0	8 78:0	$\frac{16}{79.0}$	15
44	Ther	72.5	94:0 65:0	53.0	40:0	33.0	23·0
		834	73.6	74·7 8·52	60.8	513	54.3
Mobile	Rainfall,inch.	4:00	7:07	$\frac{8.92}{13}$	2:32	5:06	3.01
	No. days rain.	99:0	91:0	94.0	82.0	80.0	75.0
		73:1	63.0	57:0	41.0	41.0	30.0
N Orleans	Aver. Ruinfall,inch.	83:9 6:57 (78:4 8:51	75·1 7·8)	62·7 2·09	63.6 6.79	$\frac{57.6}{5.15}$
A. Offeans.	No. days rain	21	21	11	7	14	13
	(iizh.	93.2	00:0	85.0	82.0	80:5	73.0
	Ther \ \ ow. \ ver.	73 0 81 8	70°1 79'3	61:0 76:6	51·0 67·3	45.0 65.6	33·0 61·5
Shreveport	. Rainfall,inch.	2.16	6:17	8.02	4.10	2.99	9.51
"	No. days rain.	16	15	4	9	12	13
66	(igh.	197:0	104:0 61:0	950 500	85:0 41:0	35.0	79·0 29·0
		85.0	79.0	73.0	33.0	53.0	55.0
Fayette, Mi	188.—	1,10	7.00	7.90	1.10	5.00	1.00
**	Rainfall,inch. No. days rain.	1·10 5	7·90	7:30 6	4·10 6	5·90 7	4.20
	(High	91.0	99:0	99:0	80:0	80.0	73.0
44	Ther ow.	71.	63:0	53.0	41:1 53:3	31.0	25.0
Vicksburg	. Rainfail,inch,	79:8	8:85	70°5 7°55	3.76	$\frac{:8.1}{4.55}$	55.2 5.61
***************************************	Yo days min	6:	12	6	8	1.1	13
• 6	(High	93 0 63 5	92:0 65:0	91:0 50:0	83:0 3:5	81:0 33:0	79·0 25·0
	Ther light	0.70	75°3	73.4	83.0	53.7	53.8
	Ther Low.	80.6	13.9				
Columbus,		}					_
Columbus,	Rainfall,inch.	1.23	5.82	8.17	0:95	6:19	8:32
**	Rainfall,inch. No, days rain.	}			0.95 4	6·19 10	13
Little Rock	Rainfall,inch. No. days rain. Rainfall,inch.	1:58 6	5·82 9	8.17	4	10	$\frac{13}{4.50}$
Little Rock	Rainfall,inch. No. days rain. Rainfall,inch. Rainfall,inch.	1:58 6 8:19	5.82 9 1.86 10	8:17 6 2:30 5	4 3.05 7	10 3:92 16	13 4·50 4·55 11
Little Rock Nashville	Rainfall,inch. No. days rain. Rainfall,inch. Rainfall,inch. No. days rain. (Uigh.	1:58 6 8:19 16 97.0	5:82 9 1:86 10 820	8:17 6 2:30 5 93:0	$\begin{array}{c c} & 4 \\ & 3.05 \\ & 7 \\ & 82.0 \end{array}$	10 3:92 16 75:0	$\begin{array}{c} 13 \\ 4.50 \\ 4.55 \\ 11 \\ 73.0 \end{array}$
Little Rock	Rainfall,inch. No. days rain. Rainfall,inch. Rainfall,inch.	1:58 6 8:19 16 97.0	5.82 9 1.86 10	8:17 6 2:30 5	4 3.05 7	10 3:92 16	13 4·50 4·55 11

1875.	Ju y.	Ang.	Sept.	Oct.	Nov.	Dec.
Memphis Rainfall,inch.	4.34	2.39	2.94	2.38	9:60	5:54
" No. days rain.	1.2	\ \ \ \	3	5	5	11
" Ther H gh. Low. Aver.	99:0	91.0	93.0	79.)	76.0	74.0
" Ther { Low .	70.0	63.0	44.0	35:0	27.0	21.0
(Aver.	82.2	75.0	70.0	59 1	50:9	49.8
Galveston., Rainfall, inch.	1.11	6.15	18 41	1:79	5.61	9.71
" No. days rain.	10	11	10	- 6	12	13
" Ther (High.	97:0 7::0	96.0	94.0	648	82.0	73.0
" Ther { Low .	77.0	71.0	59.0	56:0	47:0	40.0
/ Aver.	85.6	85.8	74.7	70.6	65.7	61.6
Indianola . Rainfall,inch.	2.34	2.03	10.65	2.26	5.45	6.5
" No. days rain.	9	5	10	-1	8	8
" Ther $\begin{cases} H \text{ gh.} \\ I \text{ ow.} \\ \text{ ver.} \end{cases}$	96.0	97:0	95.0	8 .0	83:0	77.0
" Ther { I ow.	71.0	71.0	61.0	56.0	40.0	40.0
\\ver.	84.	83.3	76.6	71.8	65.0	65.0
CorsicanaRainfall,inch.		6.24	1.61	0.55	3.46	6.5
" No. days rain.	3	, ×	7	5	7	3
" Ther $ \begin{cases} \mathbf{H} & \text{i.h.} \\ \mathbf{L} & \text{w.} \\ \text{ver.} \end{cases} $	104.0	101.0	10 0	91.0	48·0	76:0
" Ther { L ; w .	71.0	64.0	46.0	41.0	.50.0	30.0
(aver.	80.0	80.3	73.5	63.9	55.6	54.5
DallasRainfali,inch.		J				5.1

CHRONICLE WEATHER REPORTS SUMMARY.

July.—The weather during July was, in general, fairly favorable, splendid showers visiting most sections of the South. In parts of almost all the States, however, there were complaints of drought, while at Memphis and Nashville there was too much rain; but no considerable damage was done from either cause. As the month closed, fears were entertained of damage from the overflow of the Mississippi.

August.—Though some sections continued to complain of drought, the more general difficulty and complaint during August was excessive rain. Shedding, rust, rot, mildew, and overgrowth of weed, were the principal evils existing and feared. The Mississippi overflowed its banks at Memphis and in that vicinity, but although great harm was anticipated and considerable harm was done to individuals, yet the aggregate loss was so limited that its effect on the total crop was not very material.

September.—The first half of September less rain fell, and during the greater portion of that time there was a decided improvement in the weather. But on the 16th a terrific cyclone struck Texas, lasting four days, almost destroying Indianola and doing great harm at Galveston and in all the Texas coast counties; the rainfall at Galveston, during the storm, reached ten and fifty-three hundredths inches, at Shreveport seven and fifty-nine hundredths inches in thirty-eight hours, and at Vicksburg, during two days, five and sixty-one hundredths inches. The crop in all the section of which these cities are the centre, suffered more or less injury from the storm, but the harm done in the coast counties of Texas (say from San Marcos river to the Sabine river, and from the Gulf to a line drawn through Austin, Crockett, and San Augustine) was especially severe and so reported. On the 25th of September there was another storm at Galveston and vicinity, at which six and sixty-three hundredths inches of rain fell, which did further damage to the cotton prostrated by the cyclone. Through Alabama, also, and parts of Georgia, there were excessive rains this month, and much damage reported.

October.—This month was generally favorable for picking the crop. There were, Lowever, light frosts at several points, and killing frost in North Carolina and at Memphis and Nashville.

November.—Considerable rain fell in November, except on the Atlantic coast, and many complaints on that ground were made, especially in the Mississippi Valley and the Gulf States, as the rain beat out the cotton, rotted the bolls, and interfered with the picking. Sickness in

the same section also interfered with picking, while the election excitement in Mississippi had the same effect.

December.—The rains of last month were continued during December and in much the same districts; the weather also turned quite cold almost everywhere. Picking, therefore, made comparatively slow progress. For instance, it rained during November and December on 24 days at Vicksburg, 25 days at Shreveport, 31 days at Montgomery, 17 days at New Orleans, &c. See table above for details.

FROM THE AGRICULTURAL BUREAU REPORTS.

From the August and September reports (to September 1) issued as one:—"The prevalent droughts of July were succeeded by rains in "August, too copious for the best results in the Mississippi Valley, and "quite injurious in heavy soils of the eastern belt, causing rust, shed-"ding of leaves and fruit forms, and, to some extent, rotting of the "lower bolls. There is a rank recent growth which will yield largely "with a favorable and long autumn season, or prove a disappointment in case of an early killing frost. In some parts of Texas drought continued for nine weeks, but the seasonable rains since the middle of "August have placed the fields in high condition in all except the most "severely parched localities."

From the October report (to October 1):-"An improvement in the

"condition of cotton during the past month is indicated in Alabama, "Louisiana and Arkansas. The depreciation in Mississippi is slight, "from 98 to 96, occasioned by storms. The destructive equinoctial "storm wasted and stained much fibre in Southern Texas, reducing the "State percentage of condition from 94 to 88. In North Carolina and "Tennessee, 8-ptember was cold, and the harvest is late with less favorable prospects of a top crop. A reduction of the percentage of Georgia from 76 to 71 is caused by storms and the increasing prevalence of rust. South Carolina is 3 per cent lower, from similar conditions. In "several counties of Florida the caterpillar has been injurious." "The harvest has been retarded in the Mississippi Valley by an unusual amount of sickness among the laborers. In the State of Mississippi "there has been some loss of tinfe on account of political disturbances."

From the November and December reports (to December 1) issued as one:—"As former reports of condition have indicated, the States bordering on the Atlantic all show a reduced product, and those in the Mississippi Valley an increased yield. * * * There is much irregularity in the progress of picking. In some counties of Georgia and Alabama the harvest is nearly over. In Mississippi the work has been delayed by political difficulties and by sickness. * * * Fine weather has been the rule, with a few exceptions; but in Louisiana much fibre has been lost or stained by storms. The effect of the great September "storm in Southern Texas proves less disastrous than was at first "represented."

From the foregoing we learn—

That from the first of August the rainfall was extremely heavy in a very considerable section of the South. The following shows the aggregate rainfall in each of the districts named during the five months (August, September, October, November and December) for the years designated. We have arranged the stations in classes, putting points

on the coast together and those inland together. Storms are apt to divide themselves up in that way, many confining themselves to the coast; hence the comparison becomes more intelligible and instructive with this arrangement.

RAINFALL BY SECTIONS.

August to Deember, inclusive, (tire months).

STATIONS.		1872.	1573.	1874.	1875.	1876.	1577.
Norfolk, VaI	nches.	21:28	27:65	16.83	22.41	20:37	33:35
Witmington, N.C.	••	19:37	28.05	20:35	17:17	32.31	(8:31
Charleston, S. C		25.76	33.51	20.62	15:29	37.55	24:62
Savannah, Ga	"	21:40	19.99	20.35	15.86	24.62	25:96
Total	44	93.81	108.80	78:15	70.73	115:15	132.27
Augusta, Ga	4.	14.17	18:57	20:00	16:17	15:11	23·C0
Atlanta, Ga		15.44	14.27	1746	19:15	15.04	-1492
Columbus, Ga	**			21:14	21:24	18.50	17:16
Macon, Ga	**			18004	17:90	16:22	12.47
Total	"	29.61	32.81	76.61	77:46	67.57	74.55
Mobile, Ala	44	15:96	26:47	12:54	25.98	26:20	34:21
New Orleans, La	**	21.71	21:12	13.42	30.53	1 × × 6	36.14
Galveston, Tex	**	20.17	29:11	21.65	-11.67	19:93	45:14
Indianola, Tex	44	13.24	53.4~	22:18	24.32	17:99	26.77
Total	**	71.08	100:15	69:79	122:50	82.95	142.56
Montgomery, Ala	44	16:29	13:27	11.35	23.89	15.01	16:19
Shreveport, La	4.4	15:14	21.33	15.67	31.12	$13 \ 63$	26:94
Fayette, Miss	**			17:20	29:40	14.50	
Vicksburg, Miss.	4.	$15^{\circ}21$	12.43	14:22	30.32	15.08	24.97
Columbus, Miss	**				31.03	$-16.36 \pm$	33.52
Little Rock, Ark. –	4.4				'	13.56	29:35
Nashville, Tenn	44	12:46	18.73	19.58	16:19	14.69	19.59
Memphis, Tenn	61	12.53	21:06	17.00^{-1}	22.35	15401	23:32
Corsicana, Tex					1 < .91	9:90	25.19
Total	"	71.63	86.82	95.02	203.71	125.13	196.01

This statement is especially interesting because it proves the existence of conditions in the fall of 1875 which were of course harmful, and not very unlike those prevailing during the same months of 1877; yet in 1875 previous favorable conditions (that is, something in its earlier development) enabled the plant to produce a crop of 4,669,000 bales. We shall have reason to refer to this point again.

1876.

The temperature, rainfall and number of days of rain for the last six months of 1876 were as follows:

1	1876.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Norfolk	.Rainfall,inch. No. days rain.	5:50 10	4:54 16		1:52 7 78:0	3:2× 12 76:5	1:94
"	Ther \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	60:0 81:7	9 55 63:0 75:2	93-0 52-0 69-7	31:0 50:8	31:0 49:4	59°0 11°0 33°6

1876.	July.	Aug.	Sept. [Oct.	Nov.	Dec.
	7:62	 8:55	9:41	7:22	1.65	5.48
Winningt'n Rainfall,inch. "No. days gain.	13	14	10	10	7	9
High.						
" No. days rain. High. " Ther \ \Low \ Ave.	79:8	78.3	73.7	59.6	53.0	39-1
Charleston . Rainfall, inch.	11.26	5.10	11.26 12	11.32	1.35	5.85
·· No. days rain.	10	15	12	13	G	65:0
" Ther Low (Ave	97:0 67:0	97:0 72:0	94:0 60:0	82·0 43·0		23.0
Ave .	83.0	59.1	77.9 2.56	62.4	56.3	44.1
attiguistictutilintiintiintiintiin	6.26 14	3, 6	$\frac{2.56}{7}$	3.18	3.24	5·17
" No. days rain.	08:0 T.F	97:0	95.0	86.0	8	65:0
" Ther { High. Low. Aver.	62.0	70.0	48.0	36.0	2.17	20.0
(Aver.)	82·7 3·49	$\begin{array}{c} 81.6 \\ 5.32 \end{array}$	75.2 0.80	60·1 1·81	$\frac{52.4}{3.67}$	39·1 3·44
AtlantaRainfall,inch. No. days rain.	9	9 3 2	.1	3	10	6
(U ah	96:0	95.0	88.0	78.0	75.0	60.0
" Ther Low.	90:0	72·0 90·0	50:0 80:0	37·0 67·0	31.0 52.0	14.0
Sayannah . Rainfall,inch.	6.11	3.88	2:60	9.15	0.83	4.81
" No. days rain.	13	14	12	8	3	13
i II oh	100·0 66·0	97·0 70·0	96·0 55·0	85:0 44:0	81·0 35·0	65·0 20·0
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	84.2	82.1	78.0	61.7	56.4	44.9
Columbus Rainfall,inch.	4.36	5:31	0.46	3.96	2.60	6,17
" No. days rain.	10 96:0	12 96:0	$\frac{2}{94.0}$	2 78:0	5 70:0	68:0
" Ther High Low .	68:0	70.0	50:0	36.0	33.0	20.0
Ave	$\frac{81.0}{8.67}$	$\frac{82.0}{2.47}$	75·0 2·93	64.0 2.96	$\frac{51.0}{2.75}$	44.0 5.11
Maeon Rainfall,inch. No. days rain.	001		- 55			1
(High.	95:0	97.0	92.0		76.0	68.0
" Ther \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	90°0	70:0 87:0	60:0 83:0	•••	51:0	38.0
Montgom'y Rainfall inch.	6.54	3.05	1.61	0.96	3.42	5.97
" NO. GAVS FAIRA	14	18	4	2	9	15
" Ther \ H gh.	100:0 65:0	95·0 68·5	95·0 51·5	86.5 42.0	78·0 32·0	69.5
. / Aver.	82.8	80.9	(0.1	65.9	53.2	41.8
Mobile Kaintall, inch.	5:38 12	11:53	$\frac{1.76}{3}$	0.37	5:36 8	$\frac{7.18}{14}$
" No. days rain. High.	96.0	19 95:0	92:0	82.0	79-0	1.1
" Ther. \ Low .	74.0	71.0	55.0	43.0	35.0	41.4
N. Orleans . Rainfall,inch.	$\frac{83.3}{4.73}$	80:1	76.8	61:4 0:24	55.7 4.35	9.57
" No. days rain.	21	16	0·26 7	2	7	18
, High.						
" Ther Low .	83.4	82.2	79.1	67:6	59.2	48.1
Shreveport. Rainfall,inch.	1.87	2.22	0.62	5.42	-2.99	2 38
" No. days rain.	9 93:0	96:0	6	6	78:0	70:0
" Ther. (High. Low (Ave	630	69:0	95·0 52·0	85·0 33·0	35.0	17:0
(Ave.	84.0	83.0	52.0 75.0	64.0	53.0	41.0
Fayette, Miss.— "Rainfall,inch.	5:40	5.20	0.20	1:30	2:60	5.20
" No. days rain.	8	13	2	-1	9	10
(High.	92.0	91:0	95.0	84.0 37.0	76:0	69.0
" Ther Low.	71.0 70.1	70·0 77·2	51:0 72:0	87·0 62·2	29.0 50.1	39.2
Vicksburg . Rainfall,inch.	3 3 1	77.2 2.56	1.95	2.21	2.63	5.74
" No. days rain.	11	16	6	4	10	15
" Ther. $\begin{cases} \cdot & \text{igh.} \\ \cdot & \text{Low.} \\ \cdot & \text{Aver.} \end{cases}$	97·5 71·0	97:0 67:5	94:0 51:5	86·0 35·0	79·5 32·0	69·0 13·5
(Aver.	85.6	80.3	74.0	63.2	52.3	41.2
Columbus, Miss.— Rainfall,inch.	2.97	3:36	3.45	1.46	1.62	3.50
" No. days rain.		$\frac{3.36}{12}$	3.49	1 1	6	8
Little Rock Rainfall, inch.	5.89	9.65	0.64	6:95	1:32	2.00
Nashville Rainfall,inch.	5.41	7.51	2:55	2:96	0.93	0.74
" No. days rain.	97:0	99:0	J		9	9
" Ther High. Low Aver.	5 70	61.0		••••		
Aver.	80.9	73.7	69:2	56.7	464	30.8
Memphis Rainfall,inch, No. days rain.	4.38	5:37 14	3.04	3·95 11	0.90	2·14 15
So, days rain.	95.0	95:0	91.0	11	81.0	62.0
" Ther $ \begin{cases} \text{II'gh.} \\ \text{Low.} \\ \text{Aver.} \end{cases} $	65.0 81.3	65.0	46.0 70.0	53:5	29:0 47:1	35.0
(Aver.	61.9	79.1	200	95,9	41.1	95.0

1876.	July.	Ang.	Sept.	Oct.	Nov.	Dec.
GalvestonRainfall.inch.		10:19	0.64	1:11	3.93	3:7
" No. days rain.		11	3	3	9	8
High.	96.0	94.0	94.0	87.0	82.0	70.0
" Ther Low.		71.0	65.0	51.0	39.0	26.0
(Aver	85.0	83.7	79.4	71.6	60.1	20.5
Indianola Rainfall,inch.		-1.60	3.21	4.51	2:76	2.1
" No. days rain.		10	6	7	6	S
Thor Heh.	98:0	09:0	93.0	85:0		75.0
I HCI \ LOW.		71.0	67.0	50:0		53.0
. () ver.			79.4	(8.7	59.0	55:9
Corsicana Rainfall,inch.		1.58	1558	0.92	3.34	2.2
" No. days rain.		Υ .	5	6	7	6
(High.	105:0	101:0	93:0	91:5	77:0	72.0
" Ther; ow.		68.0	50.3	36.0	23.0	12.0
ve:		82.7	74.8	66.6	52.3	57:0
DallasRainfall,inca	1.29	0.29	0.32	0.95	2.47	Orā

CHRONICLE WEATHER REPORTS SUMMARY,

July.—Early in the month the overflow of the Arkansas River did some damage, taking off probably about twelve thousand bales from the prospective yield of that section. Other than this, all the conditions were during the month fairly favorable. In some sections there were complaints of droughts, and in many others too much rain, but as the plant was well started and the fields clean, the harm done was inconsiderable. On the whole, the month closed with the crop in very good condition almost everywhere.

August.—Some reports of caterpillars were current last month, but in the early days of this month they began to be more definite, and as the month progressed it became evident that in some sections harm had actually been done. This was especially true in the prairies and came brake sections of Middle Alabama, and also in a portion of Mississippi and the lower third of Texas. Rains were in excess in Tennessee and in portions of the Atlantic and Gulf States; but in the caterpillar district of Alabama and Mississippi there was very little rain, and in the last two or three weeks of August scarcely any, which helped in a measure to check the growth of that plagae there, though the loss in Alabama was reported at one-third the crop in that section. Rust and shedding widely complained of, especially in the West and Southwest. Drought in Northern Texas.

September.—The weather this month was very favorable everywhere, except some excessive rains on the very coast of the Atlantic States, and a drought in a few sections, the most important of which was the northern part of Texas. Caterpillars completed their work in Texas the first week of the month, stripping the plants of leaves and of the young bolls in the district between the coast and as high up as Huntsville, Brenham and Gonzales, it being reported that in that section "the early pluntings will make from a quarter to a third, and the late" plantings almost nothing."

October.—Drought continued in Northern Texas. The rainfall at Dallas has only been one inch and twenty-six hundredths since the first day of August (three months), and was only one inch and twenty-nine hundredths in July. The weather during the month has generally been excellent for picking purposes. Killing frost was reported in the West and Southwest on the first an 1 second of October, destroying in a considerable section the later growth.

Nore aber.—The weather was very favorable everywhere for picking, the first ten or twelve days. A storm during the next four days in Texas was said to have beaten out and destroyed much cotton. The balance of the month generally cold.

December. -Weather quite severe and cold, but not of so much import-

ance, as picking had been in large part finished. Towards the close of the month it became very cold, ice being reported at Galveston and Indianola, and heavy snow in north of Texas, with the "coldest weather "at Dallas ever known." Eleven inches snow at Memphis, &c.

FROM THE AGRICULTURAL BUREAU REPORTS.

From the August and September reports (to September 1) issued as one:-" The September returns, while averaging a higher condition than " is usual in this month, are lower than those of August. * * * In " North Carolina the decline has been from 96 to 93, caused by exces-" sive moisture and rust; in South Carolina from 97 to 91, from blight "caused by great extremes of heat and moisture; in Georgia from 104 " to 90 by drought mainly, and in less degree by rust and caterpillars; "in Florida from 89 to 83 by worms and rust; in Alabama from 103 to "83 from causes similar to those operating in Georgia, with great "prominence of the eaferpillar; in Mississippi from 92 to 87, mainly "from too much rain, with some injury from the boll worm and cater-"pillar; in Texas from 106 to 87, from various causes, operating either "together or separately in the different sections, as drought, rains, rust, "boll worms and caterpillars. In Tennessee and Arkansas the decline "is scarcely perceptible, amounting to but one per cent, and in Louis-" iana there is a gain of one per cent."

From the October report (to October 1):—"The October reports indi"cate a reduction of the condition of cotton during the past month in
"the ten principal cotton States from an average of 90.5 to 82.7.

" * * The impairment of the crop prospects has been caused by the
"equinoctial storm in North Carolina, drought and rust in Georgia,
"the caterpillar in Florida and Alabama, the boll worm in Arkansas,
"and frost in Tennessee. The caterpillar is confined to the southerly
"portion of the Gulf States. Its depredations are most severe in Ala"bama. In most of the infested districts its reproduction was too late
"to destroy more than the top crops."

From the November and December (to Dec. 1) reports, issued as one:—
"The returns of November indicated an extreme y favorable season for
"gathering cotton, except in some portions of North Carolina. * * *
"Frost has injured the top crop in the northern belt, notably in Arkansas.
"The fibre is cleaner than usual and of superior quality in the southern
belt. Drought in the Gulf States, rain storms in the Carolinas, the
"holl worm in the Southwest, and the caterpillar in certain locations
"near the Gulf Coast, are chief causes of injury to the crop. The har"vest will be completed at a much earlier date than usual. The crop
"must be smaller than that of last year, however favorable and long the
"remaining season for gathering."

We learn from the foregoing—

First.—That the summer growth this year was subject to more than the usual misfortunes. July was favorable, except the flood in Arkansas; but after that, rains were excessive over a considerable section, and extremely important districts were greatly injured by caterpillars, more especially the prairies and canebrakes of Middle Alabama and the lower third of Texas. There was also a very severe drought in the northern part of Texas, and the

usual complaints from very many points of shedding and rust.

Second.—The fall growth was also shortened by an unusually early killing frost, on the 1st and 2d of October, in the West and Southwest, but the weather for picking was generally as fine as possible up to December, when about all the cotton had been gathered.

Third.—Notwithstanding these serious drawbacks—(1) the Arkansas flood, (2) the caterpillars, (3) excessive rains in sections. (4) shedding and rust, (5) drought, (6) unusually early frost—the crop raised was one of the largest ever gathered. How can we account for this, other than by accepting the fact that a good stand makes such a strong, healthy plant, that it successfully resists ills that a poor plant would succumb to, and, further, has so much fruit forming constantly that it can afford to lose largely by shedding and by caterpillars and by frost, and yet furnish a good yield.

1877.

For the last six months of 1877 the monthly record of rainfall and weather is as follows:

	1877.	July.	Aug.	Sept	Oct.	Nov.	Dec.
Norfolk	Rainfall,inch.	7:97	3.78	11:90	7:52	5:54	4:31
**	No. days rain.	13	12	19	10	13	13
	Ther	99.5	94.0	93.0	73.0	77:0	6510
4.6	Ther \ Low .	6 .0	66.0	. 4.0	4 *0	52.0	25.0
		79.6	77.4	ES: 7	621	25.5	45.9
Wilmingt	'n.Rainfall,inch.	9:35	10.46	20:10	6.63	4.94	-6.13
	No days rain	9	10	. 14	10	li	1.1
	Ther $\left\{ \begin{array}{l} H_1g_0 \\ W \end{array} \right\}$				82.0	83.	73:0
• 6	Ther w	80.0			4 0	54.0	25.0
		80.0	78:3	72.4	65.4	57.5	6 6
Charlesto	nRainfall,inch.	10.51	2.21	6.30	1.37	7.02	4 22
••	No. days rain.	12	1.1	19	1.5	13	1:3
	Ther	1.0.0	93.0	92.0	81.0	500	600
11	Ther Low	73.0	71.0	63:0	FB:) '	3 *0	33.0
	/ · ver	83: i	82.3	7 .5	69:1	: 9.2	54·1
Augusta .	Rainfall.inch.	1.85	5.25	4.().)	4.98	6.06	3.21
••	No. days rain.	~	:3	1 1	13 '	13	10
	v + gh	93.0	10 .0	17:0	83:0	77:0	71:0
4.4	Ther	1 5 1	65.0	5)	460	(6.0)	3 -0
		8313	8 '5	76.4	15.1	53:9	54.2
Atlanta	Rainfall,inch.	3.29	0.77	3-19	3.87	3.19	3.90
• •	No. days rain.	7	4	.5	٧ .	7	- 6
			950	(20	74:0	6 - 9	66.0
4.6	Ther. \ L w .	0.0	67:0	17.0	44.0	2011	200
	/ .ver.	87.0	87.0		65.0	55:0	550
Savannah	. Rainfall,inch.	5.67	3.69	8.92	5:57	3:72	4.00
4.	No. days rain.	13	1.1	15	11	11	1.2
	, II gu,	103.1	1:0:0	95.0	13:0	8110	71:0
44	Ther. 'L v.	610	71.0	64:0	£0°0	54.0	200
	ver,	83.5	81.6	76.7	6-7	59:1	55:1

			1	F o		1 -
1877.	July.	Aug.	Sept.	Oet.	Nov.	Dec
Columbus. Rainfall,inch	1:34	2.24	3.30	1:87	4.13	4.7
" No. days rain.	3	4	6	5	6	- 6
" Ther High.	98:0 75:0	95·0 73·0	95.0 80	4 0	78:0 25:0	71.0
ver.	85.0	82.0	76.0	63.0	54.0	53.0
Macon Rainfall,inch.	4.17	2.05	3.28	3.40	4.73	5.1
" No. days rain.						
High.	96 0 68:0	94.0	C2·0	73.0	73.0	68.0 2.0
" Ther. Ave .	85:0	66 0 S0:0	670 770	+0·0 37·0	22 0 53 0	4 0
Montgom'y, Rainfall, inch.	3.43	1.07	4.07	2.51	3.75	4.7
" No days rain.	9	9	13	10	12	9
High,	102.0	9+0	97:0	8355	76.0	71.0
" Ther ow.	81.3	81·8	61.0 75.3	4 ::0 65:5	25.5 53.9	210
Mobile Rainfall, inch.	3.74	4.69	12.68	6.15	4.73	5.9
Wa days voin	8	12	15	9	10	10
(Hgh.	100.0	100:0	₽5•0	83.0	76.0	7 .0
	6 > 0	70.0	63.0	48.0	27.0	28.0
\ver. N. Orleans. Rainfall,inch.	84·8 6·11	82·0 2·54	$\frac{7.6}{13.21}$	68·1 9·15	56·1 6·58	54·3 4·9
" No. days rain.	13	9	14	14	8	8
(High.	99.0	98 0	93:0	81.0	7 -0	71.0
	73 a	63.0	64.0	53.0	38.0	3.·0 55·5
rer.	83.7	83.1	78.4	70.2	58.3	55:5
Bhreveport Rainfall,inch.	2.37	0.50	9.93	9:30	3·76 8	3.7
" No. days rain.	10 99·0	99·0	$\frac{12}{9 \cdot 0}$	88:0	72.0	710
" Ther Low.	64.0	65.0	1.0	43.1	19:0	2 .0
	85.0	82.0	76.0	65.4	51.7	51.3
Fayette, Miss.—						
" Rainfall,inch.	4:80	11.20	6:60			
	5 91:0	88:0	92:0			
" Ther. (High	61:	53.0	66.0			
(Av .)	7~2	73.1	.6.2			
Vicksburg. Rainfall,inch	2.95	1.14	6.54	5.00	6.03	2.8
No. days rain.	9	6	11	10	10	6
" Ther (High.	99:0	99:0 66:0	97:0 55:0	86:0 43:0	74·0 23·0	73·0
(.ve .	82.4	81.1	74.0	66.	53.3	54.1
Columbus, Miss.—			1			
" Rainfall,inch.	4.92	0.47	12.83	2.82	7.29	5.1
No. days rain.	7	3	10	10	11	10
Little Rock, Rainfall, inch.	0.81	3.26	7:72	6.16	4.93	6.6
" No. days rain.	95:0	97.0	96:0	87:0	8 78:0	81:0
" Ther Low.	79.6	60:0	51.0	38.0	10.0	12.0
	80.0	8):0	72.0	65.0	72.0	50.0
NashvilleRainfall,inch.	3.25	4.16	5:40	2.61	4.93	2:4
" No. days rain.	10	8	12	83:0	13 699	69:0
" Ther Low.	95°0 66°0	85.0 81.0	80:0 57:0	38:0	17.0	17:0
Aver.	81.1	77.4	70.6	60.9	47.3	48.5
Memphis Rainfall,inch.	6.22	6.02	3.11	3.75	5.97	4.4
" No. days rain.	13	10	13	13	15	1.
" Thun (High.	96.0	63.0 84.0	94.0	81:0 41:0	68·0 16·0	70·0 20·0
" Ther Low.	52·0 50·4	78.0	5 0 71 0	62.3	47.6	5 5
Jalveston Rainfall, inch.	1.89	1.27	13.35	17:39	6.77	5.8
" No. days rain.	11	1.27 7	. 8	10	7	11
High.	94.0	97.0	93.0	87.0	7:0	68.0
" Ther ow .	7 ·0 81·4	70°0 84°6	80:0 80:1	49·0 71·5	30·0 5 ··2	35·0 55·9
IndianolaRainfall,iuch.	2.01	198	25.50	11:75	4.83	5:9
" No. days rain.	7	7	6	13	8	13
H gh.	97.0	100.0	96.0	53.0	×20	77.0
ruer, Low.	68:0	73.0	6 00	49.0	28:0	- ⊁3∙0
/ Aver.	84.9	85.8	81.2	70.2	60.3	56.9
CorsicanaRainfall,inch.	3.60	2.85	2:33	6.81	6.51	$\frac{3.9}{11}$
" No. days rain. " Yhor Jugh.	105.0	10.0	100:0	98.0	75.0	75:0
Tuct., Low.	: 9:0	61.0	:00	40.0	14:0	55.0
/ vv r. DallasRainfall.inch.	81:1	81·8 3·16	75.8	65.4	51:4	5!·7 3·1
			4.25	6:55	7:50	

CHRONICLE WEATHER REPORTS SEMMARY.

 $Ju^{\dagger}y$.—This month was generally very favorable for the development of the crop. In some sections the temperature was too low for rapid

progress, but about half the month was hot and forcing, with just rain enough to give the plant a strong, healthy growth. More rain than needful, however, fell in the Memphis districts, and also along the Atlantic coast. Plant continues backward, say about two weeks later than last year almost everywhere. In Texas the coast counties west of the Colorado River reported great injury from caterpillars.

August.—During August the weather was very favorable, with few exceptions; on the coast of North Carolina and in Memphis there was too much rain, and in parts of the Atlantic and Gulf States, and especially in the north of Texas, there were complaints of drought; the last week of the month, Northern Texas was relieved by fine showers. Caterpillars were reported this month in many more sections of Texas, and doing harm in all the lower third of the State. Shedding and rust widely complained of.

Seplember,—The weather was fairly favorable for maturing and gathering the crop, except in the third week. Earlier in the month considerable rain fell, all of which, on account of the previous dry weather, was needed; but in the third week there was a very severe storm of wind and rain in the Gulf, the rainfall being largest at Galveston, New Orleans and Mobile (from eight to ten inches), but reached three and seventy-eight hundredths inches as high up as Vicksburg, and three and three hundredths inches at Nashville. The remainder of the month was generally very favorable. In parts of North and South Carolina there was more rain through the month than desirable.

October.-During the first half of October, except as stated below, the weather was very favorable for maturing and picking cotton. On the 7th there was a very severe local tornado in the northern and northeastern sections of Texas, but does not seem to have passed outside of Texas with much severity, nor to have passed through the lower third of the State. During the week ending on the 19th, there was another storm in the Gulf, of four or five days' duration, beginning in Lower Texas and extending up into Arkansas, through much of Louisiana and Mississippi, but not reaching Mobile, the rainfall being between three and six inches at different points. Again, in the week ending the 26th there were two days of very heavy rain on the Texas coast, the rainfall at Galveston being nine inches and forty-three hundredths. This storm did not extend far, except in a modified form-that is, the rainfall rapidly became less as it passed inland (being at Corsicana one inch and fortytwo hundredths, at Vicksburg one inch and one hundredth, at Shreveport only fifty-four hundredths of an inch, at Memphis fifty-five hundredths of an inch), and yet over much of that section there was a dense mist during the greater part of the week, which interfered with picking and gave rise to very many complaints of rotting and spronting of bolls, &c. On the Atlantic coast there were also some heavy rains, but not extending inland with any special severity. With the exception of the districts named above, the weather was fairly favorable for crop purposes.

November.—The first ten days of November there was a continuation, especially on the Gulf coast, of the heavy rains so prevalent in October; but later the weather improved, and the most of the remainder of the month was fairly favorable for picking purposes; the principal exception was in the week ending Nov. 23, when it rained on from one to three days at almost all points, the rainfall reaching, in the aggregate, from one to three inches. A killing frost was reported Nov. 10 all over Texas and, in fact, at about that date in almost all parts of the South. Ice formed in many places.

December .- The first three weeks of December, with the exception of

one to three of the first days, were generally very favorable for picking purposes, but the last week less so. Take the month as a whole, however, there was less rain than in the average years; and as the temperature was higher than usual in December, farm-work made better progress.

FROM THE AGRICULTURAL BUREAU REPORTS.

August Report.—"On the Atlantic coast there is frequent mention of inferior fruiting. In the Carolinas there has been much succulence of growth in consequence of abundant moisture. In Georgia and Alabama there has been some injury from drought, but the weather has lately been more seasonable. It has been too wet in much of Mississippi; some cotton in bottom lands in Tippah county has been abandoned from this cause. In Louisiana the promise is extraordinary. In Concordia parish the best crop since 1870 is expected; in Union 'the best since 1860.' The prospect in Texas is married by the appearance of the caterpillar. More than half of the counties reported are infested, not seriously as yet except in a few cases. In Lavaca the bulk of the crop is destroyed; in Gonzales, 75 per cent—'a complete wreck where preventives were not used.'"

September report.—"The condition of cotton during the first week of September averages for the whole cotton helt the same as in September of last year. Florida, Alahama, Mississippi, Louisiana, Arkansas and Tennessee make higher averages than in 1876. The Carolinas, Georgia and Texas report less favorably, the greatest reduction being in Texas. As compared with last month, Florida, Arkansas and Tennessee only report improvement. The caterpillar is present in all of the Gulf States and in South Carolina, but has done little damage as yet, except in Texas. * * * * In the Atlantic States there is much complaint of rust, mainly resulting from drought, but in some counties from injury by beating storms. In this section the growth is late, and the effects of frost in shortening the harvest are feared."

October Report.-- The average condition is nearly as high as in 1876. It is \$14, against \$2.7 last year and \$8 the year before. The decline in condition during September is less this year than last. Georgia and Tennessee make the same average as in September of last year; North Carolina higher, and all other States lower, though Arkansas declines but one per cent. The weather has been favorable generally up to the middle of September, except upon soils liable to suffer from drought. In portions of Arkansas, and in more limited areas in Texas, heavy rains prevailed in the early part of that month, and from the 16th to the 20th a storm of great violence swept through the cotton belt, to the borders of Texas, doing great damage by beating out the fibre, rotting the bolls, breaking down the plant and overflowing low lands. A loss of at least 20,000 bales is reported from overflows of the Black Warrior and Tombigbee. In Alabama, between the 20th and 30th of September, rains were frequent, and in some localities nearly continuous, retarding or discontinuing picking. Rust is reported throughout the belt, more in the east than in the west, but in few places causing serions damage. The caterpillar has done less damage than was feared, the most serious losses being in Texas and Louisiana. In the more northern States they will cause quite as much benefit as injury, by reducing redundant growth of foliage and hastening maturity of fruitage."

The foregoing indicates—

First.—That the summer growth was fairly satisfactory, and on the first of September the crop was in good

average condition, and over a very considerable section in excellent condition. Lower Texas, on account of caterpillars, was less favorably situated.

Second.—That September was a satisfactory month in all but the Gulf States the third week, and in parts of North and South Carolina; that the first half of October was also favorable, except a tornado on the 7th in the upper two-thirds of Texas, and a severe storm on the Atlantic coast on the 3d or 4th of the month; for the remaining two weeks and for the first ten days of November there were unusually severe and frequent storms, especially in the western and southwestern States, being more severe on the coast, but extending inland so as to interfere greatly with picking; that December was more favorable than the average for that month. A killing frost was reported in almost all sections by the 12th of November.

DEDUCTIONS FROM THE ABOVE STATEMENTS.

We have thus hastily passed in review the surroundings of the cotton plant during the last half of each year from 1871 to 1877, both inclusive. To complete the record one further set of facts is necessary, indicating the date of frost and the limit of the picking season. The data with regard to the latter point, we have mainly obtained from our own correspondents; but as to frost, we have, in all cases, relied upon the Signal Service Bureau's observations when we could obtain them. Of course, in giving the exact period when picking was finished, there is probably some little difference in the mode of fixing the date: the idea, however, has been for each correspondent to designate the time when that point in the season was generally reached in his district, not the day when the last man picked his last bale. We have subsequently averaged each section, but first insert the full returns, as follows.

KILLING FROST AND END OF PICKING SEASON.												
	1871.	1872.	1873.	1874.	1875.	1876.	1877.					
Wilmington-	Nov. 16	Oat 15	Nov. 90	Nor 0	Oot 15	Oot 17	V					
First frost Killing frost	Nov. 16	Oct. 15 Nov. 16	Nov. 20	Nov. 2	Oct. 17	Oct. 17	Nov. 7 Nov. 7					
End of picking Charleston—	Nov. 20	Dec 20	Dec. 25	Dec. 10	Dec. 25	Dec. 25	Dec. 20					
First frost	Nov. 15	Nov. 15	Oct. 29	Nov. 1	Oct. 17	Oct. 17	Nov. 11					
First frost Killing frost End of picking	Nov. 16	Nov. 17	Nov. 20	Dec. 16	Dec. 18	Dec. 1	Nov. 12					
Augusta—												
First frost	Nov. 16	Oct. 31 Nov. 15	Oct. 3	Oct. 14	Oct. 16	Oct. 8	Nov. 11					
Killing frost End of picking	Dec. 15	Dec. 25	Dec. 31	Dec. 25	Dec. 10	Dec. 25	Dec. 31					
Atlanta – First frost	1			1	1	i	i					
Killing frost	Nov 16	Nov. 15	Ŏĕf. 29	Nov. 1	Nov. 17	Nov. 10	Nov. 7 Nov. 11					
End of picking Savannah—	Nov. 15	Nov. 25	Dee. 5	Dec. 25	Dec. 10	Dec. 15	Dec. 20					
First frost Killing trost. End of picking		Oct. 15	Nov. 11	Oct. 15	Dec. 9	Nov. 10	Nov. 10					
Killing trost.	Nov. 16	Nov. 15	Nov. 26 Dec. 10	Dec. 16 Nov. 20	Dec. 9	Nov. 10	Nov. 30					
Columbus, Ga.—					ı	1						
First frost Killing frost	Oct. 12 Nov 17	Nov. 15	Oct. 28	Oct. 14 Nov. 1	Oct. 15 Dec. 7	Nov. 11 Nov. 11	Nov. 10 Nov. 30					
End of picking			Nov.20	Nov. 15	Dec. 20	Dec. 20	Dec. 25					
Macon-	Oct 19	Oct. 15	Oct. 8	Oct. 14	Oct. 14	Oct. 8	Nov. 10					
First frost Killing frost End of picking	Nov. 16	Nov. 15	Oct. 29	Nov. 1	Dec. 7	Nov. 11	Nov. 30					
End of picking Montgomery—	Dec 12	Dec. 12	Dec. 12	Dec. 15	Dec. 10	рес. 6	Dec. 20					
First frost	Oct. 12	Oct. 15	10777355	Oct. 13	Oct. 8	Nov. 10	Nov. 4					
First frost Killing frost End of picking	Nov. 18 Nov. 10	Nov. 16	Oct. 29 Nov. 25	Nov. 2 Dec. 10	Dec. 8 Dec 16	NOY, 10 Dec. 17	Nov. 11 Dec. 20					
Mobile—	! !						ļ					
First frost Killing frost	Nov. 18	Oct. 15 Nov. 13	Oct. 8	Nov. 2	Oct. 12 Dec. 8	Nov. 8	Nov. 12 Nov. 12					
End of picking	Nov 15	Nov 30	Nov. 30	Dec 1	Dec. 25	Dec. 15	Dec. 25					
New Orleans— First frost	Nov. 18	Nov. 16	Oct. 5	Dec. 10	Nov. 11	Oct. 3	Nov. 12					
Killing frost.	Dec. 3	Nov. 16 Nov. 16			None.	Nov. 19	Nov. 12 Nov. 30 Jan. 31					
End of picking Shreveport—					aan. 10	Dec 20	3811. 51					
First frost		Nov. 18 Nov. 18	Oct. 20	Nov. 1 Nov. 1	Oct. 19 Nov.16		Oct. 20 Nov. 7					
Killing frost End of picking	Dec. 1	Dec. 1	Dec. 15.	Dec 4	Dec. 20	Dec. 24	Dec. 24					
Vicksburg—			Out 6	Oot 11	Oct. 20	Oet. 2	Nov. 7					
William frost	Nov. 16	Yov 17	Oct 29	Nov 1	Dec. 7	Oct 8	Nov. 11					
End of picking Fayette, Miss.—	Dec 10	Dec. 20	Dec 31	Dec. 5	Dec. 31	Dec 10	Dec. 31					
First frost			Oct. 7	Oct. 14	Oct. 31	Oct 2	Nov. 7					
Killing frost End of picking				Nov. 1	Nov. 11 Jan 10	Oct. 2 Dec. 20	Nov. 11 Dec. 25					
Little Rock—												
First frost Killing frost	Nov. 16	Nov. 16	Öet. 29	Nov. 1	Nov. 16	Oct. 8	Nov. 3 Nov. 3					
End of picking	Dec. 10	Dec. 31	Dec 20	Dec 10	Feb 1	Dec 15	Feb. 1					
Nashville— First frost	Sept.30	Oct 10	Oct. 8	Oct. 13	Oct. 12	Oct. 2	Oct. 5					
First frost Killing frost	Nov. 17	Oct. 11	Oct. 29	Oct. 14	Oct. 12	Oct. 8 Dec. 5	Nov. 7 Dec. 15					
Memphis—	Dec. 1	1000.01	1700.20	1/((, 1	200.20	Dett. 0						
First frost Killing frost End of picking	Sept.30	Oct. 10	Oct 8	Oct. 13	Oct. 12 Oct. 12	Oct. 2 Oct. 2	Oct. 5 Nov. 6					
End of pickin,	Feb. 17	Feb. 24	Jan. 10	Dec. 12	Feb. 1	Dec. 15						
Gaiveston							Nov. 10					
First frost Killing frost	Dec. 2	Nov. 14	Oct. 29	None.	Dec. 7	Dec. 6	Nov. 10 Nov. 10					
End of picking	Nov. 18	Dec. 15	Dec. 10	Dec. 1	Dec 10		Nov. 24					
First frost	Oct. 30		::-1:::::	Nov. 12	Oct. 20	Nov. 13	Oct. 19					
First frost Killing frost End of picking	Nov. 18	50v.14 Dec.15	Dec. 10	Nov.30	Dec. 1	Dec. 7	Nov. 10 Nov. 24					

	1871.	1872.	1873.	1874.	1875.	1 1876. 1877.
Corsicana-						
First frost		<i></i> .		Oct. 31	Oct. 20	Oct. 1 Oct. 22
Killing frost.	Nov. 15	Nov. 17	Oct. 28	Nov. 20	Nov. 16	Oct. 1 Nov. 6
End of picking	Nov. 18	Dec. 25	Dec. 15	Nov. 29	Dec. 15	Dec. 27 Dec. 10
Dallas—				ì		1
First frost						Oct. 1 Oct. 22
Killing frost						Oct. 1 Nov. 6
.End of picking			1	J 		Dec. 27 Dec. 10

This table, with all its details, will frequently be found of use, and in fact is necessary for comparison in any close analysis or estimate of a crop secured. But our present purpose will be better attained by having the substance of these facts in a less extended form. We have therefore prepared the following, which gives, as near as may be, from the foregoing, the average date in each State of the close of the picking season for each year.

	End of Picking Season in each State.									
187	1. 18-2. 187	3. 1874.	1875. 1876	. i 1877.						
North Carolina . Nov.										
South Carolina . Nov.										
Georgia Dec.	5 Dec. 15 Dec.	10 Dec, 15 E	Dec. 15 Dec. :	20, Dec. 22						
Alabama Nov.										
Mississippi Dec.	10 Dec. 20 Dec.	31 Dec. 5 L	Dec. BI Dec. 1	5 Dec. 25						
Louisiana Dec.	1 Dec. 1 Dec.	15 Dec. 4 L	Dec. 20 Dec. 2	24 Dec 24						
Arkansas Dec.	10 Dec. 31 Dec.	20 Dec. 10 F	'eb. 1 Dec. 1	[5] Feb. 1						
Tennessee Jan.										
Texas Nov.	18 Dec. 20 Dec.	12 Dec. 1 L	ee. 10 Dec. :	20 Dec. 5						

In abridging the frost statements from the same table, we designate two sections in every State where any important differences of date appear between the inland and coast counties.

		Date of Killing Frost in Each State.										
	1871.	1872.	1873.	1874.	1875.	1876.	1877.					
North Cacolina .	Nov. 16	Nov.16	Nov.20	Nov. 2	Oct. 1	Oct. 17	Nov. 7					
So. Carolina—		1										
Coast	Nov.16	Nov.17	Nov.20	Dec. 16	Dec. 18	Dec. 1	Nov.12					
Inland	Nov.16	Nov.15	Nov. 5	Nov. 1	Nov.17	Nov. 10	Nov.12					
Georgia-		1	1				İ					
Coast	Nov 16	Nov 15	Nov 20	Dec. 16	Dec. 9	Nov 10	Nov.36					
Inland	Nov. 16	Nov. 15	Nov. 5	Nov. 1	Nov. 17	Nov.10	Nov 12					
Alabama	Nov 15	Nov.13	Oct. 29	Nov 2	Dec. 8	Nov. 8	Nov 12					
Mississippi	Nov.16	Nov.17	Oct. 29	Nov. 1	Dec. 7	Oct. 8	Nov.11					
Louisiana-		1					ļ					
New Orleans	Dec. 3	Nov.16	'Oet, 29	None.	None.	Nov.19	Nov 30					
Shreveport	Nov.16	Nov.18	Oct. 28	Nov. 1	Nov.16	Oct. 1	Nov. 7					
Arkansas	Nov.16	Nov. 16	Oct. 29	Nov. 1	Nov.16	Oct. 8	Nov. 3					
Tennessee-		1					i					
Nashville	Nov.17	Oet. 14	Oct. 29	Oct. 14	Oct. 12	Oct. 8	Nov. 7					
Memphis	Nov.17	Oct. 14	Oct. 8	Oct. 13	Oct. 12	Oct. 2	Nov. (
Texas-					į.							
Corsicana												
Galveston	Dec. 2	Nov 11	Oet. 29	None.	Dec. 7	Dec. 6	Nov 10					

An examination of these figures will show that, by itself and independent of other facts, neither the length of the picking season nor the date of frost is an event con-They are both elements of some trolling the yield. importance in the problem to be solved, and at times quite decisive, but chiefly because of previous conditions. For instance, in 1874 (the year of the great spring flood), the start on the flooded low lands of the Mississippi Valley was over a month delayed; furthermore, the imperfect stands everywhere secured, and subsequently the unusual summer drought (both contributing to lessen the yield of the plant) made it highly important that the full growth should be attained and a good top crop saved. A late killing frost that year was, therefore, in every section, of the first importance. Yet the date on which it visited Memphis was very early, October 13, and by the first of November, not only throughout the whole of the Mississippi Valley and its tributaries, but almost everywhere else, vegetation was killed. On the other hand, in 1875 and in 1876, the stand was good and the bottom and middle crops were excellent, so that when, during the first eight days of October, 1876, the frost stopped all growth in the West and Southwest, and in 1875, during the first half of the same month, checked vegetation in half of the Memphis and Nashville districts, there was sufficient cotton already made in most of those sections to keep the full working force busy up to or beyond Christmas. Before, however, considering these points further, it will be well to recall the controlling features of each year's progress and growth, so that we can scrutinize as a whole the early as well as later development and yield of each season. But first, for more convenient reference, we have epitomized the conditions of weather &c., for the last six months, given in detail above:

1871 July, weather apparently very favorable. August, also very favorable, with limited exceptions, yet plant shedding badly everywhere. September to December, weather favorable, but plant sheds and little fruit ripened. Killing frost November 16 and 18. Picking closed about November 15 to December 10.

1872 July, too rainy in about one-third the South. Alabama rivers overflow; rest favorable. Angust, drought complained of in all but a portion of Atlantic States, where there was too much rain; bad shedding reported in extensive districts. September, unfavorable reports continued, but weather fairly favorable. October to December, fairly favorable; horse disease delays crop. Killing frost was delayed everywhere, except in Tennessee, till November 13th to 18th. Picking closed from December 15 to 31, though at some points earlier.

1873 July quite favorable. August, too much rain on the coast at Charleston, Mobile, New Orleans and Galveston, elsewhere fairly satisfactory; caterpillars did injury in Central Georgia and lower half Alabama; shedding badly in some districts. September, except on the very coast, no more rain than desirable. October to December fairly favorable. Killing frost in the Gulf and western States October 28 and 29, and in the Atlantic States November 5th and 20th. Picking closed from December 1 to 31, though at a few points earlier.

1874 July fairly favorable, except severe local storms on the coast and drought in Memphis district. August, Memphis drought continued and extended until taking in all Tennessee, Arkansas, northern portions of Louisiana, Alabama, Mississippi and Texas; shedding very profuse. September, fine rains everywhere and weather favorable. October, killing frost at Memphis and Nashville October 13 and 14, and almost everywhere else at close of month. Norember and December favorable. Killing frost generally November 1. Picking closed generally before December 10.

1875 July fairly favorable, though rains were more abundant at some points than needed. August, rains very excessive at many points, and Mississippi overflowed at Memphis; shedding, &c., widely and strongly complained of. September, less rain, except in Texas anainly the coast) and parts of Alabama and Georgia. October to December—Excessive rains in November and December in Mississippi Valley and Gulf States, and the weather turned quite cold in December. Killing frost at Memphis and Nashville, October 12, and clsewhere from November 10 to December 18. Picking closed from about December 15 to 31.

1876 July fairly favorable, though the rains in considerable sections were more abundant than needed. August, eaterpillars reported to have done great harm in lower third of Texas, parts of Alabama and Mississippi, and rains excessive in some sections, though not in the Alabama and Mississippi eaterpillar districts. September, eaterpillars did great harm in Texas; severe drought in northern part of Texas; excessive rains on the Atlantic coast; otherwise favorable. October, killing frost in Mississippi Valley October 2d; drought in Northern Texas continued; otherwise favorable. Norember, quite favorable, except closed cold. December, cold. Killing frost in the West and Southwest from October 1 to 8, elsewhere November 8 and 10. Picking closed from December 10th to 25th.

Such were the more prominent features of the con-

dition for the latter half of each ceason. That we may at a glance see the changing influences operating from month to month for all the seasons, and be able to compare them readily, we give the following summary:

Year.	Spring Weather.	Stand.	July to Sept.	Oct. to Dec.
	March cold. April fair-		Favorable and	Favorable wea
10-0	ly favorable. May favorable. Junevery	rent, very	cómplaints	
1870	favorable every-	clean and	few, except	
	where.	strong.	shedding.	Dec. 5 to 25.
	March cold, rainy.	sickly,weak	Rainfall gen-	Favorable wea
	April less so, May	and very	erally an av-	ther, Killing fros Nov. 16 to 18
1871	cold, rainy, except Texas. June cold,	grassy ev-	erage, but	Picking closec
	rainy.	erywhere.		Nov. 15 to Dec. 10.
	March fairly favorable	Good, clean	Departure of	Favorable.
1	April generally very favorable. May fa-	andstrong	some points	Killing fros Oct. 14 and
1872	vorable. June gen	almost ev-	live rains at	Nov. 13 to 18
	erally very favor- able.	erywhere.	ding, &c.	Picking closed Dec. 15 to 31
	March favorable, ex-	Two-thirds	Too much rain	Fayorable wea
	eept last week. Apri cold, dry. May, first	good and	on the coast. Caterpillars	
1873	two weeks favorable, rest too rainy in	an think	in Alabania	Oct. 28 to
1	one-third the South.	poor and	Shedding	Nov. 20.
Ì	June too rainy in same third.	grassy.	badly.	Picking closed Dec. 1 to 31
	March cold, rainy; rir-	Very irreg-	Great drought	
	ers overflow. Apri- cold, rainy. May,	ular and		ther.
1874	severe drought, ex- cept Atlantic States.	imperfeet,	see, Ark in-	Killing fres Oct. 13 to 31
	June, last half fa- vorable; first half,	but elean	sas, &e., with	Picking closed before Dec
	drought in some sections.	and well eultivat'd.		before Dec
	March cold. April, first co'd; rest favor-		Ang. to Dec., rains very	Killing fros
1875	able. May, first two	1		Oct. 12 t
1010	weeks cold; rest very		many points.	Dec. 18.
	favorable, Junevery favorable,	never bet- ter.		Picking close Dec. 15 to 31
	=	1	badly.	1
	Aprd, excessive rains in western and Gulf	and eleme		Favorable. Killing fros
	States; rivers over- flow, quickly recede.			Out I to 6
1876	Man generally very	asperfect,	North Texas.	except in A
_ , , ,	favorable, Junevery favorable, except	though, as	Killing frost in Miss, Val-	
	heavy showers hear	year pre-	THE PERSON ASSET	Picking close

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The reader will, of course, refer back to the detailed statements for the different years and months, using the above only as suggestive of the full facts. As to the conclusions to be drawn, there can be but one opinion.

In 1870 we see that the spring weather was almost unexceptionable; the stand was perfect; the summer growth was satisfactory; the picking season was favorable; and the yield was 4,352,000 bales, against 3,154,900 bales in 1869; or an *increase* of 37:94 per cent in the crop on an acreage increased only 13:90 per cent.

In 1871 the spring weather was very cold and ramy; the stand was very poor and grassy; the summer weather gave the average amount of rain, and yet there were complaints of drought and the shedding was very great; as would be the case with any plant with only surface roots in summer weather; the picking season every way favorable, but shedding still complained of; the yield was 2,974,000 bales, against 4.352,000 bales in 1870; or a decrease of 31.66 per cent in the crop on an acreage decreased only 10.75 per cent.

In 1872 the spring weather was favorable; the stand was good and clean; the summer weather was far from favorable, drought in some localities, excessive rains in others, and shedding reported everywhere; and yet with a good picking season the plant was found to be well fruited still, and the yield was 3.930,500 bales, against 2.974,000 bales in 1871, and 4,352,000 in 1870, or, compared with 1871, on an acreage increased 9.75 per cent, the crop increased 32.13 per cent, and compared with 1870, on an acreage decreased 2.05 per cent, the crop decreased 9.69 per cent.

In 1873 the spring weather in about one-third of the South was very rainy and in about two-thirds favorable; the stand was good and the fields clean in two-thirds and poor and grassy in the other third; the summer weather was fairly favorable except too much rain on the coast half of States; caterpillars did injury in Central Georgia and lower half of Alabama, and shedding was complained of pretty generally; the picking season was fairly favorable, except an early frost in the western and Gulf States; the yield was 4,170,000 bales, against 3,930,500 bales in 1872; or compared with 1872, on an acreage increased 10:59 per cent, the crop increased only 6:09 per cent, and compared with 1870, on an acreage increased 8:32 per cent, the crop decreased 4:18 per cent.

In 1874 the spring was first very rainy, so that in March all the rivers overflowed, being the worst flood for thirty years, and the waters did not fully recede till after the first of June; then in May there was a very severe drought everywhere except in the Atlantic States, continued in many sections into almost the middle of June; March and April were also very cold; as a result of these conditions, the fields were clean, but the start was late everywhere, and very late in the flooded district, and very imperfect indeed in all but the Atlantic States; in summer was the great drought and the abundant shedding, but if the reader will examine the comparative rainfall and thermometer, he will see that, except in a portion of the Memphis district, it was no more severe than has before occurred when the result was very much less disastrous; so that we can see no way to account for much of the injury, (the actual killing of the plant in many sections), except by saying that the plant never became well rooted in May and June, and therefore was less able to resist drought; the picking season was excellent, save an early frost in the district of the spring flood, which cut off much from the later-planted crop in that section; the yield was 3,833,000 bales, against 4,170,000 bales in 1873 and 4,352,000 bales in 1870; or, compared with 1873, on an acreage increased 1.54 per cent, the crop decreased 8.08 per cent, and compared with 1870, on an acreage increased 9.98 per cent, the crop decreased 11.93 per cent.

In 1875, the spring weather was favorable almost everywhere; the stand was excellent, never better: in the summer, however, there were very excessive rains, the Mississippi overflowed, and the plants were said to shed budly; the picking season was generally extremely unfavorable and rainy, almost in that particular equal to the picking season of 1877; and yet the yield was 4.669,000 bales, against 3,833,000 bales in 1874, and 4,352,000 bales in 1870; or, compared with 1874, on an acreage increased 5.95 per cent, the crop increased 21.81 per cent, and compared with 1870, on an acreage increased 16.52 per cent, the crop increased 7.28 per cent.

In 1876, the spring weather was not everywhere as favorable as the previous spring, and yet generally very favorable: there was a Mississippi overflow in April, the water, however, soon receding; stand was very good, but not quite up to 1875, and the fields were generally clean and well cultivated, in summer there was considerable rain in sections, a severe drought in Northern Texas, and complaints of shedding and of caterpillars in Alabama. Missisippi, and coast half of Texas, the latter doing considerable harm in Texas, but not much elsewhere: the picking season was fairly favorable, except continued drought in Northern Texas, and also except a killing frost in the Mississippi Valley October 2: notwithstanding these drawbacks, the vield was 4,485,000 bales, against 4,669,000 bales in 1875. and 4.352,000 bales in 1870; or, compared with 1875, on an acreage decreased 1:16 per cent, the crop decreased 3:94 per cent, and compared with 1870, on an acreage increased 15.18 per cent, the crop increased 3.06 per cent.

Such are the conclusions reached from a review of the history of cotton production for seven years. Little more on this branch of our subject remains to be said. The facts thus brought together point to an almost controlling influence of a good stand upon the results of the crop. The character and nature of the plant and its growth and cultivation—previously given—suggested such a relationship, but this experience in production would seem to leave no other possible explanation of the different seasons' results. We conclude, then, that rain, drought, shedding and even caterpillars are shorn of much of their power for evil, if the plant on the first of July is well started; and hence reports of harm done from unfavorable conditions in summer and fall can only be correctly measured when interpreted in the light of the early development.

AGRICULTURAL BUREAU'S FIGURES OF CONDITION.

In this and the previous chapter we have intended to include the substance of the Agricultural Bureau's monthly reports except the figures of condition. As these figures are frequently needed for comparison, we give them below, adding the November percentages of yield and the estimate of the crop each year worked out from them.

STATES.	Actual Product of 1869,	of o	condit	eau fi ion or chanor			
	in bales.	July.	Aug.	Sept.	Oct.		in bales.
North Carolina	210,000	91	101	105	107	116	213,600
South Carolina	256,000	96	101	105	101	123	311,8-0
Georgia	350,000	101	100	105	99	120	420,000
Florida	45,000	98	110	115	102	125	56,250
Alabama	505,000	102	102	100	96	1 110	555,500
Mississippi	500,000	95	95	100	99	103	510,000
Louisiana	425,000	101	100	108	92	112	476,000
Texas	322,400	97	97	109	105	131	422,344
Arkansas	321,500	101	110	110	105	119	382,585
Tenuessee	220,000	85	-90	100 -	97	112	246,400
Total	3,154,900	·					3,657,559

			1 ~	71.	_			
STATES.	Actual Product of 1870,		dition		an figu first o		yield, Est. of	Estimat' Productof Burea
	in bales.	June	July.	Aug.	Sept.	Oct.	Nov.	for 1871 in bales
N. Carolina.	275,000	90	99	94	82	50	80	220,00
8o. Carolina	348,000	92	100	96	80	7.5	68	236,61
Georgia	600,000	82	82	80	78	72	67	402,00
Florida	60,000	103	88	83	75	73	58	34,50
Alabama	645,000	83	81	×1	80	75	73	470,85
Mississippi .	650,000	84	80	80	80	76	72	465,00
Louisiana	600,000	. 90	75	83	77	73	65	390,00
Texas	400,000	93	93	81	80	70	68	272,00
Arkansas	474,000	83	90	93	95	82	85	402,90
Tennessee	000,008	90	98	100	96	94	90	270.00
Total	1,352,000							3,167,19
			18	72.				
		i						
	4 . 4 1	Agric	ultura	Bure	an tigu	res of	Per Ct.	Estimar
	Actual				first of		yield,	Produc
STATES.	Product	mor	tlı.				Est. of	of Burea
	of 1×71,						Burcau	for 187
	in bales.	June.	July.	Aug.	Sept.	Oct.	Nov.	in bales
N. Carolina.	175,000	96	91	9:)	101	90	121	211,75
So. Carolina	255,000	92	97	98	95	86	121	316,20
Georgia	328,000	96	101	101	96	88	119	390,32
Florida	40,000	95	102	96	92	75	102 ,	40,80
Alabama	505,000	105	103	107	88	8.2	111	560,55
Mississippi	495,000	100	103	112	90	74	112	551,40
Lou:siana	396,000	101	103	101	86	72	121	479,16
Fexas	289,000	100	105	103	91	85	126	352.80
Arkansas	290,000	93	95	96	78	75	105	301,50
Cennessee	210,000	101	104	101	92	90	110	231,00
Total	2,974,000							3,111,18
			187	73.				
			.] 1	Diam	au fign	no f	Per Ct.	Estimat'
	Actual				au ngn first of		yield,	Product
STATES.	Product			ште	mist of	eacn		of Burea
SIAILS.	of 1872,	11100	111.					for 1873
	in bales.	June.	July.	Aug.	Sept.	Ort.	Nov.	in bales
		-55	91	95	95		98	196,00
Y Changlian	2000 0000			;1,)	:1.1	.~~	- 1	
N. Carolina	200,000			97	98	80	0.0	0.50 00
co. Carolina	260,000	88	52	87 95	86 90	80	92 97	
so. Carolina Georgia	260,000 505,000	88 94	52 94	95	90	82	97	489,85
So. Carolina Georgia Florida	$\begin{array}{c} 260,000 \\ 505,000 \\ 60,000 \end{array}$	88 94 102	52 91 99	$\frac{95}{103}$	90 85	82 76	97 97	489,85 58,20
So. Carolina Georgia Florida Alabama	260,000 505,000 60,000 550,000	88 94 102 93	52 94 99 85	$\frac{95}{103}$	90 85 85	82 76 78	97 97 91	489,85 58,20 509,50
So. Carolina Georgia Florida Alabama Mississippi	260,000 505,000 60,000 550,000 625,000	88 94 102 93 92	91 99 85 83	95 103 91 88	90 85 85 82	82 76 73 75	97 97 91 85	239,20 489,85 58,20 509,50 531,25
So. Carolina Georgia Florida Alabama Mississippi Lonisiana	260,000 505,000 60,000 550,000 625,000 520,500	88 94 102 93 92 94	91 99 85 83 80	95 103 91 83 86	90 85 85 82 80	29 76 73 75 72	97 97 91 85 80	489,85 58,20 509,50 531,25 416,10
So. Carolina Georgia Florida Alabama Mississippi	260,000 505,000 60,000 550,000 625,000	88 94 102 93 92	91 99 85 83	95 103 91 88	90 85 85 82	82 76 73 75	97 97 91 85	489,85 58,20 509,50

Total ... 3,930,500 3,715,100

			18	74.				
STATES.	Actual Product of 1873,		lition e		nn figu first o		yield,	Estimat'd Product of Bureau for 1874
	in bales.	June.	July.	Aug.	Sept.	Oct.	Nov.	in bales.
N. Carolina.	265,000	89	102	95	87	83	89	235,850
so. Carolina	350,000	81	88	97	86	80	92	322,000
Georgia	500,000	80	91	94	77	80	93	465,000
Florida	75,000	90	96	102	77	81	100	75,000
Alabema	575,000	82	92	90	81	75	95	546,250
M.ssissippi	675,000	73	87	-89	74	74	90	607,500
Louisiana	510,000	70	73	83	62	62	85	433,500
Texas	500,000	-99	102	105	65	70	90	450,000
Arkansas	420,000	90	94	87	47	55	60	252,000
Tennessee	660,008	85	97	83	52	56	57	171,000
Total	1,170,000							3,558,100
			18	75.				
							Par Ct	Estimat'e
	Actual	Agrie	ulturai	Bure	an figu	res of	yield,	Product
STATES.	Pro luct			m the	first o	f each		of Bureau
STATES.	of 1874,	mor	ith.				Sureau	for 1875
	in bales.	June.	July.	Ang.	Sept.	Ort.	Nov.	in bales.
N. Carolina.	273,000	92	95	99	90	85	91	248,430
so. Caroliua	380,000	97	99	81	80	77	7ti	273,60
Georgia	460,000	91	97	86	76	71	74	340,40
Florida	55,000	94	101	85	75	70	99	49,500
Alabama	520,000	101	102	93	87	16	102	530,40
Mississippi .	550,000	100	103	104	98	98	111	610,500
Louisiana	520,000	95	105	99	88	90	100	520,000
Texas	535,000	96	93	93	91	88	114	609,90
Arkansas	400,000	90	104	103	99	103	135	540,000
Tennessee	160,000	99	109	107	96	90	116	185,600
Total	3,833,000							3,908,330
		-	15	76.				
		Agrie	ulturn	Rure	an tier	rres of	Per Ct.	Estimat'e
	Actual	cone	lition	on the	first o	f each	yield,	Product
STATES.	Product	moi					Est. of	of Burea
	of 1875,						Bureau	for 1876
	in bales.	June.	July.	Aug.	Sept.	Oct.	Nov.	in bales.
N. Carolina.	260,000	101	105	96	93	84	92	239,200
Sə. Carolina.	330,000	98	90	97	91	80	99	326,70
Georgia	120,000	103	103	104	90	87	110	462,00
Fiorida	60,000	82	98	89	83	80	100	60,00
Alabama	600,000	9.1	100	103	83	69	77	462,00
Mississippi .	670,000	92	91	92	87	83	78	522,60
Louisiana .	650,000	89	89	89	90	82	83	539,50
Texas	690,000	90	99	106	87	91	100	690,00
Arkansas	650,000	95	97	98	97	83	71	481,00
Tennessee	339,000	93	103	120	119	91	101	342,39

			18	877.				
STATES.	Actual Product of 1876,		lition		an figt first o		yield, Est. of	Estimat'd Product of Bureau for 1877.
	in bales.	June.	July.	Aug.	Sept.	Oct.	Nov.	in bales.
N. Carolina.	225,000	82	88	88	83	85	91	201.750
So. Carolina.	315,000	91	87	84	85	79	90	283,500
Georgia	478,000	89	90	85	77	77	92	439,760
Florida	55,000	92	95	93	94	88	97	53,350
Alabama	560,000	90	94	94	91	88	105	588,000
Mississippi .	639,000	91	93	90	24	80	92	587,880
Lonisiana	578,000	98	102	106	92	77	97	560,600
Texas	735,000	91	94	96	70	64	82	602,700
Arkansas	590,000	94	94	93	99	98	110	619,000
Tennessee	310,000	91	96	90	100	100	115	356,500
Total	1.125.000							1.990.100

In November the Bureau's figures are always intended to indicate the actual yield. They are not made up from the monthly statements of condition, but are "estimates "for each county of the total product of the year, expressed "as percentages of the actual crop of last year." In using the Bureau's reports, however, we have always found that a more useful and safer guide for crop estimates could be obtained in October, one month earlier, from an average of the condition figures for the five months, with the changes of acreage incorporated. As an illustration we give a statement thus prepared for the present year.

STATES.	Production 1876-77, Bales.	year c	ion this ompared r last.	Acreas year co- with	inpared	Yield of 1877-78, Estimat'd,
	Dates.	Better	Worse.	Iner'se,	Dec.	Dodinat d.
North Carolina	225,000		11.0		4.0	191,250
South Carolina	315,000		5.2		3.0	289,170
Georgia	475,000		13:8	1.0		416, 416
Florida	55,000	6.0		1.0		58,850
Alabama	560,000	1.4		2.0		579,010
Mississippi	639,000		1.2	4.0		656,892
Lonisiana	578,000	6.6		6.0		650,828
Texas	735,000		11.6	15.0		759,990
Arkansas	590,000	1.0		5.0		625,100
Tennessee	310,000		9.2	5.0		237,630
Total production	4,185,000					4,515,916

The above indicates that the crop which is now being marketed will reach a total of 4,515,916 bales, or 30,493 bales more than last year; this, according to present appearances, will prove to be a pretty close approximation to the actual out-turn.

AGRICULTURAL BUREAU'S ACREAGE PERCENTAGES

To complete the record of the Bureau's reports, we give in the following its statements of changes in acreage from year to year.

ACREAGE EACH YEAR COMPARED WITH PREVIOUS YEAR.

STATES.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.
N'rth Carolina	108.0	86.0	116.0	114.0	89.0	102.0	98.0	96.0
South Carolina	105.0	\$7.0	109.0	102.0	91.0	106.0	99.0	97.0
Georgia	107:0	88.0	112.0	114.0	99.0	96.0	94.0	101.0
Florida	107.0	102.0	1100	103.0	91.0	99.0	89.0	101.0
Alabama	113.0	87.0	1110	109.0	86.0	104.0	100.0	102 0
Mississippi	112.0	85.0	110.0	104.0	88.0	102.0	98.0	104.0
Louisiana	120.0	92.0	111.0	104.0	80.0	101.0	89.0	106.0
Texas	125.0	86.0	118.0	131.0	102.0	108.0	100.0	115.0
Arkansas	110.0	84.0	1160	110.0	89.0	101.0	100.0	105.0
Tennessee	105.0	88.0	112.0	115.0	92.0	92.0	95.0	102.0
crage	112.0	85.3	113.0	112.0	90.0	101.5	97:0	104.0

The unit of comparison in above is 100, so that 108 is to be understood as 8 per cent increase, 96 as 4 per cent decrease, &c.

CHAPTER VII.

THE PICKING AND MARKETING

OF THE CROP.

Fall estimates must be based on all the facts—Movement of crop may help to remove final doubts—Reasons for planters holding back cotton, how, much weight can be given them—Early and late crops, effect fon movement—First bloom, first bales and new cotton to September 1—Weeks of small receipts—Difference in date between an early and late crop—Necessities of planters have been a controlling influence, but less so hereafter—Height of rivers and effect on movement—How; marketing has been influenced each year since 1870—Daily and monthly receipts and daily percentages for five years.

In what has been already presented, we have the reason pretty clearly developed for the wide differences in fall estimates of the crop. There always will be room for some discrepancy as to the actual yield, because a few of the necessary data may be in dispute. A broad error, however, is a necessity where the estimate is based simply on present appearances; for it is impossible to determine from the apparent condition of the growing plant in any fall mouth, what the yield of a given field is to be. Acreage, stand, summer growth and fall appearance must all be used in forming a judgment; the first two facts, however, modifying to a considerable extent our interpretation of the others.

But with all our study and observation, when the fall season is reached we shall still have doubts (greatly narrowed, but not removed), which the movement to the ports alone can dissipate. It becomes important, therefore, to analyze this portion of the problem also, and account for the varying comparative daily percentages, as far as we can do so. Formerly there was more regularity from year to year; but of late seasons there has been an increasing rapidity in the marketing, not, however, with uniform progress. For instance, in 1872–73 half of the port receipts had been received on Jan. 8; in 1873–74, they were half in on Jan. 2; in 1874–75, the date of reaching the same percentage was much earlier, being December 15; and in 1876–77 it was December 8. Yet this irregularity is, in the main, the result of causes which can be explained and understood if the precise situation everywhere could be indicated.

First, however, we would state that little weight can be given to the consideration frequently advanced, that the free movement has, in the past, been disturbed by planters holding back cotton. They have acted in this respect as their interests dictated. Being usually under advances to the factor at high rates of interest, a strong pressure has led them to market their produce as rapidly as possible. This same tendency was increased also by the custom, largely practiced since the war, of paying laborers with a portion of the crop, making necessary quick returns so as to permit the adjustment of accounts and supply the freedmen's wants, which become intensely urgent as the possibility of supplying them approaches. Then, again, while the cotton is on the plantations it is liable to be stolen; and, furthermore, it cannot be insured, and is, therefore, exposed to an absolute loss through fire from accident or malice. Besides all this, no good purpose could be served by holding on, for, if the planter really believed in higher prices for his staple later in the season, he could easily use a portion of the proceeds of his sales in buying futures, a far cheaper and safer way of carrying cotton.

These reasons would seem to be unanswerable, so far as the past is concerned, and yet, changing conditions may, to some extent, eventually reverse this tendency. Planters are every year becoming more independent of the influences which have heretofore forced them to hasten their crop forward. Their cash capital is certainly increasing, and, consequently, not only are the needed supplies, each succeeding year, bought less and less on credit, but the practice of cultivating and picking on shares is passing out of use. The abandonment of the latter custom is accelerated by a disposition among laborers to seek for cash payment. Instances are noted the present season of freedmen even abandoning the crop in which they had an interest, to work for cash. As a class they are very improvident, so that the prospect of future advantage has little power to hold them as against money to supply the wants of the moment. The planter also is each year raising a larger proportion of the food products necessary for the maintenance of his household, and approaching more nearly the true ideal of the Southern farmer of making cotton simply a surplus crop. He is thus becoming, in a measure, independent of the money lender, independent of the laborer, and independent of the grocer, and to that extent acquiring control of the cotton he has raised. We experience too much of the disposition of other agriculturists to doubt that as he may he will hold back his crop for higher prices, notwithstanding the many and obvious benefits of marketing it early. As to the argument growing out of the advantages of buying futures instead of holding cotton, it does not apply in all cases, for very many are on principle opposed to that kind of business, and another large class, more especially the smaller producers, know little about it. These considerations seem to force one to the opinion that, under certain conditions of

the market, it is reasonable to expect, in the near future, that the willingness or unwillingness of the planter to sell, will, to some extent, control the early crop movement.

At present the first positive influence which affects the volume of receipts, is the early or late condition of the plant. Upon this fact depends the movement, to a considerable extent, during one or two months, and, consequently, (other things being equal) the aggregate up to Christmas. There is, however, always a disposition to exaggerate the backwardness of a crop. It is frequently state I that there is a difference of three or four weeks in this respect. The facts, however, would indicate that about two weeks mark the extreme limits between an early and a late season. Of course, this statement refers to the general average in the same district. Some little idea of the situation in this particular may be gathered from a record of the first bloom. We have been able to procure no regular late statistics on this point except the figures kept by the Mobile Prices Current. Some other statements have been published, from time to time, but as they appear to apply to no particular section, but are given as an indication of condition for the whole South, from the Rio Grande to the Potomac, we cannot place any value upon them. At best, the first bloom is but a faint guide, yet taken with other facts, forms a part of the evidence, cumulative in character, which, as a whole, should represent with considerable accuracy, from year to vear, the comparative maturity. The Mobile statement is as follows, and applies simply to Alabama or its immediate vicinity:

In 1	877, the first bloom was from Sumter county	June	9
In 1	876, the first bloom was from Marengo county	June	9
In 1	875, the first bloom was from Monroe county	June	8
T 1	and the first bloom was from Lawredge country	Tuno	2

In 1873, the first bloom	June 11
In 1872, the first bloom	June 4
In 1871, the first bloom .	
In 1870, the first bloom	June 11
In 1869, the first bloom	June 13
In 1868, the first bloom	June 1
In 1867, the first bloom	June 11
	June 23

A mere glance at the above suggests at once defectiveness in a conclusion founded upon it. And vet, such a thought may not do justice to this kind of evidence, for it must be remembered that it applies simply to the district named, and in substance says that the earliest portions of the last three crops there, were on June 8 at about the same stage of growth This probably was true, masmuch as the first bale was received at Mobile the present year (1877) on August 11, in 1876 August 13, and in 1875 August 5. Granting this, we must conclude that with the centres of this kind of information multiplied, some very useful facts might be obtained. Our object, however, in introducing it now, is simply to illustrate the little difference in date it indicates between the earliest and latest The extreme, if we omit 1866, is twelve days. But, as already stated, we do not claim for this evidence any great weight. A much better and surer indicator is found in the receipt of first bales and in the arrivals of new cotton up to September 1 We have been at much pains to prepare a statement on these two points for many districts, as only through a multiplication of the centres of observation can we draw any satisfactory conclusions. Complete records have not been kept except in a few cases: as, for instance, at New Orleans by the New Orleans Prices Current, and at Mobile by the Mobile Prices Cur rent. The facts we give, therefore, are derived from various sources, in part from the local newspapers. in part from our own correspondents and from their old letters

which we have on file, and in part from the Chronicle reports. The compilation is as follows:

	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Charleston— First_bale rec'd. Where_from	S. C.	S. C.	s. c.	S. C.	S. C.	S. C.	s. c.
Recy'd to Sept. 1							
Augusta— First balo ree'd. Where from Recy'd to Sept. 1	Aug.19 275	Aug.10 220	Aug.18 Ga. 568	Aug.16 Ga. 226	Aug. 1 Ga. 32	Aug.17 S. C. 253	\ug.2' 8. C. 117
Atlanta— First_bale rec'd. Where_from Reev'd to Sept. 1	Sept. 4 Ga. None.	Ga.	Sept. 3 Ga. None.	Sep. 11 Ga. None.	Aug.14 Ga. 7	Aug.22 Ga. 6	Aug.2 Ga. 3
Savannah— First Georgia First Florida Recy'd to Sept. I	Ang. 6	July 31 July 31 1,028	Aug.10	Aug. 7	July 30 Aug, 20 396	Aug. 2 Aug. 2 1,500	Aug. Aug. 227
Macon— First Dale rec'd. Where from Recy'd to Sept. 1	Aug.11 Ga. 20	Aug 12 Ga. 212	Ga.	Aug.12 Ga. 1 95	July 28 Ga. 506	Aug. 2 Ga. 898	Aug. Ga. 113
Columbus, Ga. First bale ree'd. Where from Reev'd to Sept. 1	Aug.17 Ga.	Aug. — Ala. 124	Aug.11 Ala. 67	Aug. 8 Fla. 74	Aug.10 Fla. 51	Aug. 9 Ga. 156	Aug.1 Ala. 72
Montgomery— First bale rec'd. Where from Recy'd to Sept. I		Aug. 6 Ala. 217	Aug.14 Ala. 288	Aug.11 Ala, 190	Aug. 4 Ala. 247	Aug.12 Ala. 216	Aug.1 Ala. 304
Mob.,e First bale rec'd. Where from Recy'd to Sept. 1		Aug. 7 Ala. 251	Aug.16 Ala. 47	Aug.12 Ala. 175	Aug. 5 Ala. 212	Aug.13 Ala. 114	Aug.1 Ala. 58
New Orleans— First Texas First Miss, Val Recv'd to Sept. I		July 10 Aug. 4 1,641	July 10 Aug.12 71	July 13 Aug. 12 320	July 13 July 13 342	July 10 Aug. 4 429	July 1 Aug. 1 419
Shreveport— First bale rec'd. Where from Recy'd to Sept. 1		Ang,21 La. 41	Aug.19 La. 9	Aug.13 La. 38	Ang. 7 La. 66	Aug. 6 La. 40	Aug. 9 La. 56
Vicksburg— First_bale ree'd Where_from						Aug.14 Miss.	Aug.1-

	1371.	1872.	1873.	1874.	1875.	1876.	1877.
Col'bus, Miss							
First bale rec'd.		Ang. 8	Aug.29	Aug.21	Aug.25	Aug.17	Aug.24
Where from		Miss.	Miss.	Miss.	Miss.	Miss.	Miss.
Recy'd to Sept. 1							
Nashville—							
First bale ree'd.		Aug.22	Aug.22	Aug.15	Sept. 3	Aug.30	Sept. 4
Where from							
Recy'd to Sept. 1				1			
Mcmphis-							
First bale rec'd.	Ang. 3	Aug.16	Aug. 20	Ang.12	Ang.23	Aug.23	Sept. 1
Where from							
From Tenn							
Recy'd to Sept. 1							
_	-						
Galveston—) - 1 - 1 - 1 - 1 - 1 - 1
First bale rec'd.							
Where from							
Recy'd to Sept. 1	1,967	7.975	1,989	2,706	6,218	5,282	1,051

To bring the results before us more distinctly, we have also classified and separated the above by first grouping together the dates of the arrivals of first bales, and after that the arrivals of new cotton to September 1.

	Date of Receipt of First Bale.						
	1871.	1872.	1873.	1874.	1875.	1876.	1877
s. Carolina—							
charleston	Aug.15	Aug. 7	Aug.19	Aug.13	Aug.14	Aug.13	Aug.2
Jeorgi —							
Augusta	Aug. 19	Aug. 10	Aug.15	Aug.16	Aug. 1	Aug.17	Aug.1
Atlanta	Sept. 4	Sept. 5	Sept. 3	Sep. 14	Aug.14	Aug.22	$\Delta n_{\rm g} z$
Sayannah—						1	ļ
From Ga	Aug. 6	July 31	Aug. 9	Aug. 6	July 30	Aug. 2	Aug.
" Fla	Aug. 6	July 31	Aug.10	Aug. 7	Aug.20	Aug. 2	Aug.
Macon	Aug.11	Aug.12	Aug.19	Aug.12	July 28	Aug. 2	Aug.
Columbus	Aug.17	Aug	Aug.11	Aug. 8	Aug.10	Aug. 9	Aug. l
Mabama—	1						
Montgomery .	Aug.11	Aug. 6	Aug.14	Aug.11	Ang. 4	Aug.12	Aug.1
Mobile	Aug.12	Aug. 7	Aug.16	Aug.12	Aug. 5	Aug.13	Aug.1
∡onisiana—							
New Orleans—							
From Texas.		July 10	July 10	July 13	July 13	July10	July
" Miss. Val	July 27	Aug. 4	Aug.12	Aug.12	July 13	Aug. 4	Λ ug. 1
Sareveport		Aug.21	Aug.19	Aug.13	Aug. 7	Aug. 6	Aug.
Iississippi—							
Vicksburg						Aug.14	Aug.1
Columbus	 .	Aug. S	Aug.29	Aug.21	Aug.28	Aug.17	Aug.
Cennessee-							
Nashville		Aug.22	Aug.22	Aug.15	Sept. 3	Aug.30	Sept.
Memphis	Aug.23	Aug.16	Aug.22	Aug.12	Aug.23	Aug.23	Sept.
'avaz—							
Galveston	July 21	July 16	July 10	July 9	July 16	July 7	July 1

This statement would indicate that the earliest portion in each section of the present crop was about a week later than last year's crop, and from one to two weeks later than that of the previous year. The arrivals of new cotton to September 1, were as follows for the years named:

ARRIVALS OF NEW COTTON TO SEPT. 1.

	1871.	1872.	1873.	1874.	1875.	1876.	1877.
Augusta, Ga	275	220	568	226	32	253	117
Atlanta, Ga	None.	None.	None,	None.	7	6	3
Savannah, Ga	771	1.028	1.254	1.421	396	1,500	227
Macon, Ga	20	212	304	195	506	898	113
Columbus, Ga		124	67	74	51	156	72
Montgomery, Ala	237	217	288	190	247	216	304
Mobile, Ala	40	251	47	175	212	114	58
New Orleans, La	22	1,641	71	320	342	429	419
Shreveport, La		41	9	38	66	40	56
Vicksburg, Miss						38	46
Nashville, Tenn						1	None.
Memphis, Tenn	20	75		28	86	48	1
Galveston, Tex			1,9~9	2,706	6,218	5,282	1,051
Total all ports to							
Sept. 1	3.402	9.784	4.597	5.373	8.163	8,981	2,467

This statement gives us a total of new cotton at all these points of 2.467 bales to September 1, this year, against 8,981 bales to the same day in 1876, and 8,163 bales in 1875, which is simply corroborative of the conclusions drawn from the previous table. Still another means for obtaining an indication on the same question is by a comparison of the weeks of smallest receipts at the ports, as we have done in the following:

WEEKS OF SMALLEST RECEIPTS FOR YEARS NAMED.

Year.	Week ending—	Quantity received.
In 1879, smallest receipts were	August 18	5,287
In 1871, smallest receipts were	August 18	7,630
In 1872, smallest receipts were	August 8	1,178
In 1873, smallest receipts were	August 29	8,237
In 1874, smallest receipts were	August 14	4,054
In 1875, smallest receipts were	August 13	1,541
In 1876, smallest receipts were	August 4	5,153
In 1877, smallest receipts were	August 17	1,733

One fact appears to be brought out by all these comparisons, and that is that the extreme difference between an early and a late crop is about two weeks. Still, the effect on the receipts of even ten days' difference is very considerable, showing itself through many weeks. The

following statement of September percentages in a measure illustrates this.

SEPTEMBER PERCENTAGES OF TOTAL PORT RECEIPTS.

Day of Month.	1872.	1873.	1874.	1875.	1876.
1	s.	00:04	00.03	00.02	00.05
2	00.11	00.03	00.06	00:05	00.09
3	00:15	00.13	00.11	00.10	S.
4	00.22	00:17	00.16	00.13	00.10
5	00.28	00.23	00.22	8.	00.28
6	00:39	00.27	S.	00.22	00:30
7	00:17	8.	00.35	00:30	00:44
8	8.	00:36	00.38	00:37	00:53
9	00:64	00.42	00.13	00:46	00:65
0	00:78	00:47	00:51	00:55	8.
1	00:91	00:53	00:60	00.63	00:89
2	01:01	00.61	00.69	8.	00.99
3	01.21	00.68	S.	00:50	01.19
1	01.33	8.	00:86	00.95	01:34
5	S.	00.81	01:00	01:08	01:59
6	01:58	00:91	01:12	01.21	01.72
7	01.92	01-01	01.23	01.36	8.
8	02:11	01.12	01.41	01:49	02:06
9	02.32	01.27	01.60	8.	02:32
0	02.53	01.35	8.	01:70	02.58
1	05.52	8.	01.90	01.86	02.82
2	8.	01.50	62.68	02.05	03.12
3	03.14	01:76	02.30	02.25	03:46
1	03:55	01.89	02.49	02.49	8. 40
5	03:78	02 67	02.74	02.73	03.95
6	04.04	02.27	02.99	S	04.28
7	04:39	02.45	8.	03:14	04.65
7		S. 3.	03.36	03:44	05.00
0	04.65.	02.74	03.20	03.73	05.49
9	S. 05:06	03.03	03.84	04.03	05:87

The foregoing percentages would furnish, as the month closes, an expression of the relative maturity of the different crops, were it not that other conditions coming in sensibly affect the movement to the ports. Prominent among these we may mention the character of the picking season, which begins early to exert an influence, and may finally become a very important consideration. This has been the case this fall, and the same agencies were also active as an obstructive force in the year of 1875, when the crop was generally early. Very excessive rains both seasons cut out so many picking days, that every fair moment was of necessity devoted to gathering and housing the cotton, to the neglect of ginning and baling. This disposition of the planter is decidedly increased in case the crop is a late one; for in that event general pick-

ing has of course to begin late, and a subsequent loss of days by rain or otherwise, must compel a more eager improvement of what is left, to the exclusion of other work. On the other hand, with the crop early and the picking season fine, the labor on the farm proceeds in a regular routine, without interruption, and, other things being equal, the movement to the ports will be rapid.

Another important consideration affecting the receipts is the height of the water in the navigable streams of the Southwest. Formerly this was a point of very decided consequence. But the great expansion in the railroad net work since the war has made it a less controlling influence. Still, even at the present time there are extensive regions having no means of marketing their cotton other than the navigable rivers and bayous. After a very dry summer, many of these streams, including at times some of the larger ones, fall so low that the smallest steamboats cannot navigate them, and they remain in this condition for weeks. The planters and factors who are dependent upon them have no alternative but to wait until the autumn rains cause a rise of water. It often happens, however, that navigation remains suspended or obstructed during all or most of the winter; in such instances the spring rains give those sections their earliest relief, rendering possible then for the first time the marketing of their reserves of cotton. It becomes very necessary, therefore, for the observer to know the condition of these rivers each season. Very little, however, can be learned on this point, except by comparison with previous seasons. We have, therefore, compiled the following from the monthly reports of the Signal Service Bureau. It will be noticed that we include the data for points on the Upper Mississippi and Missouri rivers; this is done principally for comparison when future floods threaten.

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The foregoing tables show the position of the rivers named for the past four years. The object for including the northern stations was, as stated above, that our readers may have in their possession the condition of the rivers in those districts at times of previous floods, so as to be able to judge better of any future similar conditions. As we are, however, now considering the influences affecting the movement of the crop during the fall months, the principal facts from these tables which shed light on that point for that period may be usefully brought together for comparison.

HEIGHT RIVERS ABOVE LOW WATER, OCTOBER TO DECEMBER, 1873-77.

STATIONS.		October.				Nov	emt	er.	D	December.			
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^{*} Below high water mark. † Receded from guage.

The comparison furnished in the above between 1875 and 1877 will be found instructive.*

But still another fact remains to be considered; for, notwithstanding late crops, poor picking seasons, and low rivers, there appears hitherto to have been, as we have already seen, an almost constant increase from year to year, down to the present season, in the rapidity with which cotton has been marketed. In 1876-7 half of the port receipts had reached the ports December 8, 1876, while in 1870-71 it was not till January 18, 1871, that the same percentage had been moved. The possibility of such a change is wholly due to the extension and increased capacity of Southern railroads. Though of very late years the number of miles of road has not been greatly added to, the carrying capacity has been steadily enlarged. Of course, cotton cannot be brought forward faster than the railroads can move it. So it is always an important question how much can the roads carry? Last crop year we had a pretty fair test of their capacity during the first few months. But to say that no more can be brought to the ports in any one month now, than was then, would be misleading, because even if we admit that they did their utmost during those months, there is and always must be growth—very slow in miles probably for some years to come, but, as the business demands it, there will be further large additions to rolling-stock.

With these suggestions and explanations, we may now with profit recall the surroundings of each crop since 1871 during the picking season, and notice the helps and hindrances which hastened or retarded the movement to the ports. Briefly stated, they are as follows:

^{*} In above tables as to height of rivers, New Orleans is reported below high-water mark of 1871 until Sept. 9, '74, when the zero of gauge was changed to high-water mark of April 15 and 16, '74, which is six-tenths of a foot above 1871, or sixteen feet above low-water mark at that point.

1871.—First. The crop was spotted, some ripening early, which made the receipt of first bales misleading, as the most of the crop was late, Georgia being very late. Macon correspondent telegraphed Sept. 9 that receipts to Sept. 1 of new cotton had only been twenty bales. September receipts were therefore small. Second.—No special influences after September affected the movement to the ports, except so far as the closeness of the money market, which was increased by the Chicago fire Oct. 8, tended to hasten it.

1872.—The crop was decidedly earlier, and September receipts were therefore large, but the picking and movement to the ports were after that checked: first, by the general election and its after influence; second, by low state of the rivers; third, and mainly by the epizootic which ran all through the South and put an embargo on all commerce.

1873.—First. The crop was late, and therefore the early receipts, especially in September, were small. Second.—The yellow fever appeared at Shreveport in an unusually virulent form, and was an epidemic over a considerable section in the Southwest, and also for a time at Montgomery, Ala., and elsewhere; this also checked shipments to the ports. Third.—The penic, which occurred the last of September, was the influence of greatest importance; its effect being to derange the exchanges and make the obtaining of currency so nearly impossible as to clog the cotton movement for many weeks very materially; later (but not till December) relief came through the same money pressure forcing the planters and factors to push forward their cotton, as the actual delivery was the only way of obtaining money.

1874.—First. The crop was generally earlier than the last one, the drought hastening the maturity, and conse-

quently the early movement was large. Second.—The rivers tributary to New Orleans were very low; ordinarily this would have considerably checked the movement, but, for reasons stated below, it was of less importance than the same situation ever was before. Third.—Splendid weather made this an unusually favorable season for moving merchandise; the roads were so good that in absence of high water in the rivers it was possible for cotton to be carried, and it was carried, very long distances, to ship by Fourth.—An inducement for extraordinary vigilance in pushing forward the crop existed in the unusual necessities of the planters. The panic of 1873 rendered it impossible for the factors to make the ordinary advances, so that the producers were under a pressure never before felt, to get money to procure even family supplies. On the first of December there were about 350,000 bales more of the crop in sight than there was of the preceding crop at the same date, although the year's vield was 337,000 bales less.

1875.—First. The crop over a considerable section was later (especially where the drought of 1874 was severest), but in a large portion of the South it was earlier than the previous one. Second.—The panic year of 1873 was the turning point in crop-raising in the South; since then it has been carried on much less on credit, because advances could not be obtained, and consequently the producers have been under much greater pressure than formerly to push their cotton forward early, so as to lay in supplies—such was the case in 1875. Third.—But the picking and marketing season was bad, the rains being very excessive, more like 1877 than any year in our record, and to some considerable extent this checked marketing.

1876.—First. The crop was all of it earlier than in 1874, being in August at about the same point of maturity

as the earlier portion of 1875, and in September the opening of the bolls was further hastened by the hot, dry, forcing weather, so that the first weeks of the season the movement was large. Second.—There was a very marked improvement on 1875 in subsequent weather, it being decidedly favorable for rapid gathering and marketing purposes. Third.—The crop, like those of 1874 and 1875, was largely raised without the advances usual previous to the panic of 1873, and a similar necessity therefore acced upon producers for hurrying it to market.

1877.—First. The crop was late, generally believed to be in August two weeks later than the previous year, making September receipts small. Second.—The picking and marketing season was very bad, especially in the West and Southwest, and, as above stated, more like 1875 than any other year in our record, the temperature being moderate and the rain excessive. Third.—The condition of the planters as to advances was about the same as for the previous year, but some claim that very many of them have a less urgent need for money, as their resources are increasing.

We see from this review that in the past the crop movement has always been under the control of well defined influences. (1) The first in importance and weight has been the necessity to pay debts, settle accounts and obtain supplies—pressing needs not admitting of delay or post-ponement. (2) Next comes the maturity of the crop, either hastening or delaying, but generally only during early weeks. (3) This latter influence, however, is soon swallowed up by the greater one, the character of the picking season, either rainy or fair. (4) Then we have the other special conditions, such as height of rivers, the epizootic of 1872 and the panic of 1873, &c. As in the past these facts have determined the movement, so will

they in the future, except so far as the changed circumstances of the planters may remove the stimulus for pushing cotton forward.

With these explanations and suggestions, the reader is in position discreetly to forecast the movement of any crop, through the fall and winter months, if he will only inform himself accurately with regard to the peculiarities of the season on the points we have specified, and use the tables which are given below for comparison.

MONTHLY MOVEMENT OF THE CROP.

The following shows the comparative monthly receipts for five years, and the percentages received at the beginning of each month of total port receipts and of total crop.

Monthly Receipts.		Year beg	inning Sep	tember 1.	
Monthly Receipts.	1876.	1875.	1874.	1873.	1872.
September	236,865	169,077	134,376	115,255	184,744
October	675,260	610,316	536,968	355,323	444,003
November	901,392	740,116	676,295	576,103	530,153
December	787,769	821,177	759,036	811,668	524,975
Total to Jan. 1	2,601,289	2,340,686	2,106.675	1,858,549	1,683,875
January	500,680	C37,067	444,052	702,168	569,430
Total to Feb. 1	3,101,969	2,977,753	2,550,727	2,560,517	2,253,305
February	449,686	479,801	383,324	482,688	462,552
Total to March 1		3,457.554	2,934,051	3,043,205	2,715,857
March	182,937	300,128	251,433	332,703	309,307
Total to April 1	3,734,592	3,757,682	3,185,484	3,375,908	3,025,164
April	100,194	163,593	133,598	173,986	218,879
Total to May 1				3,549,894	3,244,043
May	68,939	92,600	81,780	127,346	173,693
Total to June 1		1,013,875	3,400,862	3,677,240	3,417,730
June	36,030	42,234	56,010	59 701	72,602
Total to July 1	3,939,755	4,056,109	3,456,872	3,736,741	3,490,338
July	17,631	29,422	17,061	31.956	83,515
Total to August 1			3,473,936		3,573,853
Angust	14,462	33,626	13,524	23,391	46,467
Corrections	66,293	71,985	9,709	12,299	31,026
Total to Sept. 1	4,0,8,111	4,191,142	3,497,169	3,804,290	3,651,346
Year's port receipts.	4,038,141	1,191,142	3,497,169	3,804,290	3,651,346
Overland		333,146			
Southern consump'n	117,000				
Year's total crop .	1.135.493	1.660.000	3 635 001	1 170 900	2.020.508

	1876.	1875.	1874.	1873.	1872.
Per cent of total port					
receipts to Jan. 1	64.42	55:81	60.24	48.81	46.11
Per cent of total port	04 42	55 31	00 21	41701	40.11
receipts to Feb. 1	76.82	71:05	72:93	67:30	61:71
Per cent of total port	100-	7 1 ().7	7 = 377	07 170	()1 /1
receipts to Mar. 1.	87:95	82:19	83.89	79:99	71:38
Per cent of total port	(1 (11)	02 1.7	(4)	4.7.7.7	110
receipts to April 1.	92.48	89.66	91.08	88:71	82:85
Per cent of total port	(/ <u>a</u> (a))	1 23 00	51 03	0.11	02.00
receipts to May 1.	94.98	93:56	94:90	93:31	88.84
Per cent of total port	04 00	95 56	94 90	10 01	∓
receipts to June 1.	96:67	95.77	97:24	96.66	93.60
Per cent of total port	10 01	35 11	37 21	20.00	55 60
receipts to July 1.	97:56	96:77	98:84	98.22	95.59
Per cent of total port	37.90	90.11	112.24	11/2/22	95.59
receipts to Aug. 1.	98.00	97:48	99:33	99 06	00-
receipts to Aug. 1	95.00	07740	39.55	155 00	97.87
Per cent of total crop					
to Jan. 1	57.99	50.13	54.96	44.56	42.83
Per cent of total crop			i		
to Feb. 1	69.16	63.77	66.54	61:39	57 32
Per cent of total crop					
to March 1	79.18	74.04	76.54	75:37	69.09
Per cent of total crop					
to April 1	83:26	80.47	83.10	80.94	76:98
Percent of total crop					
to May 1	85.49	83.98	86.59	85:12	82.53
Per cent of total crop				í	
to June 1	87 03	85.96	88.72	88:17	86.95
Percent of total crop					
to July 1	87.83	86.86	90:18	89.60	88.80
Per cent of total crop					
to Aug. 1	88:23	87:49	90.63	90°36	90.92
		1			
Half the port re-				7 0	7
ceipts received	Dec. 8	Dec. 20.	Dec. 15	Jan. 2.	Jan. 8.
On which day re-		2 000 0-1	1 515 000	1.000.050	1.000.50
ceipts were	2,032,132	2,090,674	[1,745,630]	1,909,958	1,822,523
Half the total crop					7 . 10
received	Dec. 16	Dec. 30.	Dec. 22.	Jan. 11.	Jan. 16.
On which day re-		Į.			

The reasons for the varying dates at which half the port receipts and half the crop had been received in the years named, have been set out above.

DAILY RECEIPTS AND DAILY PERCENTAGES FOR FIVE YEARS.

We now give our statement of the total arrivals at the ports each day for five years, and the percentage which had been up to the close of each day received of total port receipts for the same years.

		XEEVE	SEPTEMBER.					OCTOBE	BER.		
hay of Jonth.	1872	1873.	157.1.	1,55	1876.	Day of Month.	1873	1.47.3.	1871.	1675.	1876.
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:	1.963	10,759	0,850	12,850	15,094	30	19,019	16.295	130.115	20,115	41.56
:	:	:	:	:	:	31	20,561	11,035	18,704	18,641	32,532
Total	181,744	115.255	13.1.376	160 077	202 35.0	Total	111 00:3	0000	200 307	610 616	2000

Day of Month.		100	NOVEMBER.					DECEMBER	MISER		
	1872.	1873.	1874.	1875.	1876.	Day of Month.	1872.	1873.	1871.	1875.	1876.
	18,510	195,62	ı.	13,611	28.119		X.	20,472	24.517	3. 3.	25.05
	21,579	T.	56,0,53	30,115	35.011,	21	00077	70.00	20.7	56.301	0.70
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* To illustrate the menning of these figures, take as an example the 31st of December, 1-71;—on that day there had been received (60.21) sixty per cent and (wenty-four hundredths of one per cent of the year's total port receipts.

March 1-73, 1-74, 1-75, 1-74, 1-74, 1-75, 1-74, 1-74, 1-75, 1-74, 1-	1.471, 1.471, 1.472, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.876, 1.877, 1.	,	Memory					APRH						MAY.			
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The foregoing tables make unnecessary the usual statement of weekly receipts. In fact, as the corresponding weeks of two succeeding years end on succeeding days of the month, there is always a difference, when a series of years are given, of several days in the comparison between the close of the week of the first and last year. The daily and monthly movements are, therefore, the only compilations that are not misleading.

CHAPTER VIII.

SPOT AND FUTURE MARKETS

AND PRICES.

Changes in the cotton trade—Routes by which cotton was marketed previous to the war—New York's position during same period—Changes the war made in routes—Receipts and sales at New York since—Future-delivery business—Future sales for eight years—Reasons why business in futures is a necessity to the trade—Could not be discontinued—The new arrangement as to weight of 100 bales adopted by Liverpool conference—Prices of futures for seven years—Changes in mode of quoting spot cotton, how and when made—Spot quotations for seven years.

The cotton trade in this country has made very rapid progress in organization and working-power during late years. Previous to the war there was but little unity of feeling or of action, and no market of any considerable importance, outside of the Southern States, except New York; and even New York held a position of comparative insignificance. New Orleans was then, as now, the leading port for marketing the crop, Mobile coming next, and Savannah and Charleston following them, some years Savannah and some years Charleston taking the precedence. The following statement indicates the percentage of the year's yield which the net movement at each port bore to the total movement, from 1854-55 to 1860-61. It will be seen that, according to it, in 1860-61 New Orleans marketed 45.78 per cent of the total; Mobile, 14.29 per cent: Savannah, 12.48 per cent; Charleston, 8.79 per cent; and

the other ports a much less amount, varying from 3.79 per cent to 1.47 per cent.

PERCENTAGE OF RECEIPTS.

RECEIPTS AT-	1854-5	1855-6	1856-7	1857-8	1858-9	159-60.	'60-61.
Wilmington,&c., N.C.	00.89	00:72	00:89	00.74	00.04	00.85	01.47
Norfolk, &c., Va	01.06	00.26	00.78	00.76	00.83	01.18	02.04
Charleston, &c., S. C.	17:03	13.61	12.98	12.54	12.03	10.57	08.79
Savannah, Ga	12.91	10.68	10.54	08.74	11.91	10.89	12.48
Apalachicola,&c.,Fla	0446	03:06	*04.47	03.78	01:31	04.00	03.17
Mobile, Ala	15.20	18:10	16.46	16:13	17.63	17.48	14:29
New Orleans, La.,&c.	42.04	45.28	46 95	48.67	41.79	44.35	45.78
Galveston, &c., Tex	02.75	0348	02:94	01.44	04.81	05.23	03:79
Total at ports	96.81	96:39	96-01	95.84	94.28	94:55	91.81
Overland from Tenn.	00.26	00.39	00.16	00.30	02.14	02.25	03.75
From plantations by South'n consumers.	05.80	03-22	03:83	03*36	03.28	03.20	04.44
Total crop U. S	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Even during the period covered by the above table, New York handled annually several hundred thousand bales, mainly received from the Southern outports, the movement overland being very small. To illustrate the situation and position this city then held in the trade, we give the New York receipts, exports and purchases here for home consumption, from September 1, 1849, to Sep-

COTTON MOVEMENT AT NEW YORK,

tember 1, 1861:

			Exports to		Sales
Years.	Total Receipts.	Great Britain,	All other Countries,	Total.	for Consump- tion.
1519-50	481,938	200,113	114,687	314,800	167,138
1850-51	429.742	184,517	136,980	321,497	108,245
1851-52	537,115	218,771	121,000	339,771	197,344
1852-53	487,082	207,586	74,657	282,243	204,839
1853-51	450,473	245,621	82,350	327,971	122,502
1854-55	509,136	200,889	78,328	279,217	229,919
1855-56	424,712	181,045	75,419	256,464	168,248
1856-57	402,625	143,938	50,617	194,555	208,070
1857-58	351,597	110,721	39,308	150,029	201,568
1858-59	435,269	120,648	70,970	191,618	243,651
1859-60	463,433	117,630	81,828	199,458	263,975
1860-61	435,261	157,381	89,339	216,720	188,541
Total	5,408,383	2,088,860	1,015,483	3,104,343	2,304,040

These figures represent the gross movement, not the net

movement, and show the average gross receipts for the twelve years to have been 450,699 bales. With the breaking out of the war and the closing of the Southern ports, this movement fell off, of course, because there was comparatively little cotton marketed; but during that period a much larger proportion of the total supply of American staple reached spinners through this city than before the war. The nature of this change in the trade may be seen from a statement of receipts, sales to home spinners, and exports here and total receipts of American cotton in Europe, from 1861–2 to 1864–5.

NEW YORK RECEIPTS AND EXPORTS, SALES TO SPINNERS, AND EUROPEAN RECEIPTS OF AMERICAN COTTON, 1861-1865.

Year.	Receipts at New York.	Total Exports from New York.	Sales to Spinners at New York.	Receipts of American Cotton in Europe.
	Bales.	Bales.	Bales.	Bales,
1861-62	115,427	9,328	125,000	562,000
1862-63	204,229	27,052	170,000	133,000
1863-64	281,794	30,954	225,000	212,000
1864-65	391,635	54,203	316,000	236,000

When the war closed, the route overland, which the blockade of the Southern ports had up to that time made necessary, continued in favor for the marketing of the crops of a considerable section. In fact, for a time a change back to the old routes was impossible, on account of the condition of the Southern railroads. But even after the old communications were restored and new connections made, the movement north, across the Mississippi and Ohio, received but a temporary check, growing subsequently even into larger proportions. As our readers are aware, however, only part, not to exceed 20 per cent, of the overland receipts, now pass through New York, the remainder going to other northern cities or direct to spinners. All other New York arrivals come through the Southern outports, the total gross movement since Septem-

ber 1, 1865, being as follows. We add, also, the stocks, exports, and takings for home consumption, but do not include in this table, nor in that for the ante-war period, sales of spot cotton on speculation, as they were, for most of the time, very imperfectly reported.

RECEIPTS, STOCK AND SALES OF COTTON AT NEW YORK.

Year.	Stock begin- ning, year,	Receipts for year.	Stock close of year,	Consump- tion.	Exported	Sales for the year.
1865-66	. 10,000	863,497	88,642	319,393	495,462	\$14,855
1866-67	. 88,642	674,232	41,497	251,709	469,668	721,377
1867-68	. 41,497	632,328	23,440	275,651	374,734	650,385
1868-69	. 23,440	662,780	7,367	331,015	327,838	658,853
1869-70	. 7,367	780,017	12,981	380,699	413,701	794,400
1870-71	.12,984	-1,101,591	38,875	407,742	667,958	1,075,700
1571-73	. 35,575	738,526	27,027	377 303	373,071	750,374
1872-73	. 27,027	1,005,680	17,746	411,463	573,498	954,961
1873-74	.47,746	975,750	56,013	481,857	485,596	967,453
1874-75		805,612	34,712	381,771	$-445,\!172$	826,940
1875-76		943,491			494,374	
1876-77	. 61,267	959,955	67,102	522,662	434,158	956,820
Total		10,143,459		4,560,827	5,555,230	10,116,057

According to this statement the average of receipts for the twelve years ending September 1, 1877, was 845,288 bales, against an average of 450,699 bales for the twelve years ending September 1, 1861. But such an exhibit in no measure portrays the actual change which has taken place in the relative position of this market, or in the spirit and character of the trade, as it indicates only the dealings for export and consumption in cotton actually handled, and does not represent how the methods of conducting business have been by degrees modified, during the war and since, until the entire system has become essentially new. truth is speculative operations have gradually, constantly and (comparing the earliest and latest dates) so very largely increased, that now even spot transactions, which with transit cotton were until recently the only transactions, have come under the influence and almost under the control of sales for future delivery. To set out the history of

this growth, and to give an idea of its present proportions, we have brought together the actual monthly transactions in futures in New York since 1870, made up from the daily cotton circular. Undoubtedly, in the last year or two, these sales have been more fully reported, so that the totals do not absolutely represent the growth.

MONTHLY SALES FOR FUTURE DELIVERY.

Year and	Bales.	Year and	Bales.	Year and	Bales.	Year and	Bales.
M'uth		Minth		Muth		Minth	
1870.		1872.		1 474.		1876.	
Jan	50,167	Jan	450,500	Jan	642,150	Jan.	505,500
Fe')	66,608	Feb	480,000	Teb.,	469,150	Feb.,	5 S,CO
Mar'h	98,342	Mar.	479,550	Mar .	517,750	Mar.	701,650
April.	39.722	April	369,300	$\Lambda_1 r T_1$	471,700	$\Delta pril$	677,900
May .	$70,\!175$	May	417650	May	604,650	May.	903,500
June.	67,233	June.	455,800	June.	655,900	June.	523,800
July	51,401	July	492,100	July.	431,400	July	395,900
Aug	48.883	Aug	325,450	Aug.	556,100	Aug.,	557,700
Sept .	89,883	Sept	497,300	Sept.	520,850	Sept .	410,5cc
Oct	200,585	Oct	433,900	Oct	718,100	Oct	441,100
Nov	189,025	Nov.	708,100	Nov.	566,500	Nov .	696,800
Dec	237,125	Dec.	406,700	Dec.,	937,250	Dec.	475,300
1	,209,149		5,317,550	_	7,125,800		6,862,750
1571		1873.		1875.		1577.	
Jan	219,375	Jan.	413.050	Jan .	651,700	Jan.	877,200
Feb.	241,450	Feb	311,650	Feb.	537,700	Feb.	1,324,300
Matt'a	447,700	Mar	739,850	Mar.	588,700	Mar.	1,948,200
April.	153,690	April	380,500	April	891,850	April	1,203,100
May .	350,183	May.	373,550	May	723,400	May.	998,200
June	331,150	June.	404,000	June.	809,500	June.	996,600
July	273,000	July.	326,100	July.	699,850	July	619,600
Ang	327,600	Aug.,	313,150	Aug.	468,750	Aug.	\$89,900
Sept.	350,750	Sept	366,950	Sept.	596,200	Sept.	911,100
Oct	450,350	Oet.	431,550	Oct.	883,700	Oct.	1,161,500
Nov	343,314	Nov .	551,500	Nov .	500,700	Nov.	1,099,200
Dec	370,050	Dec.	458,100	Dec.	447,200	Dec.	1,389,200
Dec							

We here see that calling the present crop 4,500,000 bales, the future sales in New York during the last twelve months were about three times the total year's production, representing, at 10c. per pound, an aggregate value of about \$598,400,000.

Yet this is not the whole measure of the change recent

times have witnessed; a feature perhaps even more surprising, the twin growth of this future-delivery business, is the effort made and the expense incurred in obtaining facts of interest to the trade, and the wonderful extent and accuracy of those facts. In the ante-war times the only interchange of thought was between a few brokers who were accustomed from day to day to meet on 'Change and communicate to each other points of infor. mation. Out of it all, however, nothing could be gathered sufficient even to form an official market. Different newspapers often varied widely in their quotations. Journal of Commerce published the prices made up by one firm of cotton brokers, the Courier and Enquirer those made by another firm, and the Herald those of still another. When, in 1865, the Chronicle began the first effort at organization, by grouping together cotton intelligence from all parts of the world in a weekly report, although judged by present standards the early effort was comparatively meagre, yet it was a considerable advance and an indication of an existing want which has since found expression in the establishment of Cotton Exchanges all through the country, and in the remarkable growth of a complete system of obtaining information. How visionary would the man have been thought who, in 1866, when the cable was first laid, should have prophesied that the trade here would in a few years be in the receipt of several reports a day by cable from Liverpool, Manchester, Havre, &c., and by telegraph from all Southern towns of any importance, conveying information with regard to every changing condition of the growing crops, every movement of the staple, and every fluctuation, however trifling, in the markets. And yet this is only a portion of the data daily and weekly gathered and distributed by our Cotton Exchanges.

These facts, so briefly set out, show the extent of the revolution which has been effected in business methods. But the modifications made have only kept pace with, and been mere adjustments to, the changes which have taken place in physical science. Years since, when it required twenty to thirty days to reach Liverpool, it was impossible to base a venture on facts at the moment existing. New Orleans, as the centre of production, might be ten days or more from us, while the interior was many days from New Orleans; and, on the other hand, the market for consumption was twenty or thirty days in the opposite direction. To bring these distant points together, and to adjust the relation between supply and demand, so as to be able to act intelligently either as buyer or seller, required time; and even then the chances of a variation in the conditions before the operation was completed were great, but must be assumed. Under such circumstances, action could only be slow. But when these distances were all very greatly reduced by the substitution of railroad and steamship for stage-coach and sails, mercantile movements necessarily quickened, and with the telegraph and cable brought into use, no other system than the present would be possible.

It is folly, therefore, to decry future-delivery business. To direct and control it, and, so far as possible, strip it of evil, is of course needful; but one might as well attempt to talk down the use of the cable and telegraph as to seek to suppress a system which is a voluntary outgrowth of such quickened communication. Besides, it has great uses. Through it the spinner is enabled, with confidence, to sell his year's manufacture in advance, and ensure a steady trade: for he can as soon as the goods have been promised, buy contracts based on approved samples, for the delivery

as he needs it, of the cotton which is to make them. he could not do this, he would be compelled either to purchase at once, requiring a much larger capital for his business and a loss of interest to be added to the price of his goods, or else await the moment when he needs the cotton, and take the risk of buying at whatever price may rule at the time. These are the days of very small profits; the loss of interest or a slight rise in the staple would in many cases absorb it all, or turn what promised to be remunerative into an actual loss. Furthermore, this business in futures encourages and assists the manufacturer with limited resources. The tendency in this country now is for capital to accumulate in the hands of a few. Business naturally moves towards the larger houses; their superior credit, beyond criticism as it is, and their greater means, give them immense advantages, so that the number of small traders is constantly decreasing. Such an absorption of minor firms is very harmful, and anything that benefits them or ensures them a stronger hold is an advantage to the country at large. Then, again, the future-business may be of great benefit to the producer. He can select his time for disposing of his crop, and if he desires can find a purchaser for it months before it is harvested. This gives him a choice of time for selling, and a greater chance of profit for his year's labor. Finally, the opportunity the spinner and producer secure of purchasing and selling when they deem it best, should tend to so distribute transactions through the year as to impart to the cotton market greater stability. Few conditions are more vexatious, and not unfrequently disastrous, to the spinner, than fluctuations in the price of the raw material. A rise is more likely than not to eatch him with his contracts for goods made and his cotton unbought, while a decline depreciates all his unsold stock and deadens the goods market everywhere.

A price as nearly uniform as possible reduces the risks of his business to a minimum, and makes it what it should be, an open trial of skill and economy in manufacture.

But notwithstanding all these advantages which are con. nected with and grow out of this department of the trade, there is a great evil fostered by it; we refer to a species of speculation extensively practiced—so extensively, in fact, that it exceeds in aggregate amount the legitimate future sales—and which we are far from advocating or justifying. But to condemn the system because it admits of perversion from its true purposes, would be very unreasonable. So long as there are crops to be raised, and such uncertain elements to be forejudged as acreage, weather, condition and consumption, we shall find those who, trusting in their information and foresight, will trade on the probabilities. But such dealers are limited in number, and generally conservative in action. With, however, this kind of business once begun, it soon finds almost numberless followers of various classes: - one takes a turn for a point or two, another hammers the market with a persistency worthy of a better cause, and still another strives to screw it up by a cornering movement. All this is, of course, objectionable, but what can be done about it, except let the participators punish themselves. They are on both sides of the market, and on the average have very slight influence over it, getting a little success for a time, but generally after a brief existence are snuffed out. The worst feature of it is, that the South is constantly putting the gains on the crops it raises into this same hopper which turns out chaff only. A broker told us a short time since that ninety-nine out of every one hundred speculative accounts he had opened showed a loss to his clients; this is probably a fair sample of the whole business. It is a lottery in which every chance is against the ticket-holder. It will be a

blessed day for the South when it really learns this lesson and acts in the light of it.

An important change in the business in futures has been determined upon the past year, through the conference at Liverpool. We refer to the fixing of the weight at New York and Liverpool of 100 bales at 43,200 pounds. Heretofore the average conventional weight in the New York market for deliveries under a contract has always been considered 450 pounds per bale, but at Liverpool the requirement has been that the bales should average within 5 per cent of 432 pounds. A fixed weight is very desirable. Under the old Liverpool rule, sellers regulated their deliveries according as their contract was a profitable or a losing one. The arrangement now agreed upon will, when carried into effect, limit the possible variation from the quantity contracted for to half a bale, or one half of one per cent, and therefore prevent any advantage being taken by the seller; and further, it facilitates the operations of the English spinner, enabling him to cover his sales of varn, which are made in pounds weight, by the purchase of the exact weight of cotton required for that purpose.

As the fluctuations in prices for the years since this description of business was begun, are of much interest, we have compiled them, beginning with September 1, 1870, and giving the highest and lowest prices of the sales each week for each month down to September 1, 1877, all of which will be found in the following nineteen pages. The reader should remember in using these figures that previous to September 1, 1875, future transactions were based on Low Middling Uplands, old classification; since that time they have been based on Middling Uplands, new classification. We shall explain the change in classification subsequently when speaking of the spot quotations.

FITURE DELIVERY SALES FOR YEAR 1870-71, IN PITO PLOES.—Page 1. Weekly Range of Prices of Sales for Months Named Below.

			the transfer of the		The state of the s			1
Sales during	Prices of	Prices of	Prices of	Prices of			Prices of	Prices of
week end.—	Sales for Ang.		Safes for Oct.	les for Nov.			Sales for Feb.	Sales for Mar.
Sept. 2.70	1915 415		1678 #1619	5k a 165k			None	None.
	Sales for Sept.		Sales for Nov.	les for D c.			Sales for Meh.	Sales for Apr.
G:	1:1: 5:11		1718 #161g	34 . 11611			None.	None.
16	7:12 - 77		17 #163⊭	34 401614			Nolle:	None.
: :: :	17.5 4.17.8		6191" ts91	(1) (b)			None.	None
350	1738 "161	-	1658 #1519	3 151 15 E			None.	None.
	Sales for Oct.	_	Sales for Dec.	les for Jan.			Sales for April.	Sales for May.
	153 4153		15% 451	21519			None.	None.
	1554 4154		1554 #1134	w1518			None.	None.
	161 0.113		16 41178	4.15			None.	None.
: :	1711 11578		201 × 1091	7:01 " to			None.	None.
	17 "16349		16 1 2 21 31	1 ₉ "16			None.	None.
	Sales for Nov		Sales for Jan.	les for Peb.			Sales for May.	Sales for June.
	163, #159 ₁₆		1614 41519	19 # 15.3 ₁			None.	None.
	1658 4 17916		16 153	24 () m			None.	None.
: ::	1184 # 154g		153 a 154g	34 WI512			None.	None.
	16 / 155		Fig. 4113	34 W15516			None.	None.
	sales for Dec.	_	Sales for Feb.	des for Mar.		. *	Sales for June.	Sales for July,
5 .	1534 # 15		154 4154	34 11514			None.	None.
	J:11 = 11:1	-	154 0113	715 W1178			1519 "	None.
	15% allbug		15^{13}_{16} a a 11^{15}_{16}	(T) # X			16 "	None.
:	15916 71134	1538 #113	1558 011516 15	34 4 15516	1534 #15516	1519 "	1519 " 2151	None.
	" " "		15.1% (11.5%)	12 w 15116			None.	None.
	Sales for Jan.		Sales for Mar.	es for April.			Sales for July.	Sales for Aug.
: ::	15 "11 ¹ 9		15% 1516	3, w1514			None.	None.
	1514 #1134		154 01518	* 10.5%			None.	None.
	1.14 (/113)		15% 415316	3, 415716			None.	Nene.
	1.7316 a 1174		15916 × 1178	916 WISTIG			None.	None.
	Safes for Peb.		Sales for April.,	les for May.			Sales for Aug.	Sales for Sept.
	113t w 114g		1518 #1158	7-110 #s			None.	None.
	1111 " 8:11		1172 #1119	$w1111_{16}$			1175 "	None.
: ::	114, 0113		1175 #11916	116 # 1134			None.	None.
	7:11 = 91-11		1134 #1334	7x # 1354			1514 01114	None.
Prices of	sales for May	-September 23, 1	 Prices of sub 	s for Dec Mar	ea 3, 149s. Prac	es of sales for J.	m.—March 3, 11	73.

FUTURE DELIVERY SALES FOR YEAR 1870-71, IN TWO PAGES.—Page 2.

Weekly Range of Prives of Sales for Months Named Below.

	January Lands	Doğum of	Duissess of	Decision of	Driver of	Prince of	Privace of	Primar of	Prions of
_	went ond	Calme from Man	Solve for Ann	Salas for May	Sales for June	Sales for Infe	Sales for Anc.	Sales for Sept.	Sales for Oct
	11. 17	123, 119	127. 4.12	11	11 2121	1145 0135.	113 41335	Zone Z	None.
_	11.	113, 4 103,	1112	1115 4153	113, 51315	1150	1115 4135	111. 0113	Volle.
		113 6 7 103		111. 4131.	1112	1114 413%	1135 8 133	1112	None
	:		1134 4 11135		1415 413114	111 113	1110 011	None	Volle
	:	Sales for varil	Safes for May	sales for June.	Sales for July.	Sales for Ang.	Xales for Year	÷	Sales for Nov.
	1 1.00	11 0 13115	1375 01211	13.75 × 13.55	1375 0 133	13,0 0.137	113,0 0.1.11		None.
		11 % 133	1275 8.125.	125. 4130.14	137. #1311.	111,6 0.133	11376 201331		None
	: : :	1223	() () () () () () () () () ()	127.	1133	11 / / 1313,	14 00	None	None
	1 2	15 2013151	111, 4133,	1111 / 133	1114 00 133	1114 7 131316	1.1	1.1	None.
	May 5	1134 4115	111.	11% %11	1134 #1118	1134 01114	1-17,8 @ 1114	None.	None.
		Sales for May.	Sales for June.	Sales for July.	Sales for Aug.	Sales lor Yept.	Sales for Oct.	Sales for Nov.	Sales for Dec.
-		1531g a 1-13c	153% w 11716	154g #114g	15% a 11%	154g #113g	Ne ne.	None.	1134 41-13
	: 19	157, 4113	157 = 117	15% #15116	16 41514	78:21 × 91	None.	None.	151 & 11516
	.51	161 0 01518	161, w1551c	164. a 154.	169 ₁₆ # 153 ₄	16% #15%	None.	None.	None.
	June 2	161516# 151516	1715 81578	1715 #1618	175 # 1614	163 a 163	$162_4 - a 155_8$	1619	16
_		Sales for June.	Sales for July.	rales for Ang.	Xi'es for Xept.	Sales for Oct.	Sales for Nov	Sales for Dec.	
	6.	1949 a 1678	20 = 173	20 a 1719	183t #163t	15 = 165	1819 01714	17 "	
	:	197 × 2 18 5	2011 01878	103g × 187g	1938 0 184	1838 #174	1814 a 1719	1414 81719	None.
_	: ?}	201, #1519	209 6 6152	103 w 183	10.7 = 18.1	15 * 18	1831 @ 1831	15.1 0 1.5	None.
	:	1934 a 1834	2014 a 1858	2019 @19	195 4 18316	157g @1734	1815162175	1515167173	None.
-		Sales for July.	Sales for Ang.	Sales for Sept.	Sales for Oct.	Sales for Nov.	Sales for Dec.	Sales for Jan.	Sales for Feb.
	1-	20% × 19%	203 6.30	2014 @1948	1932 2 1819	1914 @1838	1994 2 18516	1x1 & 61x1	None.
_	1.	20% 7193	7.197x	$2015_{16} m 194_{20}$	19131671434	185x × 18916	1958 @ 181g	1914 = 185	None.
_	5	$20 - a197_{16}$	2019 @ 19.19	20516 #1938	1915 51834	1914 #1819	1914 6185	18.8.1 16.1	None.
-	X X	$199_{16} = 187_{8}$	191516#1834	162 3 183	1918 @ RISI	19 %1819	19 2 18 16	37. 3 7.7.	1.53 E
	-	1838 #	1434 01416	141316@18316	2123 2 227	IXIS SIXI	1x12 g 1x1	17.1 = 17.10	None.
_		Sales for Arg.	Sales for Sept.	Sales for Oct.	Sales for Nov.	Sales for Dec.	Sales for Jun.	Sales for Feb.	Sales for Mar.
_	11	1512 21714	18716 @17716	1814 @ 1714	1214 21738	1814 417316	75115 51	IXT = TX	X 2 7 X
_	2	112 311	18 @17	1x = 911	1778 @ 17	173 017	z = z = z =	/	17 19 0
	: ::	18116 a 1738	1819 @1719	$18^{1}g$ $\bar{w}17^{1}g$	1819 @1738	1849 @1738	1849 01734	1858 @1518	183 a 1858
_	Prices of	sales for Dec	unberMarch :	21, 14th; April 1	1. 143t; April ?	1, 1445; May 5,		Prices of sales for January,—March 24	ury,March 24.
_	1434; April 1.	143; April 14, 143; May 12, 143,	2, 1434, Prices	4; April 14, 143; May 12, 143; Prices of Sales for March.—July 28, 183;	h.—July 28, 153				
_									

FUTURE DELIVERY SALES FOR YEAR 1871-72, IN TWO PAGES.—Page 1. Worldy Range of Prices of Sales for Months Named Below.

- 51	Prices of	Prices of		Prices of	Prices of	Prices of	Prices of	Prices of
week end -	Sales for Sept.	Sule.	Sales for Nov.	Sales for Oce.	Sales for Jan.	Sales for Feb. X	Sales for Mar.	Sales for April.
	x212 x x21	6:	<u>7</u> €	15 × 15	12:0 61	2115	11.9 @ 1878	None.
	20 018116	2:	1071 = 1001	12.5 = 18.5	1919 81x7	2181216	1161 10 616	None.
	503 × 1958	191	1978 01918	61.07 5.01	$20 - w193_{16}$	4 19 11	11 a 19716	2013 @
	2038 a 19	5161	1978 #181516	1978 @ [815] 6	18.1 m E. 61	± 1935	1861 " Tid	502 w 193
	8161 n 1861	7: G.	$195_{16} \approx 1 \times 13_{16}$	101 × 1×151	8191» 61918	34 19516	616177	2014 @ 191516
	Sales for Oct.	5	sales for Dec.	Sales for Jan.	Sales for Feb.	for Mar.	les for April	Sales for May.
Oct. 6	20 4 19 18	21	29 @191s	20116 # 1932	00% %00	00.5	05 " 10	None.
: :::	1978 4 1911	1:0	197 4 1918	1915 16 11 19 14	2018 6 531	$a = 193_1$	050 60	2093
: ::	1913/64 1815/16	15 34	1931 4.19	19.5 4 19.13	50 w 193 [∞]	a-191.5	Hg161 " 146	None.
/:	115 211	=	101 414	194 0.18716	1932 a 18146	\hat{w} 1.9	13 " 161" ter	None.
**	1515 E 1715 16	3	1812 16 @ 1816	1912 2 3 3 3 3	19916 @15916	エスーミ	T. X = X.	2012 420
	Sales for Nev.	ź.	Sales for Jan.	Sales for Feb.	Sales for Mar.	for April.	des for May.	Sales for June.
10	1551g 21x	7	15.15.15.21.735	1911 16 41812	194 4187	61515	11.9 (1	Nelle:
- 1	145 s 141g	3	25.X. = C.I.	19 @1×19	194 #18m3n	61.0	11111 1 1211	None.
7.7	1531 018316	3 3.	181316 2 18716	1918 @ 1891c	1938 @19	41612	1,61 " 181	Nelle.
_	1515 1 50 151	X Y	19116 2145	19516 @181316	1958 #1913g	$a = 195_{16}$	± 651 ≈ -	None.
	Saws for Dec.	37.	Sales for Feb.	Sale for Mar.	Sales for April.	for May.	les for June	Sales for July.
7	1917 × 18916	195	1919 21574	19^{11}_{16} a 19^{1}_{16}	1972 @193g	% 19 lg	None.	None.
15	20 16 0 1918	37	2081 a 81802	203 @195g	203 @19316	2.61.0	, <u>a</u>	None.
-1	1913 ₁₆ a 193 ₁₆	9,1	2019 G195	20916 @ 191516	203 w 201s	F:07 =	" I	None.
: ::	1931 a 1938	1915/16/19716	203 a 193	2058 @2018	2018 E.O.3	4.50 kg	"x a	No.1.6.
ri Pris	19516 a 194	50.7	214 a 1915 ₁₆	5120 m 5017	211316 @ 20716	$\approx 209_{16}$	178 4	No. C.
	Sales for Jan.	3.7	Sales for Mar.	Sales for April.	Sales for May.	for June.	des for July	Sales for Ang.
2	213 620416	7177	2258 at 116	25.58 W.21 kg	15.13 8 5.513t	111	None.	None.
19	22 a 21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	31	2318 a 2178	F. 11 = T. 11	23.18 W22.316	4.55.7	None:	None.
97	2/12/2 2/13/	اد دا	221316@22116	25.78 a 25.516	2316 W225	8, 11.2	None.	None.
Feb. 2	3 15 2 15 E	31	233 16 4 22 18	513.38 (C.7.74)	10 to 10 to	@ ::: 78	31.2 a	None.
	Xales for Feb.	÷.	Sales for April.	Sales for May.	Sales for June.	for July.	ales for Aug	Sales for Nept.
9	231s a 2221s	100	185 w 91 e185	21113 42278	110 6 22 78	100	None.	None.
16	2114 42216	ŝî	#675 # 61855	E. 150 81687	2358 WEST 16	#25331G	1.50 of 5	None:
	# 555 # F555	#::: * * * * * * * * * * * * * * * * * *		1178 @ 235016	5. C	« 231:16	n	None:
Mar. 1	223% a 211516	2254 #213s		23.58 W 22.316	233 a 2216	2338 #224	2334 A 2249	2119 0 114
Prices of	sales for Oct.	March 1, 20 a						

PUTURE DELIVERY SALES FOR YEAR 1871-72, IN TWO PAGES-Page 2. Weekly Range of Prices of Sales for Months Named Below.

				-		_	_		_	=	_	_					-		_	-			-		_	_	_	_				_	_
	Prices of	Sales for Oct.	20116 420	20 4194	195g a 1951g	20 4 1941 16	gales for Nov.	19 1, a 19	19 "	1:61 % 05	193t a 194s	193 0 194	Sales for Dec.	1914 × 1×78	194g 2 187g	19516 @ 19316	1912 0 194	Sales for Jan.	Nene.	None.	None	None.	None.	Sales for Feb.	None.	None.	Sales for Mar.	None.	None.	None.	None.	None.	None.
and a second	Prices of	Sales for Sept.	P15% 615	21.1 0.203	21 lg a 21	2115164214	Sales for Oct.	20116 420	05 % F105	21 420	2019 41919	2019 a 2018	Zales for Nov.	105g w 193g	193 4 1914	1934 × 197 ₁₆	2018 a 1919	Sales for Dec.	%61 % F107	19^{11}_{16} 4 19	105 2 201	161% × 1914	1919 gr 1918	Sales for Jan.	None.	None.	Sales for Feb.	None.	None.	None.	None.	None.	19 ¹ 9 % 18 ³ 8
	Prices of	Sales for Ang.	2311 a221g	St. 12.15	1311 a 223	850 × 653	Sales for Sept.	21 2 × 21 1 2	21121602112	P250 0 21 34	2214 #2111 ₁₆	S125 S015	Zales for Oct.	204 - w1978	000 8000	2058 42011	2112 × 2003	Sales for Nov.	05.0	20^{1}_{1} " 19^{3}_{1}	2038 W1934	20516 a 1978	50 a 1915	Sales for Dec.	1911 ₁₆ # 127	152 8 1838	Sales for Jan.	None.	18516 @	19 els's	153 e 157	1778 6 183	1914 @18ch
	Prices of	Sales for July.	#1 117 # No. 117	21112212	100 m	8153 × 8233	Sales for Ang.	Sec. 12. 12. 12. 12. 12. 12. 12. 12. 12. 12	231116 4 23113	21 7 731116	51055 a 2555	21116 4231116	Kales Tar Kept.	221x #211116	223% W2131	227 6 0 22	#6175 8 AF661	Sales for Oct.	22316 #201316	700 × 8010	21 lg & 203	214 # 201516	2013 _{16 @} 203 ₈	Sales for Nov.	20 4/19	197a w 19	Sales for Dec.	19316 # 1819	141516 8 1814	191 ₁₆ @181 ₂	1X3 & 1X3	15% @18916	19 @185 ₁₆
	Prices of	Sales for June.	Se 12.2 8 82.22	2338 W 22111G	237 te w.23	235 W 2333	Sales for July.	23.78 w 23.99 a.	21 233	(E) (E) (E) (E) (E) (E) (E) (E) (E) (E)	Se SE 2 5782	1887 × 8117	Sales for Aug.	el 82 % % 82	2 11 10 a 133 38	2012 × 2012	2010 S 2000	Sales for Yepi	31 13 × 18121	2378 % 221516	15.5 % 15.	233 4 23516	8177 % Trees	Sales for Oct.	$21 - a + 199_{16}$	2078 @ 1911 ic	Sales for Nov.	1919 W 1×34	1.77 × 1.7.3	1014 41834	181516 @ 185g	19 w I S.	$19 - w187_{16}$
	Prices of	Sales for May.	23 lg # 22 lg	2351.c 0 2271.c	2022 % 2022	2338 × 2533	Sales for June.	2315164 2319	mention To	25.53.5	F1857 #885	91878 × 23319	Sales for July.	11 #255%	2411 WESSE	2.115, c a 2.118	26 a 217a	Soles for Aug.	X:101 / 7:11	7001 × 3007	26716 42519	261, 425916	1500 8005	Kales for Zept.	2234 7721116	2238 @ 201g	Sales for Oct.	20116 @ 1914	19 19 6 19	1978 @ 19516	19716 @ 19	194g @1948	1938 @ISH16
	Prices of	Sales for April	4.113%	2010 actor	229 a 421 long	23 4221	Sides for May.	23 lg # 23	237 " # 2331.	100 = 200 E	4524 4 523	2333 C 22274	Sales for June	2334 # 2338	231516 @ 23 lg	2.13, 4.2313,6	26 × 215×	Sales for July.	15.72 a 2.72	20% #251	2 11,6425	25716 #24151g	2518 623111	Sales for Ang.	He 122 % 1916 1-2	2338 × 201116	Nales for Nepl.	215 2012	201016# 19151c	21 820516	20916 70 20	20716 4 2018	203 a 1919
	Prices of	Sales for Mar.	2215 7 21716	20114 a 211116	2/10/2	" " " " " " " " " " " " " " " " " "	Sales for April.	2331g # 22111g	25.000 0 21.000	535316 @ 55578	2331 1 " 22.34	1317 " 2333ng	Sales for May.	234 7 2221316	231316 # 2318	2.15g a 253 to	25.54 @ 2.19 in	Sales for June.	01.00 a 0.01.00	25.34 W2.4.34	25's 8'21916	25.916 W 25	2.11511. a	Sales for July.	2315 ₁₆ # 221g	227 a 2078	Sales for Ang.	211516 42011	2113 G20	2118 20038	205% 82011	. 2011 _{16 #} 2014	05% × 505
	Sales during	week end.	Mar. X.72	:	31	Fi :		10	21	61	97	::		10	-1					1	: ::	: ::	.:		21			97	:	5 .	16	: :: ::	99

Prices of sales November—March 15, 185, 4; March 29, 19. Prices of sales for December—March 15, 19@184; March 29, 19@184; April 19, 19@185; April 19, 20@19; April 26, 19½@19; May 3, 19½@193, 19½@193.

FUTURE DELIVERY SALES FOR YEAR 1872-73, IN TWO PAGES. Page 1. Weekly Range of Prices of Sales for Months Named Below.

Princes of safestory North North	None, None, None, None, None, None, None,
Sales for Nar. 2014; we soft Nar	Vales (1971) A second of the control
Prices of the pr	2013 8 8 2013 10 20 20 20 20 20 20 20 20 20 20 20 20 20
[사] 글 ㅎ ㅎ , ㅎ[우루 ㅎ ; . ; ㅎ] _ 우 _ 우	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Prices of Pric	200 - 200 -
Prices of Prices of Prices of Prices of Sales for Land 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1958 at 1841 at 1842 at 1843 at	2014 # 1924 2015 # 1924 2015 # 2014 Sales for Appli, 2011 # #2018 2015 # 2018 2015 # 2018
Property Property	20 % # 1919 20 % # 1919 20 % # 1918 20 % # 195 20 1918 for 1918 20 1918 # 20 18 20 1918 # 20 18 20 1918 # 20 18
Prices of Particle	1913/6 1919 1913/6 1919 2016 a 1915/6 2019 a 1915/6 2019 a 1915/6 2019 a 1916 2019 a 2014 2019 a 2014
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Prices of sides for May, +Oct. 1, 21 a 205s. Prices of sides for June, +Nov. 1, 204g.

FUTURE DELIVERY SALES FOR YEAR 1872-73, IN TWO PAGES.-Page 2. Weekly Range of Prices of Sales for Months Named Below.

Sales for Oct. None. None. 1759 a 1754 1874 a 1754 1874 a 1754 1874 a 1754 None. None.	
Siles for Sept. Nome. Nome. Nome. Nome. Nome. Sales for Dec. 174. Nome. 175. Nome. 175. Nome.	
Princes of Sales for Aug. Nome: No	
Prices of 23 See Stort Int. 25	1842.
Prices of Sales for June. 2015 of 2017 of 1915	r FebJune 20,
Prices of Prices	rices of sales for
Prices of Prices of Prices of April 1995, a 2002, a 2002, a 2003, a 20	May 2, 174, P
Prices of Sales for Mel. 2012 2 1934 1945 2 1945 1 1945 2 1945 1 1945 2	Prices of sales for Dec.—May 2, 174. Prices of sales for Feb.—June 20, 1845
Nach Salos during week end Nech 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Prices of

FUTURE DELIVERY SALES FOR YEAR 1873-74, IN TWO PAGES,—Page 1. Weekly Range of Prices of Sales for Months Named Rebox.

Prices of Sales for Mar. None.	Ī.	S S S S S S S S S S S S S S S S S S S	į.		7			Ť			None:	Sales for Aug.				Sales for Sept.		Nelle.
Prices of Sales for Feb 184 # 18	Sales for Mar. 1834 a 1845	x, x = 2,	Sales for Apr None.	171 ₁₆ n 16 ¹ g 173 ₂₉ n 16 ¹ g	2010 2 1018 Sales for May	None.	None.	Sales for Jun	None.	None.		٠.		1713/16# 174		Sales to r Ang	1797.	1738 4
Prices of Sales for Jam. 1729, gg a 175	Xales for Feb. 1X5x @1X14 1X8x @1X14	18 8 8 1 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Fales for Mar.	17^{11}_{16} $^{\mu}$ 16^{29}_{32} $^{\mu}$ 15^{10}_{16}	16 a 151 ₁₆ Sales for April	157s #1331gg	1613 ₁₆ # 1574	Sales ter May.	$17 - \frac{a}{a}1615_{16}$	172132 8 732	171516 @ 1718	Jules for June.	15.4	72120 4 1678	1615 162 162 3	Sales for Inly.	100	175gg w 1625gg
Prices of Sales for Dec. 1778 - #17516	Nabes for Jan. 184 / # 173132 1715 1755	175 8 1718 17218 8 1718 17218 8 17716	Sales for Feb. 1725.32 \u03b4 1755.	1754 #1611 ₃₂ 163 _{4 #} 155 ₈	1511 _{16*} 117 ₈ Sales for Mar.	159 ₁₆ # 153 ₄ 161 ₄ \$ 143 ₅	16716 # 15916	sales for April.	17116 # 1611gg	1715 ng 1658	17516 # 1621mg	Sales for May.	17.78 @ 17.116	174 70 1649 1	169 ₁₆ w 164	Soles for June.	111 6 A111	$16^{13}16a16^{12}$
Prices of Sales for Nov. 172932@17716	Sales 10r Dec. 18 (* 172) 173, (* 174)	17.16 #1678 17.18 #1578	Sales for Jan. 17916 # 17516	1738 # 1614 162132# 1538	$154_2 - a 1419_{39}$ Sales for Feb.	$15^316 \times 15^4$	163 16 % 153 16 1615 % 153 16	Sales for Mar.	$\frac{1615}{1678} \frac{60}{160} \frac{161}{16}$	175 0 10939	16% #164	Sales for April.	17132 4 1613 16	16-122 # 16516 1611 # 1521	165gg @ 151gg	Sales for May.	1611169 1638	16516 # 161mg
Prices of Sales for Oct. 18732 @1723;2	Nates for Nov. 1832 @ 1734 1734 1734 1734	1715 #165 1715 #17316	Xiles for Dec. 17916 # 174	17-16 a 16316 1658 a 15316	15516 a 14939 Sales for Jun.	1434 @ 13 1555 @ 1375	1525gg # 1427gg	Sales for Peb.	16716 # 151116 16714 # 1519	163 / w 1578	16516 # 1534	Sales for Mar. 1672 @1614	17 @ 1614	1672 graduate	1554 # 1551g	Sales for April.	1650 9 152100	$1513_{16} \pm 154_{4}$
Prices of Sales for Sept. 1×7s @181132	Nales for Oct. 1838 @181 ₁₆ 181., @121,	1711 16 0 16 16 16 16 16 16 16 16 16 16 16 16 16	Sales for Nov.	17716 #16932 1654 #15	151 ₁₆ % 14 Sales for Dec.	1 19 to 2 123 123	15/16 @ 14.5%	Sales for Jan.	165g × 155g 155h × 155g	169se #1518se	151516# 154	Sales for Feb. 165 to #1535	1688 2152122	1511	15116 9113	Sales for Mat.	105 415	154 all's
Prices of Sales for Aug. 20516 & 2018	Nation 100 No. 1193 16 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	121 8 161 141 141 141 141 141 141 141 141 141	Sales for Oct. 172732@171133	172132 4 16514 1612 4 15314	Eales for Nov.	15% \$ 13	1515 # 113	Sales for Dec.	1521 8 8 1548 1521 8 8 15	1531327 151132	151516 # 1554	Sales for Jan. 1525 2 1511	151516 # 151752	155 % % 155 T	11:11:20	Vales for Feb.	15% # 15 19	15% 22 415
Sales during week end.+ Sept. 5,73.	:	0.t. 38	10	 - = - =		:	::	:		23	Jam. 2,74.	6 ,		19		:		:

FUTURE DELIVERY SALES FOR YEAR 1873-74, IN TWO PAGES-Page 2.

Weekly Kunge of Prices of Sales for Months Named Below.

during Prices of	Prices of	f Prices of Prices of	Prices of	Prices of	Prices of	Prices of	Prices of
week end Sales for Mor. [8a] Mar. 6.74, 1555e #15	Sales for April. 153; @155;e	Sales for May. 164 at 1578	ales for June. 1625	Sales for July 17 @1617	. Sales for Ang.	Sales for Sept. None.	Sales for Oct. None.
13 159 ₁₆ a 159 ₃₃	578 w15916	16516 @ 1611g	1695 6 4 1615g	17116 at 1631		None.	None.
$2.1 \dots 15^{11}_{16} \times 15^{9}_{39}$	52 cg # 1521gg	16718 @ 16316	161516 @ 1658	$171_{32} \tilde{w} 161^{5}_{16}$	<u>-</u>	175 g 4 167g	
101 6 102 10 10 10 10 10 10 10 10 10 10 10 10 10	6539 #153 65. **1515	$16^{21}_{32} \frac{a}{a} 16^{9}_{32}$	1748 @161316 1791675	17715 @ 17516 1715 @ 1551.	5,710 E.71	179.00 001716	17 None.
sales for Antil.	sales for May.	sales for June.	rales for July.	Sales for Aug.	Sales for Sept.	Sales for Oct.	Sales for Nov.
" 10 16 ¹ 9 @16 ³ 18 10	$627_{32} + 1619_{32}$	1738 @17118	1725327173	1778 @171316	1738 0171	1718 017	None,
17 161 46 0 165 39	678 4161932	17.88 # 17.332	17.54 4.17.19	18 1 3 Y	9121 0 821	17,16 0.17	None.
May 21 1638 @1631a 17	7316 @162339	17.5 6 17.93	14.8 017116	1818 8171916 1830 6 1831	1713164172132	1125 0 119.0	173, 017L
Salesfor May	ales for June	Sales for July	Sales for Ang.	Sales for Xeat.	Sales for Oct.	X15.7 101 X 15.	Sales for Dec.
8 1738 @1631.	721 gr @ 1715go	1818 17272	1413201416	1514 @171516	171516@172332	1754 @17916	17173201712
15 18932 @1738 1	ST16 W1758	181516@183g2	197. 2 @ 1×13.2	1×1316@1×933	18116 01778	173 w	1778 @171116
22 18516 @171116	Se @ 173938	1.831 p. 9.149 gg	707 10 TiG1	181316@18739	18316 @1731	15 61.916	21.19 4.11
2.3 1713 ₁₆ @1742	8116 @1716	1.5. 6 1.5. 6. 1.5. 1.5. 1.5. 1.5. 1.5.	1.520, 30 % 1.510, 30	1.X.15 (0.1.X.1.)	17.8 % 17.23.02	50 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Zales for Tan
13100 @17510	Son @ 1731	1823 # 185	187. a 0.1731	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1734 W1749	1711,6017716	None.
$12 \dots 1713_{32} @ 17^{-13}$	72532 @ 1714	18316 @17916	18133 @1738	1719 gg 01718	1749 177	1438 @17	None.
$19 \dots 17^{1_4} - @165_8$	7153 @ 167x	$17^{27}_{32} @ 17^{11}_{33}$	1734 1714	1738 017133	1714 @161516	1714 @163132	None.
26 17 ¹ 8 @16 ⁵ 8 117	71332 @ 161316	171316@17979	172732 0 17973	171732 @ 17132	17932 417	174 017	None.
Sales for July	Calles for And	Sales for Sent	Sales for Oct	Keles for Nov.	Sales for Dec.	Safes for Jan.	Sales for Peb.
10 161516 216316	77. 01658	1718 @16131g	17116 @1658	1678 @1619	1678 @1614	None,	None.
17 1658 @153139	678 @163 ₁₆	1713 @1619	$1615_{16} @ 161_{4}$	163, @163 ₁₆	162 32 @ 167gg	None.	None.
. 31 16 ³ 39 @ 16	6.16 @ 1531.5	162, @1633 1619 @1635	$16^{11}16 @ 16^{3}16$ $1619_{10} @ 1630$	161-8 70 10132	161232@10216	Aoue. 161a @167.a	163 \(\bar{w}\) 1638
Sales for Aug.	sales for Sept.	Sales for Oct.	Zalez for Nev.	Sales for Dec.	Sales for Jan.	Sales for Feb.	Sales for Mar.
7 16716 216	62332@1638	162132@161332	16918 @161132	16½ @1638	165g @161732	$16^{13}_{16} @ 16^{3}_{4}$	17 @16151s
. 11 161332@16532 10	8191@61a9	161732@16	16716 @1578	16714 @152932	161g @151916	16% @1648 16% @15%	1619 ₁₆ @1648 163.c. @ 1575
24 16 % 15%	618 @1538	1513148	15111601518	$15^{23}_{32} @ 15^{3}_{16}$	1578 @1538	161 ₁₆ #1515 ₃₂	16^{14} $= 15^{11}_{16}$
Prices of sales for December—April 17, 163; April 21, 1678@16316; August 21, 16516@1632; August 28, 1649@153132.	"Der-April 17	t 28, 1612 #1531	21, 17 ¹ 4 @ 17 ¹ 8; 32. Prices of su	May 1, 1758@ les for May.—A	174,0174; May 1, 1759,0174; Prices of sales for April—August 14, Prices of sales for May:—August 21, 1674,0164; August 28, 165,0163s	sales for April 164; August	11 August 14, 28, 1619 #1618.

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FUTURE DELIVERY SALES FOR YEAR 1874-5, IN FOUR PAGES-Page 1.	Polone
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	FUTURE	DECIVERY SALES	FUTURE DELIVERY SALES FOR YEAR 1874-5, IN FOUR PACKA—Page 1. Weekly Range of Prices of Sales for Months Named Below.	5, IN FOUR PAGE fouths Named Below.	S Page 1.	
Sales during Week ending— Sent. 4, 1874	Prices of Sales for Aug. $\frac{153}{a}$	Prices of Sales for Sept. 16 ¹⁸ a 15 ¹⁹	Prices of Sales for Oct. 15 27-32 Ø15 9-32	Prices of Sales for Nov. 153, @154	Prices of Sales for Dec. 15 13-16 # 15 9-32	Prices of Sales for Jan. 16 1-16 @ 15 13:32
Table 11 miles	Sales for Sept.	Sales for Oct.	Sales for Nov.	Sales for Dec.	Sales for Jan.	Sales for Peb.
Sept. 11	15 15-16 & 15 17-52	15 15 55 5 8 15 1-16	1538 #15 15 17-32 #15 5-32	15.21-32@15.7-32	15 95-16 # 1548 15 95-39 #15 15-32	16
: t	167-16 0155	15.9-32 2/15.5-32	15 5-16 @15 5-32	15% 415.8-15	15 17-55 9 15 8	$15.13 \cdot 16 \cdot 6 \cdot 15 \cdot 8$ $16 \cdot 015 \cdot 15 \cdot 32$
Vol.	Sales for Oct.	Sales for Nov.	Sales for Dec.	Sales for Jan.	Sales for Peb.	Sales for March.
6	154 415	154 #15 3-32	9	15 13-16#15 17-32	163-16 415 27-32	1649 @161-16
	15 5-16 4 15	15 11-32 # 11 31-32	15% @15.3-16	15 59-32 × 15 7-16 15 6 × 15 14	157555 # 15 11-16	1618 9-524 15 51-52
000	$\frac{a}{1111116a117-16}$	113, 41115-32	誤	15 3-16 #11 29-32	1513 415 3-16	15 13-16 @ 1549
	Sales for Nov.	Sales for Dec.	Sales for Jun.	Sales	Sales for Marrell.	Sales for April.
	$11111-16\pi114_{2}$	1178 6/11/21-32	15 3-16 #11 29-32	15.19	15 13-16 4 15 17-32	161-16 × 15 25-32
22	11 19-32 # 11 7-16	21 1 5 1 5 1 1 5 1 1 5 1 1 5 1 1 1 1 1 1	15 1-16 @1178		16 1.16 2/15 11-16	164 4152 163
	1175 41111-15	11 15-16 011 11-16	15.3-16 @15.1-32		1578 415 11-16	2.1
Dec. 1	11 11-164 11 21-32	11 23 32 # 11 19	15 1-16 æ11 13-16		$15.23 - 32.4 \cdot 15^{1}$	161-32 4153
	Sales for Dec.	Sales for Jan.	Sales for Feb.	Sales for March.	Sales for April.	Sales for May.
1	119-16 #1331-32	1178 81114	154 @1111-16	15 19-32 # 15 3-52	15 29-32 #15 15-52	153 415 5-16
	111-16 #134	115.35 % 15.55	11 19-32 @ 11 5-16	15.8-32 @11.23-32	17.17-32 4.15 14	15 29-32 / 15 %
31.	1114 @1118	115-16 a 1378	11 13-16@11 13-32	15 5-16 w 1178	153 @ 15 9-32	16 1-16 a 15 19-32
	Sales for Jan.	Sales for Feb.	Sales for March.	Sales for April.	Sales for May.	Sales for June.
Jan. 8	154 413 31-32	15 15 32 4 11 7-16	15 19-56 #11 31-52	16 11-62 # 15 11-62	16 5-16 # 15 15-16	
201	15 5-16 0 15	10 10-00 010 1-30	15 13-16 215 11-32	1618 70 11-16	16 13-32 # 16	1678 // 16 13-32
66 G	154 #15	15 5-16 w 11 31-32 15 13-16 w 15 1.	15 17-32 / 15 5-16 15 19-35	15 27-32 × 15 ½ 16 1, × 15 25-32	16 5-32 × 15 15-16 16 17-32 × 16 3-32	$\frac{16.9}{16.13-16.616.7\cdot 16}$
	Sales for Feb.	Sales for March.	Sales for April.	7	Sales for June.	Sales for July.
212	15 13-16 / 153	1574 # 15.21-32	167-39 016	169 4165-16	16 55-35 9 16 5	17 1-16 # 16 %
97	. 164 8-16415-8	165-32 (153)	165 4168	1678 4167-16	17 5-32 # 16 25-32	1719 417 1-32

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FUTURE DELIVERY SALES FOR YEAR 1874-75, IN FOUR PAGES-P age 2.	Prices of Sales for Months Named	The state of the s
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	Prices of Sales for July. None.	Sales for Ang. None.	None.	None.	Sales for Sept.	None.	None. None.	Sales for Oct.	None,	None.	None; None;	Sales for Nov.	None.	None.	None,	Sales for Dec.	None.	None.	None.	Sales for Jan.	None.	None. None.
	Prices of Sales for June, 16 13-16 #	Sales for July. None.	None. None.	None.	Sales for Ang. Name.	None.	None. None.	Sales for Sept.	None.	None.	None:	Sales for Oct.	None.	None.	None:	Sales for Nov.	None.	None.	None.	Sales for Dec.	None.	None.
fouths Named Below.	Prices of Sales for May.	Sales for June. None.	17 \bar{w} None.	17 w 16 21-32	Sales for July. None.	None.	None.	Sales for Ang.	None.	None.	None. None.	Sales for Sept.	None.	None.	None.	Sales for Oct.	None	None.	None.	Sales for Nov.	None.	None, None,
Workly Kange of Prices of Sales for Months Named Below	Prices of Sales for April. 16 9-16 # 16 3-16	<u>x</u>		163t a 16 13-32	Sales for June,	17.7-16 a 163	16.21-32 × 1634 16.21-32 × 1614	Sales for July.	16 21-32 a 16 9-16	167g w 163g	16 15-16#16 27-32 163 #16 21-32	Sales for Aug.	$16.25 - 3.2 \bar{w}$ $16.3 - 16 - \bar{w}$ 16.1-16	163 41614	1678 @ 16 7-16	Sales for Sept.	None	16 19-32 # 1619	$\frac{164_9}{1641-160164_0} = \frac{w167-16}{1641-160164_0}$	Sales for Oct.	None.	1658 @161g
Weekly Eange of	Prices of Sales for March, 16 11:32 a 1578	1		161 ₂ #163-16	Sales for May. 1718 @ 16 11-16	174 #1613-32	16% a 16 1-15 16% a 16 1-16	Sales for June.	16 17-32 @ 16 11-32	16 23-32 #1619	16 23-32 @ 16 9-16 16 19-32 @ 16 5-16	Sales for July.	16 23-32 # 16 15-32	16 17-32@16	16 11-16 a 1614	Sales for Aug.	17 #163	173-16 wie i3-16	16 15-16 #16 13-16		**	16 15-16#16%
	Prices of Sales for Peb. 164 a 155s	Sales for March, 16 1-16 a 15 21-32	16 9-32 # 15 15-16 1614 #15 15-16	16 7-32 @ 15 25-32	Sales for April. 16 13-16#16 13-32	16 29-32 #16 3-16	16 1-16 # 153	Sales for May.	19 9-32 % 16	16 15-32 #164	16 9-32 #16 1-16	Sales for June.	167-16 #1648	161 0 15 25-32	1. 38 2 15-16	Sales for July.	16 27-32 @ 16 19-32	17 2016 11-16	163, #16 19-32 17 3-32 #16 11-16	Sales for Ang.	17 5-02 @16 17-32	1719 017:3-16
	week ending— Sept. 4, 1871	Sept. 11	2 - 51 - 51	Oct. 2	6	16	 18	Nov. 6	13	? !		;	::	31: 31:	31	Jun 0		31	Feb. 55		212	1

FUTURE DELIVERY SALES FOR YEAR 1874-75, IN FOUR PLOEN. Page 3.

Namer I Below.	Prices of Sales for July Prices of Sales for July 7 3-10	
Weekly Range of Prices of Sales for Youths Named Below	Sales for May, 17 5-82 co. May, 26 co. May, 27 co. May	
Weekly Rang	Sales for March, 16 15-28 of 1	
	Sales during Wock culling No. 5, 185 16 1 19 185 16 1 19 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 16 1 19 18 185 185 185 185 185 185 185 185 185	

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P.1 GEN Page 4	Below.
FOTR	Named
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Sales for PORT Sale	Sales for Sept. Sales for Oct. Sales for Nov. Sales for Dec.	Salvas Dar Dec. 1649.		Sales (Sales
5. 177. 1 a 16 20 22 16% a 16 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	169, 6, 168, 169, 6, 169, 169, 169, 169, 169, 169,		Xales (2007) 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
17 17 17 17 18 18 18 18	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1615 6 6 6 7 16 16 15 16 16 16 16 16		Xalex Xalex
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	16 9-16 # 16 7-16 16-21-2 # 16 16-16 16-2 16-16 16-2 16-2 16-2 16-2		Xales Sales 1657 1657 1657 1657 1657 1657 1657 1657
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 15 15 15 15 15 15 15	16 21.32 # 16 9-16 16 3 # 16 7-16 Sales for Jun. 16 19 # 16 16 16 5-16 # 16 116 16 5-16 # 16 116 16 5-19 # 15 15-16 16 5-19 # 16 15-16 16 5-19 # 16 15-16 16 11 11 11 11 11 11 11 11 11 11 11 11 1		Sales Sales 165 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sales for Oct.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16.5 and 18.		Xales 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Sales for Oct. Sales for Note Sales for July Sales for July Sales for July Sales for July Sales for July Sales for July Sales for Note Sales for July Sale	Sales for Oct	1634 at 16 7-16 Sales for Jun. 1644 at 165-16 165-16 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116 165-18 at 16 116		Sales C Sales C 165 D 165 11:0 11:0 11:0 11:0 11:0 11:0 11:0 11:
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9 Falves for Yort. Salves for Nov.	Sales for Jam. 164		Sales 165 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	16.75.6 # 16.51.0 16.75.6 # 16.11.6 Sales # 16.11.6 16.52.9 # 15.75.16 16.52.9 # 15.27.32 15.31.20 15.9 15.31.20 15		Sales 1652 1651 1651 1651 1651 1651 1651 1651
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16 7-16 at 16 3-16 Sales for 16 1-16 Sales for 16 1-16 Sales for 76 1-16 16 3-22 at 15 1-16 16 3-22 at 15 1-16 17 13 1-16 at 15 1-16 15 3-16 at 15 1-16 16 3-16 at 15 1-16 16 3-16 at 15 1-16		Sales 1658 1651-1-5 165-16 163-10 163-10 163-10 163-10
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	The color of the	16 5-16 # 16 1-16 Sales for Peb. 16 4. # # # # # # # # # # # # # # # # # #		Sales 1652 16 11-3 16 5-16 16 3-16 16 3-16 2 3-16
Sales for Nov. Sales for Dec. Sales for Jen. Sales for Nov. Sales for Nov. Sales for Nov. Sales for Nov. Sales for Dec. Sales for Nov. Sales for Nov. Sales for Nov. 15% $a = 5.52 = a = 5.15 = a = 5.52 = a$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Sales for Feb. 1634		Sales 1652 16 11-3 16 3-16 16 3-16 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
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FUTURE DELIVERY SALES FOR YEAR 1875-76, IN FOUR PLOES.—Page With Range of Prices of Sales for Months Name Unifor.	Prices of Sales for Nov. 18 15-16 at 37-29. Sales for Nov. 18 15-16 at 20-29-32 18 1-32 at 20-29-32 18 1-32 at 20-29-32 18 1-32 at 20-29-32 18 1-32 at 20-29-32 18 1-32 at 20-29-32 at 20-32 at	
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Prices of Sales for July, 14 13-16 \$\tilde{\alpha}\$ 11 9-16	Sales for Aug.	11114 @		None.	None.	Sales for Oct.	None.	None.	Sales for Nov.	None.	None. None.	Sales for Dec.	Nonie Nonie	None.	None. None.	Sales for Jan.	None.	None:
Prices of Sales for June, 14 11-16#1-14	Sales for July. 144 @14 3-16	1114 @113-16	14 1-16 #13 15-16 Sales for Aug.	None. 1434 #1158	걸음	Sales for Sept.	None.	None:	Sales for Oct.	None.	None. None.	Sales for Nov.	None	None.	None. None.	Sales for Dec.	None.	None.
Prices of Sales for May. 142 w111-16	Sales for June. 1 (14 @ 13 31-32	111-16 æ1378 1118 æ11	9 💆	1124 @14 1-16	143, 6 0, 113	Sales for Anc.	14 13-32 #14 7-32	$\frac{1138}{11138}$ $\frac{6}{6}$ $\frac{11}{6}$ $\frac{11}{11}$ $\frac{32}{6}$	Sales for Sept.	None.	None. None.	Sales for Oct.	S S S	None.	None. None.	Sales for Nov.	None.	None.
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Prices of Sales for March, 14 5-32 ** 13 11-16	Sales for April. 13 29-32 # 13 9-16	13.4	Sales for May.	14 1-16 @13 19-32 14 17-32@11	$14.9 \cdot 16 \approx 1.4^{18}$ 11 $\approx 13.19 \cdot 32$	Sales for June.	77		Sales for July.	14.21-32.41438	$14.19-32 \frac{1}{\sigma} 11.11-32$ $14.13-32 \frac{1}{\sigma} 14.3_8$	Sales for Aug.	14 15-32 # 14 15-32	1.114 4.1118	$\frac{1113-32\pi144}{144}$	Sales for Sept.	None.	None.
Prices of Sales for Peb, 13 31-32 @ 131 ₂	Sales for March, 133, #1338	13 17-32 # 134 13 17-32 # 13 11-32 133	y. :	14 to a 13 27-32	ŕ	Sales	14 @13 13-16 13 31-32 a 13 11-16	14 1-32 @13 27-32 14 @13 29-32	Sales for June.	2	143 0143-16 144 0147-32	Sales for July.	14.59 (*14.7-32		$14.5-16 - w1.4^{13}$ 14.3-32 - w13.29-32	Sales for Aug.	1415 6197	ွင့
Sales during week ending— Sept. 3, 1875.	10	:: 50			6161 6161 787	:	5151	Dec. 3	10		31	t	. 14: 15/0. . 14:		Feb. 4.	=		

	Prices of Sales for July.	Sales for Aug. 14 1-16 (413 29-32	117-16 #14 117-16 #14 14 19-32 #14 9-32	Sales for Sept. 1178 - #13 27-32 13 13-16 #135.	1378 @13 19-32 13 19-32@13 5-16	Sales for Oct. 1318 # #12 31-32	12 31-32 = 124 12 9-16 = 12 9-32 124 = = 115	7	11 31-32 @ 11 17-32 11 31-32 @ 11 23-32 11 31-32 @ 11 55-32	11 23-32 #11 17-32 Sales for Dec.	1138 #113-16 1138 #113-16 1111-32#114	11 11-16#11 7-16	12 0-32 01 23:32 11 29-32 011 17-32 11 54 011 77-32
TES.—Page 3.	Prices of Sales for June, 1358 Ø 1314	Sales for July, 13 29-32@13 11-16	114	Sales for Aug. 1138 #14 11 1-32 #133	11 ~ ~133, 13 25-32 ~13 5-16	Sales for Sept. 133 ₈ #13 1-16	13.4 12.21-32.4 [2.19-32 12.4	12½ # 11 13-16 Sules for Oct.	12 7-32 #11 19-32 12 #11 13-16 12 7-32 #1174	11 13-16 a 11 5 Sales for Nov.	11 11:52 = 11 # 11 11:52 = 11 # 11 15:32 = 11 3 16	21 21-32 a 11 13-32	1178 #11 19:32 11 13-16#11 7-16 11 19 #11 11-32
FUTURE DELIVERY SALES FOR YEAR 1875-76, IN FOUR PAGES.—Page 3. Weekly Range of Prices of Sales for Months Named Below.	Prices of Sales for May, 13 11-32 # 12 29-32	Sales for June, 13 11-16#13 15-32 13 27-3 2#135	11 1-16 0013 11-16 14 4 0013 31-32	<u> </u>	137 ₈ #13 9-16 135 ₈ #13 5-32	Sales for Aug. 13 13-32@13's	12 23-32 @ 1234 12 23-32 @ 1234 12 7-16 @ 11 11-16	12 19-32/411 13-16 Sales for Sept.	12 5-16 #1134 12 7-32 #11 15-16 1234 #11 31-32	12 & #11 13-16 Sales for Oct, 113, #11 7339	11 15-32 # 11 14 11 15-32 # 11 9-32 11 9-16 # 11 13-32	113t #11 15-32 Sales for Nov.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
FOR VEAR 1875 Prices of Sales for 3	Prices of Sales for April. 13 1-32 \approx 1258	Sales for May. 13 7-16 #13 5-32 13 19-32#13 11-32	13.25 - 32 = 13.8 = 13.31 - 32 = 13.11 - 16	Sales for June, 14-1-32 #13-11-16 13-25-32#13-7-16	13 21-32 #13 11-32 13 7-16 #12 15-16	Sales for July. 134 × 12 15-16	12 19:32 \(12\) 12 5-16 \(\sim 11 \) 9-16	35 1 c 32 a 11 21 32 Sales for Aug.	1234 #11 21-32 12 9-32 #12 124 #12 1-32	Sales for Sept. 11 13-16./ 1135	11 21-32 #11 13-32 11 21-32 #11 7-16 113t #11 9-16	H 15-16#11 13-32 Sales for Oct.	11 31 32 3 11 21 32 3 11 29 32 3 11 11 32 3 11 11 32 3 11 11 32 11
DELIVERY SALES Weekly Range of	Prices of Sales for March, 124 # #12 11-32	Sales for April. 1318 #1278 13 5-16 #13 1-32	13 17-32 #13 1-16 13 23-32 #13 ¹ 2	Sales for May. 13 25-32@13 7-16 13 17-32@13 3-16	13 3-16 - #123	Sales for June. 13 1-16 #12% 19 13-16#19 9:39	12 3-32 411 7-16	1 ,	123-16 #11 15-16 123-16 #11 15-16	Sales for Aug. 312 35-32	11.31-32@11.9 11% @11.9-16 11% @11%	12.5-16 #117s Sales for Sept.	125-16 #1178 125-16 #1178 1115-16#1134
FUTURE	Prices of Sales for Peb. 1238 a	Sales for March, 12/31-32@12/11-16 13/8 @12/15-16	13 51-32 #13 1-16 13 21-32 #13 ¹ 9	Sales for April. 13 9-16 # 13 9. 13 3. # 12 15-16	13 5-32 #12 25-32	Sales for May. 12 13-16 a 12 9-16 12 9-16 a 12 3-16	12 1-32 @ 11 15 15 15 15 15 15 15 15 15 15 15 15	Sales for Amre,	123-32 @113-32 123-32 @1178 123-3 @1115-16	Sales for July. 11 27:32 a 11 15:32	11 15-16@11 17-32 11 13-16@11 21-32 1178 @11 21-32	Sales for Aug.	12.15-32@12.5-32. 12.9-16.@121. 12.3-16.@117.
	Sales during week ending— Melt. 3, 1876.		. : . : . :	April 7	;	May 5	61	2	255	<u>بر</u>	Z5161	AUE.	: : 11 : : : : : : : : : : : : : : : : :

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YEAR 1875-76, IN FO	rely Range of Prices of Sales for Months Nam
FUTURE DELIVERY SALES FOR YEAR 1875-76, IN FOUR PAGES.	Weekly Range of Prices

Prices of	Sales for Jan.	Sales for Feb.	None.	None	None:	Sales for March.	None.	5 2002	None	Sales for April.	None.	None.	None.	1214	Sales for May.	12 19-32 #124	12 17-32 @ 12 12	114 × #117-16	Sales	151		101	1212 912,5-16	Sales for July.	105% (0.1038	
	Sales for Dec. None.	Sales for Jan.	None.	None.	None.	Sales for Feb.	None.	None	None.	Sales for March.	None.	None.	12 7-16 #11 15-1	124g a 11 15-16	'		12 15-52 #			1238 @11 15-1	12 1-16 6 19 1-39	1218	12 13-32@12 3-16	Sales for June.	19 19 32 @	127-16 @125-16
Workly Range of Prices of Sales for Months Named Below. Prices of Prices of Prices of Prices of	Sales for Nov. None.	Sales for Dec.	None.	None.	13 27-32 à 13 25-32	Sales for Jan.	None	None	None.	Sales for Peb.	None.	None	125 #1113-16	12 9-32 #1178	Sales for March.	15.4 Sec. 1	19.7-39. %	17s #11 11-16 311 31-32 #11 15-16 12 5-32 #11 31-32	Sales for April.	None.	11 31-320	None.	12 3 16 @ 12 3-32	Sales for May.	None.	12 9-32@1214
Prices of Sales for Prices of	Sales for Oct. None.	Sales for Nov.	Noge:	None.	14^{4} \bar{w} 13 13-16	Sales for Dec.	13.5	13 17-32 7 13 5-16	13 9-32 # 13 3-32	Sales for Jan.	None.	12 17-32@12 11-32	123k #11-23-32	125-16 a 113	Sales for Feb.	10 2.16 2.10 5.50	19 3-39 %	311 31-32 @ 11 15-16	Sales for March.	113, 511 01.30	113	11 29-32 #11 27-32		Sales for April.		121-16 @12
Weekly Range of Prices of	Sales for Sept. None.	Sales for Oct.	None.	Z	144 w13 15-16	Sales for Nov.	13 7-16 @133	$13\ 17-32\ a\ 133_8$	$13\ 17-32\ \omega 13\ 3-32$	Sales for Dec.	1075 6108	127.16 @123.16	12.9-32 7-11 lg	12.3-16 w11.19-32	-	-	-	Ξ	Sales for Feb.	115 011 9-16	115 61117-32	11 25-32 #11 11-16	11 10-16#114	124 %121-16	12 9-32 @1178	11 29-32 # 11 20-32
Prices of	14 1-32 #135g	Sales for Nept.	None.	None.	144 "115-32	Sales for Oct.	1311 - 16% 139 - 16	13 23-32 / 13%	13 9-16 # 13 18	Sales for Nov.	1275	12 15-32 #134	12,11-32 21, 9-16	01-4112 - 12-10	19 Sales lor Dec.	11 15-16 011 25-32	$11 \ 31 - 32 \ n \ 11 \ 25 - 32$	$11 \ 11 \cdot 16 \cdot 11 \ 17 \cdot 32$	Sales for Jan.	11 9-16 @11 9-32	11 17-32 0 1138	11 19-32 7 11 19	11 27-52#11 19-52	12.3-16 @11.29-32	11 31-32@11 11-16	8011#29-02 II
Sales during	Mch. 3, 1876		. 17	213		Ameil	11	:		May	19	19		anne E	c	. 16	23	30	Total	14	51	20	Aug. 4	11	82.3	2.0

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URE DELIVERY SALES FOR YEAR 1876-77, IN THREE PAGES.—Page 1.	med Below.
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1.476-1	W Joj S.
YEAR	Prices of Sales
FOE	r Prieces
SYLES	Range of
DELIVERY	Weekly Range of Prices of Sales for Months &
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Prices of Sales for Jan. 119-16 #1138	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11 23-32 × 11 3-16 Nates for March. 11 23-32 × 11 9-16 11 31-33 × 115	11 27-32 a 11 23-39 11 15-16 a 113- 123 a 113-32	13.4 a 12.17.39 13.8 a 12.7-16 12.13-16 a 12.7-16		Sales for June, 11 7-16 at 11-32 11 13-32 at 13-16 11 9-32 at 13 74 11 9-32 at 11 9	Sides for large 13 25-32 # 1349 13 13-16 # 1349 13 9-16 x 12 15-16 13 15 x 12 25-32
Prices of Sales for Dec. 11 13:32 a 11 t. Sales for Lo.	115 ₈ @ 11 15-32 11 11-16@11 13-32 11 15 @ 411 5-16	11 9-16 - 211 1 Sales for Peb, 11 17-32 - 113 8 11 25-32 - 11 15-32	11 11-16 11 17-32 11-3	13 558 4 12 5-16 12 15-16 4 12 1-16 12 25 8 12 19 25 12 25 8 12 19 15	Sales for April. 13 1-30	Names for May. 11 9-32 or 13% 11 11-32 or 13% 13 31-32 or 13 secto	Safes for June. 13.11-16.8.13% 15.31
Prices of Sales for Nov. 11 19:32 or Day. Sales for Day.	1113 114-16 # 1111 1134 # 1111-32	11 13:32 a 1113 Sales for Jan. 11 11:32 a 11 7:32 11 9:16 a 1114	11 15-313 = 11 5-16 11 17-313 = 11 5-16 13 31-32 = 11 15-33 Xales for Feb	. work		Sucs for April. 1135 (2187-16) 115-16 (2181-15) 13 13-16 (1818) 13 31-32 (1818) 13 11-16 (1818)	Sales for May, 13 17-32 × 13 3-16 13 19-32 × 13 7-32 13 9-32 × 12 23-32 12 9-3 × 12 23-32
Prices of Pric	1119 411 11-32 11 9-16 41114 11 9-32 7 11 3-32	11 11-32 a 11 1-32 Sales for Dec. 11 7-32 a 11 1-16 11 3-	11 9:35 a 11% 11 9:35 a 11 3:35 11 9:5 32 a 11 1. Sales for Jan.	12 23-32 a 11 $^{4}_{x}$ 12 9-16 a 11 29-32 12 11-32 a 11 29-32 12 $^{1}_{3}$	Nates for Peb. 12 11-16#124 12 13-16#12 17-32 12% #12 17-32 13 for 12 11-16	2408 100 Addition 11378 # 137-32 113 19-32 # 139- 13 19-32 # 13 9-32 13 25-32 # 1315 13 9-16 # 1375	Sales for April. 13 11-32 # 13 13 13-32 # 13 1-32 13 3 32 # 2 1 7-32 12 76 # 123
Prices of Sales for Sept. 11 13-16a 11 5-16 Nales for Oct.	11 19-32 a 11 13-32 11 9-16 a 11 1 ₁ 11 5-16 a 11 1-16	11 5-16 a 10 15-16 Sales for Nov. 11 14 a 10 31-32 11 7-32 a 11	11 1-16 # 10% 11 1-32 # 10 27-32 11 21-32# 11 1-32 Nates for Dec.	123,4 0.11 21.32 12.13-32 0.11 3.1 12.5-32 0.11 25-32 12.11-32 0.12 1-33	Sales for dam, 12.9-16. a 12.5-22. l 12.5-2. l 12.5-16. l 12.5-2.	13.54 # 12.51.52 13.21.32 # 12.31.32 13.5-16 # 13.1-16 13.7-16 # 13.4 13.7-32 # 12.11.16	Sales for March. 134s at 12 13 16 13 3-16 at 12 25-32 12 13-16 at 12 18 12 51 at 12 18
Prices of Sales for Aug. 11 15-16#115x Sales for Sept.	11 23-32 a 11 15 11 2 a 11 7-32 11 3 a 11 17-32	11 11-32 a 11 1-16 Sales for Oct. 11 1-16 a 10 13-16 11 5-32 a 10%	10 31-32 a 103 11 a 103 11 3-16 a 11 1-32 Sales for Nov.	10 10 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	Xiles for Dec. 12 11-32 ± 11 31-32 12 13-32 ± 12 3-16 12 13-32 ± 12 3-16 12 2-32 ± 12 3-16 5-10 5-10 5-16	13 9-32 8-12 19-32 13 19-32 8-12 19-32 13 19-32	Sales for Fely. 7129-16 12 15-16-712 17-32 12 3,
Sales during week ending— Sept. 1, 1876.	::: ::: ::: ::: :::: ::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::: :::	Oct. 6	27 Nov. 3	.: 10 .: 17 .: 12 Dec. 1	α :: : : :	Jam. 5, 1877.	9

FUTURE DELIVERY SALES FOR YEAR 1876-77, IN THREE PAGES.—Page 2. Weekly Range of Prices of Sales for Mouths Named Below.

12 by w 12 11.32 Salos for Aug 12 11-16 w 12 1-32 12 11-16 w 12 1-32 12 11-32 w 12 11-32 12 15-32 w Salos for Sept. 4 13 1-16 0.29-32 a Sales for Nov. Sales for July. Sales for Dec. Sales for Jan. Sales for Oct 13 13-32 a 133s Prices of NXXX None. None. None. XX Sile: None. None. None, Neme. None, None. None. None. None. None 12 15-16 #12 23-32 12 13-16 #12 25-32 12 11-16 #124 12-18 #12 3-16 125x a 12 19:32 123t a 12 17:32 13 1-16 a 12 11-16 Sales for Sept. 10 91-32 # 19 17-39 19 17-32 # 19 19 19-32 # 19 5-16 w 13 15-32 12 17-32 # 12 7-16 12 11-16 # 12 9-16 *12.9-33 Sales for July. Sales for Aug. None. Sales for Nov. Sales for June, Sales for Oct. Sales for Dec. 11 19-32 # 11 19 Prices of None. None. None. Neme. None, 1378 #13 7-16 1378 #13 7-16 13 9-16 #13 11-32 13 23-32 #13 9-16 1319 #13 New for July.
19.7-16. * 19.5-16.
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19.8. * 19.10.81.
19.8. * 19.10.82. Sides for Nov. 12 15-16 #12 25-32 13 1-16 #12 23-32 12 23-32#124 12-47 #12 3-16 # 12% # 12 11:32 13 19-32 # 13 17-32 # 1214 # 12 5-32 10.5% a 10.15-39 10.5% a 10.15-39 10.1-16 a 10.1-16 Sales for Ang. 35g #13 1-16 13 11-39#13 13 17-39#13 5-16 a 13 1-32 12.3-16 # 1214 × 1108 for June. Sales for Oct. Sales for May. Sales for Sept. 7-16 @134 Prices of None. Neme: តិតិតិត្តិ ភភភភភ 7::: ::: 12.14 # 12.18 12.18.28 | 12.753 12.14 # 12.5-16 12.7-16 # 12.5-16 12.29-32.28 | 12.5-32 Safes for July. 135_h # 12.31-32 135_t # 12.15-16 133_t # 13.5-32 13.7_16 # 13.5-32 13 9-16 #13 3-16 13 11-16#13 17-32 13 25-32#13 15-32 14 #15 #13 7-32 # 1354 # 13 21-32 # 1378 13 3-16 @12 29-32 13 7-32 @12 15-16 13 1-32 @12 17-32 12 1-32 @11 29-32 12 11-32 8 12 3-16 12 3- 6 8 12 3-15 12 3-16 8 12 3-12 7-32 8 12 Sales for Sept. 11g - a 13 13-16 13 25-32 @13 13-32 Sales for April. Sales for June. Sales for Ang. Sales for Oct. Sales for May Prices of 99.81 1113 1113 1143 1143 13 17-89 @ 12 27-89 13 15-82 @ 12 27-82 13 8-82 @ 12 25-82 13 5-16 @ 13 11 27-32 // 11 23-32 12 5-32 #12 12 7-16 #11 7-32 19 1-16 #11 13-16 #11 13-16 1.19-32 @13 11-16 @12 15-16 #13 13-32 * 151.8 * 151.35 5.55 #1218 #125-16 Sales for March. 11 11-32 #11 7-32 1158 #11 1-32 115-16 #111-16 115-32 #115-16 $\frac{13^{12}}{13 \cdot 19 \cdot 32 \cdot \overline{w} \cdot 13^{14}}$ Sales for April. Sales for May, 1-32 w 12 Enles for June. Sales for July, Miles for Nept. Sales for Ang. 13 7-16 a 1318 13 23-32 @ 133g 13 29-32 @ 135g Prices of 555555 - 4444 5555 3.0-33 Sales for April. 11 29-32 ø 11% 121% ø 11 27-32 121% ø 11 15-16 121% ø 11 15-16 13 11-32a/19 25-3913 5-16-a/195a/1919 31-32a/19 25-3213 5-39-a/11 27-3213 31-32 # 11 13-16 12 1-16 # 11 13-16 $\frac{11.274281111116}{1178}$ $13\ 27-32\ 0.13\ 17-32$ $13\ 15-16\ 0.13\ 0.16$ 12 27-32 11 23-32 4 11 9-16 Sales for March. Sales for May. Sales for June. Yales for July. Sales for Peb. Sales for Aug. 4.1214 13 25-32 @131 41117 113-32 #135 Prices of @ 13 1213 1215 129-16 1577 Sept. 1, 1876. week ending-Sales daring 318 33 9285 5525 Nov. Mar. Pel). Ei. : : : : : : : : : : : : : : -:

FUTURE DELIVERY SALES FOR YEAR 1876-77, IN THREE PAGES.—Page 3. Weelij Range of Prices of Sales for Months Named Below.

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	end's Sale	Sales for Mag	Sales for Apr	Meck Prices of P	Sales for The	Sales for J'ly	Sufes for Ang	Sales for Sep.	Sales for Oct.	Sales for Nov	Sales for Dec	
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	:: ::	15 1 15 1 5 2 1 15 X	11:70 #11:15 11:55 # 11:16	23 [11-12] (11-27 11-70] [17-0] [11-88] (11-30) [12-10] [12-10] [12-17] [12-17] [13-17	11.85 = 11.45	10-10 × 11-01-01 11-0 × × 11-00	12.07 # 11.70	9.11.808.11	11.70 × 11.03 11.65 × 11.11	11.60 * 11.50	11.66 / 11.39	
	7	s for Apr	Sales for May	Sales for Apr. Sales for May Sales for J'hy Sales for Ang Sales for Sep, Sales for Oct. Sales for Dec Sales for Jan.	Anles for J'ly	Sales for Ang	Sales for Nep.	Sales for Oct.	Sales for No.	Sales for Dec	Sales for Jan	
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		1701011	12.01 571.11	01-11-2-2-11	11:30 // 11:01	11.20 % 11.00	11.10 % 10.23	10.95 / 10.79	10:07 × 10:51	26.01 " 11.11		
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	11000	33 # 11·17	12:35 # 11:61	## 2011(338-11-17 12:35 # 11-61 12:32 11-17 13:32 11-17 14:32 11-34 11:35 11-3	11.73 × 11.61	11.15 × 11.35	11:504 11:39	11:61 / 11:56	11.71% 11.69	17. 1 5 7 X . 1 1	None.	
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	Prices of sales (of sales for or March.	or January.— Nav 25, 11	Prices of sales for January,—March 30, 1165±11/54. Prices of sales for Pebruary,—April 20, 11/58, April 27, 11/66±11/24. Prices of sales for March. May 25, 11/30±11/27, June 4, 11/30±11/41.	65#11-51, P me 1, 11-46#	rices of sulc 11-11.	s for Februar	y.—April 20.	11:58; April	27, 11:66#11	Prices	

It will be noticed that with the last page of the foregoing future quotations the form of the quotation is changed. This is due to the fact that on the first of March, 1877, the decimal was adopted by the New York Cotton Exchange for expressing the fraction, and has been in use from that date.

QUOTATIONS FOR COTTON ON THE SPOT.

The business in futures in the New York market has since its introduction overshadowed the transactions in cotton on the spot, as we have previously shown. This was a very natural result of its greater proportions. The total receipts of cotton at New York have never reached but a very little in excess of a million bales, and yet the future sales last year aggregated over thirteen million bales. Still, the spot transfers are considerably in excess of the actual receipts, on account of the speculative transactions.

But no little inconvenience has always been experienced from the fact that quotations in the different markets of the United States were on a different basis. Frequent efforts have been made in the past to assimilate them, but always without success, until the organization of Cotton Exchanges throughout the North and South made it practicable. The first step was taken at the National Cotton Convention, held at Angusta on the 10th and 11th of June, 1874, when the following report, made by Mr. Chaffe, of New Orleans, was adopted:

First—That we recommend to the Convention the adoption of a uniform classification of cotton throughout the United States, to be called the Standard American Classification, and that the Convention request ail Cotton Exchanges in the United States to appoint an experiment who shall meet at some point designated by this Convention in response to a call from the chairman appointed by this Convention, on or before the 1st of September next, when they together shall proceed to make a classification that shall be the American standard, which shall be adopted by all American Exchanges, and official quotations from and after the 1st of October next shall be based on the types prepared and established by said committee of experts.

Second—The types to represent the following grades, viz.; Good middling, middling, low middling, good ordinary, and ordinary.

In accordance with this report a committee was appointed by the Convention. Mr. J. T. Doswell, of New Orleans, being chairman, to carry out the recommendation contained in it. This committee met in New York on Tuesday, Sept. 1, 1874, and reached a satisfactory conclusion, fixing upon types and forwarding duplicates to the various Cotton Exchanges. With the 1st of October of the same year the new quetations, based on the American Standard of Classification, became the official ones. In New York the grades of fair and middling fair, as established by that Exchange, were added; and up to Sept. 1, 1875, the six grades of upland cotton, on the types that ruled in New York market previously, were also given, for the purpose of settling contracts in futures.

At the next National Cotton Convention, which was held at Greenbrier. White Sulphur Springs, Va., in July, 1875, Mr. Pinckney. of Charleston, offered the following resolution, which was adopted:

Resolved, That two grades be established, in addition to those adopted at the last Convention, to be known as middling fair and fair, and that the Committee on Classification of New York Exchange be requested to put up same and forward to other Exchanges.

But even with all these changes, a difference still remained between the American types and the Liverpool types. An attempt was consequently made to secure an international standard. In the fall of 1876 the Liverpool Cotton Brokers' Association presented to the National Cotton Exchange a case containing a complete set of their official Standard Samples for American Cottons. The Types were as follows:—Good Middling, Middling, Low Middling, Good Ordinary of each growth, Uplands, Mobile, New Orleans, Texas.

At the third Convention of the National Cotton Exchange, held in July, 1877, this subject was brought up, and the following report, made by Mr. Lafitte, of New Orleans, was adopted:

No. 1.—They recommend the adoption of the Liverpool Standards, to conform to the types sent out by the Liverpool Cotton Exchange, and now in possession of this Exchange.

No. 2.—The types for upland cotton to be made up in New York by a board of eight experts, two of whom shall be appointed by the New York Exchange, two by the Charleston Exchange, two by the Savannah Exchange, one by the Norfolk Exchange, and one from the Cincinnati Exchange.

No. 3.—That the types for Mobile, Orleans and Texas cottons be made up by experts appointed respectively by the Mobile, New Orleans and Galveston Exchanges. That the types so made up shall be considered as the "American" as well as "International Standards," and that exact duplicates be forwarded to each Constituent Exchange, to the Liverpool Exchange, and to all members of any Exchange who may make application for the same upon payment of five dollars for each set. The original types to be retained by the Exchange charged with the duty of making up the types.

So far as the New York Cotton Exchange is concerned, no action has been taken on this subject, so that the quotations here are still based on the American Standard of Classification. There would seem to be, however, great advantages in having one standard everywhere; and we have no doubt that, in the end, the objections now felt to exist against the adoption of some such plan as here proposed will be overcome and the simpler system go into general use.

We now add the daily price of cotton in New York from September 1, 1870. to September 1, 1877. We first give the quotations in the New York market of Low Middling Uplands (old classification) to September 1, 1875. On and after the first of October, 1874, the official quotations were of the grades of cotton established by the National Cotton Exchange, as set out above, called the American Standard of Classification. From that date, therefore, to September 1, 1877, we give the daily prices of three grades of the new American classification, viz., (1) Good Ordinary, (2) Low Middling and (3) Middling. These prices will all be found on the following fourteen pages.

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Day of Month.	Sept.	October.	Novemb'r Decemb'r	Decembr	January.	Pehruary	March.	April.	May.	June.	July.	August.
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Day of Mouth.	Yerpt.	October.	October, Novemb'r Decemb'r January. Pebruary	December	January.	Pebruary	March.	April.	May.	June.	July.	Angast.
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Day of Month.	Sept.	October.	October, Novemb'r Decemb'r January. Pebruary	Decemb'r	January.	Pebruary	March.	April.	May.	June.	July.	Angust.
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15	10^{14}	x.	10 15-16	1118	1518	11 15-16	10 15-16	Ľ.	.57g	10 13-16		105
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PRICES IN GREAT BRITAIN,

We can only add a brief summary of the prices of cotton at Liverpool. For very early dates the compilation which is generally relied upon is found in Tooke's "High and Low Prices." That statement is scarcely of sufficient interest to us to be inserted in full here and we therefore give the range as he has it for each year from 1788 to 1800.

LIVERPOOL PRICES OF COTTON, EXCLUSIVE OF DUTY.

Year.	West I	udia, &c	. Bow'd (leorgia.	Pernambue	o. Bengal & Surat.
1788 1789	$\frac{1}{1}$ $\frac{2}{0}$	\tilde{a} 1 10	s. d.	s. d.	s. d. s. 1 6 â 2 1 4 â 1	7
1790	$\begin{array}{ccc} 1 & 1 \\ 1 & 8 \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1 1 7		$\begin{array}{ccccc} 1 & 7 & 0 & 1 & 1 \\ 1 & 6 & a & 2 \\ -1 & 10 & a & 2 \\ 1 & 9 & a & 2 \end{array}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
1794 1795 1796	î 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$1 + 0.9 \hat{a} \hat{0} \hat{1}\hat{1}$
1797 1798 1799	$\begin{array}{cccc} 1 & 5 \\ 2 & 1 \\ 1 & 6 \end{array}$		$\begin{array}{c} 1 & 0 & \delta \\ 1 & 10 & \delta \\ 1 & 5 & \delta \end{array}$	3 9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$egin{array}{cccccccccccccccccccccccccccccccccccc$

The average prices for subsequent years have been as follows, according to the Liverpool Cotton Brokers' Circular.

	l'g Fair ds. Surat.	Years. U	idd'g Fair pı'ds. Surat	Years.	Midd'g Upl'ds.	
d.	d :		d. d.	11	d.	d.
1801 18		1827	619 514	1853		.114
1802 16		1828	634 . 454	1854		358
1803., 121	2 1112	1829	534 - 4	1855	554	-1
1804 14		1830	67s = 5	1856	65_{16}	4.3_{4}
1805 164	2 11	1831	6 458	1857	734	54_{2}
1806189	4 1112	1832	659 5	1858	674	$5^{1}\overline{5}$
1807 141	2 13	1×33	S19 619		634	5 5
1808 22	1912	1831	854 654		$6^{1}1$	5
1809 20	1 < 12		$0^{1}4 - 7^{1}4$	1861	S916	65_{16}
1810 154	1 15	1536	$97_8 - 61_4$	1862	17^{14}	1278
1811 124		1837	7 4% 7 1%	1863		1914
1812 163			7 174	1561	2719	21_{10}
1513 23	1742	1539	77s 57s	1865		1.1_{12}
1814., 294			6 15	1566	151_{2}	12
1815. 203	17		$6^{1}4$ $1^{5}8$	1567	1078	~34
1816 181	15^{18}		5^{3} , 4	1868	1012	~ 1.3
1817 20%			45g - 31g	1569	1214	93p
1818 20			474 354	1870	91^{-16}	512
1819 131			414 314	1.71	S916	$\frac{513}{51}$ 16
1820 114			$4\frac{7}{3}$ $3\frac{1}{2}$	1872	109_{16}	719
1821 94			614 - 419	1873	9	63_{16}
1822 $84.$			414 314	1571	8	55 ₁₆ 5
1823 83.			5^{1_8} 37_8	1875	739	
1824 85		1850	7, + 5/4	1876	6^{1} 1	112
1825 115			519 414	1877	65_{16}	5376
1826 63	1 2 2	1552	$55_{16} - 41_4$			

The full details for 1877 and the influences acting on the market we have made up as follows from Ellison & Co.

PRICES IN LIVERPOOL AND MANCHESTER EACH WEEK OF 1877.	COURSE OF THE MARKET,	Strong; large business; spot bgd, to 3 ₁₆ d., and futnres figad.	10 722d. higher; New York buoyanf; Manchester active. Opened strong; extensive dem'nd; small Americ'n rec'pts;	adymecof ³ 1 ₆ d. Io ⁵ 1 ₆ d., but clos'd dull & lost ¹ 1 ₆ d. to ⁵ 5d, Vety qulet; small demand; increased American receipts:	heavy import; pressure to sell; decline of 3 ₁₆ d, to 4 ₁ d. Improved demand; advance of 1 ₁₆ d, to 4 ₈ d, on snot and	futures; closed quieter and weak, 119 Quiet all week; closed tlat. Spot prices 18d, and futures	142 Flat; very small dem'd; excessive smally; large Amerle'n	recepts; Manche ster dull; spot and Intures 3, al. easier. 12, Opened better, became active, advanced 3, al., but sub-	sequently reacted; closed quiet. Not advänce 14dt to Very idde, with [cudency] downwards; small demand;	excessive supply. Decline 4 ₅ d, to 3 ₁₆ d, on spot, and 5 ₅₂ d, to 3 ₁₆ d, on spot, and Dell little day, at 4 ₁₆ d, but becterremainder week. Dell little day, at femore the decline, but becterremainder week.	Action 1 251, 10 monest found, 1gt, 90 week, Futures 1254, for 1gt, fighter, Opened Week, Futures 1254, for 1gt, for some finding a part 1 gd, futures 1 gt, 15 billion in part of some finding for the form of the form of the finding for the form of the form o	## 10-12 Gloonty all Weeks for fittings.	care to set, American spots and mittees 4μ, lower; other sorts 1 μd, to 3d, lower; Continued dulness; small demand; unfavorable Eastern exchanges. American 13d, to 4μ, lower, all positions; other growths 13d, lower.
EF	₹ %	-j s.	- co	co	c:	11g	3	-1.	•		•	. 10	6
IEST	8 ¹ 4-pound Shirtings.	x x	a 9	\bar{a}	0.0	6 2	9 9	a_0	6 · 6	\bar{a} 9	$a \cdot 0$	® 1	s ®
NCI	7.4	ಕಂ	က	÷	n	က	က	က	n	0	0	0	101g 6 101g@8
MA	0,000,000 0,000,000,000,000,000,000,000	x1-	_ਾਂ ਜ਼ਿਲ੍ਹਾ	17	-1-	11127	1136.7	11147	1~	- £ - 1	1-	<u>ਾ</u>	 9
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00.	358 (John 358)	104 11 11%	105, 114, 113, 7	101	$10 \div 111_8 \cdot 113_4$	1014 11	1014	10^{1_5}	9	9	93	915	
TERP	ВенжаЪ		15	i.F);	,:	59_{16} 55_{8} 115_{16} 104_{4} 11	59_{16} 115_{16} 101_{8} 11		ι×	178	8 [‡]	11116
171	.вашоО	Pair, Pair, Pair 5 ⁷ 16 5 ⁷ 16 13	5.3	17.			E	5916	5716 478	er IS			518
ES 13	ПойС	Fair. 5716	5.3	55 X	5^{11}_{16} 5^{3}_{4}	5^{11}_{16} 5^{3}_{4}	5916	9. 15.	 	5516	5516 538	5316 514	518
PRICE	Egypt.	Fair.	1-	673	67 ₈	63	C:3		61.5	612	6^{1}_{9}	619	638 638
	somes.	Fair. Fair. 613 ₁₆ 63 ₄	7^{1}_{16}	1~	1-	$615_{16}, 63_{4}$	$613_{16} \ 65_8$	6^{13}_{16} 6^{5}_{8}	829 9	$\tilde{\epsilon}_{x}$	678	Ca _t	6.5 8
	Tuenro I	Fair. 613 ₁₆	6316 7116	7116 7	7116 7	1~		67,2	<u>*</u>				
1	Orleans,	Mid.	11.		7,18	1-	8, 658 61916, 678	878		$613_{16} \begin{vmatrix} 69_{4} \end{vmatrix}$	61316 634	6916 658	6716 612
	Spinda .	Mid, 613 ₁₆	t-	18, 613 ₁₆ 71 ₁₆	25. 615 ₁₆ 718	613_{16}	828	15. 63g	55. 69 ₁₆ 63	20	S. S.		22. 61 ₄
	Week ended.	1877. Mid, Mat. Pair. Pair. Pair. Pair. Pair. Pair. Pair. Pair. Jan. 4. 618 _{16,7} 61 ₁₈₄₆ 634 634 634 57 ₁₆ 57 ₁₆ 134	11	18.	25.	Fcb. 1, 613 ₁₆ 7	œ	15.	äi	Mar. 1. 658	x.	15. 638	61

PRICES IN LAYBREGOL AND MANCHESTER BACH WEEK OF 1877,—CONTRIED.	COURSE OF THE MARKETA	Opened steadier; relapsed on Low's failure; closed better;	Decadectine is not between a figure than previously opened strong on 2d, after bolidays, Sig. of Protocol; odvance led, to 3, d, snot and 3, d, to 4d, in finness	but reacted and lost had and light. but reacted and lost had and light. but, owing to reject n of Protocol by Trikey; pressure to	Senting heaviness; decline of Sigd, on spot, & Sigd, to Tagd.	on in 1985, but closs a better at recovery of 4 ₁₆ 0, all round. Opened with nove confidence; gained 8,64, but became that	Opened Bat; semi-denjoralized; prices lose 'ed., but re-	cover 4 ₁₆ d. In second half, owing to better demand, slow, but not depressed; American and Brazit particlly	Tall lower; Infinest light, caster Orened that, and lost light, but regained Ind., and closed	Differentials (Not fall in futures lead, 10 Just) Whitemetide holidays, Safurday to Thresday; 1 e-opened With good demand. Surius lact, highers others me	changed. Futures 1 ₂₀ d. lower. Steady, with hard coing tendency. American 1 ₁₆ d., Sprats	8-t, nutrices 1 ₁ aCmgnet, ranhing on in foliology receptor. Opened quictor hocan extenger, closed firm a advance of led. to 3 ₅ d ² in Annerean, and 3 ₆ d ² d. 10 JaC Surus;	fittures 3 pt 1, bigher. Opened Streddy, became strong, then paused, closed firm at a drady-mer of 3 pt, to 5 pd, for Junctican and 5 pt, others.	Fr. Open'd steady, bugher. Small deni'd, at decline 1,64,00 sp't & 2,240 statut res.
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	COURSE OF THE MARKET,	Opened gat, with small demand, and lost 116d., but re-	covered on Impleved demand; closed steady at advance of 44t, for spot and futures. 42g Operied firm, but became quiet, and gave way v_{1g} d, for	spots and Aget, for intruces. Manch'r flat; '' short time,'' 44g Opened famely, but subsequently hardened, and closed	steady at advance of $\Gamma_{16}d$, on spot and $\Gamma_{16}\bar{a}^{-3}$ 22d, furnies, $4^{1}2$ Firm, with hardening tendency, all week; closed at $\Gamma_{16}d$.	advance on spot, and partially 1_{32} d, to 1_{4} d, for futures, 41_{2} Opened steadily, but rapidly beginn fit, and closed weak	Anneluster depressed, business, Manchester depressed, the furthess have been seen to spots and futures, belt to 3 gd. Lower for spots and futures, "Short prices 3-d, to 3 gd. Lower for spots and futures," Short	time" extending. Dult and idle all week; closed at decline of 4sd, to 31gd.	Opened steadier, advanced 116d., became quieter, and	Dull all week; dechno of 18d, to 14d, in American, par-	tially 116d, in Surats, and 18d, 10 5 22d, in Intures, Opened better; more inquiry; closed quiet at advance of	¹ 16d.; Egyptians depressed, and partially 4 ₄ d, lower, Opened quict, and gave way ¹ 16d., but closed stendier;	futures shightly easier, Opened firm, and improved as week advanced, closing at	improvement of 4gr, to 4gr, in spot, and 4gd, in futures. Strong all week. Small American receipts. Declining visible supply. Large frade demand, Prices 3/gd, to 4gd, higher, 8/pd and futures.
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WEEK OF 1877.—CONCLUBED.	COURSE OF THE MARKEY.	Opened quiet, then improved, then relansed. Closed unier	at net adv. of 4 p to bad, in spot; no change for futures, Opened active, owing to stock-taking showing a reduction	35,000; after sundry fluctuations closed 46 higher spot. First half strong and 24d, to 5,4d, higher: second half	weak; net result 3 ₁₆ d, higher spot; no change futures, Quiet all week; indifferent buyers; enger sellers; closed	steadier 4 164, to kd. loweron spot; futures unchanged. Quiet; fair demand; freely supplied; closed firm; prices	116t.to 5ct. higher on spot, and 116t, dearer for fulmes. Reduced demand; new Uplands 2st, lower. Orleans me	changed. Long staples easier. Futures 4ad lower. Opened famely: Uplands touched 631ad, to 64ad; in-	proven second that of week; crosed slendy in net decline of the spot. Puttures helt advance. Slendy first half, quiet remainder; net advance Liel, on	spot; decline 1 _{3,5} d, for futures, Opened quiet, but subscanently improved, and closed	firm at advance of 1_{16} to 14 on spot, and 18 in futures, (thief all week, without quotable change in prices, except	partial advance of 4sd, in Brazils, and 4gd, in Surats, Opened steady; second half firm; large business; ad-	Vance 1 ₁₆ d, spot and futures, 4½ Open'd firmly, and gain'd had, on snot, and bactors	(ut'res, became quieter & clos d 122 to 14d, lower fut'res.) Opened quietly, went flat: lost 12 to 5 ad, on spot, 5 ad, for	Intrest increased Amer'n rec'pts, unfavorable politics. A broken week owing to holidays, and incisposition to do	business owing to uncertain polities; priecs lower $\Gamma_{\rm 10}{\rm d}$, spot, figd.
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PRICES IN LIVERPOOL AND	Egypt.	Fair, Pair, Pair. 6716 618 218	719	:: ::	ii ii	(j. 1 ₂)	5. 12.	612	613	619				, 10	615	
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Messrs. Ellison & Co. also furnish the following statement of the average value of all kinds of raw cotton imported, exported, consumed, &c., in Great Britain for the past ten years.

	1877	1876.	1875.	1874.	1873.	1872.	1871.	1870.	1869.	1868.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Import	61_{4}	61_8	7116	7^{1}_{2}	858	95_{16}	S	9516	11^{1}_{16}	95_{8}
Export	$5^{13}16$	51_{4}	57_8	6	7	$77_{\rm S}$	7	83_8	10	$$^{813}16$
Consump'n	65_{16}	63_{16}	718	75_8	83_{4}	913_{16}	81_8	97_{16}	113 _{1€}	97_8

CHAPTER IX.

CONSUMPTION OF COTTON IN

EUROPE AND AMERICA.

Year unfavorable for spinners—Eastern war not the cause but the developing influence—How consumption of goods was stimulated—First, by cotton famine—second, by speculation and free borrowing in United States—Third, speculation and wastefulness everywhere—Fourth, rivalry among spinners—Sudden check in demand and large decrease in consumptive power—Consumption of cotton in Europe for a series of years—More favorable outlook for the manufacturing industry in the United States—Growth in spindles in Europe and America—Ellison's review for 1877—United States crop for 1876–77.

The past year has been an extremely cheerless one to the cotton goods trade. It was, however, begun in hope, for in its earlier days almost every surrounding appeared to favor a return of prosperity, and the little flicker of life which marked the closing months of 1876 seemed to add an earnest of new vigor in the months to come. And yet with all this promise it is scarcely necessary to say that the year's business has been very disappointing, without prospect of relief even to the very end. In fact, the cotton-consuming world is to-day in the situation of a greatly reduced patient, with apparently no recuperative power.

The cause of this condition is a question of the first importance; for it is a very essential point gained if we can learn the nature of the disease we wish to cure. The popular idea has been to charge it all to the war in Eastern Europe. Only let us have peace and the revival will be

instantaneous, has been echoed from every side. This is a very natural inference, because the new depression began with the war; and yet the argument that it will therefore end with it is very inconclusive. Our own commercial distress began with the panic of 1873, and although that storm soon passed off, and in fact is at present almost forgotten, the disorder has really increased every year since, until now it is universally admitted that there was a disease which was not then recognized, and of which the panic was only an outward sign.

Similar in some respects to this experience appears to us to be the relationship which the war in Eastern Europe bears to the present depression in the spinning world. That conflict was certainly the developing influence, but the real cause of the depression seems of deeper origin, accumulating in force for years, and made up of divers elements acting and re-acting upon one another.

Great Britain was for a very long period the manufacturer of cotton goods for the world. During the ten years previous to 1861 the Continent however rapidly attained in this industry an increasingly important position. From an average consumption of 300,000,000 pounds for the five years ending 1855, an average of 627,000,000 pounds was reached by the Continent for the five years ending with 1860; at the same time England increased her consumption from an average of 570,000,000 pounds to 947,000,000 pounds. This very essential addition to the production of cotton goods was decidedly in excess of consumers' wants, and it is an acknowledged fact that when our war broke out the markets of the world were largely overstocked with European manufactures, the war saving English and Continental spinners from a great disaster.

Of course, from 1861 to 1865, the cotton famine checked the progress of this rivalry among European manufacturers, but during those years another element was being introduced which was to exert a decided influence upon the trade. We refer to the very high prices for cotton, which stimulated its production in all countries, especially in British India, and through the great amount of capital so distributed enlarged their capacity to consume and pay for cotton goods. In our chapter on India we have shown how the people there were literally flooded with money, the returns for their crops. These effects, as we know, continued for years after the war closed, and until the gradually falling price of cotton reduced that capacity very materially.

But out of the same civil contest sprang other consequences of perhaps even greater importance, because more widely diffused. We are all familiar with the financial expedients and results of that war; we know but too well the vast amounts of money expended by the United States Government and people during the latter half of its progress and for six or eight years afterward, and of the speculative forces which were thus set in motion. know, too, how the lavish disbursements of the Government and an inflation of the currency led to high prices of all commodities and consequently to a seeming acquisition of wealth, which induced a very free purchase of the productions of all other countries. Extravagance and prodigality were almost universal, and we were able to indulge these weaknesses through the many hundred millions of dollars borrowed in Europe by sale of securities. All this acted directly upon producing countries, for we lavishly bought their goods and thus stimulated prices everywhere.

With such demands then, so eager and enlarged as came from the United States and from those countries which had been producing and selling cotton at very high prices, it is not surprising that European manufacturers should receive an unhealthy impulse. Add to this, however, the further facts contributing to the same end—first, that the values of the staple productions other than cotton, of almost all lands, were at the same time and in the same way enhanced; and, second, that these countries, and also almost every European nation, seemed to partake of this general feeling of prosperity, of wealth accumulating rapidly, and we can easily understand how extreme and unusual the consuming power of the world would be, and how it must have stimulated the spinner everywhere. The commercial history of the American war and its after-results is yet to be written. When it is written, if done faithfully, and the direct and indirect influences and results set out, we shall find that in this day of steam and telegraphy the world has a common centre of life, with a nervous system acutely sensitive in all its parts to every disturbing influence.

But while the events we have related were in progress, still another influence was at work, very decidedly contributing to an undue growth or enlargement of the manufacturing industry. If all the spindles in the world had been in Great Britain, as they substantially were years ago, one can easily see that there would be less danger of their becoming excessive; but when we introduce a rivalry on the part of other nations, first to supply their own consumers and then to secure possession of the outside trade, we can readily understand how an increase once begun might go on in an arithmetical progression, reaching a point finally which would bring the same conditions of trouble in an aggravated form, not in one country alone, but in all. Precisely this has been the history of the spinning industry since the close of our Every nation in Europe has been building spindles; consumers that England used to supply, are now not only supplying themselves, but competing with her everywhere, even in Liverpool. This fact was referred to by the President of the Manchester Chamber of Commerce, at their annual meeting held on the 4th of February, 1878. He stated that foreign competition was one of the principal causes of the present depression of trade. And speaking of portions of the Continent, he further remarked that "Germany, Austria, Italy and Holland had lessened their "imports of woven goods; while Belgium was so nearly "England's equal, that it had exported both woven goods and yarn into Great Britain for several years," and much more to the same effect.

What a picture of quickened, unhealthy growth and of certain final involvement do all these facts present. We have first our own cotton ports shut up and such high prices ruling for the raw material as to make other producing countries almost beside themselves over the capital pouring in upon them for their produce. Next comes the United States, with its delusion of inflation and fancied wealth, borrowing its millions upon millions from Europe and throwing them back with lavish hand for productions at highly remunerative prices. At the same time the feeling of exhibaration consequent upon an apparent rapid increase in wealth begins to widen;—in Europe, because they could sell more than they could produce, at high prices, in China, because their teas had appreciated in value and were in active demand; and in other countries for similar reasons. Every one of these agencies, as we can see, must have helped to enlarge the capacity of the world to consume goods and thus to stimulate the demand. Their arose the renewed rivalry - if we may call it such - among manufacturing nations, and out of it all a growth in spindles necessarily everywhere very rapid, on the Continent, in England, in the United States, and finally in

India. To show in brief the progress made in the consumption of cotton in Europe and America we give the following summary of the average takings of spinners in periods of five years.

CONSUMPTION OF EUROPE AND AMERICA, IN MILLIONS OF POUNDS.

	'46-50.	'51-55.	'56-60.	'61-65.	·66-70.	'71-75.	Two Years, '76-77.
Great Britain Rest of Europe United States Total	300·4 240·5	750.1 451.4 281.4 $1,482.9$	627·4 358·8	455·4 181·2	653·4 381·9	856·6 524·7	952.6

The extent of these takings compared with previous periods we indicate in the following.

Increase in	1866-70.	1871-75.	1876-77.
Compared with 1846-50	35.48	134·98 76·00 34·98	153·62 89·97 45·69

This makes the increase in the takings since 1860 over 45 per cent; and it will be remembered that even in 1860 the producing power was in excess of the consuming capacity, and that manufacturers were only saved from disaster at that time by the breaking out of our war. But to set out the progress more definitely and plainly, we have procured from Mr. B. F. Nourse, of Boston, a statement of the probable actual consumption each year since 1859-60, made up from the takings on the basis of the spinning capacity and the presumable annual increase in spindles. In the Chronicle of July 31, 1875, we published a similar table for the five years (calendar), 1870 to 1874, inclusive. These have been reconstructed for the seasons by the same rule that governed their first computation, going back to 1859-60, and adding 1875-6 and 1876-7, to complete a period of eighteen years, for comparison with the table of deliveries, imports, &c., given subsequently.

Season.	~ E				ontin			Tota	11.
	Thous'ds of bales.	Average weight.	Millions of Ibs.	Thoms'ds of bales.	Average weight.	Millions of lbs.	Thous'ds of bales.	Average weight.	Millions of Ibs.
1859-60.	2,457	120	1,053.9	1,635	118	6883	4,092	126	1,742
1860-61.	2,404	126	1,023:9	1,631	415	677.0	4,035	422	1,700
1861-62.	1,481	393	588.7	1,079	357	416.8	2,560	393	1,005
1862-63.	1,275	368	460.8	997	365	361.0	2,272	367	833
1863-64.	1,501	355	532:5	1.083	343	376:3	2,581	352	908
1864-65.	1,918	361	691:7	1.327	348	461.1	3,245	355	1,152
1865-66.	2,313	369,	852.7	1.622	349	567.4	3,935	361	1,420
1866-67.	2.738	374	-1,024.0	-1.947	350	681.4	4.685	3. 1	1,705
1867-68.	2.671	355	947:5	1,977	350	691:9	4.618	353	-1.639
868-69.	2,754	355	935.9	-1,694		5814	4.418	353	1,570
1869-70.	2,760	386	1.0654	1,712	370	633.4	4.472	350	1.698
1870-71.	2.911	356	$1.122 \cdot 2$	2,015	375	762.6	-4.926	382	1.884
1871-72.	3,190	378	$1,205 ext{ s}$	2,253	365	822.8	5,443	370	2,028
1872-73.	3,229	3×2	1.23355	2,202	369	812.7	5,131	37:	2,046
873-74.	3,190	392	$1.251^{\circ}2$	2,221		825.6	5,111	381	2,676
1974-75.	3,131	391	$1,235\cdot3$	2,346		896.2	5,477	359	2,131
1875-76.	3,017	118	1,270:3	2.390		961.1	5,407	$\Pi 3$	2,231
376-77.	3,136	406	1,273.3	-2.402	396	951.2	5,538	102	2,221

These figures are intended to represent the actual consumption. But the capacity of Europe to manufacture goods is now very considerably in excess of these to als. Mr. Ellison gives it as follows.

CONSUMING POWER OF EUROPE.

	Number of Spindles.	Pounds per Spindle.	Total Pounds.	Bales of 100 pounds
Great Britain	39,500,000	33	1,303,500,000	3,258,000
Continent	19,500,000	53	1,033,500,000	2,584,000
Total	59,000,000	40	2,337,000,000	5,812,000

These statements show how many idle spindles there are, or (the fact of chief interest to us in this connection) the actual extent to which the growth of the spinning power has been forced. For instance, in 1859-60 Europe consumed 1.742,200,000 pounds of cotton. This was in excess of the world's wants at that time. To-day the position is about as follows:—(1) the spinners of Europe have the power to consume 2.337,000,000 pounds, which is an increase of power equal to 1,500,000 bales of 100

pounds each, (2) the United States have the spindles to manufacture fully 700,000 bales, and India about 200,000 bales (all of same weights) more than in 1860. Thus we have in these countries an increased spinning power during the period mentioned of about 2,400,000 bales of cotton.

Such has been the progress made and the results reached under the incentives we have briefly referred to. course, there should be from year to year a regular increase in the demand for goods and in the world's spinning power. But here we have unusual stimulants applied and an extraordinary development attained. Were the producers and consumers confined to a limited district we could easily see that a check to a growth so forced would be inevitable, for it is the history of almost every decade. With, however, the whole world as the field for obtaining consumers, we are apt to think of a constantly growing, or at least of an unobstructed demand, because of its extent and diversity, favorable influences in one nation compensating for unfavorable ones in another. To understand, then, the present situation, we must remember, in connection with this extreme growth in spinning power, the wonderful changes which have taken place in the condition of consumers almost everywhere.

First, notice the effect of the decline in the price of cotton. In 1862, Fair Surats averaged 12½d.; in 1864 the average reached 21½d.; from that point the decline was pretty regular, (with the exception of some recovery in 1872 and in 1873), until in 1876 the average was 4½d. In the delirium excited by the high rates during our war and subsequently, India, out of her crops, had money enough even to waste on silver ploughshares; now the return barely supplies the necessities of life. All other cotton-producing countries are to the extent of their production of this staple

in a similar comparative condition, the very high prices of a few years ago giving them the idea of unbounded wealth, and the constantly shrinking prices later, and especially since 1872, making them realize the urgency for strict economy. Acting in the same direction also (only less in degree) is the decline in the values of productions other than cotton. As a general indication of this, notice the lower wages prevailing in Europe now and the continued downward tendency. It is unnecessary to specify a trade, for it pervades almost all; but we may mention the iron industry as a good illustration. Nor are the lower prices confined to Europe alone. China, a great consumer of cotton goods, is fair evidence of the wide extent of the present depression, her teas having depreciated largely during the past few years.

But, besides all this, suddenly the people of the United States stop spending money in Europe. We have already referred to the immense sums we so lavishly wasted there because it was so easily borrowed. Now, we are all economizing to make good the waste. But even when that necessity for economy is passed, there will be no revival in its full extent of the American demand on Europe for cotton goods. In the first place, the old delirium will never return; and besides, even if that were possible, we are in a condition to supply ourselves more nearly and more cheaply than formerly, and think we have also a very considerable surplus to furnish other countries at prices which will enable us to compete with the great producing nations. India, also, as we have seen, is engaged in building spindles, and hereafter will supply a larger share of her reduced consumption.

Thus, at the moment when the producing power had reached so inflated a position, the consuming capacity is found to be very materially contracted—not only shorn of

its over-excited element, but forced below even a normal This crisis, or concurrence of unfavorable influences, has not, as we have seen, been the outgrowth of the Eastern war, but is the natural result of a disease which is running its course. Undoubtedly the war has increased the disturbance; and just to that extent, but no further, will peace act as a restorative. The whole issue as to the future takings of spinners is wrapped up in the inquiry, how far can the consuming world at this time find the means with which to pay for the cotton fabrics which the existing power can produce. In one particular, at least, the answer can be by no means uncertain: that is to say, at old prices the old consumption cannot be for the present re-established. The facts we have set out above would seem to put this point beyond all controversy. To what extent the lower prices now ruling will permit it, time alone can determine. That inquiry we cannot pursue, as it is wholly within the realm of conjecture.

For the purpose of further illustrating the points discussed above, we have prepared the following three pages.

The first page* is from Mr. Ellison's circular of October last, and shows the World's total cotton supply, &c.†

The second page gives the European deliveries, as stated by Messrs. Ellison & Co. and by M. Ott-Trumpler.†

The third page shows the percentages of each kind of cotton contained in these deliveries.

^{*}This table includes the total American crop for each season, and consequently the quantity lost at sea and that shipped to Mexico, &c. The deliveries for European consumption therefore differ slightly from those given in the table on the next page, which centains the known imports into Europe only. The American deliveries include cotton burnt or lost within the United States, and also forwarded to Canada.

[†] In the second of these tables the European figures of deliveries for seasons previous to 1870-71, and in the first table for the seasons previous to 1873-74, do not include cotton other than American imported into Spain and Russia. Ellison estimates the deliveries thus omitted in the first table to be about 108,000 bates in 1867-68; 109,000 bates in 1868-69; 98,000 bates in 1869-70; 120,000 bates in 1871-72; and 88,000 bates in 1872-73.

	7.	rek i	T.	SUPPLY.					DELIV	A SHREE	OR CONS	DELIVERIES FOR CONSUMPTION.		
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DELIVERIES OF COTTON IN EUROPE—In Thousands of B des.

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	America.		3,013	3,132	15.03	2,722	2,511	2,083	2,013	1,912	1.1	1,735	1,518	1,237	983	313	133	292	3,443	3,107
	Total		2,255	2,558	2,311	5,369	2,193	1.981	2.365	1.627	916,1	1,732	1,733	1,616	1,182	1,033	81.1	977	1,776	1,719
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CONSUMPTION IN THE UNITED STATES.

There have been no mill returns obtained of the consumption of the cotton mills in the United States later than our own figures for 1875. Of course, the annual cotton crop reports since then show the actual deliveries, but those totals include the takings for all other purposes as well as spinning. The details of our figures for the year ending July 1, 1875, were as follows:

COTTON MILLS AND COTTON CONSUMPTION IN THE UNITED STATES.

STATES.	of Mills.	No,of spindles	verage size of yarn.	Average run-	Aver, consimp tion of cotton per spindle.	Q'ntity of cot ton used.	Q'ntity of cot- ton used,
	No. of	No,0	Аусгаде оf уага	Avel	Aver, tion per	Q'ntity fon	Q'nti tor
Northern-			No.	w'ks.	Ibs.	lbs.	Bales.
Maine	27	633,914	23.14	50.50	53.00	33,603,236	72,421
N. Hampshire.	36	815,709	22.66	50.22	70.25	57,326,126	123,535
Vermont	10	46,314	29.55	50.51	51:51	2,372,420	5,513
Massachusetts	206	3,775,631	28.69	16:17	55.33	203,894,352	450,204
Rhode Island	129	1,438,479	33.48	48.00		61,109,470	132,348
Connecticut	108	889,784	35.66	47.20	51.12	45,492,513	98,044
New York	-60	615,205	36.38	19:65	46.30		61,365
New Jersey	22	178,928	29.13	50.83			21,798
Pennsylvania.	60	451,900	18.07	13.62	69.85		68,044
Delaware	8	48,276	23.17	52.00	69.96		7,246
Maryland	20	127,352					46,052
Ohio	4				135.69		3,802
Indiana	-1	22,988				3,261,340	7,029
Total North	694	9,057,543	28.42	47.52	56.25	509,009,613	1,097,00
SOUTHERN— Alabama	14	70.10 0	10.77	10		0 == 0 1 = 0	14.50
Arkansas		,			114.51	6,756,170	14,56
Georgia	47			16.34		132,100	283
Kentucky	3	131,340					50,21
Louisiana	3	9,514			254.40		5,210
	1				315 50		1,537
Mississippi Missouri	9		l.		110.60		4,29
North Carolina	3				140.52	2,810,185	6,05
South Carolina	31				121.72		14,42
	18	70,282			137.57		19,91
Tennessee	40				121.85		
Texas	2				172:34		2,11
Virginia	9	54,624	15.55	51.63	115.85	5,560,835	11,98
Total South RECAPIT'LAT'N	181	481,821	12.67	49.07	140.57	67,733,140	145,07
Total North	694	9,057,543	28.42	17:52	56-25	509,009,613	1.097.00
Total South	181	481,821				67,733,140	145,07
Grand total	375	0.530.361	27:00	(7,00	110.10	576,742,753	1.010.00

For the sake of comparison, we bring forward our figures for previous years, giving the totals of the main items

		Yarn,	$\Lambda verage$	Total Consu	mption.
	Spindles.	Average.	per Spindle.	Pounds.	Bales.
1875.					
North	9,057,543	28:42	56:25	509,000,613	1,097,001
South	481.821	12.67	140.57	67,733,140	145,079
Total 1875. 1874.	.9,539,364	27:60	60:46	576.742,753	1,212,080
North	8,927,754	28.56	56.86	507,790,099	1,094,387
South	487,629	12.50	122:53	59,793,774	128,526
Total 1874 1870.	9,415,383	27 73	60.59	567,583,873	1,222,913
North	6,851,779	25.38	50.87	34\$,550,000	752,908
South	262,221	12:25	124.23	32,575,715	70,358
Total 1870 1869.	7,114,000	28.38	53.57	381,125,715	823,166
North	6,538,494	28:00	60.70	396,886,586	\$55,359
South	225,063	12:88	138:12	31,085,702	67,000
*Total 1869	6,763,557	27:50	63:28	427,972,288	922,359

The actual *takings* for all purposes from 1873 to 1877 have been as follows.

	1873.	1871.	1875.	1 > 76.	1877.
Taken by— Northern mills. Southern mills.	1,063,465	1,177,117	1,062,522	1.211.593	1.288,118
Total takings from crop	1,201,127	1,305,943	1,207,601	1,356,598	1,135,118

GOODS MANUFACTURED.

The statement of kinds and quantities of goods manufactured is necessarily incomplete. We do not claim that these results are as exact as the returns of consumption. Spinners are frequently unwilling to state their production except in gross, which we are required to divide up on information otherwise acquired. The statement may be taken, however, for as close an approximation as the nature of the case will permit, and is as follows for 1874 and 1875.

Year ending July 1, 1875.	New England States.	Middle& Western States.	Total North'rn States.	Total Southern States.	Total United States.
Threads, yarns, and twines, (lbs.)	45,000	19,000	64,000	19,000	83,000
ilar plain goods (yds.) Twilled and fancy goods, Os-	540,000	94,000	634,000	92,000	726,000
naburgs, Jeans, &c., (yds.)	180,000	46,000	226,000	21,000	247,000
Print cloths (yds.)	640,000	109,000	749,000		749,000
Ginghams (yds.)	30,000	5,000	35,000		35,000
Ducks (yds.)	12,000	16,009	28,000		28,000
Bags (number)	8.000	2,009	10,000		10,000
Year ending July 1, 1874.					
Threads, yarns, and twines,					
(lbs.)	32,000	29,000	61,000	18,000	79,000
ilar plain goods (yds.) Twilled and fancy goods, Os-	520,000	90,000	610,000	97,000	707,000
	204,000	80,000	284 000	22,000	306.006
	481,000			,	588,000
Ginghams (yds.)	30,000		33,000		33,000
Ducks (yds.)	14,000	16.000			30,000
Bags (number)	5,000				6,000

FUTURE PROSPECTS OF UNITED STATES SPINNERS.

There are reasons why spinners in this country appear to us to be much more favorably situated with regard to the future than European spinners. The economics in manufacture which the depression we have passed through has taught us, added to the advancement we have made in machinery during the ten years previous to the panic, have put us into a position for more successfully competing with European spinners than ever before, not only for the trade of the United States, but also for that of other countries. In the first place, it is not likely that foreign dry goods will ever again come here in such abundance as previous to 1873. And in the second place, we hold decided advantages over Europe, if we only have the wisdom to improve them, for all North and South Ameri-

can trade; while in every other country where quality is a consideration, our goods have already made for themselves a market. Of course, any new trade is of slow growth, but a close study of what has been done in this respect gives a very hopeful outlook as to what may be done. The actual figures of exports of cotton goods are as follows.

EXPORTS OF COTTON MANUFACTURES FROM UNITED STATES.

Year ending June 30.	1877.	1576.	1371.	1873.
Colored goods (Yds.)	29,111,134	16,488,214	4,600,417	3,585,629
do (Val.)	\$2,446,145	\$1,445,462	\$660,262	\$596,912
Uncolored goods(Yds.)	76,720,260	59,319,267	13,237,510	10,187,145
do (Val.)	\$6,124,154	\$5,314,738	\$1,686,297	\$1,655,116
Other manuf's of (Val.)	\$1,310,685	\$962,77×	\$741,773	*695,500
Total cotton manufac- tures exported(Val.)	\$10.150.954	\$7,700,975	*3.091.33º	\$2.947.528

Here is a rise in four years from three millions in value to ten millions. The total even now is of course very small, but it is highly encouraging, for time and experience alone can acquaint us with the wants of any trade; and besides, this growth has been reached in spite of the very many obstacles which have been interposed by ourselves. We must remember that the margin for profit is of necessity Hence every impediment, however triffing, to the freest, cheapest intercourse with nations wanting our goods, cripples or fetters to that extent the trade. What then we require is to have our navigation laws changed and reciprocal trade fostered: or in a word, we need to have every facility offered for making freights cheap and for securing the fullest and freest intercourse. When this has been done, our country will experience an industrial development hitherto unknown to us.

In the following pages we give in full the last annual circular of Messrs. Ellison & Co., for the year of 1876-77, with a brief notice of the results as to past and prospective consumption reached in their 1st of January circular.

ELLISON & CO.'S ANNUAL REVIEW OF THE COTTON TRADE FOR THE SEASON 1876-777.

Twelve months ago we stated that the season 1875-'76 had been one of the most disappointing and unsatisfactory periods in the recent experience of the cotton industry. The season which has just closed has been quite as unsatisfactory and even more disappointing than its immediate predecessor, in a much as after several years of depressed markets and unprofitable trade, it was thought that a change for the better could not be far distant. Apparently, Europe was just beginning to recover from the effects of the widespread crisis of 1873, brought about by the excessive trading and extravagant speculations of 1870-72, and during the first three or four m nths of the season there were symptoms of renewed healthy activity in various directions; but these movements were based upon the expectation that the threatened outbreak of hostilities between Russia and Turkey would be averted; and the moment war became certain a reaction ensued which left the state of trade in a worse condition even than it was before. During the last eight or nine months of the season the markets have been in a chronic state of over-supply. The after-effects of the commercial and financial disasters which commenced in 1872-773 have been everywhere visible in the shape of forced reduced expenditure, which has led to a curtailed consumption of all kinds of manufactures. The consumption of cotton goods has not perhaps diminished, nor has it kept very far behind production; but it has kept behind, and this slight excess in production, combined with constantly dragging markets, has made selling quite a one sided bargain, and almost invariably compelled the producer to part with his goods at unremunerative rates. It was accepted as certain that peace and settled politics would instantly reverse the positions of buyer and seller, especially as there was a deficit in the supply of the raw material; and this caused producers to keep up the out-turn of their mills, and go on selling what they could at the best prices they could get, until the loss became so great and the stocks of goods so burd-nsome that (chiefly in July, August and part of September) short time was adopted in the leading manufacturing districts, while the effort to reduce production was further helped by a strike at Bolton. By means of these measures stocks were greatly reduced, and the margin between cotton and goods materially improved-so much so, at all events, that it became less unremunerative to work full than short time, and with few exceptions (aside from the mills closed at Bolton) short time was practically abandoned by the close of September.

COURSE OF THE MARKET, OCT. 1, 1876, TO OCT. 1, 1877.

The market closed quietly on September 30, 1876, with mid

dling upland at 5 15 16d. An extensive business had been done during the first half of August, and prices had advanced to 6 3-16d, from 52d, touched in July. Thence to the third week in September the demand had fallen off, resulting in a decline to 5 15-16d. There was a temporary increase in the demand in the last week of September, but holders offered their stocks so freely that prices did not goin anything of moment. October opened tamely, under the influence of large receipts at the American ports, and a very apprehensive feeling regarding the future of events in Turkey Buyers operated very sparingly, holders showed some eagerness to sell, and middling upland receded (October 4) to 5\frac{1}{2}d., or \frac{1}{2}d. to \frac{3}{2}d. lower than the prices touched on August 17, and only $\frac{1}{8}$ d, on the spot, and 1-16d, to 3-16d, in futures, higher than the low sales of July, which were not only the lowest of the year, but the lowest since 1860. There was very little change during the subsequent formight, prices on the 20th October being pretty much the same as on the 4th of the month.

More hopeful views, however, began to be entertained respecting the efforts being made to preserve the peace of Europe. This caused the public to look more closely into the position of cotton on its own merits, and in view of the low prices current and the probability of a reduced American crop, buyers commenced to operate with unusual freedom, both here and in Manchester; but, although the sales for the week ended the 26th October reached 117,820 bales, such was the freedom with which the demand was met that prices only advanced 1.16d. to \$d. per lb. on the spot, and 3-16d. to \(\frac{1}{4}\)d. for futures. After so large a business it was thought a pause might en-ue, and for a day or two the upward movement ceased, especially as some uneasiness was caused by the ultimatum suddenly delivered to Tu key by Russia; but the news (received on 31st Omober) of the final arrangement of an armistice between the Porte and Servia removed all hesitation on the part of buyers, and on the 1st and 21 of November the market became quite excited, the sales on the last-named day being estimated at 49,000 bales, with an additional 10,000 bales after official hours. About the same quantity was sold for forward delivery, making a total of 100,000 biles, an aggregate never before touche t in the history of the trude. The result was an advance of $\frac{1}{3}$ d. to $\frac{1}{4}$ d. on the spot, and $\frac{1}{4}$ d. to 5 16d. for futures. The advance was fully maintained on the 31 and 4th November, though the demand fell off; but less strength was displayed on the 6th, owing chiefly to the desire of speculators to realize the late rise, and a slight reaction took place in futures; but the fall was ful v recovered on the 7th, owing to a sharp upward movement in New Yo k, and on the 8th the market again become excited, closing strong at an advance of $\frac{5}{8}$ d, to $\frac{1}{2}$ d, per lb, on the week for both

spots and fatures, bringing middling upland up to $6\frac{5}{2}$ d. on the spot and $6\frac{5}{4}$ d. for distant delivery, or $1\frac{5}{8}$ d. for "ordinary" and $\frac{7}{8}$ d. to id. for "middling" upon the low sales of July. Meanwhile, the low and medium counts of yarn gained $1\frac{5}{8}$ d. to $1\frac{7}{8}$ d. per lb., and the current run of $8\frac{1}{4}$ lb. shirtings 1s. per piece.

During the subsequent week or ten days the demand fell off, and prices gave way 1. for American on the spot and ad. for "futures;" but the decline was fully recovered between the 20th and 28th November, owing to the acceptance of the armistice by Turkey, and the publication of the pacific assurances by the Emperor of Russia to the English Ambassador—middling uplands being quoted 65d, on the spot and 63 l, for distant delivery. Then come a few days of quietness, during which prices gave way about 1d. per lb., owing to less assuring Continental advices; the absence of any signs in the long-expected reduction in the American receipts, and the desire of sellers to get rid of cotton declared against December deliveries. The decline, however, again brought in buyers, and with decidedly assuring Continental news, favorable Indian advices, and more activity in Manchester, prices, with slight interruptions, tended upwards, until the fall quoted on 2d of December was more than recovered; the final quotations on the last market day of the year (December 29) b ing 611-161, for middling upland on the spot and 7d. for distant "futures."

This anima ion led to a large attendance of spinners during the first week of January, especially as the American receipts were falling off so rapidly as to bring the smaller estimates of the crop to the fro tagain. The demand was so extraordinary that the sales for the first six working days of the new year averaged over 30,000 bales per day, and the confidence of operators was so unbounded that prices advanced 1/2d, per lb., middling upland being pushed up to 7 3-164, on the spot and $7\frac{1}{2}$ d, for June delivery, while as high as 7% d. was paid for distant shipments—the highest prices of the season. A'armingly low estimates of the American, East Indian and Egyptian crops were current; sanguine views of an early settlement of the Eastern question were in vogue; the large stock of cotton accumulated by consumers was altogether overlooked, and Sd. per lb. for middling upland was calculated up in as certain to be witnessed during the course of the season; but the excitement was too intense to last, and between the 8th and 17th of January the demand fell to very moderate dimensions, speculators hastened to realize the late advance, the idea got abroad that, after all, the American crop might not be very much smaller than the previous one, and prices receded \$d. per lb. The decline led to an improved demand and a recovery of 3-16d. per lb. between the 17th and 20th of January; but with augmented receipts at the American ports (the weekly figures rising

from 110,000 on the 26th of January to 143,000 and 111,000 on the 21 and 9th of February respectively) the reaction recommenced with more intensity than before, and middling upland fell to 6 9-16d, on the 8th of February, while the sides for the week ended on that day reached only 40 000 bales; but with reduced American arrivals, advancing prices at New York, unfavorable crop accounts from Bombay and an improved business in Macchester, confidence revived, and prices gaited 3-16d, between the 8th and 15th of February—middling upland being quoted 6\frac{2}{4}d, on the spot and 7-1-16d, for distant deliveries.

The improvement, however, was only short-lived. The increased business in Manchester was more apparent than real; the demand for cotton fell off, and with a large import the stock here increased from 829,000 bales on the 15th February, to 1.070,000 on the 22d March. During these five weeks the sales on the spot averaged only 7,600 bales per day. There was no appreciable reduction in the rate of consumption, but with a slow state of trade in Manchester, spinners fell back upon their large surplus stocks. Moreover, they were receiving an average of nearly 11,000 bales per week, direct from the quay. During this period, too, the market was injuriously affected by the pressure to sell March deliveries and cotton dec'ared against shipments; while business in Manchester was restricted by an adverse turn in the Indian exchanges. The result was a decline of 1d. to 5d. per lb., middling upland receding to 64d, on the spot, and 6 1-16d, for landing cotton on the 22d March, against 63d, and 611-16d. respectively, on the 13th February. At times there were symptoms of improvement, but they ended in nothing substantial. On the 231 and 24th Murch there was a little more inquiry, owing to some advance in the Indian exchanges and a better demand in Manchester, but the change for the better disappeared on the 26th, on the announcement of the failure of Messrs. Isaac Low & Co. This event took the public quite by sure rise, and fears were entertained that further mischief won d follow; the result was an instant decline of 1-161, to 1/8d, per lb. Middling upland was sold at 61 to on the spot, and 6d. Londing. The low price attracted buyers and the fall was recovered between the 27th and 29th March. The market was closed for the Easter holidays between the 29th March and the 3d April; meanwhile (on the 31st March) the Protocol on Turkish affairs was signed by the various Powers. This gave rise to hopes of a speedy settlement of the Eastern question, and, together with the low prices, led to a large attendance of spinners on the 3d April, resulting in a buliness of 30,000 bales, and an advance of $\frac{1}{8}$ d. to 3-16d in spet prices, and 3-16d. to $\frac{1}{4}$ d. in futures; but the movement met with no response in Manchester. The demand rapidly fell off, and the whole of

the advance was lost between the 6th and the 9th April. A few days later came the rejection of the Protocol by Turkey, which was taken not only as indicating the certainty of hostilities between Russia and Turkey, but as threatening a general European war. For several days, therefore, the market was exceedingly depressed, especially as the gloom occasioned by political disquietude was intensified by rumors of impending difficulties in the market, and eventually by the announcement of the failure of Messrs. Lockhart & Dempster, who were largely engaged in cotton operations. The result was that between the 9th and the 17th April prices gave way 11. per lb. During the sub-e quent four days rumors that renewed efforts were being made to preserve peace caused an advance of 3-16d.; but the ac ual decla ration of war by Russia dispelled all hopes of hostilities being averted, while the non-committal character of the Emperor's manifesto led to the fear that, in certain eventualities, other Powers besides Russia and Turkey might be drawn into the conflict. The upshot was a demoralized cotton market and a fall of Ad., middling upland selling on April 27 at 5 13-16d. on the spot, and 5 11 16d. landing. During the subsequent week there was a recovery of 1 16d. to 3-32d., but it was lost the week after; and on the 15th May the quotations for middling upland were 5#1. on the spot, and 5 11-16 i. for near deliveries, the lowes prices of the season.

The fall in values had now reached nearly 12d, per lb, from the highest prices paid in January, and the current rates were only 1-16d, to $\frac{1}{8}$ d, above the low irregular sales made during the most depressed days in the previous season. Buyers, therfore, began to think that little, if any, further decline could reasonably be calculated upon, especially as the prospects for the remainder of the season pointed to the certainty of a serious deficit in supplies, compared with the previous season. Accordingly, after the Whitsuntide holidays (which occurred between the 18th and 23d of May) a rather better inquiry was experienced both here and in Manchester. The improvement was slow at first, but made d cided progress during the first fortnight of June, ending in an advance of 9 16d. between the 15 h May and the 14th June; middling upland being quoted at 6 5-16d, on the last named date, against 53d. on the former. The advance led to a pause; buyers in Manchester refused to follow the rise, and spinners having increased their stocks of the raw material, cut down their purchases to very small dimensions. Meanwhile the market was adversely affected by continued apprehensions respecting the future of the Eastern question, and by the increased gravity of political affairs in France, both of which causes were injuring trade in general throughout the world. Between the 14th and 23d of June, therefore, prices lost 3-161. Jer lb; but the react on

again brought in buyers, and the fall was recovered between the 23d and 28th. The hardening tendency continued until the 19th of July, on which day middling was quoted at 63d, on the spot and 6.7 16d, for distant deliveries.

The upward movement was due entirely to the unmistakably strong statistical position of the market, and received no encouragement whatever from Manchester, where trade was as dull as It was as clear as anything could be that a further advance in prices could not be prevented except by a reduction in the rate of consumption; but although there had been much talk of "short time" in the manufacturing districts, nothing of importance in that direction had been done. At length the true position of affairs forced itself upon producers, and towards the middle of July the "sbort time" movement began to make decided progress, and continued to do so during the subsequent month, so much so that it was currently estimated that the weekly rate of consumption for part of July and the whole of August did not materially exceed 50,000 bales per week. Meanwhile, the market was further weakened by the promise of a large new American crop, the failure of the food crops in important districts in India, and by the apparent certainty of a prolonged war in Turkey. A very bad effect was produced, too, by the stoppage of Messis. Shorrock, Eccles & Co., of Darwen, announced on the 13th of August. The upshot of these various influences was, that the sales for the five weeks ended August 23 averaged only 41,000 bales per week, and that prices gave way 7-16d, per lb.-middling upland receding to 5 15-16d, on the spot and 53d. for near deliveries.

At last the reduced rate of production began to make itself felt in Manchester, not in any very pronounced way, but still sufficient to give firmness to prices. This circum-tance, and the unfavorable turn taken by the American crop advices, brought out buyers of yarns and goods, and led to a little more business in cotton, but the demand was so freely met that prices gained only 1-16 i, per lb, in the last week of August and the first week of September. Little attention was paid to the had crop accounts, and the improvement in Manchester was reported as being of a very trifling character; but is the month of September advanced the unfavorable crop news became too general to be altogether ignored, while it was also clear that more business had been doing in Manchester than appeared on the surface. Spinners, therefore, became very large operators, especially as they had allowed their surplus stocks to be completely used up, and during the three weeks ended the 27th of Soptember the cales averaged over 80,000 bales per week and prices advanced gd. per lb. After so large a business there was less animation between the 27th and 29th of the month, and futures lost 1 16d. to \frac{1}{3}d., but

spot prices remained steady, middling upland being quoted 6§d. per lb. on the last day of the month, being 7-16d, higher than the opening, $\frac{5}{6}$ d, higher than the lowest, and 13-16d, lower than the highest prices of the season. The average price for the season is $6\frac{1}{6}$ d, against $6\frac{1}{6}$ d, lost season.

The following is an account of the principal fluctuations during the season in the leading descriptions of cotton, and in 32's twist and 8½ lb. shirtings:

	Uplands, Middling.	Near:	Distant.	Pernambaco Fair,	Egypt-Fair.	Dholl.—Fair.	32's Tv	vist.	Shirting 814 lbs.	
1876.	d.	d.	d.	d.	d.	d.	d.	d. s.	d. s.	d.
	$5^{15}16$	$5^{13}16$	578	534	(; l _{\(\in\)}	1716		9386	6 to 8	4^{1}_{2}
Oct. 10	57s	525_{32} 617_{32}	57s	553		43_{8}		9586	712 to 8	6
Nov. 9	tirs .	617_{32}	(3:34	(;1,,	678		10 to		3 to 9	0.
	43.50	0.4	63.9%	6716	(5.24	$4^{13}16$	95s to			1012
- '	65%	6916	611_{16}	6916	634	$5^{1}16$	95s to		3 to 9	0
Dec. 2	0116	6516	67_{16}	615	658			10587	3 to 9	0
	01116	6.8	4	¹¹ 16	0.4	$5^{5}16$	10 to	10.8	4½ to 9	0
1877.	,	-9	71.	719	7	534	105 ₃ to	115 -	71- to 0	3
Jan. 3	7316	5316	450	113		55g	10 g to		7½ to 9 4½ to 9	0
" 17 " 20	516	6-035	4.732	$\frac{71}{634}$	678	511_{16}	10 ½ to		4 to 9	ŏ
Feb. 8	69	51932	6316		6.5	59_{16}	97, to	1078.7	3 to 9	3
13		611_{16}^{32}	71.	610	4:5.	5916	97s to		3 to 9	3
Mar. 22		61_{16}	6716	612	635	518		958 6	10½ to 8	9
Apr. 27	513	311	GL	423.		111_{16}		938 6	9 to 8	ő
May 15	53,16	$[511]_{16}^{16}$	531	116	433.	15_{8}	838 10		3 108	6
June 14	65.0	6932	619	638		518	834 10	9146	712 to 8	9
July 19	313a	633		638		53_{16}	881 to	95, 6	6 to 8	6
Aug. 13		575	515_{32}	Glas	6	51_{16}^{16}	Slo to		3 to 8	112
Sept. 29	635	6^{1}_{4}	65_{16}	16	Glo	51_{8}^{116}	91s to	9586	412 to 8	41.
верс 20	0.8	0.4	0"16	oos	0.8	9.8	5.8 (0	0.80	4-5 (0.8	4.

IMPORTS AND STOCKS.

The imports and stocks of the whole of Europe compare as follows, in 1,00% of bales:

	Ameri- can.	East Indian.	Brazil.	Egypt.	Smyr- na.	W. Ind.	Total.
Import— 1876-77	3,019 3,206	1,135 1,220	$\frac{411}{402}$	443 461	107 107	90 113	5,238 5,512
Decrease	187	S5 	42	21		23	274
Stocks, Sept.30— 1877 1876	575 570	179 312	127 162	67 65	17 21	36 38	1,001 1,168
Decrease		133	35	2	-1	2	167

DELIVERIES FOR SEVEN SEASONS

The following is a comparative statement of the deliveries in 1,000's of bales during the past seven seasons, with the weight in pounds:

	Antorican	= s East India.	Brazil.	Egypt.	Sundries.	Total	Average weight.		weight unds.
GREAT BRITS 1876-7 1875-6 1871-5 1873-4 1872-3 1871-2 1870-1	1,9 1,6 1,6 1,7 1,6	$ \begin{bmatrix} 48 & 47 \\ 66 & 66 \\ 61 & 66 \\ 54 & 73 \\ 12 & 65 \end{bmatrix} $	9 238 8 161 0 113 7 509 8 668	295 245 256 289 289	51 97 90 129 155	3,1 19 3,017 3,077 3,1 19 3,335 3,132 3,222	106 121 359:6 39:1 38:1 360	1,270 1,198 1,240 1,280 1,127	,53×,000 ,2×7,000 ,×3×,000 ,706,000 ,610,000 ,520,000
CONTINENT 1876-7 1875-6 1874-5 1873-4 1872-3 1871-2 1870-1	1.0 1.1 9 1.0 5 6	23 56 81 91 81 91 21 87 90 79 71 72	2 63 6 109 7 15 1 1 157	155 166 85 91 101 65	152 178 171 196 181 221	2,255 2,553 2,341 2,369 2,193 1,981 2,365	108 102 382 377 366 350	920, 1,026 894, 893, 802, 693,	,082,000 ,374,000 ,262,000 ,443,000 ,638,000 ,350,000
ALL EUROPI 1876-7 1875-6 1871-5 1873-4 1872-3 1871-2 1870-1	3,0 3,1 2,5 2,7 2,5 2,0	32 1,39. 87 1,613 22 1,53 14 1,52 83 1,38	5 3 1 7 5 6 1 5 4 6 0 0 7 7 1 0 1 9 6 6	161 330 376 107 301	232 271 286 310, 376	5,570 5,418 5,518 5,528 5,113	112°3 386°3 386°7 376°8 356°1	2,296, 2,093, 2,133, 2,083, 1,820,	,661,000 ,100,000 ,819,000 ,278,000 ,870,000
The average	weekly	delive	ries i	a ba	ıles	were	as fo	llows:	
1	876-7. 1	875-6.	1874-	5. 1	¥73-	4. 15	72-3. 1	\$71-2	1870-1
East Indian	38,274 7,833 11,452	37,465 9,220 11,337	30,88 12,81 15,4	16 1	32,71 12,69 15,17	12 14	.173.1	27,151 2,651 20,123	37,019 .0,731 11,211
Total	60,559	58,025	59,17	73 (50,57	57 61	.135	60,231	61,961
		22,773 17,607 5,719	18.80 18.21 7,91	2 1	[9,6] [6,5] [9,1]	7 15	.115 1 .192 1 .866 1	3.961	21,500 11,181 9,500
Total	13,365	19,099	45,01	9 -	(5,5)	58, 12	,173,.	300,2	15,151
Grand total 10	93,921 10	7,121	101,19	2 10	6,11	5 106	,30×j#	8,327	107,142

The average acight of American packages consumed this year we estimate at 433 lbs., against 441 lbs. last year; of Egyptian, 691 lbs., against 692 lbs; of Brazil, 164 lbs., against 160 lbs; of West Indian, &c., 205 lbs. for both years; of Smyrna, 370 lbs. for Great Br.tain, and 35) lbs. for the Continent, for both years; of East Indian, 384 lbs., against 380 lbs., for Great Britain, and 373 lbs., against 367 lbs., for the Continent.

CONSUMPTION OF GREAT BRITAIN.

It is generally supposed that at the end of August English spinners held only a bare working stock of the raw material. During the four weeks of September they took 258,590 bales (averaging 401 lbs. each) from Liverpool and London. Allowing for the closing of the mil's at Bolton, and for "short time" else-

where, it is thought that the actual rate of consumption did not exceed an average of 56,000 bales per week, or a total of 224,000 bales for the four weeks. This would leave a surplus of 34,500 bales, weighing about 13,800,000 lbs., at the end of the month, and also at close of the season, against 8,518,000 lbs. twelve months previously, showing an increase in spinners' stocks of 5,282,000 lbs. this year over last. If we deduct this latter figure from the weight of cotton delivere 1-1,278,533,000 lbs—we shall get 1,273,256,000 lbs. as the weight actually consumed, against 1,270,287,000 lbs. last season. The movements for the past five seasons compare as follows:

		Estim't'd w'ght consumed.	Surplus pounds.	Defici t pounds,
1873-74	1,240,706,000			19,130,000
1874-75 1875-76 1876-77	1,270,287,000		5,282,000	25,539,000

Our estimate of the requirements of the season was 1,297,000,000 lbs., or about 24,000 000 lbs. less than the weight actually consumed; but the loss in spinning American cotton was from 2 to 3 per cent less than in the previous season, and 2½ per cent on the weight of American spun (1,990,260 biles of 438 lbs., or a total of 871,733,880 lbs.) comes to 21,793,000 lbs. So the weight of yarn actually turned out was practically about the same as our estimate.

EXPORTS OF YARNS AND GOODS.

The following is a comparative statement of the export of cotton yarns and piece goods from Great Britain in each of the past ten seasons, ended Sept. 30, in millious of pounds and yards:

	Yarn pounds.	Goods yards.		Yarn pounds.	Goods yards.
1876-77. 1875-76. 1874-75. 1873-74. 1872-73.	$\begin{array}{c} 223.2 \\ 218.1 \\ 218.5 \end{array}$	3,803 3,635 3,546 3,530 3,526	1871-72 1870-71 1869-70 1868-69 1867-68	$194.0 \\ 181.5 \\ 169.3$	3,449 3,432 3,412 2,908 2,980

The exports for the past season show an increase of 2 per cent in yarn, and 4.6 per cent in piece goods, over those of 1875.76.

THE CONSUMING POWER OF THE CONTINENT.

The following table is based upon answers given to the question, "What is the average consumption of cotton per spindle per annum in your neighborhood when all the machinery is fully at work?" and upon official accounts of the deliveries of cotton for consumption in each country:

	No. of spindles.	ths.pr. spindle	Total pounds,	Bales of 400 lbs.	Ave'ge per week.
Russia & Poland	2,500,000	65	162,500,000	406,250	7.81:
Sweden & Norway.	310,000	80	21,864,000	62,160	
Germany	-4,799,000	55	258,500,000	646,250	12.125
Austria	1,558,000	67	101,386,000	260,965	5.019
Switzerland	-1,850,000	2.5	48,250,000	120,625	2,320
Holland	230,000	GO	13,500,000	34,500	66;
Belgium	500,000	60	48,000,000	120,000	2.308
France	5,000,000	43	-240,000,000	600,000	11,53
Spain	1,775,000	-1 ×	\$5,200,000	213,000	4,090
Italy	\$80,000	67	58,960,000	117,100	2,835
Total	19,693,000	53.2	1,041,460,000	2,611,150	50,211

CONSUMPTION OF THE CONTINENT.

The above figures differ slightly from those given in the previous reports, but they are more correct. In the following table we give an approximate estimate of the quantity of cotton actually consumed in each country during the past season. Compared with the full rate of consumption as shown above, there is a reduction of 12½ for Russia, 10 per cent for Switzerland, Belgium and Italy, 5 per cent for Germany, France and Spain, and 2½ per cent for Austria.

	No of spindles.	Lbs.pr. spindle	Total pounds.	Bales of 400 lbs.	Ave'ge per week.
Russia & Polánd	2,500,000	57	142,500,000	306,250	5.889
Sweden & Norway.		80	21,800,000	62,000	1.192
Germany		53	249,100,000	622,750	$-11.97\bar{6}$
Austria	1,558,000	65	101,270,000	253,175	4.868
Switzerland	-1,850,000	23	42,550,000	106,375	2.016
Holland	230,000	60	$13, \le 00,000$	34,500	663
Belgium	800,000	54	43,200,000	108,000	2,077
France	5,000,000		230,000,000	575,000	11.058
Spain	1,775,000	4.5	79.875,000	199,657	3,810
Italy	850,000	60	52.800,000	132,000	2,539
Total	19,603,000	50.05	979,895,000	2,899,737	46,148

These figures show an increase of 1.8 per cent over the estimated consumption of 1875-76, against an average increase of 5 per cent in 1875-76 over 1874-75, and 1874-75 over 1873-74. Compared with a full rate of consumption, the quantity of cotton spunit 1876-77 shows a deficit of 6.3 per cent. The movements for the past four seasons compare as follows:

	Actual weight Estim't'd w'ght, Surplus delivered, lbs. consumed, lbs. pounds.	Deficit.
1873-74 1874-75 1875-76 1876-77	$oxed{894,262,000} oxed{915,375,000} oxed{1,026,374,000} oxed{961,143,000} oxed{65,231,000}$	21,113,000

It appears, therefore, that the surplus stock of 65,330,000 lbs., over and above ordinary working requirements, held by spinners twelve months ago, has been reduced to 5,368,000 lbs., or about

13,000 bales of 400 lbs., or about 150,000 bales less than at the close of September, 1876.

But although the stocks of cotton at the mills are much smaller than they were a year since, we should think, from the tenor of our correspondence, that the difference is quite counter balanced by increased stocks of yarns and goods.

CONSUMPTION OF THE UNITED STATES.

The consumption of cotton in the United States continues to make rapid progress, the unsatisfactory state of trade notwithstanding. In reference to the course of business during the past season, the New York Financial Chronicle, in its annual crop statement, issued last month, says:

"The past year h s proved far from a sat sfactory one for our spinners, notwithst maing they have manufactured goods in increased quantities, and sold them all. Several circumstances have combined to produce this d sappointment (for a disappointment it has been since they began the season with a favorable outlook and very hopeful anticipations. In the fir tiplace, all trade in the caucity has been in redepressed and spiritless during the part tweive months than during any similar period since the panic. Very naturally, the rote, the demand for cotton goods has in genera, been of a quiet nature, not favorable to all prices; absorbing the production to be sure, but in ruch a sluggish, hand-to-month way, as to keep the seller nearly all the time to the disadvantage of having to force his goods. Then, again, the vigaries of the cort on market have helped to intensify the indisposition to rurchase among havers. When the year begin, the price of corton statistically appeared very low. The last season's consumption and this season's prospective apply clearly showed a deliciency. Consequently, spinners stocke (up, and prices good) improved. But the fumors of war in Europe and finally war itself, changed entirely the same incin tion to manufactures. No one buyst rigely or eagly on a falling market, and especially when all trade is depressed."

Allowing for differences in stocks in the Northern interior towns, and deducting the cotton sent to Canada, and that burnt or lost, the deliveries during the past five seasons were as follows:

	1873. Bales.	1874. Bales.	1875. Bales.	1876. Bales.	1877. Bales.
Taken by Northern mills.	1,063.465	1,177,417	1,062,522	1,211,598	1,288,418
Taken by Southern mills	137,662	128,526	145,079	145,000	147,000
Total takings from crop	1,201,127	1,305,943	1,207,601	1,356,598	1,435,418

As spinners hold less cotton than they did twelve months since, the consumption has made greater progress even than that indicated in the foregoing statement.

In reference to this increased consumption, the CHRONICLE says: "These figures verify our remarks and the mill-returns which we published some weeks since, showing that the Northern spinners were using increased amounts of cotton. We should remember, however, that is creased takings do not of accessity indicate increased yards of cloth manufactured. With cotton at 11 cents perab, the heavier makes been me relatively the cheaper, while our export movemen to China, Africa, and Sauth An erica runs upon heavy to brick, Furthermore, as we stated a year ago, low prices are enlarging the uses of this staple. For instance, in worsted a dwoolen mills and knit goods there has been of late years a constantly-increasing proportion of cotton consumed. In these and one transport ways, the demand for the stable is growing, and especially has this been the case during the past three seasons."

What becomes of a portion of the increased out turn of

American spindles and looms is shown in the following account of the exports of cotton manufactures from the United States during the years named, ending June 30:

		PIECE GOODS.	Cotton - Manuf'ctures.	
Years.	Plain. Yards.	Colored, Yards,	Total, Yards.	all kinds, Value.
1872 1874 1876	8,859,191 13,237,510 59,319,267 76,720,260	2,811,888 4,600,117 16,488,214 29,111,434	11,704,079 17,837,957 75,807,481 105,831,694	\$2,304,330 3,091,332 7,722,978 10,180,984

The last complete count of spindles in the United States was made two years ago. There were then 9.057,543 in the North and 481,821 in the South. Since then about 415,000 new spindles have been put up in the North and 100,000 in the South, so that there are now about 9,472,543 in the one section and 581,821 in the other, or a total of 10,054,364 in the United States.

THE AMERICAN COTTON CROP.

The last American crop reached 4.485,423 bales, against 4.669,285 bales in the previous season. The exports to Great Britain amounted to 2.024,877 bales, against 2.08,711 bales, and to the Contine t 1.024.620, against 1.172,283. American spinners took 1.435,418, against 1.356,598 bales. The weight of each of the past four crops is estimated as follows by the New York Financial Chronicle, upon returns received from the various Southern shipping ports:

	C	ROP.	Average
Season of—	Number, Bales,	Weight, Pounds.	Weight per Bale.
1876-77 1875-76 1874-75 1873-74	4,669,288 3,832,991	2,100,465,086 2,201,110,024 1,786,934,765 1,956,742,297	468.28 471.46 468.00 469.00

The foregoing are gross weights, and include bands and wrappers.

THE COTTON MILLS OF INDIA.

According to a recent official report, there are now at work in the cotton mills of India 1,231,400 spindles, and from 10,000 to 11,000 looms. It is not easy to ascertain the weight of cotton consumed by these spindles, as many of the mill companies have declined to fill up the Government forms with the necessary particulars; but the returns received show an average of 75 lbs. per spindle per annum. On the basis of this average the present rate of consumption is about 92,395,000 lbs., or 237,000 bales of 390 lbs., per annum. The extraordinary progress made by this new branch of Indian industry is shown in the following table:

inivalor of	COTTON CONSUMED.				
work.	Pounds.		Bales V week		
338,000 593,000 886,000	25,350,000 41,475,000 66,450,000	65,000 114,000 170,000	1,250 2,190 3,270 4,150		
	338,000 593,000	Spindles at work. Pounds. 338,000 25,350,000 593,000 41,475,000 886,000 66,450,000	Spindles at work. Pounds. Bales of 390 pounds. 338,000 25,350,000 65,000 593,000 41,475,000 114,000 886,000 66,450,000 170,000		

It may be that some portion of this increased production by steam power has taken the place of the native hand-made yarns and goods; but most unquestionably the bulk of the out-turn has gone to supply wants that would otherwise have been met by imports from Great Britain.

STATE OF THE COTTON INDUSTRY ON THE CONTINENT.

In September we forwarded printed forms, containing the following list of questions, to correspondents at every cotton port and cotton manufacturing district on the Continent:

- 1. Has the character of the business of the past season been satisfactory or un atisfactory, and what causes have influenced the course of trade?
- 2. What is the present state of the trade, and what are the prospects for the coming season?
- 3. Has the consumption of cotton in your district increased or decreased, and whit do you estimate the difference per cent compared with the previous
- 4. As a the stocks of raw cotton at the mills in your neighborhood larger or smaller than they were at this time last year? If so, what is the approximate difference per cent?
- 5 Are the stocks of yarns and goods larger or smaller than they were at this time last year? If so, what is the approximate difference per cent?

 6. What increase (if any) has there been in the number of spindles in your
- i eighborhood? What is the total number of spindles now in existence in your country,
- so what is the average consumption of cotton per spindle per annum in your neighborhood when all the machinery is fully at work?
- 9. Please state the number of power looms in your country, and the number
- of hands employed in spinning and weaving, either by official return or approx-
- imately.

 10. Your views on other matters of interest to the trade not included in the above questions would also be gladly received.

We take this oppor unity of thanking our numerous correspondents for the prompt and hearty manner in which they have answered our questions, and we trust that the perusal of our report will afford tuem some recompense for the trouble which they have been put to in complying with our wishes.

Past Season. - Very favorable for yarns, owing to reduced production, better also for goods but less so than for yarns, owing to stocks of calicoes and prints being heavy at the opening of the season, and the sale slow in consequence of the war. Producers have benefitted by the low exchange, advanced duties, shorter terms of credit, and gradual reduction of stocks.

No increase in spindles. Consumption of cotton reduced in the Moscow district, but no change of moment in the St. Petersburg district. Night work partially suspended during a portion of the year, but now resumed. Reduced consumption for all Russia; probably not more than 10 to 15 per cent. Stocks of cotton at the mills considerably smaller than last year. Stock at St. Petersburg nearly all sold. Stocks of yards very small; spinners under contract for some months to come. Stocks of goods much smaller than last year, but large in proportion to yards.

Prospects—Very uncertain. Everything depends on the chances of peace and the improvement in exchange. There is a fair demand, but the fear is that the rise in prices cannot keep pace with the fall in exchange.

POLAND.

Past Sea on.—Opened with little doing. The outbreak of the war caused some activity, but the panic in Russia inundated us a terwards with Russian manufactures, and prevented prices from rising. Now everything is better.

No increase in spindles. Consumption about the same as last year. Slocks of raw cotton at the mills 15 per cent to 20 per cent larger. Hardly any stocks of yarns or goods.

Prospects.—Not bad, but the war causes muc. diffidence; and the depreciation of the Russian currency is also a great drawback.

SWEDEN AND NORWAY.

Pa t Season.—Very favorable during the greater part of the season, but not so favorable at the close.

A few new spindles have been put up in several mills. The consumption of cotton shows no change of importance. The stock of cotton at the mills same as last year. Stocks of yarns and goods larger.

Prospects.—Not favorable, owing to accumulation of stocks, and dull trade.

GERMANY.

PRUSSIA.—Past S ason.—Very unsatisfactory, owing to the slow sale and de, ressed prices of yarns and goods, occasioned by the war, and the consequent stagnation in business. Coarse counts of yarns (2's to 20's) worse than ever known. All attempts to bring about a better state of things, by reducing production, have been frustrated by Manchester competition.

No new mills opened; but some new spindles added to old mills last year have since been put to work. On the whole rather more cotton has been spun this year than last. Stocks of cotton at the mills decidedly reduced. Stocks of yarns and goods very greatly increased.

Prospects.—Present state very unfavorable, owing to the unprecedentedly unprofitable scale of prices. There has been a rather better inquiry within the past month, and a further improvement is expected during the winter. If this hope should not be realized, the present rate of production cannot be continued, as socks are already very excessive.

SANONY.—Past Season.—Unsatisfactory throughout, owing to the rise in cotton in the early part, and the political disquietnde produced by the Eastern war and the critical position of affairs in France.

No change in spindles. Consumption slightly diminished—some say 5 to 10 per cent. Stocks of cotton at the mills reduced; but stocks of yarns and goods vastly increased.

Prospects.—Very discouraging. No signs of improvement. Unless a change to: the better comes quickly, the out-turn of the mills will have to be reduced.

BAVARIA.—Past Season.—Very unsatisfactory, especially during the second half of the season, owing to the continued aftereffects of the finarcial crisis, the decline in the iron industry, the adverse influence of foreign tariffs, and the unfavorable treaties of commerce of the German Empire. Production in excess of demand. Prices very unprofitable.

No increase in spindles. Consumption of cotton diminished in some mills, but fully maintained in the majority. More American used than last season—Stocks of cotton 30 to 50 per cent smaller.—St cks of yarns and goods rather larger.

Prospects.—Very unfavorable, with little hope of any immediate improvement, owing to the general depression in all departments of trade, and the unseasonable weather for the potato, wine, tobacco and fodder crops.

Baden.—Pat Scason.—Fairly satisfactory at the opening, but bad later on, and very bad at the close, especially for manufacturers. The adverse influences in operation have been—financial losses, which have forced people to economize; general depression in trade, owing to political disquietude; and over production.

No increase of spindles. One mill with 15,000 spindles burnt down early in the year, but now at work again. Consumption of cotton slightly diminished. The quantity of cotton at the mills much smaller than last year, most mills holding only a bare working stock. Stocks of yarns moderate; stocks of goods enormous in first hands, but very small in second and third hands.

Prospects.—Business lethargic, and no appearance of any early improvement. No likelihood of any amendment until the war is at an end.

Alsace.—Past Season.—Unfavorable, from bad to worse, owing to slow sales and accumulation of stocks, caused by thsuppression of protective duties; by the high tariffs of France, Austria and Russia; and by the commercial depression arising out of the political uneasities occasioned by the crisis in France and the uncertain eventualities of the war in Turkey.

No increase in spindles. Consumption of cotton about the same as last season, though possibly rather less, owing to some mills having gone on to finer numbers. Minor efforts have been

made to reduce production, but they have been too unimportant to notice. Stocks of cotton at the mills greatly reduced; in most cases they now on'y amount to ordinary working requirements. Stocks of goods largely increased, and now unusually heavy.

Prosp cts.—No signs of improvement. No improvement possible until the caus's enumerated above are removed. The only redeeming feature is the low price, which enables producers to hold stock easier and with less liability to loss than before, and encourages the hope of increased consumption. With peace, no doubt a great revival of trade would take place, which, by increasing employment for the working classes everywhere, would enable consumers to increase their expenditure in clothing. Aside from this, Alsace also wants the establishment of import duties equal to those of France, as a protection against English competition.

AUSTRIA.

Past Season.—Favorable during the first three or four months, owing to advancing prices, good demand and rising exchanges; but unfavorable during the remainder of the season, owing to declining prices, diminished demand, and falling exchanges. On the whole there has been a fair sale of goods, and stocks have not accumulated very much, but prices have been very unsatisfactory, owing to the competition of English imports, which have been forced off at low rates.

About 15,000 new spindles have come into work, but a mill with 12,000 has been burnt. The consumption of cotton has diminished about 5 per cent in some districts, but has been well maintain d in others. Average reduction perhaps 2½ per cent. Spinners have gone on to lower counts of yarn, owing to foreign competition in the higher counts. The stocks of cotton are larger at some mills, but smaller at others, than last year. The stocks of yarns are moderate. The stocks of goods are smaller at some mills, but much larger at others; on the whole, possibly a little heavier than last year.

Prespects.—The outlook is not good. The favorable anticipations based upon the bountiful harvest have not been realized. The recent rise in cotton has not been followed by a corresponding advance in yarns and goods. Any movement of moment in this respect has been prevented by the competition of English imports. The result is that producers are working at a less. One of our correspondents says "spinning of high counts does not pay, and requires a higher protective tariff. Low numbers and waste spinning pays, and has largely increased." Another says—"The Eastern War, uncertainties of present situation, and absence of demand from those countries; effects of the crisis since 1873; differences in Austrian and flungarian commercial

and financial relations; and dissatisfaction of spinners requiring higher protective duties,—sadly disturb business."

SWITZERLAND.

Past Season.—Very unsatisfactory. Production constantly in excess of demand. Demand slow, owing to the influence of the war in the East; general political uneasiness; the competition of English products in our home market, and in those of our foreign customers; and the diminished buying by consumers who have suffered heavy losses in home railways and other speculative investments.

No increase in spindles. The consumption of cotton has been reduced from 5 to 10 per cent. The stock of cotton at the mills is reduced to a minimum, stocks of yarns slightly, those of goods considerably larger than last year.

Prospects.—Very unpromising. No chance of improvement until the war is at an end. Switz-rland usually does a large bu-iness with the East of Europe, but at present this is seriously reduced. Improvement at home will increase slowly, as the losses entailed by unfortunate investments are gradually made up. With peace and a general revival of trade, it is expected that English products will find profitable outlets elsewhere, and, therefore, that the competition here will be diminished.

BELGIUM.

Past Season.—Un atisfactory throughout the year; the cotton industry having suffered from the general distress experienced during the past three years.

No increase in spindles. The consumption of cotton has been 5 to 15 per cent below full rate. The stocks of cotton at the mills are reduced to not more than half the quantity held last year. The stocks of yarns and goods are nearly double what they were a year since.

Prospects.—The position is bad, and the outlook not brilliant. In ordinary times, when the price of the raw material is low, the consumption of cuton goods would increase, but the present times are bad, and it is to be feared that the general depression will continue for a woile.

HOLLAND.

Past Season.—Unfavorable owing to the generally unsatisfactory state of trade in Europe, caused by the slow recovery from the effects of the lest financial crisis, and by the unremunerative condition of the business with India and China—particularly with Java, where the stocks of goods are heavy. Soinners have not done badly, except a few who, in the winter months, bought largely of cotton at high prices; but the season has been very unproficable to weavers, owing to their being constantly ham-

pered by excessive stocks, which they have had to force off at losing prices.

No increase in spindles. The consumption of cotton has not varied materially from last season. The stocks of cotton at the mills are smaller than last year. The stocks of yarn are also smaller, but those of goods are much larger.

Prospec s.—Unfavorable, and no indication of any improvement, as the stocks of goods everywhere are excessive.

FRANCE.

Past Season.—Unsatisfactory, owing to the dragging trade caused by the apprehensions a ising out of unsettled politics abroad and at home; while matters have been made still worse by the continued competition of Manchester goods.

There is no increase in spindles; a few thousands of new ones have been put to work, but there have been counterbalancing losses of others by fires. In some places attempts were made during the year to reduce consumption, but they were shortly abandoned, and the weight of cotton spun has probably not been much short of a full rate of consumption. The stocks of cotton at the mills are about the same as last year. The stocks of yarns and goods are very much larger.

Prospects.—The present situation is bad, but a better state of things is anticipated after the settlement of the present political agitation, which upsets every department of business. The change is more likely to occur because the prices of goods have never been so low as they are now. But a substantial revival cannot be expected until the Russo-Turkish war is over.

SPAIN.

Past Season.—Unsatisfactory on account of general depression in all branches of trade, and the consequent difficulty of selling except at irregular and unrenuncrative prices.

Increase in spindles, 25 000 to 30,000; but this increase is counterbalanced by short time in some quarters, and the entire stoppage of milts in others owing to insufficient water supply. On the whole, less cotton consumed this season than last. Stocks of cotton at the mills less than last year. Socks of yarns and goods larger, e-pecially the latter.

Prospects.—Unpromising, in consequence of the continued absence of enterprise. The chances of improvement are uncertain also, owing to the proposed change in the customs and excise duties. The industry of the country is suffering from the effects of the late civil war.

ITALY.

Past Season.—Unsatisfactory, owing to the reduced consumption occasioned by the partial failure of the grain and silk crops, and the almost total failure of the olive crop; to the competition

of English goods; and to the bad state of trade in general, arising out of the war in Turkey, and the unsettled condition of politics.

The number of spindles is increased by about 80,000. Except a few mills temporarily stopped owing to want of water, there has been no "short time;" but it is doubtful whether the increase in consumption has been in the same ratio as the increase in spindles. Weavers have, in many instances, reduced their production 10 to 20 per cent. The stocks of cotton at the mills are smaller, but those of yarns and goods are much larger than last year.

Pro pects.—The position remains as bad as during the past season, and there is little chance of any improvement until steps are taken to limit the competition of English goo's. Peace might reduce this evil, by diverting Manchester fabrics to other markets; but the remedy really required is an increase in the import duties.

THE CONSUMING POWER OF EUROPE AND THE UNITED STATES. REQUIREMENTS FOR 1877-78.

In round numbers there are in Great Britain 39½ million spindles, on the Continent 19½ millions, and in the United States 10 millions. The following is a statement of the consuming power of this machinery:

	Number of Spindles.	Lbs. per sp'dle	Total lbs.	Bales of 400 lbs.	Av. per week.
Great Britain	39,500,000	33	1,303,500,000	3,258,000	62,600
Continent	19,500,000	53	1,033,500,000	2,584,000	49,700
Total Europe	59,000,000	40	2,337,000,000	5,842,000	112,300
United States	10,000,000	63	630,000,000	1,575,000	30,300
Grand total	69,000,000	43	2,967,000,000	7,417,000	142,600

Judging from the experience of the past few seasons, the spinners of the United States will require for 1877-'78 about 1,500,000 bales of 438 lbs., or about 1,640,000 bales of 400 lbs. What Europe will require will depend upon the course of politics in connection with the war, and upon the chances of a recovery from the present unsatisfactory state of trade in all departments of industry. With peace we should no doubt see an extraordinary revival in business, but with continued war and political disquietude we may witness a repetition of the dragging trade experienced during the past season. The full requirements of Europe compare as follows with the actual consumption for the past season:

	Great Britain. Pounds.	Continent. Pounds.	Total. Pounds.
Estimated full requirements Consumption past season	1,273,256,000	979,895,000	2.253.151.00
Average	1,288,378,000	1,006,697,000 :	2,295,078,00

For the coming season, therefore, Europe will require at least 110,000 bales of 400 lbs. per week, and may want more.

PROSPECTS OF SUPPLY.

Two or three months ago estimates of the probable yield of the American crop most'y varied between $4\frac{1}{2}$ and $4\frac{3}{4}$ million bales; since then the prevalence of caterpillars in some districts, drought in others, and the recent occurrence of heavy rainstorms in all, have reduced the figures by at least a quarter of a million of bales, and new the estimates current range from $4\frac{1}{4}$ to $4\frac{1}{2}$ millions. The actual result depends upon the weather during the remainder of the season. Of this, of course, no one can speak positively, but as the crop is some two or three weeks late, the risk of serious injury from frost is correspondingly increased. Under the circumstances, $4\frac{1}{2}$ millions is considered a full estimate. Supposing this figure to be attained, American spinners will take about 1,500,000 bales, leaving 3,000,000 for shipment to Europe.

Last season the import of cotton into Europe from Ludia reached only 1,133,600 bales, against 1 220,000 in 1875-6, and 1,544,000 in 1874-5. The following estimate hows that 1,250,000 bales would be a full estimate of the probable receipts for the new season:

	1877-78.	1876-77.	1875-76.	1874-75.
Afloat commencement of seas'n Shipments Oct. 1 to Sept. 30	123,000 1,309,000	219,000 1,009,000	301,000 1,201,000	269,000 1,576,000
Supply. Afloat end of season	1,432,000 182,000	1,258,000 123,000	1,505,000 288,000	$\substack{1.845,000\\301,000}$
Import into Europe, Oct. 1 to Sept. 30	1,250,000	1,135,000	1,220,000	1,5 14,000

The estimated increase in shipments is 300,000 bales. The increase is hardly likely to be any more than this, and it may be less. As the bulk of the increase will be late in the year, the amount affoat at the close of the season will be much larger than at the opening.

From Egypt we shall probably get about 450,000 bales, against 443,000 iast season. From the Brazils probably not more than 400,000 bales, against 444,000, the accounts from that quarter reporting injury to the crop by drought. Sundry Mediterraneau sources may supply 100,000 bales, against 107,000. From Peru,

the West Indies, etc., we may receive about the same as last year, say about 90,000 bales.

A recapitulation of the foregoing gives the following as the probable import into Europe, in bales and pounds, in 1877-78:

	Bales.	Weight.	Pounds.
American	3.000,000 1.250,000	438 378	1,314,000,000
East Indian Egyptian	450,000	601	472,500,000 270,450,000
Frazilian Sundry Mediterranean	100,000	164 850	65,600,000 35,000,000
Peru, West Indies, &c		205	18,150,000
Total	5,290,000	411	2.176,000,000

SUPPLY, DEMAND A D PRICES.

We have shown above that on a moderate computation the consumption of Europe in 1877-78 will reach:

For Great Britain	Pounds, 1,288,000,000 1,006,000,000
Or a total of To meet which we have a supply of	2,176,000,000
Showing a deficit of (295,000 bales of 400 lbs.)	118,000,000

If the consumption should not exceed that of the past twelve months, the case will stand as follows:

Consumption of Great Britain	Pounds, 1,273,000.000 980,000,000
Total Estimated supply as above	2,253,000,000 2,176,000,000
Deticit (192,000 bales of 400 lbs.)	77,000,000

So that with a rate of consumption that pre-supposes a continuance of bad trade, and with a supply that includes an American crop of 4,500,000 bales, and an increase of 300,000 bales in the shipments from India, we have to face a deficit of 192,000 bales of 400 lbs. each. Besides this there is, compared with last year, a reduction of 167,000 bales in the stocks in the ports, and tully 150,000 bales in the stocks at the mills, or a total of 317,000 bales.

With a smaller prospective supply than even the retarded consumption of last season, we must, in the ordinary course of events, look for a higher range of prices in 1877-78 than ruled in 1876-77. At the end of September, 1876, the price of middling upland was $5\frac{1}{4}$ d. In our annual report we stated that we looked for an advance during the course of the season. The average for the season was $6\frac{1}{4}$ d., and the closing price $6\frac{2}{3}$ d. Unless the war spreads, the average for 1877-78 will not be lower than in 1876-77; how much higher will depend mainly upon the outturn of the American crop. A yield of four and three quarter

millions might prevent any rise of importance, but in the absence of any new political misfortune, such a crop would not lead to any average decline worth mentioning; while with peace four and three quarter millions would be found too small for the wants of the world.

At the moment, the strong statistical position of the raw material is weakened by the knowledge that the socks of goods are large, that the position of producers is very unsatisfactory, that general trade shows no signs of revival, and by the fear that new political complications may arise out of the Eastern war. These weakening influences may continue in operation for some time, and with sufficient force to retard or prevent the advance in prices that would be inevitable if cotton was on its own merits. But, taking a broad view of the situation, it would appear that, whatever may be the extent of the fluctuations in the course of the twelve months, the average price of middling upland is more likely to be over than under that of the past se son.

Mr. Ellison, in his 1st of January circular, says that the consumption in Great Britain in 1877 was nearly 3 per cent less than in 1876, and at least 5 per cent less than the full rate; that on the Continent the average rate of consumption the last three months of 1877 has been over 16 per cent short of the full spinning power. He estimates the requirements for 1878 at about 7 per cent below the full working power, and gives the following as a minimum estimate of the requirements of Europe for 1878.

	Pounds.	Per Cent.	Bales.	Per Week.
Great Britain Continent	1,275,0 0,0 0	56 3 43.7	3,187.5 0 of 490 lbs. 2 425.0 0 of 4 0 lbs.	6 ,200 46,600
Total	2,245,000,000	100.0	5.612,500 of 4:0 lbs.	107.9 0

We now add our report of the United States crop for 1876-77.

COTTON MOVEMENT AND CROP OF 1876-77.

Our statement of the cotton crop of the United States for the year ending Sept. 1, 1877, will be found below. It will be seen that the total crop for the year ending that day reaches 4,485,423 bales, while the exports are 3,049,497 bales, and the spinners' takings 1,435,418 bales, leaving a stock on hand at the close of the year of 119,638 bales. The tables which follow show the whole movement for the twelve months. The first table indicates the stock at each port, Sept. 1, 1877, and the total on Sept. 1, 1876, the receipts at the ports for each of the last two years, and the export movement for the past year (1876-77) in detail and the totals for 1875-76.

PORTS.	Receipts year ending		Exports year ending Sept. 1, 1877.				Stoc	
TORIS.	Sept. 1, 1877.	Sept. 1, 1876.	Great Britain	Chan- nel.	Fr'nce	Other for ign	Total.	387
Louisiana	1,195,035	1,415,959			333 325			21,
Alab ıma	36 1,918	374.673	142,153		29,758	46 492	214, 03	2.
So, Carolina	468, 21	416,372	2 3,412	10,602	59.679	73,057	337,480	2.5
Georgia	491.831	524.8 5	204,605	5 750	14,187	73,498	298 540	1.5
Texas	506 634	488,641	190,092	16.65	24,774	26, 119	258,135	4.7
Florida	23,089	17.424	1.36				1.362	
. Carolina	138,087	107,836	20,484		2.511	10,606	36.3.4	
Virginia	575,941	539, 266	116,559	3, (8	1.603		1:1,169	
New York*.	121,2.3*	193,693*	358 148	29,8 3	9,368	36,524	434.1 8	67,
Boston*	100,206*	71,396*	75,2 9			91	75,310	13.7
Philadelp'a*	45 21 *	36,826*				833	30,8:4	21
Baltin, re*	7.8 1*	6,2:7*	16,892			15,4.4	32,3.6	. (
Portland*	4.105*	3,066*						
S. Francisco			415				4:5	
Pot, this yr	1 038, 41		2.024 877	91,700	466,704	463 216	3,049,497	119
Tot. last yr		4 191,142					3,2 :2,994	

*These figures ar: only the portion of the receipts at these ports which arrive overland from Tenn see, &c. The total receipts at New York, Baltimore, Boston: nd Phil de'phia, for the year ending August 3', 1577, are given in a sub equent part of this report.

By the above it will be seen that the total receipts at the Atlantic and Gu'f shipping ports this year have been 4,038,141 bales, against 4,191,142 bales last year. If now we add the shipments from Tennessee and elsewhere direct to manufacturers, we have the following as the crop statement for the two years:

	—Year ending Sept. 1—		
	1876-'77.	1875-76.	
Receipts at the shipping portsbales Add shipments from Tennessee, &c., direct to	4,038,144	4,191,142	
manufacturers	300,282	333,146	
Total	4,338,123	4,524,288	
Manufactured South, not included in above	117,000	145,000	

Total cotton crop for the year, bales, 4,435,423 4,669,288

The result of these figures is a total of 4 485,423 bales as the crop of the United States for the year ending August 31, 1877.

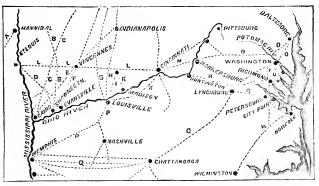
Overland and Inter-State Movement.

To prevent any misunderstanding of our overland movement we give a brief explanation of it. In studying these figures, however, and, in fact, every other portion of our crop statement, it must be remembered that it has always been our plan to count each ba'e of cotton at the Southern outport where it first appears. This is a simple rule, applying to every part of our annual cotton crop report. We in this way not only preserve the unity of the report, and therefore simplify it, but, as a consequence, also make it more intelligible, and less liable to error. Hence, in the overland statement, the reader will find three classes of Jeductions from the gross amount carried overland.

First, all cotton shipped by rail from Southern outports to the North. For instance, from New Orleans, Mobile, Savannah, &c., frequent shipmen s are thus made, an account of which is k pt, but it is all included in the crop of New Orleans, or Mobile, or Savannah, &c., as the case may be, when it first appears there, and therefore when the same cotton appears again in the overland, it must of course be deducted, or it will be twice counted.

Second, we deduct from overland likewise the small amounts taken from the Southern outports for Southern consumption. They also, for the sake of unity and simplicity, are counted at the outports where they first appear. But, as is well known, the entire Southern consumption is made up in an item by itself, and added to the crop. Hence, unless these small lots which thus go into Southern consumption from the Southern outports, are deducted somewhere, they will be twice counted.

Third, we also deduct the arrivals, during the year, by railroad from the West and South, at New York, Boston, Biltimore, Philadelphia and Portland. Those receipts reached these ports by coming across the country, and appear in the weekly totals, becoming a part of the receipts at the ports, under the heads of 'New York" and "Other Ports," but now have been divided up and included under each separate city, according to the amount thus received by it during the year, as indicated in the first table of this report. All this cotton, then, having been counted during the year, must now be deducted as has been done.



- A Mo. Kan. & Texas P.R. connection.
 B Sp.Ingfiel 1 & 1 L Southeast rol R.
 C Lill, eds central R.R. and branches.
 St. Louis & southeastern RR (from
 E Shawneetown and Evansyllie.)
 F Evansylle & Crawfordsylle RR.
 F Evansylle & Crawfordsylle RR.
 H&K Jeffersonylle Mad son & indianapolls RR, and Madlson ranch.
 I Onio & Miss. RR., Louisylfe Branch.
 M Connections in Onio of the Baltmora & Julio RR.
- more & chlo RR.
- Baltimore & Ohlo RR

natt.

- Louisville & Nash, RR, and Memphis Branch.
- Through route Men phis to Norfolk, thesapeake & Ohio RR.
- Washingt a route, via R chrond Fredericksburg & Potomac HR. R chwond
- Richmond Che. apeake & York River Railroad.
- Sou hern route from Richmond and Not folk. Short Line RR., Louisville to Cincin-

By examining the preceding diagram, and with the aid of previous explanations, nothing further will be needed to explain the following statement of the movement overland for the year ending September 1, 1877:

Shipments for the year from St. Louis
Total carried overland. 636,886
Deduct-
Receipts overland at New York, Boston, Philadelphia, Baltimore and Portland
Galveston. 4,994 New Orleans 4,994 Mobile. 129,212 Savannah. 2,592 Charleston. 5,993 Virginia ports. 11,250-154,041 Less shipments inland heretofore deducted- Mobile from New Orleans 862 New Orleans from Mobile. 85,403

Total now to be deducted.....

743

3.680-101.312- 52.729

Savannah from Mobile, &c......... 10,624 Charleston from Savannah, &c.....

Norfolk from Wilmington....

According to the above, the total carried overland this year was 636,886 bales, against 703,780 bales last year, and the movement direct to manufacturers this year reaches 300,282 bales, against 333,146 bales a year ago. This shows a decrease over last year of 66,894 bales in the gross movement, and of 32,864 bales in the net movement. We now give the details of the entire crop for the two years:

Leaving the direct overland movement not elsewhere count'd.300,282

^{*} As previously stated, these items are deducted—(1) so that "Southern Consumption" can be added to the crop in one item; (2) because "Shipments Inland" have once been counted as receipts at the ports named.

Louisiana.

	Louisiana.	
Exported from N. Orleans:		1875-76
To foreign ports	1,204,591	1,363,005
To Coastwise ports To Northern ports by rail	188,003	212,375
and river	4,398	7.601
Burnt, manufactured, &c.	×13	1,976
Stock at close of year	21,356-1,119,191	
Deduct:	,	
Received from Mobile	85.403	67,632
Received from Florida	221	370
Received from Galveston		0.0
and Indianola	109.125 4	120.117
Stock beginning of year.	29,107- 221,156	9,986- 198,105
Total product for year	1,195,935	1,415,959
	Alabama.	
Exported from Mobile:*		
To foreign ports	219,703	213,653
To coastwise ports	141,536	127,935
Burnt and manufact'd	312	308
	2,156- 366,007	
Stock at close of year Deduct:	2,100- 000,007	4,227 570,155
	862	559
Receipts from N.Orleans Stock at beginning of	604	553
	1.00= 7.000	600

* Under the head of coastwise shipments from Mobile are included (in addition to the amount shipped to and deducted at New Orleans) 40,533 bales shipped inland by rail, which will be found deducted in the overland movement.

4.227 -

year.....

Total product of year.....

5.089

360.918

922-

1,141

374.672

Texas.

Total product for year		506,634		455,610
year	5,345	5,118	5,105	5,105
Received from N.Orleans Stock at beginning of	103			
Stock at close of year Dedurt:		512,032	5,345-	493,745
Burnt and manufact'd				
To coastwise ports*	249.079		251,951	
To Mexico	1.307		1.0×5	
To foreign ports, (except Mexico)	256,928		235,364	
Exported from Galveston, &	ke:			

* Coastwise exports are made up as follows: 238,886 bales from Galveston; 9,933 bales to New Orleans from Indianola; 260 bales from Brazos Santiago, of which 158 were to New York and 102 to New Orleans.

Florida.

Exported from Fernandina,				
To foreign ports To coastwise ports Stock at close of year	$^{1,362}_{21,732}_{6-}$	23,100	$\frac{17,132}{11}$	17,113
Deduct: Stock at beginning of year	11-	11	9-	9
Total product of year		23.059		17,131

^{*}These figures represent this year, as heretofore, only the shipments from the Florida outports. Other Florida cotton has gone inland to Savannah, Mobile, &c., but we have followed our usual custom of counting that cotton at the outport where it first appears.

	Georgia	١.		
	1876-	77	1875-	76
Exported from—				
Savannah:				
To foreign ports—Upland	289,560		368.844	
To foreign ports—Sea Isl.	1,138		1,374	
To coastwise ports-Up-			405.000	
_ land	193,613		$165,\!898$	
To coastwise ports—Sca	4.500		~ .00	
Island	4,733		$5,\!493$	
Brunswick:	T 0 10			
To foreign ports - Upland	7,842			
To coastwise ports—Up land	6.876		1,449	
Burnt	1,261		25	
Stock close of year-Up-	1,201		2.7	
land	1.869		2,858	
Stock close of year—Sea	2,500		-,000	
Island	99	506,991	181-	546.122
Deduct:				
Received from Mobile				
and New Orleans	10,624		13,505	
Received from Beaufort,				
_ Charleston, &c	48		1,623	
Received from Florida—	0.04		070	
_Upland	864		976	
Received from Florida— Sea Island*	616		4,292	
Stock beginning year—	010		4,202	
Upland	2,858		859	
Stock beginning year—	2,000		000	
Sea Island	181-	15,191	42-	21,297
Total product of year		$491,\!800$		524,825

^{*} These are only the receipts at Savannah from the Florida outports, and being counted in the Florida receipts, are deducted here. Besides these amounts, there have also been 14.731 bales Uplands and 3,804 Sea Island, from the interior of Florida, received at Savannah during the year.

South Carolina.

Exported from Charleston, a	\ .c.:*	
To foreign ports—Upland	331,803	276,694
To foreign ports—Sea Isl.	5.677	5.019
To coastwise ports-Up-	, , , , , ,	
land	132,573	135,994
To coastwise ports—Sea	,	,
1sland	5.601	3.212
Exported from George-		
town, Beaufort, &c	473	996
Burnt at Port Royal	486	
Stock close of year-Up-		
land	1,949	1.417
Stock close of year—Sea		
Island	949 - 479,5	11 316- 423,678
Deduct:		, ,
Received from Florida—		
Upland	134	84
Upland Received from Florida—		
Sea Island	7,013	3,916

^{*}Included in the exports from Charleston this year are the following exports from Port Royal: To Cork, 51 bales damaged Sea Islands; to coastwise ports, 27,589 bales Upland and 773 bales Sea Island. The collector of the port, in giving us the foreign shipments, states that 6,164 bales additional were cleared for Liverpool in December on the Harvey Mills; but, as our readers are aware, this vessel got on fire, and subsequently the vessel, with 5,978 bales of the cotton, was sent to New York; so, of course, it is not included in the foreign shipments. There appears to have been a loss by the five of 486 bales.

South Carolina-(Concluded.)

D 10 0	1876-7	7	1875-7	6
Received from Savannah, &c Recovered from bark	743		523	
Disco * Stock beginning of year—	1,834			
Upland Stock beginning of year—	1,417		2,443	
Sea Island	346	11,487	340	7,306
Total product of year		168,024	-	116,372

^{*}The Disco cleared from Charleston in December for Havre, but was wreeked on the Pumpkin-Hill Breakers. Of her eargo, 1,834 bales of cotton were recovered and brought back to Charleston.

North Carolina.

Exported from Wilmington, To foreign ports To coastwise ports Taken for consumption	&e.: 36,374 100,211 1,206		27,267 79,779 1,148	
Burnt Stock at end of year	396—	138,187	100-	108,294
Deduct: Stock beginning of year.	100-	100	458-	458
Total product for year	-	138,087	_	107,536
	Virginia	١.		
Exported from Norfolk,&c.: To foreign ports	121,169			
To coastwise ports Taken for manufacture Burnt	$ \begin{array}{r} 121,103 \\ 445,774 \\ 11,100 \\ 101 \end{array} $		108,693 412,043 10,385	
To coastwise ports Taken for manufacture	$\begin{array}{c} 445,774 \\ 11,100 \\ 101 \end{array}$	580,052	412,013 10,385	531,552

^{*&}quot;Norfolk, &c.." exports are made up this year as follows: To foreign ports, all the shipments are from Norfolk, except 4,314 bales to Liverpool from Richmond; to coastwise ports, all the shipments are from Norfolk, except 53,936 bales from Richmond, Petersburg, &c.

575,941

529,126

Total product for year....

Tennessee.

Shipments:		
From Memphis	381,169	484,515
From Nashville	46,970	51.811
From other places in		
Tennessee, Mississippi		
and Texas, &c	316,209	349.166
Stock in Memphis and	,	·
Nashville at end of year	6.241 - 783.889	5,812- 891,337
Deduct:	.,	
Shipped from Memphis		
to New Orleans, &c	92.947	113.919
Shipped from Memphis,		
&c., to Norfolk, &c	95,624	105,562
Shipped from Nashville	,	
to Southern ports	10.611	17.586
Shipped direct to manu-	- / /	,
facturers	300.292	333,116
***************************************	1	,

Tennessee	– Concluded.)
Stock at Memphis and Nashville beginning of	812— 505,276 4,546— 575, 0 59
Total shipments to New York, &c	278,613 316,278
facturers direct	$\frac{300,282}{}$ $\frac{333,146}{}$
Total product from Ten- nessee, &c.*	578,895 649,424
* Except the shipments to New Care included in the New Orleans, V	orleans, Norfolk and Charleston, which Virginia and South Carolina crops.
Total product detailed above by C	
Total crop in the United States for 1877	r the year ending Sept. 1, 4,485,423
Consumption 3	North and South.
Our mills have even this v	ear made a further considerable
	by be seen in the following state-
	otton during the year, North and
South:	otton during the year, more and
Total crop of the United States, as Stock on hand, commencement year (Sept. 1, 1876)—	stated abovebales 4,485,423 of
At Northern ports	
At Southern ports	
terior markets	
Total supply during year ending So Of this supply there has been— Exported to foreign ports durin	ept. 1, 1877
the year	
Less foreign cotton included.	
Sent to Canada, direct from Wes	t. 2,872
Burnt North and South	3,597
Stock on hand end of year (Sept. 1,	
At Northern ports	
At Southern ports	
terior markets	
Total takings by spinners in United	
1, 1877	
Taken by spinners in Southern Stotal	
Total takings by Northern spinners	sbales 1,288,418
	t the North and South have to-
	from this crop, 1,435,418 bales.
	amorks and the Mill naturns

These figures verify our remarks and the Mill returns which we published, showing that the Northern spinners were using increased amounts of cotton this year. We should

remember, however, that increased takings do not of necessity indicate increased yards of cloth manufactured. With cotton at eleven cents per pound the heavier makes become relatively the cheaper, while our export movement to China, Africa and South America runs upon heavy fabrics. Furthermore, as we stated a year ago, low prices are enlarging the uses of this staple. For instance, in worsted and wo len mills and knit goods there has been of late years a constantly increasing proportion of cotton consumed. In these and other ways, the demand for the staple is growing, and especially has this been the case during the past three seasons, as is illustrated by the following statement of the total takings for all purposes at the North and by the mills at the South, for a series of years:

	18°2. B les.	1873 vales	1 74. Bales.	1.75. Bars.	1876. B t es	1877. B t/es.
Taken by Northern mills Taken by Southern mills						
Total takings from crop	1,097,5 0	1,201,127	1,305,913	1,237,401	1,35 :,5 №	435,118

Weight of Bales.

The gross weight of bales and of the crop this year we have made up as fo lows. We give last year's statement for comparison.

	Year endi	ng September	1, 1877.	Y ar endi	ng S pt m'er	1, 1 75.
Crop of	Number of bales.	Weight, in pounds.	Aver ge weight.	Number of b des.	Weight, in pounds	Av'ge wei ht
Texas	506,634	254,103,078	501:67	483,610	245,8 8,9 8	5)3:17
Louisiana	1, 95, 35	542,217,131	453:75	1,415,953	659,836,8-4	465.0)
Alabama	350,913	178,838,475	495 51	371,672	11:0,084,839	50 '3
Georgia	491 8 10	228,195,200	461 00	524.825	243.6 4,161	461 22
S. Carolina,	463, -44	212,0.9,552	453.01	416,372	154.8 9,163	411 00
Virginia	575.941	267,570,653	461 58	529, 1.6	241,810.182	457 00
N. Carolina.	138,087	62.412 5 2	451 98	107,8 6	41,232,165	433 (9
Tenn., &c	745,984	355,018.415	474 (0	811.858	338,033,124	478.00
Total crop.	1.485, 453	2 100.465,086	463:28	4.669,238	2,201,410.021	471 6

According to the forezoing, the average gross weight per bale this season was 468.28 lbs., against 471.46 lbs. in 1876, or 3.18 lbs. less than last year, which indicates nearly 7 per cent decrease in weight. Had, therefore, as many pounds been put into each bale as during the previous season, the crop would have aggregated about 31,0.0 bales less than the present actual total. The weights, however, were unusual last year, as may be seen from the following comparison:

Season	Cr.p,	Crop,	Av. weight
of	num er beles.	weight, lbs.	per bale.
1570-77	4.485 128	2,107,465,186	468 48
1875-76	4 669,288	2,201,41 ,024	471.45
18:4-75	3 83 .991	1,78 ,931,765	463 00
1873_71	4.170.358	1, 56 742, 297	4.310

It should be remembered that the above are gross weights.

Sea Island Crop and Consumption.

Through the kindness of the various receivers and shippers of Sea Island cotton, we are able to continue our annual report of that's aple. As our readers are aware, no record is kept of the export movement of Sea Islands except for the ports of Charleston and Savannah. For the Northern ports, Custom House manifests furnish no guide. We have found it impossible, therefore, to perfect these figures except by special correspondence in every case with the consignee or the shipper, and in this way following every bale of Sea Island after it appeared at a Southern outport, until it either had actually been exported or taken for consumption. We should also state that for the shipments of cotton direct from Florida to ports other than Charleston and Savannah, we have in the case of each consignment at the time of its receipt procured from the receivers the exact number of bales of Sea Island received. Hence in the following results thus obtained there is but little room for error:

Fio	rida.
-----	-------

-1876-77.---

·		1879-70.
Receipts at Savannah, bales. Receipts at New York. Receipts at New Orleans Shipments to Liverpool from Florida direct.	$7,013 \\ 1,065 \\ 49$	4,292 3,916 726 16
Total Sea Island crop of Florida	11,214	8,950
	Georgia.	
Receipts at Savannah Deduct:	6,137	7,212
Received from Florida Received from Florida for	·	4,384
Charleston Received from Beaufort,&c	1,388 48— 4,468	1,523 92—5 , 999
Fotal Sca Island erop of Georgia	1,669	1,213
6		
	uth Carolina.	
Receipts at Charleston1 Shipped from Port Royal,	.1,057	8,188
coastwise	768	435
Bluffton, &c Shipped from Beaufort to	48	••••
Great Britain Deduct:	51-11,924	49-8,672
Received from Florida	7,013	3,916
Total Sea Island crop of South Carolina	4,911	4,756
	Texas.	
Receipts at Galveston Receipts at Corpus Christi	29 29	$^{74}_{3-}$ 77
Total Sea Island crop of Texas.	29	77
Total Sea Island crop of the United States.	17,823	14,996
		,

The distribution of the crop has been as follows:

	Supp	ly year ept. 1, 1	ending		low abuted.	of whi	ch expe	orted to
Ports of	St'ck Sep.1 '76.	Net- Crop.	Total S'pply.	S 1	Leav'g for dis- trib't'n		Havre	Total ex- ports.
So. Carolina*.	346	4,911	5,257	949	4.308	5,037	610	5,677
Georgia	151	1,669	1.8 0	99	1.751	1.090	45	1,138
Florida		11.214	11.214		11.211	55		5.5
Texas		29	29		29	27		27
New Orleans.						l ãi		41
New Yorkt			}			2,710	681	3,391
Boston						411		411
Baltimore						2.412		2,112
Philadelphia						7.352		52
Total	527	17,823	15,350	1.018	17.302	11.865	1,369	13,234

^{*} South Carolina exports were all from Charleston, except 51 bales to Cork from Port Royal.

From the foregoing we see that the total growth of Sea Island this year i-17.823 bales; and with the stock at the beginning of the year 527 bales, we find—

The total supply has been bales The stock at the end of the year, Sept. 1, 1877, was	. 18,350 . 1,048
Making the total distributed Of which exported to foreign ports.	17.302 $13,234$
Leaving consumed in the United States	

We thus reach the conclusion that our spinners have consumed of Sea Island cotton this year 4,068 ba es, less whatever (if any) stock there may be remaining in our Northern ports in excess of last year. Why there has been this very considerable increase in consumption in this country the present season, we are unprepared to state. The following very useful table shows the crops and movement of Sea Islands since the war:

	1		CEOP.			E	XP BT	s.	Amer-	¥.
Senson.	Florida	Geor- gia.	Souch Caro lina.	Tex-	Total.	Great Britain	Conti- neut,	Total ex- ports.	Con- sump- lion.*	Aug
1876-77.	:1,:14	1.6 9	4.911	23	17 8 3	11,565	1,369	13 254	4.06 1.0	(48
187 -76.	8.95)	1.213	4.7:6	77	14 996	11,591	1,345	12 93	1.9.5	5:27
1:74-75	▶.3 3	1.1.0	7.4 0	504	17.027	13.1 9	1,900	15.146	2,193 3	34 .
1873 - 4		1.4 8	×.750	920	19,912	16,986	1.887	18,873	2,113	553
1872-73	10.764	1.269	13,156	1,101	26 289	22,817	622	23,469	1.523 1,0	hb.
1871-72.	5.624	1,5 17	8 755	899	16,845	14.991	193	15.584		370
1870-71	8 753	4 934	7,218	704	21,009	19,544	61	9.9.5		35
1:69-70	9.948	9 225	7,331		26,507	22,776	1.940	24.716		503
1868-19	6,703	6.371	5.608		18,682	15,3 8	1,550	17,239		Ł 11
1857-68	16,404	6,2.6	4,577		21,275	19.7	152	9.859		153
1865-67.	11,213	10,015	11,001		32,238	30,3 4	5,972	30,766		410
18 -5-66	2,4 8	10,957	5,63		19,015	18,085	145	15,:31	1,101	455
Total	03 136	56,124	89,105	3,933	252,208	217 534	12,234	229,798	22.163	

*The column of "American Consumption" in this table includes burn in the United States

 $[\]dagger$ New York exports to Great–Britain were all to–Liverpool, except 53 bales to Glasgow.

Movement of Cotton at the Interior Ports.

Below we give the total receipts and shipments of cotton at the interior ports, and the stock on the 1st of September of each year. The shipments in this statement include amounts taken from these interior ports for home consumption:

	Year en	ding Sept.	1, 1 76.	Year ending Sept. 1, 1877		
	Receipts.	Spipments.	Stock	Receipts.	Shipments	Stock.
Angusta, G1	172.592	172.865	635	1.9 69	184.733	595
Columbus, Ga	51,8 3	51,864	494	72,531	72,2,2	7.6
Macou, Ga	54, 37	53,470	923	19, 42	79. 70	468
Montgomery, Ala	72,727	72,380	959	67.337	67,509	787
Selma, Ala	8-,5 m	88 278	913	64,33)	69, 1.9	324
Memphis, Tenn	487 3.6	484,515	5,4-3	384,358	3 . 469	5.:9:
Nashville, Tenn	50,.58	51,811	4.8	47,507	46,9.0	94
Total, old parts	9 7,429	975,:16	9,748	909,864	910,452	9,161
Dallas, Texas .	49,667	49,306	273	44.104	44.145	13 '
J. fferson, Texas	40,333	40.149	213	36,926	37,059	80
Shreveport, La	1 4,095	104, 21	1. 5	1 1.885	1 1.797	193
Vicasburg, Miss.	60.784	6084	1,5 8	55.048	55,339	227
Columbus, Miss	21,282	21,226	120	22,042	23 23	4
Eufaula, Alı	57,078	₹6,793	390	47,195	47.095	40
Goffin, Ga	12,7 2	12.786	3 +	16,437	16,531	17
Atlanta, G	60, 50	60 229	295	90,175	9.1,2 11	2 0
Rone, G	2, 51	32,518	53	33,100	33,036	57
Charlot e, N. C	42,628	42,445	85	48 236	48.357	1:4
at. Louis, Mo	130, 12	243,064	2.221	219 010	217 5 9	1,:01
Cincinnati, O	185,375	179,559	6,6.2	175,527	177,281	4,858
Total, new ports	891,867	883,353	12,079	839,035	891,692	7,879
Total, all	1, 69.296	1.852,569	21,8:7	1 759 459	,802,144	1 ,040

Gross Receipts at New York, Boston, &c.

The following are the receipts of cotton at the ports named:

	.,				1				
	New York.		Bos	Boston.		PHILADELPHIA		BALTIMORE.	
	187 -77	875-16	1876-77.	1875-76	1876-77	1875-76.	1876-77.	1875- 6.	
New Orleans				19.165		431		834	
Texas		94, 20				1,227			
Savannah					12,8 2	17,610	24,666	18,871	
Mobile*			10,895	-6,483					
Faria	13, 93	7,271							
S. Carolina	106.948	105,165	2,531	1,879	15,263	13,3 3	19,522	11,138	
N. Carelina	85,061	54,676			7.8 9	r.937	13,1-1	21,381	
Virgin a	234.860	184 (03	82,142	74.0 9	39, 83	46,339	6 . 148	57,914	
Nor hern p rt		14 091	106,825	87,866					
Terness.c.&c.	121,213	19.56J	100,206				7,871		
Foreign				4					
D1 1 1									
Totel	[959,955.	943,491	55,355	331,314	132,76	124,773	-126,388	116.405	

^{*} There have been shipments for New York, &c., from Mobile, which do not appear in this statement, having been made by railroad, overland.

Exports.

In the first table given in this report will be found the foreign exports the past year from each port to Great Britain, France and other ports, stated separately, as well as the totals to all the ports. In the following we give the total foreign exports for six years for comparison:

Total Exports of Cotton to Foreign Ports for Six Years.

	Expo	its to fore	i_n ports	f-r year	ending A	ng, \$1
From—	1572.	1873.	1-74.	1875.		1877.
New Orleansba'es	888,976	1,177,058	1,117,314	995 270	1,3 3,005	1 201 501
Mobile	137,977	132,130		131.341	243,783	
South Carolina	111,388		247.866	275,131	281713	
Georgi	295 798	375,895	429 571	4.3,235	570.218	298 510
Texas		210,438		221,284	136 449	
Florida	• • • • •	1.000	835	41	27,267	1,362
Virgioia	3,807	1,632 7,722		15.375		
New York	373 071	573,498	20,721 485,596	4:5.174	108,693	
Boston	13,128	11.128	25.399	35.250		434,158 75,340
Philadelphia	2,106	6, 192	28,248	26,090	40,007	30.841
Baltimore	14 311	20,543	41,528	44.567	20,114	32,316
Portland, Maine	143	2,257	252			
San Francisco	15	3:4	468	431	394	415

Total from Un. States.1,957,314 2,679,936 2,840,181 2,684,410 3,212,994 3,049,497

Below we give a detailed statement of the year's exports from each port, showing the direction which these shipments have taken:

New Mo- Orleans. bile.	Gal- Char- eston leston.	Sav'n-	New York.	Ba ti- more.	Other Ports*	Total.
(65,225,120,618)	85,968 203,112	01,605	352,827	16,592	244,043	1,993,290
23,104 21 835	16.650 10.6 2	19.00	29.813		5,788	109,795
		10,007	20.019		U,1 0.0	2 ,0, 100
			5,621			5,621
	4,124					4.12
327,010 20,758	21,774 5 ,673	14,687	9,368		4,113	460, 89
-6,315		•••	• • • • • •		• • • • • • •	6,31
					1	
\$61				1		26
(8,65) 15,972	19.920 10,590	15 590	15,211	14, 66	1,868	
	0.3= 0.150		0 11~1			8,14
4,171	2,25 2,150 		1.0	[1,608	5.87
6,911 8,951.	15,933	7,829		200	7,963	48, 8
~, , , , , , , , , , , , , , , , , , ,	1,441			0.13		6.88
		8,280	11,505			43,270
11 900 9 00	1,470	3,065	000			18,840
11,386 2,025		5,005	900			10,04
	1,3 0 3,151	3,270	35			14.11
25,874, 11,785						55.98
6,992	1,430					8.4.
,						
1.000		1,495				3, 73
2,710	780	9 000		••••		22,79
17.1.2		3,676				25
	•••••		250	• • • • • • •		
1					81	8
6,650	1.307					7,9 7
0,000					10	10
					200 400	0.000.00

^{* &}quot;Other ports" includes the following shipment.*
From Florida, 1,555 bales to Liverpool, and 7 to Dandee.
From Wilmington, 2,14-4 bales to Liverpool, 2,773 to Cork and Falmouth,
2,5-1 to Havre, 1,868 to Bremen, 7,993 to Amsterdam, at d 7.5 to Antwerp.
From Norfolk, 112-245 bales to Liverpool, 3,0-8 to Cork, and 1,602 to Havre.
From Richmond, 4,314 bales to Liverpool, 81 to Nova Scotia, and 10 to other foreign ports.

foreign ports.

From Philadelphia, 30,011 bales to Liverpool, and \$33 to Antwerp.

From San Francisco, 41. bales to Liverpool.



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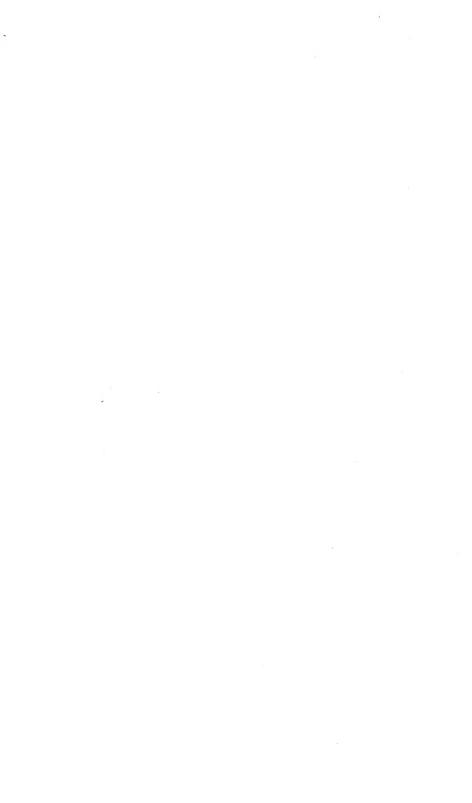
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