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**SPRING  
1921**

**PEDIGREED SEED COMPANY**

**OPERATING THE PEDIGREED SEED BREEDING AND EXPERIMENTAL FARMS**

**DAVID R. COKER, PRESIDENT**

**HERBERT J. WEBBER, GENERAL MANAGER**

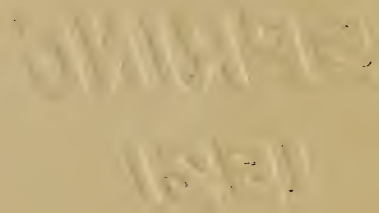
**HARTSVILLE, SOUTH CAROLINA**



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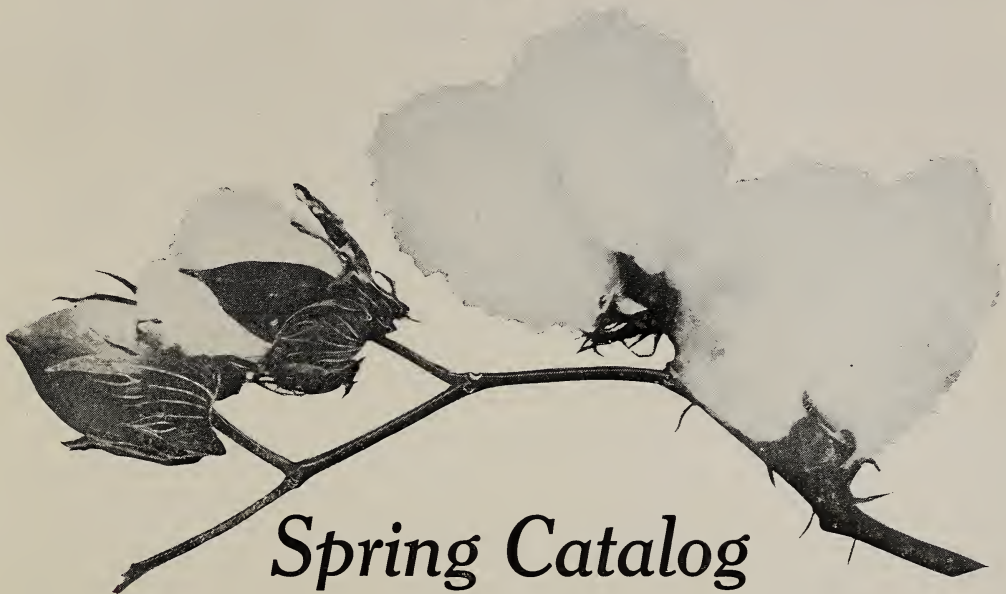
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**PEDIGREED SEED COMPANY**  
**HARTSVILLE, SOUTH CAROLINA**

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MAR 25 1921

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# Spring Catalog

## 1921

### Pedigreed Seed Company

Hartsville, South Carolina

**OFFICERS**

DAVID R. COKER, *President*  
 J. J. LAWTON, *Vice-President*  
 A. L. M. WIGGINS, *Sec. & Treas.*  
 HERBERT J. WEBBER, *Gen. Mgr.*  
 GEO. J. WILDS, *Production Mgr.*  
 J. F. CLYBURN, *Farm Mgr.*  
 E. M. CHAPPELL, *Sales Mgr.*  
 RALPH SHARPE, *Warehouse Mgr.*

**PLANT-BREEDING STAFF**

DAVID R. COKER, B. A.  
 HERBERT J. WEBBER, M. A.; Ph.D.; D. Agr.  
 GEO. J. WILDS, B. A.; M. A.  
 J. B. NORTON, B. S.; M. S.  
 J. F. CLYBURN  
 D. R. HOPKINS, B. S.  
 CURTIS L. VOGLER, B. A.  
 J. S. BROWN, B. S.

**BRANCH OFFICE, JACKSON, MISSISSIPPI**  
 W. S. ATKINSON, MANAGER

*Established 1902*

*Incorporated 1918*





## ANNOUNCEMENT--FOR YOUR PROTECTION

The increased demand for our highly bred pedigreed seed has made it necessary this year for us to greatly enlarge our staff of scientific workers. We believe that we now have the strongest staff of trained plant-breeders of any seed company in the United States or possibly in the world. (See statement regarding our staff on page 11.)

We do not expect ever to produce cheap seed. We aim to produce the best seed available anywhere of the varieties we breed. To produce the best seed costs money and the prices of our seed stocks must necessarily be high. We do not expect to compete with seedsmen handling ordinary seeds. We are in an entirely different class.

Our patrons have given us their enthusiastic support in the past and we hope to merit their approval in the future. We are now prepared to offer a higher grade of service than ever before. What the world demands is service, and we are doing our best to measure up to this demand. We believe that in supplying highly bred seed we are fulfilling an important function and rendering a real service.

Coker's Pedigreed Seeds are sold only under our registered trade mark and official O. K. as here reproduced. This Company has been in operation seven years but the pedigrees of nearly all of our special strains and varieties date back to the original breeding work conducted by our President for many years before the formation of this Company. The pedigree of the Webber cottons is really continuous with that of the Columbia cotton bred by our Dr. Webber while in the service of the National Department of Agriculture more than twenty years ago.

Our success has stimulated the formation of numerous other companies that claim to supply pedigreed seed. To all these who are doing honest scientific work and distributing seed with genuine pedigrees we wish success. We have been unable thus far to meet the southern demand for our seeds and believe that legitimate competition is the life of trade. An ample supply of pure pedigreed seeds and the accumulation of adequate and accurate agricultural knowledge by careful experimentation are absolute essentials to the success of agriculture.

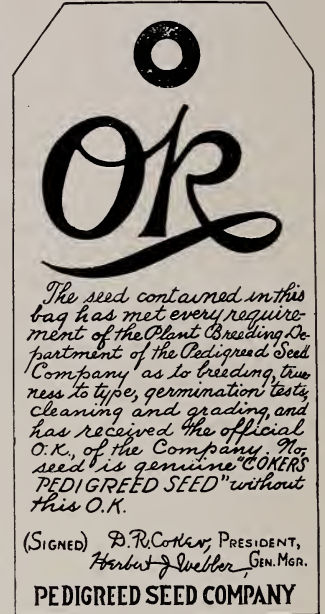
Some companies, however, are selling what is claimed to be pedigreed seed of the varieties we have originated. Some are using names, trade marks, and literature which are more or less similar to our own and which have caused confusion in the minds of some of our customers. We think that most of our customers will detect any efforts to capitalize on our reputation and will unanimously condemn any practices which do not conform to the highest ethics of trade.

We call especial attention to the fact that the new strains of our varieties, such as Webber 49 and Webber 82, are put out each year under advanced numbers indicating new strains and progress in breeding. Our competitors offering Webber and other seeds originated by us are of course selling stocks from our older strains which do not equal our newer strains in pedigree or performance record and which, even if raised under the best conditions have begun to deteriorate in some of their characters. You can only secure the latest and best fruits of our scientific work by buying each year some seed of our newest strains.

Our seed is all sent out in bags labeled Coker's Pedigreed Seeds and bearing our registered trade mark. All of our Pedigreed seeds also bear the O. K. tag of our President and General Manager and are officially sealed before leaving our warehouse. No seed is genuine "Coker's Pedigreed Seed" unless it bears our official O. K. under seal and our registered trade mark. Do not be deceived. Insist on having genuine Coker's Pedigreed Seed.

PEDIGREED SEED COMPANY,  
Hartsville, South Carolina.

January 1st., 1921.





## YOUR FINANCIAL FUTURE



Every bag of our Pedigreed Seed bears this trade-mark. It is your guarantee of superior quality.

Every planter is interested in his financial future and we are equally interested in the financial future of our planter customers and of Southern agriculture generally. We are operating a seed breeding farm and selling highly bred seeds of the principal crops grown in the South. Our operations must be financially successful if this business is to be maintained. We, however, did not take up this business primarily as a money making proposition but mainly because the conditions of Southern agriculture demanded that more attention be given to the improvement of agriculture through the breeding and introduction of better varieties of our staple crops and the maintenance of a reliable source of highly bred seeds. We saw in this field of activity a great opportunity for public service of the highest grade. When our work was started in 1902, no other work of similar kind had been started in the South. *We are the Pioneer Pedigreed Seed Breeding Company of the South.* That the work has proven important and valuable is demonstrated by the rather numerous companies that have recently been organized, presumably to do similar work.

Is this work in any way related to your financial future? Unhesitatingly we assert that it is. The use of highly bred, productive seed, true to type and variety, is of the highest importance to every planter. Cotton is the dominant money crop of the South and yet an examination of cotton fields in any section will demonstrate that almost universally mixed seed is being used. Nowhere is this mixture more evident or more serious than in the long staple sections of Mississippi, Arkansas and Louisiana. Three agents of this Company in an inspection trip last fall through these states found abundant evidence of the very general use of poor seed. The very general mixture of different types of cotton in the fields was shown usually at a glance by the varying heights of the different plants. In the great majority of fields this variation in height is striking even to a layman in cotton culture. If this observation is followed up by an examination of the fiber, one discovers immediately that plants with different lengths of staple are growing together and will be harvested and ginned together. Frequently one finds short staple plants mixed in varying proportions with plants producing  $1\frac{3}{8}$  inch staple and intermediate lengths. A serious mixture of different lengths of staple in the bale lowers the value of the bale at least to that of the shortest staple in the bale and such mixed cotton, which is pretty certain to be detected by the classer or buyer, may render the bale almost useless for any purpose.

This mixture of seed is mainly due to the carelessness or ignorance of the grower. Very commonly planting seed is obtained from a gin where no attempt is made to keep different lots pure. Rarely can any fit planting seed be obtained in this way. It is of unknown variety, is certainly mixed, and no attention has been taken to cure it properly to insure good vitality. If a planter gets good seed one year, unless he practices careful selection, it soon deteriorates by gin mixing, by crossing with other varieties, and through the reversions and variations that normally occur in all types of cotton. It soon becomes worthless seed, yet much seed is sold on the basis that the planter at one time purchased good seed of a certain variety.

Many fields in the Mississippi Delta supposed to be of our Webber 49 cotton were examined by our agents in which only an occasional typical plant could be found. Such fields had been planted with seed too far removed from the pedigreed type and had become so mixed and degenerated as to be unrecognizable as Webber cotton.

The production of good seed is expensive and growers are prone to think it a saving to plant cheap seed. This is a mistake. It means money in the pocket of the grower to use highly bred, pure seed, of known standard type.

What has been said regarding cotton refers equally well to other crops such as oats, corn and the like. Watermelon growers of South Carolina, Georgia and Florida lost many thousands of dollars last year by using mixed seed that produced fruit of different types, many of them being worthless, unsaleable fruits.

The ordinary seedsman does not often grow his own seed but usually buys in the open market from farmers and growers, taking the word of the grower as to the purity and productiveness of the crop. They usually emphatically disclaim any guarantee as to the purity of variety and type.

We are not ordinary seedsmen. We are Plant Breeders. We breed and grow all the seed we sell as Coker's Pedigreed and guarantee it true to type and vital. It is not merely good, vital seed, nor merely true to type. It is pedigreed seed. True pedigreed seed produces plants highly uniform as to type and length of lint and of high productivity. It pays to grow crops from seed with a real pedigree. It will pay you to do so.



A BAG OF COKER'S PEDIGREED COTTON SEED READY FOR SHIPMENT.



## WHAT IS PEDIGREED SEED?

Everyone understands the value of pedigreed animals, horses, cattle or hogs, and are willing to pay fabulous prices for single superior individuals. Many, however, do not understand what is meant by pedigreed seed of plants and why it should have superior value.

The only fundamental difference between pedigreed breeding in plants and in animals is in the method of handling the product. In animals where the individual is large and valuable and reproduces but slowly, we deal in individuals and register the pedigree of each selected animal. In plants where the individual is of little value and where we must handle millions of them, we deal in families from individuals or what might be termed pure bred herds, all of which would be eligible for registration if their very great numbers did not preclude registration. A good cow can only average about one offspring per year. A fairly good cotton plant having fifty bolls, will give about sixteen hundred seeds and with care will give a progeny of over one thousand plants.

The plant breeder in conducting his work of producing a pedigreed strain deals with individuals the same as does the stock breeder and certain individuals selected may be potentially of as great or greater value than the finest animals ever sold, as their value is reckoned only in their after effect on an industry. What, for instance, would have been the monetary value of the original selected plant that gave rise to any one of our important varieties of cotton or corn?

As an illustration let us assume that we desire to produce a new pedigreed strain of a certain cotton. What should be our procedure? We would first secure a quantity of seed of the variety known to be pure and true to type, and grow a good representative field of it. This field should not be adjacent to any other cotton and should be thinned to one plant in a hill and the hills should be of a uniform distance apart in order to give each plant an equal opportunity to develop. When the cotton of this field is well open, the field should be examined to see that in general it is true to type and variety and if so the breeder would then proceed to choose from among the large number of individuals a considerable number of specially good plants. In making this choice the breeder should carefully consider all fundamental characteristics, such as type of plant, size of boll, earliness, yield of seed cotton, percentage of lint, and length, uniformity, strength and quality of lint. In beginning the foundation of a pedigreed strain he should select not less than 200 superior plants. His problem is to find the best single individual in the field, but to find this best one he must test many. Each of the selected individuals must be harvested separately and ginned separately in order to keep the seed of each individual separate and also in order to get the record of lint percentage for each individual.

The 200 plants selected from the general field are tested the next year by the plant-to-row method in order to determine which plant produces the best and most uniform progeny. The plants are thus numbered in sequence and at least one row of a hundred or more plants are grown from each individual. The selected plant believed to be the superior individual may not produce a good progeny. The determination of which plant is the superior one can only be judged by its progeny. It is what we term the performance record that counts, exactly the same as it is in animal breeding. If we are breeding Holstein cattle, we do not choose a bull because he is a fine show animal but we judge his value by the milk record of his daughters.

When the different progeny rows from the 200 selected plants mature they are carefully compared in all important characteristics and all of the rows discarded except possibly five of the best ones. In each of these five progenies several superior plants are selected to continue the breeding and all poor and off type plants are marked for discarding after which the seed from the remaining plants of each selected row is picked to obtain a quantity of seed from each row for further tests and to grow increase plants.



PLANT-TO-ROW TESTS OF GRAIN AND FIRST YEAR INCREASE BLOCKS





The second year the general seed from each of the five selected rows is grown in larger blocks, termed increase plots, to get further comparative tests of their value and at the same time to increase the seed of each. This year also a variety test should be made in which each of the five strains are tested against each other and also against a number of standard varieties. At the end of this second season a careful comparison of the crops of the increase plots and of the performance of the five strains in the variety tests may enable the breeder to discard all but one of the five strains, in other words, to determine which one of the 200 plants first selected was the superior one. If such a decision cannot yet be made, increase plots and variety tests should continue in the third and even into the fourth year.

While this comparative testing is going on, the seed of the most promising strains is being increased so that by the end of the fourth year from the time the selections were made, sufficient seed has been grown from the selected strain to grow a general crop. It is the seed from this general crop, five years from an individual selection, that is generally sold as pedigreed seed.

It may be objected that this is not similar to animal breeding in that we do not know and register both of the parents. In cotton, which we are using as an illustration, the plants are hermaphrodite, each flower bearing both male and female organs. Self fertilization is the rule, though there is some crossing. In judging and finally selecting the individual by its progeny record, however, we are judging both the superiority of the mother and the father parent and the record of the performance of the individual plant as shown by its progeny is its pedigree. What better pedigree could be desired when what we want is ability to produce?

The seed sold as pedigreed seed thus goes back in record to a single superior plant selected five years previously and propagated in isolated fields to keep it pure and is thus to be looked upon as a pure family coming from one superior parent. In regular pedigreed breeding, selections are made every year from the superior rows and this process thus becomes a continuous one, the seed sold each year coming from the superior plant of the strain selected five years previously.

One feature of this work that requires continuous attention is the appearance of inferior and off-type plants in all strains, no matter how pure they may be, or how carefully they may have been chosen. This means that the increase plots every year must be "rogued" as it is expressed, that is, carefully examined and all such off-type plants removed before the crop is harvested. Unless careful attention is given to the roguing the best strain of cotton will soon run down.

The method of pedigreed breeding described here for cotton is with minor modifications applicable to all other ordinary farm crops.

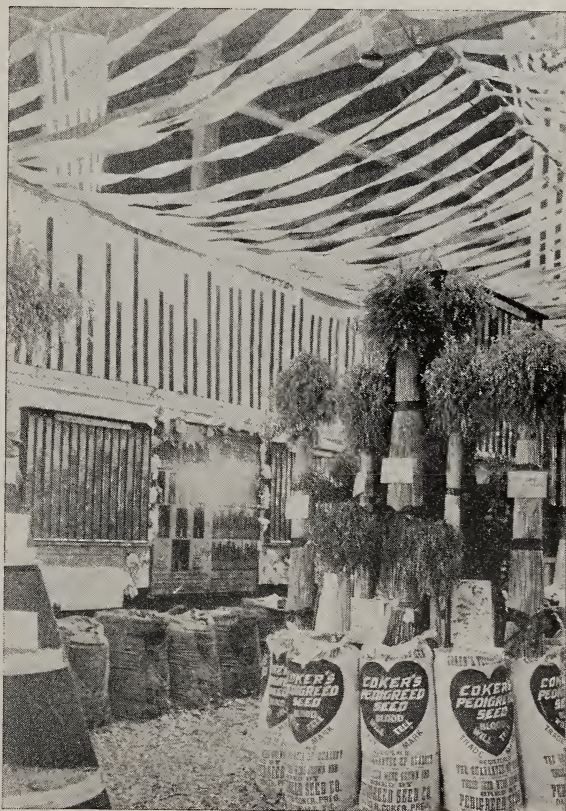
### Our Method of Pedigreed Seed Breeding

The method of pedigreed breeding pursued by this Company is in general the plant-to-row method just described and is generally recognized by plant breeders and experiment stations as the best method of crop improvement. The plant breeder, like the animal breeder, must make the individual the unit of selection and in the plant-to-row method, this idea is carried out. In judging a plant by the performance record of its progeny we at the same time judge the value of both the male and the female parent of the progeny. This judgement of the value of the combination which in itself is highly important is readily obtained in plants but is only obtained with difficulty in animals because of the slower reproduction.

Pedigreed Breeding as applied by the Pedigreed Seed Company means that every year a new strain or family is started of each variety from the best plant of that variety selected the preceding year.

As the selected plants are each year taken from the best progenies in our plant-to-row tests the pedigrees of our different strains are continuous.

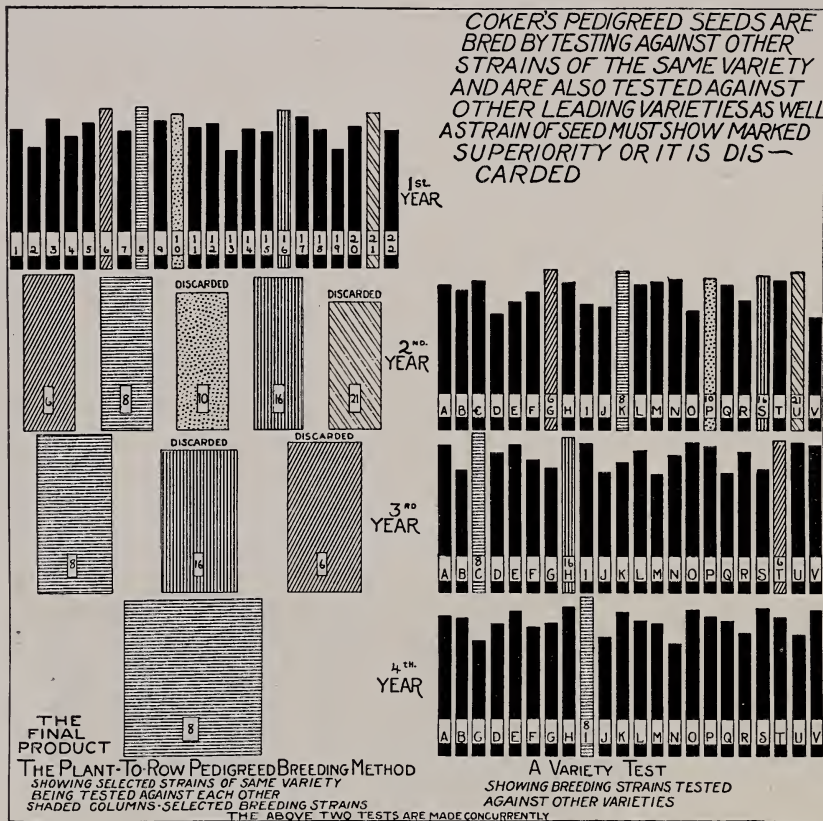
In our methods of breeding we regularly test the progeny of the superior selected plants both in increase plots and variety tests during a period of three years and no strain or family is offered for sale unless it holds a high record of performance during the entire period. Our method will be more readily understood by a careful study of the following chart.



A SECTION OF OUR PRIZE WINNING SEED EXHIBIT AT THE SOUTH CAROLINA STATE FAIR OF 1920.



## Our Plant-Breeding Method Graphically Illustrated



This chart graphically illustrates the method of pedigreed breeding that has been used by this Company for nineteen years. The first year illustrates the plant-to-row tests including only twenty-two plants because of space. The heights of the different columns illustrates the comparative value of the different rows or progenies as determined by yield and value. Five superior progenies or families are chosen for further trial. A few of the superior plants in each of these rows are chosen and picked separately for the plant-to-row tests the next year. All inferior plants are then removed and the remaining seed of each row is picked under the row or family number for further tests.

The second year these five selected progenies or families are grown in increase blocks and also tried out in a general variety test. At the end of the second year No. 10 and No. 21 are discarded. (No further illustration is made of the plants selected the first year from the five good rows as these plants are grown the second year in plant-to-row tests and begin a new series.)

The remaining families, Nos. 6, 8 and 16, of which 8 seems to be the superior one, are tested again in like manner the third year, at the end of which 6 and 16 are also discarded as inferior. No. 8, which is retained, has been demonstrated to be the superior strain of all of those first selected.

The fourth year No. 8 is again tried out in the variety tests and a large increase plot is grown to furnish seed to be used in growing a general seed crop.

This process is a continuous one and in the third and fourth years the families or strains as here illustrated will come in competition with later selections from the plant-to-row tests made the second year. It thus frequently happens that the pedigreed strain of a certain year may be discarded for a better strain the next year. The longer this continuous selection is pursued, the better and more uniform the pedigreed strain becomes. In all this breeding work accurate records are kept of very individual strain and we are able to trace the ancestry or pedigree of any strain back to the original plant first selected.



PART OF A THREE TON SHIPMENT, SEED OF WEBBER 49-3, STARTING FROM OUR WAREHOUSE AT HARTSVILLE, S. C., ON ROAD TO ALEXANDRIA, EGYPT.



## OUR METHOD OF HANDLING SEED

### Recleaning and Grading

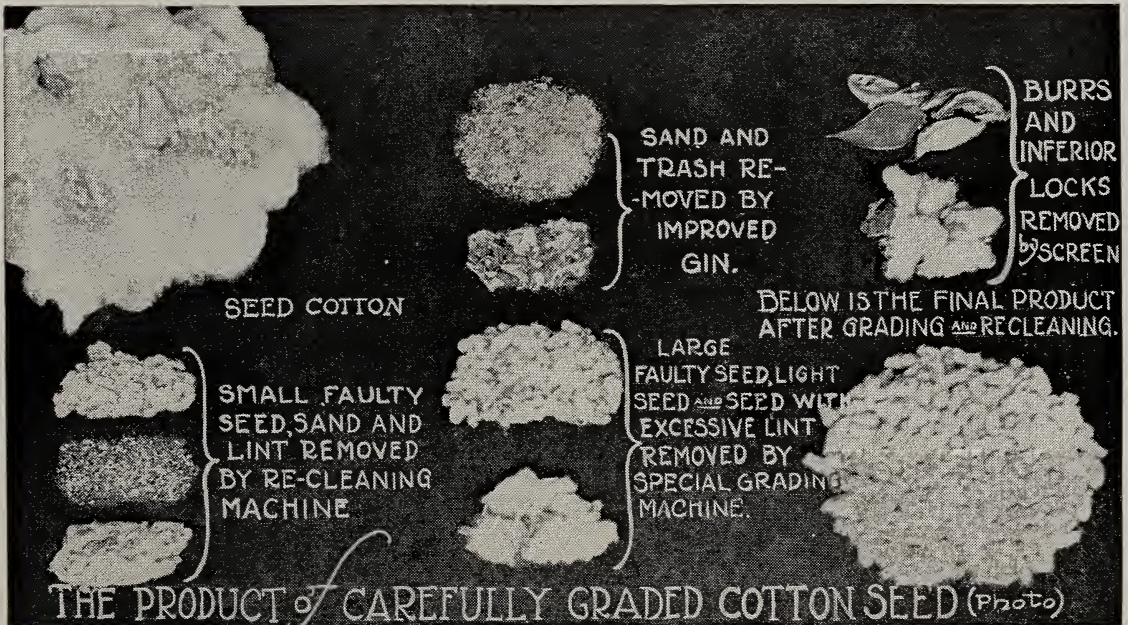
In addition to our requirements of proper breeding of seeds, we demand also that our seeds shall be sound, vital and properly graded. No matter what the breeding or pedigree of the seed may be it is an inferior product if it is full of trash, immature seeds and broken grains. For several years we have conducted accurate tests to determine the value of well graded seed. While we have always believed that there was a great difference in favor of well graded seed, the results obtained were far beyond our expectations. Read results of tests on page 9.

### A Point to Keep in Mind

To say that a seed is recleaned does not mean that it is of first grade. Recleaning seed ordinarily means that the trash and dirt have been removed. This "recleaning" does not affect the yield. But when seeds are properly graded, it means that all the light, immature and broken grains are removed, as well as all trash and foreign substance. It is, of course, quite expensive for a seedsman to thoroughly grade his seed and discard all of the lower grades, as the discarded parts cannot be used except for feed purposes. But the difference in actual value of well-graded seed is so great that farmers everywhere should insist that all seed they buy be carefully and properly graded.

### Our Seed Cleaning Department

Our Seed Cleaning Department is operated under this instruction: "Every lot of seed must be recleaned and graded, removing all light, immature and broken seeds and all trash, dirt and foreign matter. It is better that a small portion of good seed be thrown out than allow any inferior seed to go in." This rule is rigidly enforced even though it means at times a large loss to us. In grading oats for instance, we sometimes remove 25% in order to bring the product to the high standard of our requirements. Our machine on which most of our grain is graded, is a double decked, four-screen vertical air-blast machine of the most approved type, and does as perfect work as any similar machine to be found.



We also carefully reclean and grade all of our cotton seed. Our gins are fitted with special grading machines through which all cotton seed pass. We do this at additional expense because we have proven conclusively that it handsomely pays the planter, and if we are to best serve his interest, we must furnish the most valuable seed that can be produced. The illustrations above, which are engraved from actual photographs, show the cotton as it goes to the gin, the nine grades of trash and the inferior seeds which our machines remove, and finally the grade of seed which we offer for sale.

*The seeds we offer for sale as our own strains represent the cumulative results of nineteen years' scientific work in selecting and breeding field seeds by the plant-to-row method. During this time our seeds have been planted and tested in every Southern State with results which have shown conclusively that Coker's Pedigreed Seeds make bigger yields and better quality than ordinary seeds.*



## TESTED FOR GERMINATION AND PURITY

No matter how well bred or carefully handled a seed may be, its value for planting is only in proportion to its germination percentage. If a seed will not sprout, it is naturally of no value. In order to determine accurately the germination of our seeds, and guard against the shipment of seed of low vitality, we have installed in our laboratory four of the most approved types of Electric Germinators. In adopting this apparatus, we have followed the lead of the U. S. Department of Agriculture at Washington. Heat for this germinator is furnished by an electric hot plate and the temperature is lowered by the use of an ice box. An electric thermostat regulates the heat and sustains an even and regular temperature at any degree required. Samples of every lot of seed we handle are tested with this apparatus and the percentage of germination accurately determined. Any falling below the high standards set by us are discarded for seed purposes.

It is needless to say that we would not have installed such an expensive apparatus nor would we go to the trouble and expense of testing all of our seeds if we were not thereby better serving the interests of our customers.

### Purity Tests

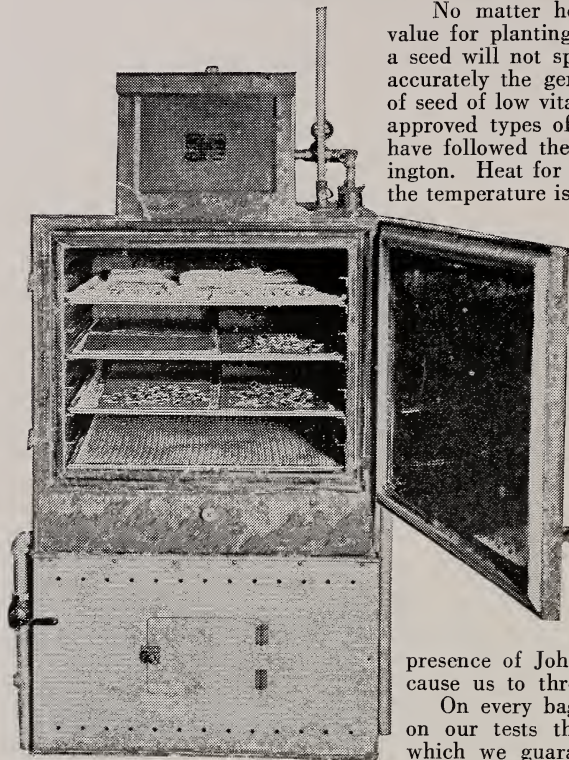
Purity tests require microscopic examination of all small seeds and a determination of the kind and nature of any impurities. In Sudan Grass, for instance, we are especially careful to determine the presence or absence of Johnson Grass or Sorghum Hybrids, both of which are very similar to pure Sudan seed. The presence of Johnson Grass, no matter how small the proportion, would cause us to throw out for seed purposes any lot of Sudan.

On every bag of seed a tag is attached which gives in figures based on our tests the actual percentage of germination and purity above which we guarantee that particular bag of seed. Any failure of the seed to prove up to the figures we give lays us liable under the State Seed Inspection Laws. The value of such information and the laws behind it is apparent. Although the State Department of Agriculture

makes no standard requirement of quality for seeds, *our own standards are equal and above the high standards recommended by the State authorities.*

During its stay in our warehouse all seed is carefully examined frequently by seed experts to insure its vitality until it is shipped. Its position may be changed several times in order to prevent heating. Particularly is this necessary with cotton. For an absolute assurance experts often go into the sacks and examine the seed carefully. Wherever there is any question of a loss in vitality, additional germination tests are conducted.

As a final proof of our confidence in our seed, we have adopted a trade-mark which is registered in the United States Patent Office, which we use on our finest seeds. This trade-mark stands for us and our reputation and wherever it is placed it is our guarantee of highest quality.



MOST IMPROVED TYPE ELECTRIC GERMINATOR



ONE CORNER OF THE GERMINATION ROOM SHOWING TWO OF OUR LARGE GERMINATORS



## OUR EXPERIMENTAL WORK

In addition to our regular breeding work, we carry on each year experiments that have to do with actual every day farm problems; to determine the most profitable ways of crop production and farm procedure.

Every farmer should apply the test—Does it Pay—to every farm problem that he has to face. Such is the test we are applying to some of these problems and the results we publish (in brief) for the benefit of all who may wish to profit by our experience.

### Fodder Pulling (Does it Pay?)

We have concluded our Fodder Pulling Tests.

IT DOES NOT PAY to lose 7.5 bushels of corn per acre, or 16.8 per cent of your corn crop, for the small amount of fodder you receive. Better save the expense of pulling, make more corn and buy your forage, in case you do not make enough.

Write for our Special Bulletin on this subject.

### Cutting and Shocking Corn

With the increased interest in Live Stock production and the Dairy, it is becoming more prevalent for the farmer to cut and shock his corn about fodder pulling time and later to shread it and utilize the stalks and leaves as stover for feeding and bedding purposes. This is a practice recommended, but the question arises, will this method and handling affect the value of seed corn and influence the next year's crop production?

We have a striking four-year test on this question:

#### FOUR-YEAR AVERAGE

Plot No.	Bushels Per acre.	Pct. Corn to cob.	Pct. Infr. Corn.
1. Corn standing .....	43.5	86.7	14.8
2. Corn cut and shocked....	38.2	84.8	21.4
	5.3	1.9	6.6

Loss due to cutting and shocking 12.2 per cent.

This is a big loss and while it may be offset by the feeding and bedding value of the stover for Live Stock, it should not be practiced on the fields used for getting seed corn. Such inferior corn would surely produce poor seed corn and give poor crop yields the following year. A one-year test on this particular point shows a loss of 3.4 bushels per acre, or 8 per cent.

### Fertile Soil Seed vs. Poor Soil Seed

Heredity as a factor in the production of good seed and good crop yields is no longer a question in the minds of the intelligent farmers of today, but the matter of environment as a factor in the production of good seed is a question that many farmers have never thought of seriously and our tests, started four years ago, have opened our eyes to its importance. We have found that good seed from fertile soil are better than good seed from poor soil; that is, they will produce

better crop yields. A five-year test with oats and a one-year test with corn give very striking results in favor of fertile soil.

PER ACRE  
OATS (av. increased yield 5 yrs., fertile soil) 3.5 bu.  
CORN (av. increased yield 1 yr., fertile soil) 4.27 bu.

The suggestion from this test is, that every farmer should select his planting seed from the very best soil, from the best environment, basing his selection on the field and not from the barn.

### Cleaned Seed vs. Uncleaned Seed

The cleaning and grading of planting seed is a method that has been brought to the attention of the farmers time after time, and yet we find a great majority of the farmers, some of them our best farmers planting seed just as it comes from the field at harvest time.

DOES IT PAY you to plant small seed that do not have the power to produce strong, healthy plants? Will it pay you to plant inferior seed, many of which will not come up when planted? Will it pay you to plant trash and broken seed such as is found in every lot of uncleaned seed? Will it pay you to plant seed that will give you trouble in planting, uneven stands and poor crop yields? IF NOT, then it will not pay you to plant seed that have not been thoroughly cleaned and graded.

The greatly increased yields derived from planting thoroughly cleaned and separated seed has led us to the conclusion, that SEED CLEANING AND SEPARATION is a tremendous factor in the production of good crop yields.

Our tests have been running for five years with oats, testing the yield from the seed that have been thoroughly cleaned, 50% being removed, against seed as they come from the threshers, and the average results for the four years are given below:  
OATS (average increased yields 5 years) ...10.8 bu.  
OATS (lowest increased yield for any year) ..1.6 bu.

We do not separate the seeds we sell on a 50% basis, but it would pay the farmer to raise twice as much seed as he requires each year and separate them on this basis.

Owing to the small investment necessary for every farmer to have a seed cleaning machine, there is no excuse for the neglect of this important factor. Any farmer who plants as much as 20 acres of oats would save enough in one year to more than pay for his Seed Cleaner.

### The Constitution of Good Seed

The results and experience of 19 years of Breeding and Experimental work lead us to suggest three factors that go to make up the constitution of good seed. We give them in the order of their importance.

- 1.—Good Breeding
- 2.—Good Environment.
- 3.—Good Cleaning and Grading.

*We are continually upbreeding the seeds we sell. Our plant breeding and experimental work with field seeds is, so far as we are informed, the most extensive of its kind carried on by any individual or firm in the cotton belt.*



## OUR EXPERIMENTAL WORK

### Effect of Phosphate Fertilizers on Earliness

Under boll weevil conditions we grow early varieties, plant early, and do all we can to hasten the maturity of the cotton crop in order to develop as large a crop of bolls as possible early in the season before the boll weevil has become numerous. Phosphate fertilizers have been claimed to hasten maturity and we have conducted a fertilizer experiment for the last four years to determine the actual effect of different forms of phosphates in hastening maturity. All plots receive the same quantity of ammonia and potash and are treated alike except for the variation in the phosphates. The amount of the different phosphates used on the different plots is determined by their respective monetary value—all representing the same fertilizer investment of \$5.50 per acre. The averages for the two plots of each treatment for the four year period is given in the following tables:

Kind of Phosphate	Average Seed Cotton per acre, first pick about Sept. 1.	Average total yield per acre of seed cotton.
Hard Rock Phosphate	509.4 lbs.	1,310.7 lbs.
Soft Rock Phosphate	496.2 lbs.	1,220.3 lbs.
Acid Phosphate	730.2 lbs.	1,265.3 lbs.
Check (No Phosphate)	418.9 lbs.	1,141.6 lbs.

Every year during the four years the acid phosphate plots have given a markedly larger first pick than any of the other treatments in about the proportion as shown by the average for acid phosphate in the first column. So far as total yield for the entire season is concerned, hard rock phosphate shows a slight superiority of yield but this is not uniform in all of the years and the difference is slight. All phosphate plots, however, are considerably ahead of the check where no phosphate was given.

As a further indication of earliness, on August 4, 1920 a count was made on 50 plants of each plot of the mature bolls judged to be past the stage where they would be susceptible to boll weevil injury. The following table shows the results:

### Number of Mature Bolls Per Plant on Aug. 4, 1920.

Treatment	Number of Plants examined.	Total number Ma- ture Bolls.	Average number of mature bolls per plant.
Hard Rock Phosphate	50	408	8.16
Soft Rock Phosphate	50	394	7.88
Acid Phosphate	50	814	16.28
Check (No Phosphate)	50	234	4.68

The experiment shows fairly conclusively that phosphates increase the yield and that acid phosphate does very markedly hasten maturity. We should therefore fertilize rather heavily with acid phosphate where boll weevil is abundant.

We have also conducted tests for the last four years to determine the effect of different amounts of acid phosphate on earliness and yield, two plots being grown of each treatment. The following table gives the average results for the four years.

Treatment in Pounds per Acre	Average pick up to Sept. 11 in pounds seed cotton per acre.	Average total yield in pounds of seed cotton per acre.
Acid Phosphate—200 lbs.	620	1190
Acid Phosphate—400 lbs.	692	1144
Acid Phosphate—800 lbs.	745	1180

From these results it seems that the large application of acid phosphate markedly increased the amount of the early pickings but did not increase the final total yield. Large applications would, therefore, be justified only under conditions of severe boll-weevil infection.

### Our Variety Tests

Variety testing is one of our principal lines of scientific work as with every crop we are breeding our pedigreed strains must every year be tested in comparison with the various standard varieties commonly grown. This year we have grown about 300 standard varieties in these tests which are conducted with exactness and impartiality. The seeds so far as possible are obtained from the originators of the different varieties or strains tested. In our cotton variety tests each variety is tested by four rows an acre long (210 feet) arranged so that each is in a different part of

the field. In the grain tests each variety is tested by ten different rod-rows by the standard experimental method.

It is these comparative tests carried on year after year, that finally determines the real value of a variety of seed and many varieties that in general are thought to be very good are clearly revealed as inferior sorts when subjected to such critical tests.

As shown in the chart on page 6 our pedigreed strains are not only tested against each other but against other varieties as well. Not only must a selected strain of seed show superiority over our other selected strains during three years' trial, but it must be superior to other standard varieties or it is discarded. Only the fittest can survive the rigid tests to which all Coker's Pedigreed Seeds are submitted.



FERTILIZER SALESMEN INSPECTING COTTON VARIETY TESTS ON PEDIGREED SEED FARM, AUGUST 26, 1920.



## OUR PLANT-BREEDING STAFF

The plant-breeding work of the Pedigreed Seed Company was begun in 1902 and the pedigree records date back to that time.

The work of the Company necessitates the maintenance of the highest scientific ideals and must be most carefully done. A high standard can only be maintained by an adequate staff of men trained in the science and practice of plant-breeding. The rapidly increasing demands for our seed have made it necessary to increase our scientific staff greatly, and during the past year the work has been reorganized and strengthened by additions of several highly trained specialists. Dr. Herbert J. Webber, now our General Manager, has come to us from California where he was Director of the California Agricultural Experiment Station. Professor J. B. Norton, now one of our plant breeders and asparagus specialists, came to us from the U. S. Department of Agriculture where he served for many years as a Plant Physiologist and Agricultural Explorer. Mr. D. R. Hopkins, Mr. Curtis L. Vogler and Mr. J. S. Brown are also new members of our staff.

We are now well organized to carry our work forward in a satisfactory way with confidence that we will merit the support of our patrons.

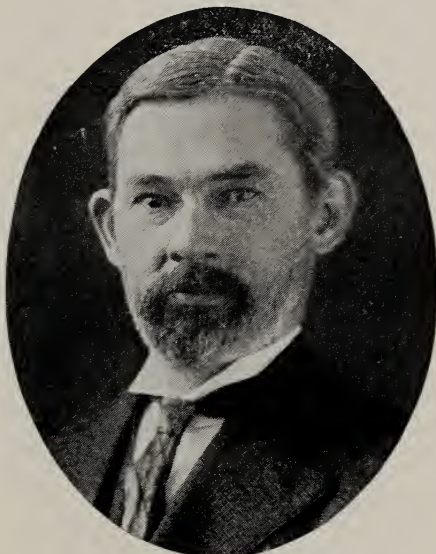
As a buyer of our pedigreed seeds, you will be interested in knowing something of the personal history and achievements of the men engaged in our scientific breeding work and seed production.

### David R. Coker

Mr. David R. Coker, our President, is known and recognized over the entire South as an Agricultural and Plant Breeding Expert of high rank; founder and chief exponent of the new staple cotton industry of the South; originator of Coker's Pedigreed Seeds, now being grown in most cotton growing sections of the world. To him belongs the befitting honor of having never sacrificed his interest in the advancement of the agricultural industries of the South and nation for the sake of personal or commercial profits. He gave to the Pedigreed Seed Company its policy of working primarily along the lines of absolute scientific accuracy for the development of the agricultural industry of the South and he has planned and closely supervised all of its work from the beginning. His efforts have now perfected a scientific breeding organization that challenges comparison with any similar organization in the world—an organization which guarantees even a greater expansion of the Pedigreed Seed Company to extend the scope of its useful and unique business.

The following biography is from RUS, a Register of the Rural Leadership in the United States and Canada, compiled by L. H. Bailey: "Coker, David Robert, plant-breeder, seedsman, cotton dealer. Hartsville, S. C.

"President J. L. Coker Co., merchants; president Coker Cotton Co.; president Pedigreed Seed Co.; director Federal Reserve Bank of Richmond, May or Hartsville, 1902-04; chairman South Carolina Council Defence, 1917-19; Federal Food Administrator, 1917; trustee University of South Carolina. Member National Agricultural Advisory Committee, 1917-18; member National Agricultural Commission to Europe, 1918; president South Carolina Plant Breeders Association. \*\*\*\*A. B., University of S. C., 1891."



DAVID R. COKER, President

### Herbert J. Webber

Dr. Herbert J. Webber, our General Manager, is known the world over in scientific and agricultural circles as a plant breeder and scientist of note. He has achieved noteworthy success as a university teacher and scientific investigator, and has published numerous bulletins and research studies in the United States Department of Agriculture and the experiment stations of New York and California. His achievement in practical plant breeding is demonstrated by the varieties he has originated and introduced, such as the Columbia and Keenan long staple cottons, the Webber and Cornell No. 1 varieties of corn, and several varieties of timothy, citrus fruits and pineapples.

The following biography is from RUS:

"Webber, Herbert John, Gen. Mgr. Pedigreed Seed Co., Hartsville, S. C. "Assistant botanist University of Nebraska, 1889-90; assistant botanist Washington University, 1890-92; assistant pathologist and physiologist, U. S. Department of Agriculture, 1892-97; physiologist in charge plant-breeding laboratory, U. S. Department of Agriculture, 1897-1907; professor plant-breeding, Cornell University, 1907-13; acting director N. Y. State College of Agriculture, 1910-11; dean Graduate School of Tropical Agriculture and director Citrus Experiment Station, University of California, 1913-19; director California Agricultural Experiment Station, 1919-20; present position, 1920, Fellow A. A. A. S., American Botanical Society; chairman plant section, American Breeders Association, 1906-10; president California Avocado Association, 1916; president Citrus Institute of National Orange Show, 1919-20. Delegate (representing U. S. Department of Agriculture) to International Conference on Hybridization, London, 1899.\*\* B.Sc., University of Nebraska, 1889; M. A. 1890; Ph.D., Washington University, 1900; D. Agr., University Nebraska, 1913. Sigma Xi; Alpha Zeta."



HERBERT J. WEBBER, Gen. Mgr.



## OUR PLANT-BREEDING STAFF (Continued)

### George J. Wilds



**GEO. J. WILDS**  
Production Manager

Mr. Wilds, our Plant-Breeding Manager, began his scientific training with two years work at the University of South Carolina which institution he left in 1908 to affiliate himself with the Pedigreed Seed Company in conducting plant-breeding and experimental work under the direction of Mr. David R. Coker. For three years his work embraced the breeding and developing of the Hartsville and Webber varieties of cotton and the Williamson corn, together with experimental work with peas and sorghum. The first Webber "Plant-to-Row" test was made during this period, which produced the parent rows of the present well known Webber No. 49, and Webber 82. In 1911 he returned to the University of South Carolina, graduating in the fall of 1913. During these two years he conducted experimental work for the Pedigreed Seed Company and cotton breeding experiments in cooperation with the United States Department of Agriculture in Columbia, S. C. After graduation he resumed his plant-breeding activities with the Pedigreed Seed Company until 1915, at which time he entered Cornell University where he took a fundamental course in agriculture and botany. This course was followed by his entry into graduate school work, specializing in plant-breeding and farm management, graduating in 1917 with M. A. degree. Since 1917 he has been associated with the Pedigreed Seed Company

as expert plant-breeder and for the last three years has been in active charge of most of the plant-breeding. His scientific knowledge, his years of practical experience and his nine years of loyal service with the Pedigreed Seed Company have contributed very largely to the success and plant-breeding attainments of the Company in its special field.

### J. B. Norton

Mr J. B. Norton, plant-breeder and asparagus specialist, has wide experience as an agricultural investigator and plant-breeder. He was associated with Dr. Webber in the U. S. Department of Agriculture from 1902 to 1907; supervised the oat breeding work of the Department of Agriculture from 1902 to 1907; during which period practically all the small grain breeding methods now in use by experimental breeders in this country were developed and standardized, including the plant-to-row and head-to-row methods. His investigations on the breeding of asparagus, which resulted in the production of the Washington Asparagus, is one of the most noteworthy examples of successful plant-breeding that has ever been carried out. In 1919 he traveled in China as an agricultural explorer for the Department of Agriculture.



**J. B. NORTON**  
Plant Breeder and Asparagus Specialist

The following biography is from RUS:

"Norton, Jesse Baker, plant-breeder, Hartsville, S. C.

"Librarian, Missouri Botanical Gardens, 1899-1900; assistant U. S. Department of Agriculture, 1900; assistant entomologist Kansas State Agricultural College, 1900-02; assistant professor plant-breeding, Cornell University, 1907-08; assistant physiologist Bureau of Plant Industry, 1902-07; physiologist, 1908-1918; agricultural explorer, 1919-20; Fellow A. A. A. S.\*\*\*B.Sc., Kansas State Agricultural College, 1897; M. Sc., 1901. Sigma Xi."



**CURTIS L. VOGLER**  
Plant Breeder

### Curtis L. Vogler

Mr. Curtis L. Vogler is a graduate of the University of North Carolina with A. B. Degree, majoring in botany and plant diseases, which work he took under Dr. W. C. Coker, head of the Department of Botany. At the same institution he served a year as Laboratory Assistant, followed by another year as instructor in Botany. He also took special research work in Peck Herbarium in Albany, N. Y., under Dr. R. B. House, New York State Botanist. Because of his scientific knowledge and practical experience in field plant-breeding, he has been intrusted with a good share of the plant-breeding work of the Pedigreed Seed Company.



**D. R. HOPKINS**  
Plant Breeder





## OUR PLANT-BREEDING STAFF (Continued)

### D. R. Hopkins

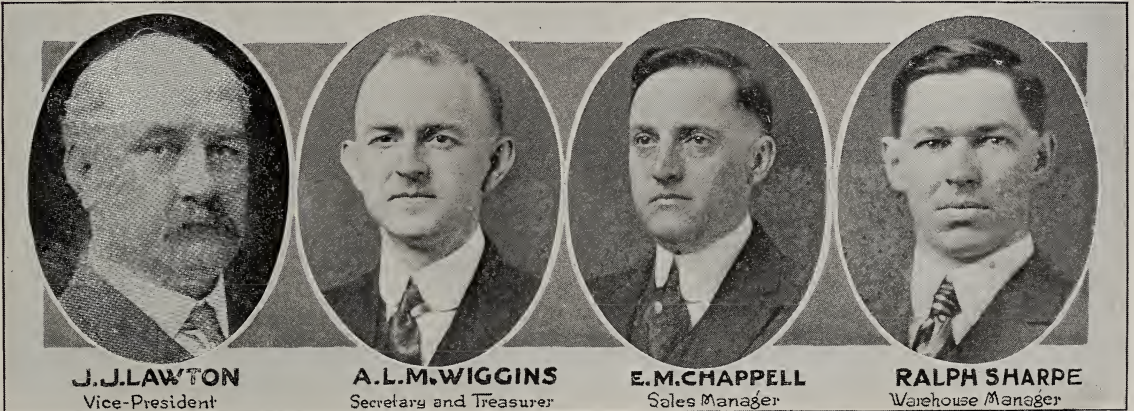
Mr. D. R. Hopkins graduated at Clemson College in 1915 with degree of B. Sc. His agricultural training consisted of special work under A. F. Conradi, State Entomologist for the State of South Carolina, and J. N. Harper, head of Experimental Station work in South Carolina. He spent the summer of 1916 in Western wheat fields, studying methods of production and harvesting. Before he became associated with the Pedigreed Seed Company he was Farm Demonstration Agent for the County of Darlington, South Carolina. He has charge of the purity work and conducts all germination tests of the seed grown by the Pedigreed Seed Company.



J. S. BROWN  
Plant Breeder

### J. S. Brown

Mr. J. S. Brown is a native of South Carolina and a graduate of Furman University where he received in 1915 the degree of B. Sc. His special training was supplemented by a post graduate course at Clemson College in 1916. Since his graduation he has had continuous practical training in special truck crops and plant development. He has only recently connected himself with the Pedigreed Seed Company, yet his services as an assistant plant-breeder have already proved a valuable asset.



J. J. LAWTON  
Vice-President

A. L. M. WIGGINS  
Secretary and Treasurer

E. M. CHAPPELL  
Sales Manager

RALPH SHARPE  
Warehouse Manager

## OUR BUSINESS MANAGEMENT

Photographs are also reproduced of our principal business managers. Our Vice-President, Mr. J. J. Lawton, is a widely known business man and leader in many important business operations, particularly in cotton, oil and fertilizer manufacturing. He is the president of the Interstate Cotton Seed Crushers Association and is the chairman of the Board of Trustees

of Furman University and of Coker College. Mr. A. L. M. Wiggins, our Secretary and Treasurer, is vice-president of the Trust Company of South Carolina and also of the Bank of Hartsville. He has been very active in the work of the Pedigreed Seed Company and the organization and efficiency of the Company is in large measure due to his untiring energy. He is a graduate of the University of North Carolina. Mr. E. M. Chappell, our Sales Manager, was largely trained at Wake Forest College and previously to coming to us was the Freight Agent and Assistant General Manager of the Durham and S. C. Railroad. Our Warehouse Manager, Mr. Ralph Sharpe had two years of special training at the North Carolina Agricultural and Engineering College. Our Able Farm Manager, Mr. J. F. Clyburn, is a graduate of the school of "hard knocks" and there is none better. Mr. W. S. Atkinson, the Manager of our Branch Office at Jackson, Mississippi, is one of the widest known cotton seed salesmen in the country.



J. F. CLYBURN  
Farm Manager



W. S. ATKINSON, Manager  
Branch Office, Jackson, Miss.



## OUR COTTON VARIETIES

Cotton is the principal crop of the South and we have thus specialized on cotton. We have not been satisfied to take cotton varieties as we found them, but have bred special varieties to meet the requirements of the industry. We are the originators and introducers of the Webber 49, Webber 82 and Hartsville, and all of the strains of these cottons that have yet been introduced. These are all recognized now as standard varieties of long staple cottons and are extensively grown in the staple sections of Mississippi, Arkansas, Louisiana and the Carolinas. Since the creation of these varieties we have continued to select and improve them every year by the plant-to-row method. We have maintained a continuous pedigree record of each variety since the beginning, selecting and propagating every year from the best individual. This has been conscientiously and systematically carried out since our work began so that our pedigrees now go back 19 years. This is the reason why our varieties are so uniform in all important characteristics. Uniformity in length and quality of fiber and in productivity means that the grower gets the best possible money return for his crop.

The Deltatype Webber, a new variety descended from the Webber 82, we are offering for the first time this year. It has  $1\frac{3}{8}$  inch lint and the largest boll and picks the easiest of any of our long staple cottons. It is also fully as early as any of the long staple varieties.

While we have specialized on long staple cottons we have not neglected the short staples. In 1915 we began the improvement of the Cleveland Cotton, having found this to be the best general variety of ordinary short staple. Our selections here have been directed along two lines: First, to obtain a pedigreed short staple with increased production, and Second, to obtain a Cleveland plant with a fiber  $1\frac{1}{8}$  to  $1\frac{1}{8}$  inches in length. The pedigreed strain of the short stapled type we are now offering as the pedigreed Coker-Cleveland, and it is the best short staple cotton we have ever grown. The strain with longer fiber ( $1\frac{1}{8}$  in.) will not be ready for distribution for several years.

The experience with the boll weevil has demonstrated that the most effective means of producing cotton where this pest is present is to use early varieties that mature a considerable portion of the crop early in the season before the weevil becomes so abundant as to cause much damage. We have for several years been breeding the Express cotton which is an early variety, producing  $1\frac{1}{8}$  to  $1\frac{1}{8}$  inch lint, and we now have a strain of this variety that is longer, earlier and more productive than the original strain and has a larger lint turn out. This strain is the earliest cotton of any kind that we have ever grown, or of which we have knowledge, and bids fair to be an important variety, particularly for boll weevil sections and for the northern limits of the cotton belt. This variety will not be ready for distribution until the spring of 1922.

The cotton wilt is a parasitic fungus disease that causes considerable damage in many parts of the cotton belt and the best method of controlling the loss from this disease is through the use of resistant varieties. The Dixie, bred and introduced by the experts of the U. S. Department of Agriculture, was found to be the best wilt resistant sort and we have been selecting this variety on a wilt infected plantation and are now offering seed of a pedigreed strain which we believe to be the best wilt resistant short staple cotton available.

We have not yet bred a wilt resistant long staple cotton ourselves, though we are actively at work on this problem and have promising strains in progress. However, one of our neighbors, Mr. Register, who started working on this problem in co-operation with the U. S. Department of Agriculture, has produced a variety that is wilt resistant and has a fiber averaging about  $1\frac{1}{4}$  inches in length. As an accommodation to our customers, we have purchased Mr. Register's entire crop of seed, which we are offering with full confidence that it is the best resistant variety of long staple cotton now available. Mr. Register's seed has been pedigreed by him, using the same plant-to-row methods which we use. Our president, Mr. D. R. Coker, has regularly purchased Mr. Register's cotton through the Coker Cotton Company and we have followed Mr. Register's breeding work so that we know we are offering a good product.

### Suggestions as to Growing Staple Cotton

#### 1. VARIETIES.

As the boll weevil has now covered practically the entire cotton belt as far north evidently as it can exist, it is vital to the cotton planter to decide on a variety which stands the most chance against depredations of the weevil. The earliness of varieties and their resistance thus become very important factors in choosing a variety. Our Deltatype Webber and Webber 49 are the earliest 1 5-16 to  $1\frac{3}{8}$  inch cottons that are now on the market. The



FIELD OF WEBBER 49 COTTON, ILLUSTRATING THE UNIFORMITY IN HEIGHT OF A PEDIGREED STRAIN.



Webber 82 is not quite so early. The bolls of the Webber 49 in the Delta region of Mississippi, according to the general testimony of growers, also become immune to boll weevil puncture at a very early stage. In breeding these cottons we have had in mind the extension of the boll weevil area and the production of varieties that would partly escape injury, and we offer our new variety, the Deltatype Webber, and the newest strain of Webber 49, strain 4, with the assurance that they are the best long staple cottons yet produced for boll weevil conditions.

Leaving the boll weevil out of consideration, our Hartsville 14 is one of the best staple cottons we have produced. It is earlier than some of the older strains of Hartsville, has larger bolls than any other staple cotton, and is especially easy to pick.

## 2. SEED.

In buying seed it is, of course, essential to obtain those of absolute purity which have been bred to pedigree. It is almost equally important, however, to assure yourself that the seed have been well handled and not allowed to heat; have been re-cleaned and all light, inferior seed, trash and dirt taken out, and that they have been grown under good conditions. All cotton seed have a percentage of inferior, immature seed in them when they come from the gin, and these, with the trash and dirt which uncleaned seed usually contain, are a dead loss to the planter. Besides, many light seed if planted will come up and form sickly plants which will not produce a maximum yield.

Another thing which is not suspected by most farmers is that seed produced under poor conditions will not yield as well as seed produced under good conditions. We have for years been making tests which prove this beyond the shadow of a doubt, and we will be glad to show any farmer the results of five years testing which completely prove this point.

## 3. CULTURE.

The best results with cotton are usually obtained from early planting and liberal fertilization. Good land well fertilized will usually produce better staple than poor land. Most of the staple cottons have large seed, and not less than one bushel per acre should be used in seeding. The distance between rows and in the drill is a matter for the individual judgement of the farmer as it varies very greatly under different conditions.

Staple cotton should never be allowed to suffer for culture. Anything which interferes with the growth of the plant interferes with the development of the staple. We have found it profitable here to cultivate our cotton until it lapped in the rows. We frequently plow up to the first of September.

## 4. PICKING AND HANDLING.

The staple varieties planted in this section have much larger bolls than most varieties. They also hold well in the burr, not hanging far out of the boll as some varieties do. These characteristics prevent our staple cottons from bluing up quickly in the fields. But, notwithstanding this, it is most important to gather staple cottons promptly, for there is, of course, some decline in grade the longer the cotton remains unpicked.

The great difference in value now prevailing between high-grade and low-grade staple cotton makes it imperative that no greater acreage be planted than can be promptly harvested. The best grades are nearly always in active demand at profitable premiums, but low grades are usually a drug on the market and rarely pay the cost of production. The farmer who every year plants more than he has labor to gather promptly is the bane of the whole industry. He is now suffering, but because of him are also suffering those conservative growers who never plant more acreage than they can handle.

## 5. GINNING AND PACKING.

Staple cotton should not be ginned when damp. If picked during moist weather or even when a heavy dew is on the cotton it should be sunned before ginning. Five to twenty dollars per bale is frequently lost in staple cotton by ginning it green or damp. In ginning staple cotton be careful to see that the roll has been cleaned out before ginning, as otherwise there will be a plate of different length or different grade cotton on one side of your bale, and besides you get some seed from the preceding bale.

The great secret of ginning staple cotton is a soft gin roll. Not more than two-thirds as much staple should be put through the gin per hour as is usual with short cotton. A speed of about 400 revolutions per minute will produce satisfactory results with a soft gin roll, provided the brushes are speeded 1,500 to 1,600 revolutions. The lint should be blown direct into the press box from the gin and not foot packed.

We will be glad to furnish detailed instructions as to ginning to any one who will write.

Bales should be put up to weigh around 500 lbs., and 6½ yards of two-pounds bagging and 6 ties should be used. The weight of this covering is 22 lbs., which is all the tare that is allowable on uncompressed cotton by the Carolina Mill rules.

## 6. MARKETING.

Many farmers who would otherwise plant staple cotton are deterred from doing so from lack of a convenient market. If they understand how to proceed, however, this need not affect them.

If a good quality of cotton is made, and if it is properly ginned and packed it can be sold without serious trouble. There are reputable dealers in every large staple cotton market who will bid on cotton from well drawn samples. Many thousands of bales are bought in this way by Hartsville merchants, much of this cotton coming from Georgia and North Carolina. If two or more sets of samples are sent to different buyers the farmer is apt to receive a fair bid.

The following sampling instructions will be found useful:

Draw smooth sample weighing about four ounces from each side of each bale. Put ticket showing number and mark of bale between each pair of samples. Wrap in several folds of strong paper and send by parcel post. Be sure to write your name and address plainly on package.



## THE STAPLE COTTON INDUSTRY

(By David R. Coker)

While there has been a tremendous decline during the past six months in the premiums which staple cotton will bring over short they are still above pre-war averages. We can, therefore, see nothing in the situation to discourage anyone from planting staple cotton if he is going to plant cotton at all, for, whether short cotton prices are profitable or not, good staple varieties will certainly make far better returns to the planter than short cotton if he can secure present premiums of fully 50%. While the decline in staples, as well as in all cottons, was largely caused by over-production (or under-consumption) and the general re-adjustment of commodity prices inevitable after a period of inflation, the collapse of the tire cloth industry last summer was a very great factor in lowering staple prices. This industry, which was consuming at the rate of one-half million bales per annum last spring, will gradually get back upon its feet as the surplus stocks of automobile tires are used up and may be expected to again use large quantities of staple cotton within a few months. The Egyptian crop, both in quality and quantity, is disappointing and a heavy reduction in that crop may be expected in 1921.

We expect good staple cotton from productive varieties to continue to pay profitable premiums over short cotton as it has always done at some period of each year in the past, but we do not now and never have advised the discriminate planting of staple cotton. The production of high grade saleable 1 3-16 to 1 3/8 staple is a speciality and should only be engaged in by those who are willing to go to the small trouble and expense to gain the knowledge and equipment necessary to success.

The essentials of success are:

**FIRST:** Pure bred seed of guaranteed good germination from a recently pedigreed strain of one of the early high producing varieties of good staple length.

**SECOND:** The rigid limitation of the acreage planted to an area which can be perfectly worked and rapidly gathered. (The bane of the whole cotton industry is the planting of bigger crops than can be rapidly harvested and this has resulted in a heavy over-production of low grades and in an under-production of food stuffs.)

**THIRD:** Proper attention to ginning and baling so that a smooth unmixed product put up in a standard package will result.

**FOURTH:** Arrangements to store and carry the cotton through the occasional periods of stagnation and lack of demand that sometimes occur in the marketing all staple products.

**FIFTH:** Selling through reputable and well established agencies who know staple and are in position to pay its value. This can be done by the submission of properly drawn samples if the producer is not near a good staple market.

The section around Hartsville last year produced the biggest crop per acre in its history, practically all of which was staple cotton. While our farmers here have made no profits on their 1920 crop, the big yields and the premiums above short cotton (which have ranged from 100% to 50%) have saved this section from the general bankruptcy and distress which stares many other cotton sections in the face.

On page 53 of the monthly crop report of the National Department of Agriculture for June, 1917 the

average yield of lint cotton per acre for South Carolina is given as 156 pounds of long staple against 155 pounds of short staple for the disastrous year of 1916. The same publication gives the comparative yields of long and short cotton for South Carolina as 228 pounds of long staple and 232 pounds of short staple for 1915. These are the latest official figures we have seen and as these results are closely confirmed by the average yields of our staple varieties as compared with the short cottons in our accurately conducted variety tests, we think it fair to assume that the government's figures for these two years closely approximate the field results of long and short cottons in this section. This being so, the premiums obtained by the farmers in South Carolina for staple cotton are practically all net profit.

DAVID R. COKER

Jan. 1st., 1921.



PLANT-TO-ROW BREEDING PLOT OF PEDIGREED HARTSVILLE COTTON: Good Row on Right; Poor Row in Center; Medium Row on Left. This Variation of Plant Progeny Rows Within a Pedigreed Strain Demonstrates the Necessity of Continuous Selection and Breeding.



## OUR SERIES OF WEBBER COTTONS (Long Staple Cottons)



All seed sold under this trade-mark possess a crop guarantee as near perfect as nature will permit.



PLANT OF DELTATYPE WEBBER

Webber 49: strain 4, and are for the first time offering a new variety under the name of Deltatype\* Webber, which has descended from Webber No. 82 but which is such a distinct type and represents such a marked improvement that we have given it a new varietal designation.

## COKER'S PEDIGREED DELTATYPE\* WEBBER (Long Staple Cotton)

For years our breeders have been working for the production of the best possible staple cotton for boll weevil conditions. In our Webber 49 and its later strains, Webber 49-2 and 49-3, we have measurably approached our ideal, these cottons now being the most popular of any planted in the Mississippi Valley and in the Carolina staple areas.

We have, however, completed the breeding and testing of a strain of Webber cotton which more nearly approaches our ideal for a boll weevil resisting cotton than any we have yet introduced. We have designated it DELTATYPE Webber. *It is the earliest and heaviest yielding staple cotton we have yet produced.*

Plant of moderate size, with several basal branches but of erect type. Bolls large, averaging 61 to the pound of seed cotton, elongated ovate, pointed, 4 to 5 locked; lint commonly  $1\frac{3}{8}$  inches long, uniform, fine, silky, and strong, with good drag. It opens wide, is fluffy and easily picked. The turnout of lint according to our records

The origin of Webber cotton goes back to 1907, when our President, Mr. D. R. Coker, in company with Dr. H. J. Webber (then with the United States Department of Agriculture and for whom we have named this cotton), took a few seeds from a particularly productive and healthy plant of Columbia cotton growing in Dr. Webber's breeding plots of that variety at Columbia, S. C. From these seed were produced twelve plants on our Experimental Farms the next year. The fruitfulness, the length and the general character of the cotton was so striking that all of the seed of these twelve plants were grown in 1909. Two rows were planted in our variety test of twenty-four varieties with the result that the Webber made more seed cotton than any other of the forty-six rows. The seed were increased the next year and this field formed the basis of our later breeding work with this variety. Year after year, we have carefully tested this cotton in variety tests against more than a hundred other varieties and strains with the result that Webber has stood at or near the top in yield and money value.

In 1910, we began our new breeding work on Webber cotton making plant selections from our twenty-five acre field of this cotton. In our 1911 plant-to-row test, consisting of about ninety rows, each planted from the seed of a different plant of Webber selected in 1910, several rows stood up splendidly in comparison with the general average. Two of the most striking rows in the block were numbers 82 and 49.

The strains propagated from these two superior rows became the Webber No. 49 and the Webber No. 82. The pedigreed breeding has been continued every year since this time and as improved strains were secured these were numbered consecutively and sold under the numbers. We have produced and sold seed of Webber 49 strains Nos. 1, 2, and 3, and of Webber 82, strains 1 and 2. This year we are offering a new strain of

\*NOTE—The word DELTATYPE is a trade name coined and used by this Company to designate a particular product of its own breeding. The public is warned against the use of this word in the sale of seeds as application has been filed in the U. S. Patent Office for the registration of this trade name.



## COKER'S PEDIGREED DELTATYPE\* WEBBER (Continued)

has usually averaged 33.8% but this year (1920) all of our cottons have run low and the average fell to 32.59%; season of maturing early.

The Deltatype Webber comes from a specially fine pedigreed plant of Webber No. 82 selected in 1915, which since that time has been propagated in isolated increase plots and thoroughly tested in our variety trial plots. It differs from Webber 82 in being earlier in season of maturing, in having larger bolls which open better, fluff more and pick easier, and in increased percentage of lint, better yield and more upright, less spreading type of plant.

In our variety test plots in both 1918 and 1919 the Deltatype Webber produced more seed cotton and more lint for the first two pickings than any other strain of our Webber varieties. It also surpassed in yield at these pickings most of the varieties of short cottons. The second pickings in these variety tests were made on September 24, 1918 and on September 17, 1919. Its total yield in the 1919 variety test was 1927 pounds seed cotton per acre against 1828 for the Cleveland and 1680 for King. In 1918 it yielded a little more than King and a little less than Cleveland.

In our test of cotton varieties at Jackson, Miss., in 1919 Deltatype out-yielded every other variety of staple cotton. In the variety tests in 1920 it also made one of the highest averages of any long staple cotton of its grade.

In 1919 we had 19 acres of Deltatype Webber at Hartsville which was planted April 28th and produced a little over 21 bales, averaging 500 pounds each. A forty-three acre field on similar soil this year gave us 49.74 bales averaging about 500 lbs. each.

The greatest improvement in this cotton over other types of Webber is in the type of plant. It grows more erect than any other strain of this cotton. The 19 acre field referred to grew from 3½ to 4 feet tall and was planted in 4 ft. rows, yet when the cotton was fully matured one could stand in the middle of the row and see a strip of ground from end to end. This character, will of course, make it extremely valuable for planting on rich soil under boll weevil conditions, both because it allows much of the sunlight to reach the ground and kill the larvae in the fallen squares and also because it will allow the cotton to be cultivated much later than could be done with a spreading plant.

It is also a much easier picking cotton than most long staples and our pickers have this year expressed decided preference to work in this cotton.

We recommend this cotton with the full confidence that it is the most valuable strain of staple cotton yet produced in the South for planting under boll weevil conditions.

PRICES: Put up in 100 pound bags, 3 1-3 bus. of 30 pounds each. Small lots, \$6.00 per bu. or \$20.00 per bag; ton lots, \$5.50 per bu.; 15 ton lots, \$5.00 per bus' el.



DELATATYPE WEBBER, COMBED SEED (NATURAL SIZE)



COTTON FIELD AT HARTSVILLE, SOUTH CAROLINA

On Left Webber 49-4; On Right Keenan. Note the Earliness and Low Compact Growth of Webber 49-4.

\*See Footnote on Page 17.



## COKER'S PEDIGREED WEBBER NO. 49, STRAIN 3 (Long Staple Upland Cotton)



Our reputation and your crop are protected by this trademark.

The heavy-yielding, quick-maturing qualities of the Webber No. 49, are well known to hundreds of planters in all the principal staple cotton sections. For ten years our plant breeding activities have been largely directed toward the perfection of a long staple variety that would combine the qualities of earliness, weevil resistance and heavy yield. Webber No. 49 was the first ever developed by us that measurably met these conditions. Reports for the past five years from planters in many sections are that Webber No. 49 and its later strains are

the best staple cottons of their length now planted in boll weevil territory.

This cotton begins to fruit early and usually produces a good crop of bolls by the first of August. The weevil appears to have more difficulty in puncturing the young bolls of Webber 49 than of other varieties, as we have had frequent reports from Mississippi that the young bolls of this cotton stand heavy boll weevil attacks better than other varieties.

Strain No. 3 has all of the good qualities of the parent variety, Webber No. 49, but is longer, making lint full 1 5-16" in length under favorable conditions. The percentage of lint will average about 33 1-3 and its picking and storm proof qualities are excellent. It is slightly earlier than the preceding strains, 49-1 and 49-2.

Strain 3 was offered last year for the first time and the results obtained with its cultivation in all staple cotton sections have amply justified us

PLANT OF  
WEBBER 49

in our belief in its superior qualities. This year we have produced the seed in much larger quantities and are offering it at a price that will enable all growers to plant larger areas.

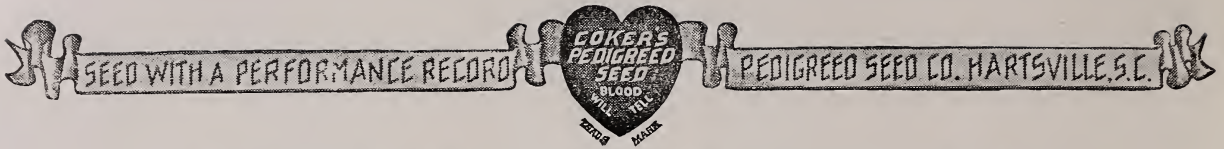
PRICES: Put up in 100 pound bags, 3 1-3 bus., of 30 pounds each. Small lots, \$2.50 per bu. or \$8.33 per bag; ton lots, \$2.40 per bu.; 15 ton lots, \$2.25 per bu.



WEBBER 49-4, COMBED SEEDS—(NATURAL SIZE)

## COKER'S PEDIGREED WEBBER NO. 49 Strain 4 (Long Staple Upland Cotton)

This is the newest and best strain of our Webber 49 and is offered this year for the first time. It has descended from a specially good plant chosen in 1915. It is very similar to the preceding strains of Webber 49 that we have introduced but is an improvement in several important characters. It has longer lint than any of the preceding strains, under good conditions averaging 1 5-16 to 1 3-8 inches in length. The lint is also rather stronger than that of preceding strains and gives a turnout ordinarily of about 33 1-3%. It fell below this percentage the present season as all cotton ran lower than ordinary, due to unfavorable weather conditions at time lint was forming. It has large ovate bolls, averaging 65 to the pound of seed cotton, opens well and is easy to pick. Our records show that it is slightly earlier than 49-3 and is a rather heavier yielder. It makes a comparatively small weed, is open growing and has comparatively thin foliage.



## COKER'S PEDIGREED WEBBER NO. 49, STRAIN 4 (Continued)



No seed bearing this trade-mark will be shipped unless it shows a germination of at least 90 per cent.

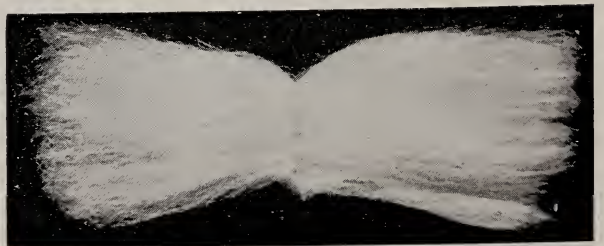
49-4 is a fine fruiter, producing its crop very rapidly and near the ground. It gives excellent results on very poor soil. It produced four-fifths of bale per acre on one of the poorest farms in the Hartsville section last year.

We consider this cotton the very best strain of staple cotton we have yet offered for planting in boll weevil territory with the exception of our Deltatype Webber. Because of its earliness it is also a good variety for sections having a somewhat restricted season. We recommend this cotton with confidence that it will give full satisfaction.

PRICES Put up in 100 pound bags, 3 1-3 bushels of 30 lbs. each. Small lots, \$4.00 per bu. or \$13.33 per bag; ton lots, \$3.75 per bu.; 15 ton lots or over, \$3.50 per bu.

## COKER'S PEDIGREED WEBBER NO. 82, STRAIN 2 (Long Staple Upland Cotton)

Since the original introduction of our Webber 82 variety we have tested seed of hundreds of individual plants and increased the product of many individual rows in an effort to produce a strain of this cotton superior to the original. The great productiveness, uniformity, and other high characters of the original strain, however, made this extremely difficult and we have only recently produced a new strain which our records show to be more productive and longer than the parent 82. We have given this strain the number 82, strain 2 and now offer it for the first time. Our records show it to be about 3% more productive and a small fraction longer than the original 82, the lint now averaging full 1 5-16 inches. The staple is also more uniform than the parent strain is at present. The bolls are ovate, pointed, and comparatively large in size, averaging 65 to the pound of seed cotton. Percentage of lint about 33 1-3. It matures at nearly the same time as the parent strain, but there is a very slight difference in earliness in favor of the old 82. It is a tall plant, has slightly larger bolls and picks easier than its parent. The seeds are lightly covered, germinate quickly and produce strong, vigorous plants which grow off rapidly. The great popularity of Webber 82 should insure this new strain a hearty reception.



PRICES: Put up in 100 lb. bags, 3 1-3 bus. of 30 lbs each. Small lots, \$3.00 per bu. or \$10.00 per bag; ton lots, \$2.75 per bu.; 15 ton lots \$2.50 per bu.

WEBBER NO. 82, PLANT AND COMBED SEED





## OUR SERIES OF HARTSVILLE COTTONS

Pedigreed plant breeding is an endless process toward perfection. No matter how excellent a product may be, there is always room for further improvement and selection. We are at all times selecting, breeding and testing new strains of our selected varieties, striving to produce a plant of greater value to the farmers and to the buyer of his product.

We have been breeding and selecting the Hartsville cotton for 19 years, always striving to secure some important advance. Our first selections were made by Dr. D. N. Shoemaker and Dr. W. C. Coker in 1902 from a field of Jones Big Boll, an ordinary short staple cotton. Shortly afterwards the work was taken up by our Mr. D. R. Coker. Plant No. 16 of the original selections, having 1½ inch staple, proved to be the superior plant and all of the various strains of the Hartsville cotton have descended from this one plant.

Year after year we have selected and improved this cotton, breeding to secure bigger yields, stronger staple, more uniform length and better spinning qualities. At the end of five years we succeeded in adding 1-16 of an inch to the length of the staple and two additional years were required to add another sixteenth.

We have successively developed and introduced strains Nos. 7, 9, 11, 12 and 14. Each successive strain has represented some improvement over the preceding in length of lint, percentage of lint or earliness.

The type of all of these cottons is open growing with rather light foliage, large round bolls that open wide and fluffy, making it easier to pick than other varieties with more pointed bolls. The lint is of exceptionally good

The value of seed depends largely on the confidence shown by the liberality of the guarantee behind the goods. This trade-mark speaks for itself.



PLANT OF HARTSVILLE

body and very uniform in the latest strains, running full 1½ inches in length under good conditions.

In recent years some of the older strains of this variety have not been satisfactory in some sections into which the boll weevil had spread because of its being rather late in maturing. Our most recent strains are much earlier than the original Hartsville and our newest strain, which will be Hartsville No. 16, marks a very distinct advance in earliness over any of the Hartsville cottons thus far produced. This strain will not be sold until the spring of 1922.

### COKER'S PEDIGREED HARTSVILLE

#### NO. 14

#### (Long Staple Upland Cotton)

Our latest development of Hartsville cotton, which is the 14th generation of this splendid variety, was distributed last season for the first time. Its outstanding superior qualities are its productiveness and splendid character of strong, even running 1½ lint. It is the largest balled strain of staple cotton which we have, running 55 to 60 bolls to the pound. The per cent of lint is higher than any other strain of Hartsville, averaging under good conditions, about 34 per cent. Each 1500 pounds of seed cotton last season produced a bale weighing over 500 pounds. It is a tremendously vigorous cotton, resisting all unfavorable influences remarkably. It seems to be well adapted to all types of soil. It is not, however, as early as other strains of staple cotton we are now offering and for this reason we do not recommend it for territory where boll weevil damage is usually severe.

**PRICES:** Put up in 100 lb. bags, 3 1-3 bus. of 30 lbs. each. Small lots, \$2.50 per bu. or \$3.33 per bag; ton lots @ \$2.40; 15 ton lots @ \$2.25.



BOLL OF HARTSVILLE 14 (Natural Size)



Look for this heart. It signifies quality.

## SHORT STAPLE COTTONS



CLEVELAND BIG BOLL COTTON

Every year we conduct variety tests of the principal varieties of both long and short staple cottons. Included in these tests are all of our own pedigreed varieties and strains of cotton and many other varieties as well. These tests, conducted with scientific precision and impartiality, and carried on year after year, show up the virtues as well as the short comings of all the varieties tested. These tests afford a comparison of the varieties with one another and give an excellent basis on which we may determine the relative merits of all.

In our tests conducted over several years, the Wannamaker Cleveland proved to be the highest yielder of the various short staple varieties other than the Cook's Improved. We, therefore, began breeding work with both of these varieties as foundation stocks to produce improved pedigreed strains. After five years of breeding with Cook's Improved, we secured a pedigreed strain that proved to be the highest yielder of lint cotton of all varieties grown in our 1917 and 1918 tests. We produced and sold a considerable quantity of the seed of this pedigreed strain but have now abandoned the variety because of its extreme susceptibility to anthracnose which we were not able to overcome.

Our tests with the Cleveland convinced us of the high value of this variety in comparison with all other varieties of short staple cotton that we have grown. Without question Cleveland Big Boll is the most popular variety of short staple cotton grown in sections east of the Mississippi River. It is grown by a larger number of progressive farmers than any other variety of cotton. Year in and year out it is a variety to be depended on. It is not spectacular. It will not make three bales to the acre, nor will it turn out half lint, but it will make as much cotton year after year as any other variety that has thus far been tested over a long period of years. Our improved strains of this variety we are selling as Pedigreed Coker-Cleveland.

## PEDIGREED COKER-CLEVELAND

(Short Staple Cotton)

This variety was developed by the plant-to-row breeding method from the best strain of Cleveland cotton of which we have any knowledge. It has shown superior qualities ever since the original plant was tested. It has comparatively large bolls, averaging 63 to the pound of seed cotton. The per cent of lint is very high, running 39 to 40 per cent in our tests. The lint is uniform and pulls a full inch under good conditions. In our 1918 variety test it produced more cotton and was slightly earlier than the parent strain. In 1919 it produced 1488 pounds of seed cotton per acre by September 17th as against 1305 pounds by the parent strain, and the total yield of the season was 2033 pounds per acre against 1828 pounds by the parent. In our 1920 variety tests the new strain produced 2013 pounds of seed cotton per acre for the first picking October 7th against 1958 pounds for the parent strain, and a total yield at the end of the season of 2497 pounds for our pedigreed strain against 2356 pounds for the parent strain. This is evidence that it is earlier and more productive than the original variety.

The earliness of the Coker-Cleveland makes it a good variety for boll weevil territory. While not immune to anthracnose, this cotton is remarkably resistant to it.

We believe the Pedigreed Coker-Cleveland to be the best strain of the Cleveland Big Boll that has been produced and unhesitatingly recommend it for general planting. The Cleveland Big Boll cotton is the most popular short staple cotton planted in the South and the evident superiority of this pedigreed strain over other strains of this cotton, we believe, will insure the quick sale of this seed at the moderate prices we are asking for them.

PRICES: Put up in 100 pound bags, 3 1-3 bushels of 30 pounds each. Small lots \$2.50 per bu., or \$8.33 per bag; ton lots @ \$2.25 per bu.; 15 ton lots @ \$2.00 per bu.



BOLL OF COKER-CLEVELAND—(NATURAL SIZE)



## WILT RESISTANT COTTON VARIETIES



In all strains of seed covered by this trade-mark we have made a distinct improvement on the parent type.

Wilt (or blight) is one of the most serious diseases of cotton occurring in the eastern part of the cotton belt. The ordinary varieties of cotton planted on wilt infected soils largely succumb to the disease and will not produce a commercial crop. Farmers' Bulletin No. 265 of the U. S. Department of Agriculture contains the following:

"The experiments of the Bureau of Plant Industry, which have now been carried on for fifteen consecutive years, have shown that the only practicable solution of the wilt problem is through the use of wilt-resistant strains developed by special breeding. Such cottons have been produced and grown successfully for the past eight or more years on thousands of acres of wilt-infected land in a large number of localities, until no doubt remains as to the possibility and practicability of controlling the disease

in this way. During this period these varieties have been further improved by selection for greater resistance, larger yield, longer lint, higher percentage of lint, and other desirable qualities.

"The development of wilt-resistant strains requires breeding for several years by the careful methods described later in this bulletin. Mass selection from apparently resistant strains of existing commercial varieties will not suffice. The selection of apparently resistant plants from the varieties usually grown may occasionally lead to the development of a resistant variety, but will generally result in disappointment. Only by the selection of resistant plants from an inherently resistant strain, by the subsequent testing of these on wilt-infected land, and by the continuation of individual selections and progeny-row tests can a resistant variety be developed."

Recognizing the demand for a cotton variety that is resistant to wilt and will grow on wilt-infected land, and realizing that the production of a variety having this quality is a task for the plant-breeder and when produced requires to be kept up to full standard of resistance by continuous selection, we took up the breeding of the Dixie cotton which is generally accepted as the best wilt resistant sort. The Dixie was bred and introduced by the U. S. Department of Agriculture and continuously gained in favor until it became the most popular wilt resistant cotton. The description of this variety from the government bulletin follows:

"Plant vigorous, wilt resistant, of medium height, pyramidal, nearly of the Peterkin type, usually with two or more large basal branches, and with long, slender, slightly drooping fruiting limbs; leaves of medium size; bolls of medium size, about 75 being required for a pound of seed cotton, easy to pick; seed small, weight 100 seeds. 10 grams, variable in color but typically covered with short greenish brown fuzz; lint about seven-eighths of an inch, percentage of lint to seed 34 to 35."

The Director of the Wilt Investigations of the U. S. Department of Agriculture furnished us seed of the finest plants of this variety, and with this as a basis, we started our pedigreed breeding work on wilt-infected fields. Last year we offered seed of Coker's Pedigreed Dixie strain No. 1 and this year we are able to offer seed of a new and more highly selected strain which we are distributing as strain No. 2.



A COTTON FIELD SHOWING WEEDY SPOTS WHERE PLANTS WERE KILLED BY THE WILT.



## COKER'S PEDIGREED DIXIE, STRAIN No. 2 (Wilt Resistant Short Staple Cotton)

Our Pedigreed Dixie strain No. 2 is the highest yielding strain of Dixie we have yet tested, being considerably better than the original Dixie or our strain No. 1, and much earlier. The original plant of strain No. 2 was selected in 1916. In the plant-to-row breeding plot in 1917 it produced a very striking progeny of low, stocky plants, fruiting well near ground; bolls, round to ovate and medium large in size, averaging 67 to pound of seed cotton; began opening August 14th, lint averaging one inch.

In 1918 a small increase block was grown of strain 2 and it was put in our variety tests for trial in comparison with other strains and varieties. Here on four different test rows strain No. 2 yielded in the first two pickings (2nd made Sept. 24) an average of 1313 pounds seed cotton per acre which was 168 pounds more than a similar average yield for improved Dixie and 121 pounds more than our Dixie strain No. 1.

In 1919 a three acre increase block was grown of strain 2 and it was again tested in our variety trials. The first three pickings (3rd made Oct. 9) gave an average yield for the four test rows of 1503 pounds of seed cotton per acre against a similar average of 1243 pounds for strain No. 1.

In 1920 strain 2 was again tested in our variety trials and the average of the four test rows for the first picking made October 11th, was 1645 pounds of seed cotton while the other two strains of Dixie averaged 1207 pounds. The final total yield for strain 2 was 2004 pounds per acre seed cotton while the average of the other two strains was 1651 pounds.

All of our wilt resistant breeding work on this variety has been conducted on a wilt-infected area on the farm of B. W. Segars at Oswego, S. C. Regarding this cotton Mr. Segars writes:

"In regard to strain No. 2 Dixie that I am planting for you this year, I am glad to tell you that I am very much pleased with it. It yields fine and I am making over a bale per acre with it this year. It is as early or earlier than any I am planting. The turnout of lint is fine. I try to get 1300 pounds seed cotton to bale and the bales never weigh less than 500 pounds. The other Dixie that I am planting usually takes 1400 to 1500 pounds seed cotton to make a 500 pound bale. It picks fine and my hands prefer picking it to any other cotton I have ever planted."

We recommend Coker's Pedigreed Dixie strain No. 2 for planting on wilt-infected areas wherever a short staple cotton is desired. The earliness of this strain makes it particularly valuable for wilt lands where boll weevil is also present.

Prices: Put up in 100 pound bags, 3 1-3 bus. of 30 pounds each. Small lots, \$2.50 per bu. or \$8.33 per bag; ton lots, \$2.25 per bu.; 15 ton lots, \$2.00 per bu.

## PEDIGREED REGISTER, A Wilt Resistant Long Staple Cotton

Considerable demand exists, particularly in the staple sections of the Carolinas, for a wilt resistant long staple cotton. The best variety of  $1\frac{1}{4}$  inch length and fairly uniform character that has yet been produced so far as we can learn, is that developed by Mr. J. R. Register who owns a plantation in our neighborhood near Hartsville, S. C. Many inquiries have come to us for seed of a wilt resistant long staple cotton and we have thus, as an accommodation to our customers, purchased Mr. Register's entire stock of perigreed seed of this variety, and are prepared to supply the needs of our customers.

Mr. Register's plantation became infected with the wilt fungus about 30 years ago and ever since considerable trouble has been experienced with the disease. He began his first work on wilt resistant breeding in cooperation with the U. S. Department of Agriculture.

In 1913 he found in a field of Sam Wood (short staple) a plant similar to Webber with 1 3-16 inch lint. As some Webber cotton had been planted near his Sam Wood cotton, the previous year, he assumed this to be a hybrid with the Webber. The seed from this plant he picked separately and planted it in a row by itself in 1914. The progeny in this row were very variable, showing long and short staple, and large and small bolls, as would be expected from a hybrid. There was much difference also in wilt resistance. He saved four of the most promising plants and planted them in plant-to-row tests the next year, 1915. He continued in following years to select the best plants from the best rows, always growing the crop on wilt-infected land, and finally produced a fairly uniform type of cotton with  $1\frac{1}{4}$  inch lint, and of very vigorous growth that was at the same time highly wilt resistant. It may be stated further that the variety also seems to be largely resistant to the nematode or root-knot worm which is associated with the wilt on Mr. Register's plantation.

The boll is ovate in shape and of medium size, requiring from 75 to 80 to produce a pound of seed cotton; seed of medium size; lint  $1\frac{1}{4}$  inches long, fine and strong, ordinarily about 33 1-3 per cent, but this year somewhat lower; bolls open well and are easy to pick.

This cotton we know to be a good variety. Our breeders have closely followed Mr. Register's work as we are conducting certain of our wilt-resistant breeding experiments on his plantation. Our Mr. D. R. Coker, through the Coker Cotton Company, has every year purchased a considerable part of Mr. Register's cotton and is familiar with the good qualities of the lint. We are thus in position to know that we are offering the best pedigreed seed of the variety and of the latest strain, as it is grown by the breeder himself on his own plantation. We have purchased his entire crop so that we have the only pure pedigreed seed from the growers own stock. The seed supply is limited and if you desire the best seed you should order it immediately.

Prices: Put up in 100 pound bags, 3 1-3 bus. of 30 pounds each. Small lots \$3.00 per bu. or \$10.00 per bag; ton lots, \$2.75 per bu.; 15 ton lots, \$2.50 per bu.



## OUR CORN BREEDING WORK

Our Ear-to-Row breeding of corn, while similar to the Plant-to-Row breeding of other crops in principle, varies somewhat as to method of procedure to accommodate the habits of the corn plant. Corn is naturally an open fertilized plant and will not permit of too much inbreeding without a decrease in yield. We are obliged, therefore, to practice a method of breeding which will eliminate, as far as possible, this inbreeding factor. Our method of detasseling the breeding rows, and of pairing the "Ear Remnants" and detasseling again in the Increase Plots, prevents all inbreeding and enables us to produce Pedigreed Strains of high yielding corn. A great deal of experimenting has been done to determine the best method of breeding corn and the one we use and consider best is probably most generally used by corn breeding experts.



ENGRAVED FROM PHOTOGRAPH SHOWING SECTION OF DETASSELED EAR-TO-ROW BREEDING WORK

We first select one hundred of the best quality ears we can find from the desirable stalks and make a record of each by number from one to one hundred. A separate row, one-half acre long, is first planted from each ear, and then beginning with the same ear, duplicate rows are planted, making two rows from each ear. The grains are spaced accurately in the rows and cultivated and fertilized all alike, using the same fertilizer as for the general crop. Notes are made of the qualities of every row throughout the season. When the corn begins to tassel, the tassels are carefully removed, in the first set of rows planted, from the even numbered rows, two, four, six, to one hundred, leaving the tassels on the other rows to fertilize the corn silks of all. In the second set of rows, the tassels are removed from the odd numbered rows, one, three, five, seven, to ninety-nine, leaving the tassels on the even numbered rows. This gives us one row from each ear detasseled and one row from each ear with the tassels, giving us one row from each ear that has been entirely pollinated by other rows.



AN "EAR REMNANT"

(Engraved from Photo.) We test out many ears every year. The "EAR REMNANTS" of the highest yielding rows are used for further testing the following year.

At harvest time we gather and weigh every row separately and record the weights of each. Notes are made as to quality and the best rows are determined, only the detasseled rows being considered and selected. After the best rows are determined, ears from these rows are selected for the next year's breeding work. The remaining best ears from these selected rows (previously selected from the desirable stalks and placed to themselves) are shelled and planted in large increase block the following year. The "Ear Remnants," or that part of the ear left from planting the original best rows (which in the meantime have been carefully preserved) are then looked up and planted the following Spring in an isolated breeding plot, each ear being used in one section of the row as the female parent (detasseled) and in the other section as the male parent. The best corn is gathered from the detasseled section of these rows and is increased and selected year after year, until offered to the public. These new strains are tested every year in test plots with other strains and varieties and if they do not hold up in yield and quality, are discarded.



## OUR VARIETIES OF SEED CORN

Every year we conduct variety tests of corn in which we try out all important varieties grown in the South as well as the selected strains of the varieties we are breeding. It is largely on the results of such tests that we base our choice of the varieties we take as foundation stocks for breeding. We of course also take under careful consideration the reputation that the different varieties have among planters as well as the results obtained by experiment stations and their recommendation. In every case we have started with the seed of the best strain of each variety obtainable and have striven to improve on the best. Thus far we have conducted

breeding work with four varieties, Garrick, Marlboro, Williamson and Ellis. Of these the Garrick is probably the best known over the most extensive territory but it is doubtful whether it is superior or even as good a variety as the Williamson or the Marlboro, which are local South Carolina varieties. The Ellis is a strictly local Hartsville variety but is particularly adapted to cultivation on sterile soils and we believe has a distinct place in the South. The Garrick and Marlboro are so-called prolific varieties, usually producing two ears per stalk but not uncommonly more than this. The seed we offer is from pure bred pedigreed strains in all cases except the Ellis which is what we designate as improved seed, having descended from a mass selection including several superior individuals.



NUBBING AND SORTING SEED CORN IN WAREHOUSE

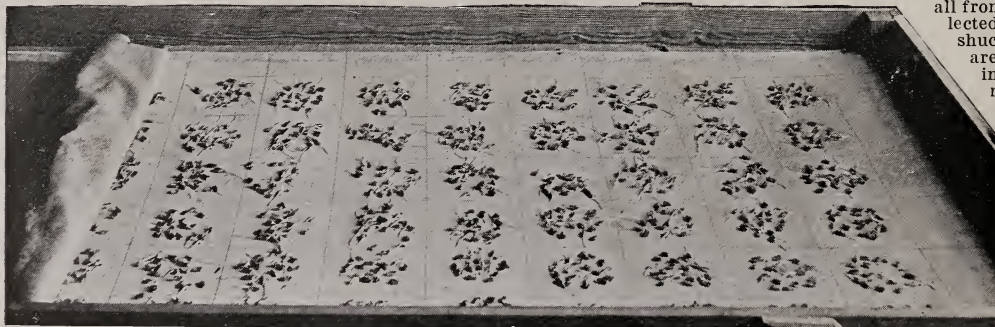
### Handling Seed Corn

We do not sell all of the seed from our pedigreed corn fields. We exercise a rigid selection. Even though a field is grown from our highest pedigreed stock only about one-fourth of the ears are sold for seed. The first choice of seed ears is made when the corn is shucked and the mass of seed corn then chosen is brought to our warehouse where it is conveyed mechanically to bins from which it is taken for reselection, nubbing and grading. As shown in the photograph reproduced here, a man sits at each bin, examines every ear as it comes down, and if the ear is found to be all right in every respect for seed purposes, places it in the nubbing machine shown at the left of each operator, which shells off the small and imperfect grains from each end of the ear. The ear still containing the good grain on the middle section is then dropped into the chute that carries it to the bins from which it passes to the sheller. All poor ears and the grain from the tips and the butts of the good ears is sold for feed.

The good corn, after shelling, goes through our large grader and cleaner, where all the light or faulty, irregular and broken seeds and all trash is removed. Only the good, heavy, mature and regular sized grains are used for seed.

Every lot of seed is carefully tested for germination and is discarded if it does not test above 95 per cent. In no case do we ship out seed corn which does not show this high grade vitality. It is only by this accurate and comprehensive method that we are able to furnish seed corn which is worthy of our trade mark and guarantee.

One of the very best features of our corn is that we allow it to mature normally on the stalk without pulling the fodder or cutting down the plant. Thus all of the seed is fully matured and vital. We have conducted tests which show that seed from rows on which the fodder has been pulled at the regular fodder pulling time produced 17% less in yield as against seed of the same variety from adjoining rows upon which the fodder had been left to dry upon the stalk. (Write for special bulletin on fodder pulling.)



GERMINATION TABLE SHOWING SPROUTING CORN

Each Square Contains Grains Taken From One Lot of Seed to be Shipped.

The seed we sell is thus all from ears that are selected when the crop is shucked and which are then reselected in the warehouse, nubbed, shelled, separated, cleaned, graded, and sacked in two bushel bags and tested for germination. Every bag contains a card on which is printed a description of the seed and our guarantee of pedigree, purity and vitality.



## COKER'S PEDIGREED WILLIAMSON CORN



A guarantee of perfection as far as can be perfect stands behind this trade-mark.

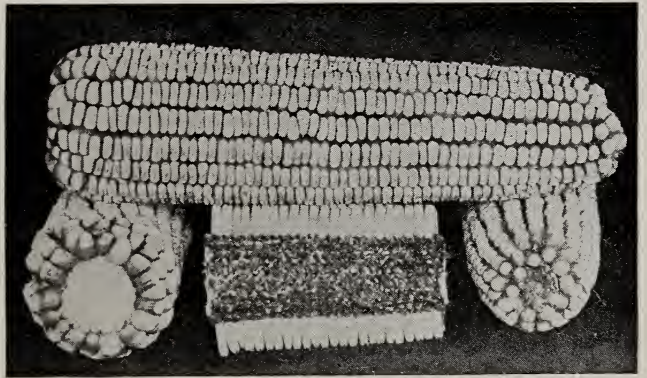
Williamson Corn is one of the oldest varieties of corn planted in South Carolina. For many generations it was bred by field selection by Mr. B. F. Williamson, Sr., (the father of Mr. McIver Williamson, of corn fame). In 1906 we began breeding this variety by planting an ear-to-row test from a number of apparently fine ears of Williamson corn. Ear E-1 came from a stalk which made two big weevil free ears weighing twenty-five ounces. It proved to be one of the highest yielders in an ear-to-row test and we therefore increased the strain in a breeding block. For the past 12 years we have been breeding this corn by field selection of plants and the plant-to-row method, increasing the ears true to type year by year until we raised sufficient quantity to offer for sale.

Plant vigorous 8 to 10 feet high, prolific, 1 to 2 ears to the stalk. Ear height 4 to 4½ feet, shanks of medium length. Ears regularly cylindrical, 8 to 9 inches long; averaging about 2½ inches in diameter, mainly 16 to 20 rowed. Cob of medium size, red. Kernels of medium size and deep. Color light amber to white with horny translucent sides. It shells out eighty-seven pounds of corn to one hundred pounds of ear corn. The shucks fit tight and fully protect the ear.

One of the most valuable features of our pedigreed strain of the Williamson corn is its resistance to weevil injury. It is not immune to weevils but it is more resistant than any other variety we know of. It is also a high yielding strain and in accurate tests during a number of years it has always stood at or near the top. If planted by the Williamson plan, one foot apart in six foot rows, it usually makes one good ear to the stalk and sometimes two. Other varieties have made two or three times the number of ears but less actual shelled corn.

**PRICES:** One peck, \$1.50; one-half bu., \$2.75; one bu., \$5.00; ten bus. and above, \$4.50 per bushel.

**Use Williamson Method.** Against early planting and early fertilizing, the Williamson method has averaged over twenty per cent more yield in an accurately conducted four years' test on our farm. If you don't know what this method is, send for our circular fully describing it.



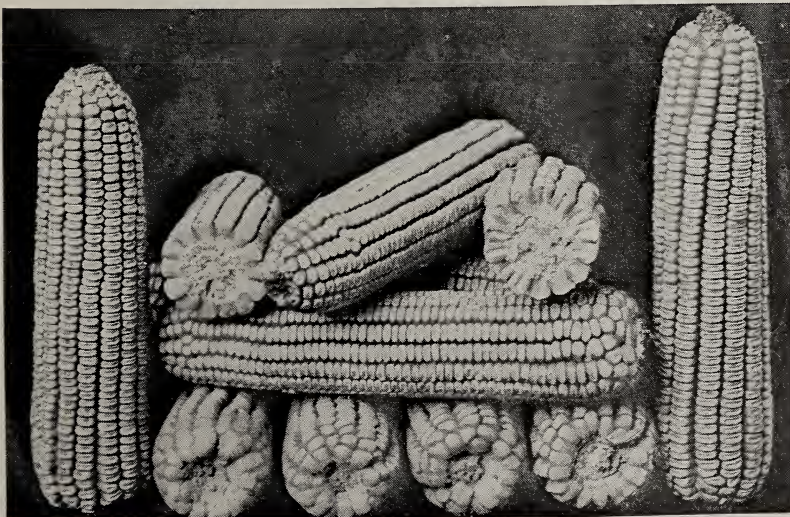
EARS OF WILLIAMSON CORN

## COKER'S PEDIGREED MARLBORO PROLIFIC CORN

The Marlboro Prolific is a well known local South Carolina variety that takes its name from Marlboro County where it originated. Our pedigreed strain of this variety which we are distributing this year for the first time is descended from the best row of our 1917 ear-to-row breeding plot. It is like the parent strain in that it produces stocky stalks of medium height with comparatively low ears. It produces two good ears to the stalk on good land and matures earlier than the ordinary single eared varieties. The kernels are white to cream in color and the cob is of medium size and white, rows mainly 12 to 16. Similar in appearance to Garrick but earlier.

Our pedigreed strain is superior to the parent strain of the Marlboro in that the ears are larger, longer and more uniform in type. The kernels are broad and more flinty than the parent strain and therefore more weevil resistant. It is one of the highest yielding and most prolific varieties we have ever found and makes an excellent quality of corn for milling purposes as well as for feeding. It is not a show corn but a good yielder. It will not disappoint you in production if it has a fair chance.

**PRICES:** One peck, \$1.50; one-half bushel \$2.75; one bushel \$5.00; ten bushels and above @ \$4.50.



EARS OF MARLBORO PROLIFIC CORN



## COKER'S PEDIGREED GARRICK CORN

The Garrick corn has long been recognized as one of the highest yielding and most widely adaptable of any of the varieties cultivated in the South. It is more nearly a standard southern variety than any other and yet ordinarily the kernels are rather soft and shallow and the ears small.

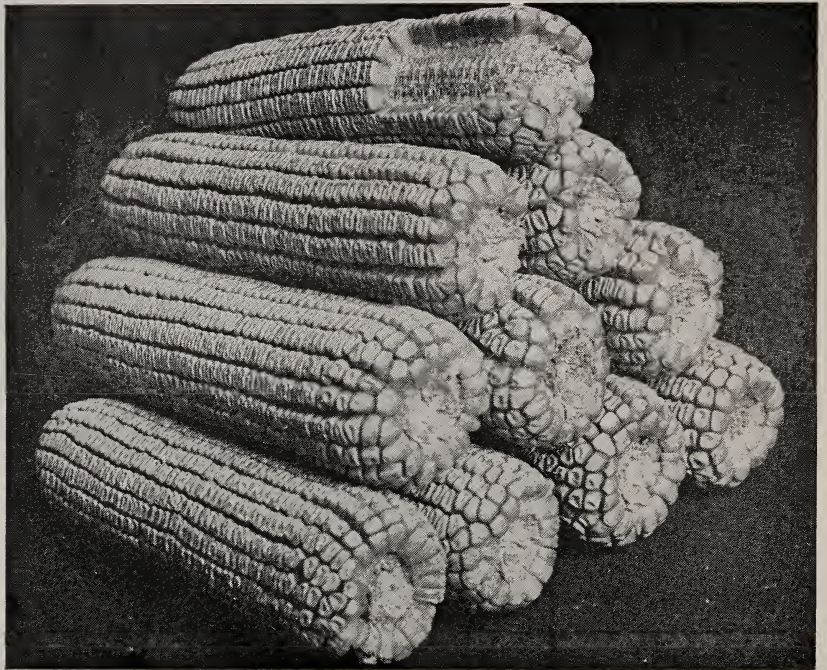
Our breeding work with this variety has been directed toward the elimination of these undesirable characters and the production of a high yielding strain. As a result we are offering this year for the first time a new strain which we are designating as Coker's Pedigreed Garrick. This strain is very different from the original Garrick and might well be given a different name. Our records show it to be a higher yielder and the objectionable characters have been almost entirely eliminated. The kernels are hard and flinty and the shank is generally short and the stalks lower in height. The following is a description of our new strain.

Plant, medium tall, 8 to 10 feet, vigorous, prolific, 1 to 3 or more ears to stalk. Ear height about 4 to 4½ feet; shank medium length; ear, regularly cylindrical or very slightly tapering, 8 to 9 inches long and about 2 inches in diameter, mainly 12 to 16 rowed; cob, medium size, white. Kernels, white with opaque top and horny, translucent sides; kernel shape broad, rather thick, and moderately deep, mainly a smooth dimple dent but occasionally somewhat rough. Season, medium late.

While all strains of this corn yield heavily, the pedigreed strain in our tests stands at the top. The hard, flinty nature of the kernel and the good shuck covering of the ear renders it weevil resistant which is a decided advantage. It is a prolific variety and dependable.

The seed we offer is pure bred, pedigreed, field selected, nubbed, graded and tested for high germination. It is high grade seed and goes out under our guarantee.

PRICES: One peck, \$1.50; one-half bushel, \$2.75; one bushel, \$5.00; ten bushels and above, \$4.50 per bushel.



EARS OF ELLIS CORN

## COKER'S IMPROVED ELLIS CORN

For a number of years we have been breeding a variety of corn that we obtained originally from Mr. James Ellis, an observing farmer of the Hartsville section. According to Mr. Ellis, it originated from a cross of a variety known as Shoe Peg or Gourd Seed corn which was of a soft, starchy, inferior quality, with the old Williamson variety which was a very flinty corn of excellent character. Each year Mr. Ellis carefully selected his planting seed in the field and this method, continued through a long series of years, finally developed a very distinct type which proved to be an excellent variety for his land.

We tested this corn for several years and it made an excellent record each year. The results were so striking that we purchased enough seed to plant over one hundred acres on one of our farms, the soil of which is very poor and sandy. It proved to be an ideal corn for this type of soil and made 50% larger yield than any variety ever before planted on this farm.

Plant low and stocky, averaging on light soil about six feet high, one to two ears to the stalk, ear height about 2½ feet, shanks medium short; ears cylindrical, commonly 7 to 8½ inches long and about 2¼ inches in diameter; mainly 16 to 18 rowed. Cobs of medium size, mainly white but some red, not pure in this character; kernels white or cream colored, of medium size and deep, a wrinkled dent with hard flinty kernels, largely weevil resistant. Season of maturity early.

We have not yet produced a pure bred pedigreed strain of this corn but our crop has regularly been planted from highly selected ears (the method termed mass selection) and is so uniform and satisfactory that we





feel safe in using the seed. The variety does well on good soils but it is especially adapted for cultivation on light, sandy soils for which purpose we know of no other variety equal to it. Such a variety has long been needed and we feel that we would be doing our customers an injustice to withhold this corn from the market longer. If you have light, sandy, poor land on which you desire to grow corn, without reservation we recommend this variety as the best.

PRICES: One peck, \$1.50; one-half bushel, \$2.75; one bushel, \$5.00; ten bushels and above, \$4.50 per bu.

## COKER'S PEDIGREED AMBER SORGHUM

Amber Sorghum as ordinarily known is a rather small growing sorghum with scanty foliage and open, sprangly heads. Coker's Pedigreed Amber is very different, having heavy foliage and very large cluster heads. It is not surpassed in seed production by any other variety in the South. It is much sweeter than the old Amber types and is very tender and juicy. It produces a very small stem, so that it is especially suitable for use as a hay crop. When sown thick it will make a tremendous yield of hay of fine quality that is relished by every kind of live stock. It also makes a splendid green forage crop and is most often used for that purpose. If sown in alternate rows with corn for silage purposes a much heavier yield will be obtained than from corn alone. This is a common practice in parts of the South. It is a very early variety, producing large, heavy seed heads, heavy foliage and small, very sweet stalks. Recommended especially for hay and green forage purposes.

Prices: Peck, \$1.00; half bushel, \$1.80; per bushel (50 pounds), \$3.50.

## COKER'S PEDIGREED DWARF OKRA

This okra is descended from one dwarf plant which was found in a patch of ordinary okra in 1912. It was strikingly different from any other plant, the joints being very short and the pods very large. Several flowers were hand-pollinated (selfed) and the seed from the resulting pods have been grown and selected since that time. It produces well, makes fine, large pods and very little bush as compared with ordinary okra. We have tested this okra fully and feel that it deserves a place in every garden.

PRICES: Postpaid, packet, 5c; ounce, 10c; one-quarter lb., 25c; pound, 75c. Not postpaid per lb., 65c.

## GENERAL SEED---NOT PEDIGREED

**HUNDRED DAY EARLY SPECKLED VELVET BEAN.**—This is one of the earliest varieties of the velvet bean, requiring ordinarily only from 90 to 125 days to mature seed. It is not as rank a grower as some other varieties but makes a heavy yield. The velvet bean is a fine crop for the land and should be planted extensively throughout the South. Seed required, one-half peck to the acre.

PRICES: Quart, postpaid, 25c. Not postpaid, peck, 75c; one-half bushel, \$1.35; per bushel, \$2.50.

**OSCEOLA VELVET BEAN.**—The Osceola is one of the newest varieties of the velvet bean and is rapidly gaining in popularity. It produces larger pods and seeds than the Early Speckled and is easier to pick and furthermore, does not have the same tendency to sting the hands. It is generally claimed to be an early variety but with us it is not quite so early as the Early Speckled.

PRICES: Quart, postpaid, 30c. Not postpaid, 1 peck, \$1.10; one-half bushel, \$1.90; per bushel, \$3.75.

**DWARF ESSEX RAPE.**—Rape makes an excellent crop for cattle, hogs and sheep and a splendid green crop for chickens. Plant in good land in spring or early fall. Sow broadcast 6 to 8 pounds per acre or in drills in thirty inch rows, three to four pounds to the acre. Seed imported.

PRICES: Per pound, postpaid, 25c. Not postpaid, per pound, 18c; 10 pounds, 15c; 50 pounds and above at 14c.

**JAPAN CLOVER (*Lespedeza*).**—Japan Clover as a grazing crop has a distinct place in Southern Agriculture. It grows on worn-out lands, where other crops fail and furnishes a nutritious, permanent pasture. Can be sown broadcast without special preparation. Thickens rapidly and re-seeds itself without attention. Grows heaviest after first year. Sow in March or April about ten pounds to the acre. Our seed Texas grown.

PRICES: Per pound, postpaid, 45c. Not postpaid, per pound, 40c; 10 pounds, @ 35c; 50 pounds and above @ 30c.

**ITALIAN RYE GRASS.**—For lawn seeding. PRICES, (F. O. B.): Per pound, 25c; 10 pounds at 19c; 50 pounds and above at 18c.

**ALFALFA.**—PRICES, (F. O. B.): Per pound, 40c; 10 pounds at 38c; 50 pounds and above at 35c.

**HAIRY VETCH.**—PRICES, (F. O. B.): Per pound, 30c; 10 pounds, at 28c; 50 pounds and above, at 25c.

**BERMUDA GRASS.**—Bermuda Grass is a very valuable perennial pasture grass for the South and is an excellent soil builder. Sow in March or April, broadcast about six or eight pounds to the acre about one-half inch deep. Bermuda Grass and Burr Clover make an excellent combination and an all the year permanent pasture. No re-seeding of either crop necessary. PRICES: Per pound, postpaid, \$1.00.



## COKER'S PEDIGREED WASHINGTON ASPARAGUS

The most painstaking and careful breeding work that has ever been conducted with asparagus was that carried out by Professor J. B. Norton while connected with the U. S. Department of Agriculture. As a result of this work Mr. Norton originated and introduced the variety known as Washington Asparagus. Asparagus is a dioecious plant, the male and female flowers being on separate plants. Washington was the name given to the finest male plant found in the investigations and Martha and Mary were names given to the finest female plants found. The pedigreed offspring from these highly selected male and female plants are known as Martha and Mary Washington and these strains are recognized as the most superior strains of asparagus now known.

In starting the work of asparagus breeding several years ago this Company obtained the best pedigreed stock direct from the Department of Agriculture and we have continued our breeding by the same method so that the pedigree of our stock dates back and connects with those of the U. S. Department of Agriculture. This breeding is designed primarily to eliminate asparagus rust which is the most destructive disease known to this plant.



BUNCH OF WASHINGTON ASPARAGUS

By the selection of only the best plants in our field we are giving customers the benefit of a triple selection. Only the best roots were planted in the field, only the best plants from these roots were used for seed production and only the best re-cleaned seed from these plants is sold to the grower.

Washington Asparagus is as far as possible an extremely resistant, vigorous and high-yielding strain of giant asparagus. The plants represented in its pedigree of the last three generations are the best found in a ten-year search among millions of plants tested. By best we mean the ones that have produced offspring, uniformly rust-resistant, high-yielding, large sized, rapid growth, which indicates tenderness. A more uniform market type has not been seen among other so-called varieties that were in any degree rust-resistant.

The seed stock we offer is from the same plants from which our commercial fields are grown, from which we supply the fancy trade in the northern markets. Our one year old roots are the best in quality and pedigree that can be secured anywhere. They are grown on ideal land and are carefully selected under the immediate supervision of our expert breeder. The originator of the pedigreed method of asparagus breeding, Professor J. B. Norton, is now in personal charge of our asparagus work.

We are practically the only growers who have only Washington asparagus on our farms. There is no opportunity for mixing with the inferior strains usually found in all other asparagus seed growing regions. You can only secure pure Washington asparagus from pure Washington asparagus fields with no Argenteuil, Palmetto, Reading Giant or other inferior strains nearby.

We are prepared to furnish seed of the highest quality of Pedigreed Washington Asparagus and Re-selected Rust Resistant Washington.

We also are prepared to furnish fine one year old roots of Pedigreed Washington Asparagus in moderate quantities. We ship only the large, vigorous, well developed roots.

PRICES: Pedigreed Washington Asparagus seed—Prices postpaid: Packet 25c; 1 ounce 40c; ¼ lb. \$1.25; ½ lb. \$2.25; 1 pound \$4.00; 5 pounds and above \$3.50.

Re-selected Pedigreed Washington Asparagus Seed. Prices postpaid: Packet 30c; 1 ounce 50c; ¼ lb. \$1.75; ½ lb. \$3.00; 1 pound \$5.50; 5 lbs. and above \$5.00.

Pedigreed Washington Asparagus Roots—Prices not postpaid: 50—\$1.35; 100—\$2.50; 500—\$10.00; 1000—\$16.75; 2000 and above at \$15.00 per thousand.



# Coker's Special "Clipper" Seed Cleaner and Grader

Removes all light, immature and worthless seed and all trash and foreign matter—by double screens and vertical air blast method. The most effective seed grader on the market. DOES EFFECTIVE WORK with all Southern seeds, including Wheat, Oats, Rye, Barley, Cotton, Corn, Peas, Sorghum, Soy Beans, Burr Clover, Kaffir Corn, Vetch, Milo Maize, Alfalfa, Millet, Rape, Crimson Clover, Onion Seed, etc. All "Coker's Special Clippers" are furnished complete, fitted with an assortment of TWELVE SCREENS specially selected for Southern seeds.

## Coker's Improved No. 22-B Clipper Seed Cleaner

A recently perfected improved model specially designed for cleaning and grading cotton seed. Also cleans and grades other seeds, grain and beans. The most perfect model seed cleaner for the Southern farmer.

NEW FEATURES: Force feed roller, adjustable, to insure even feed of cotton seed; clutch throwout for feed roller; double grooves for changing elevation of lower screen.

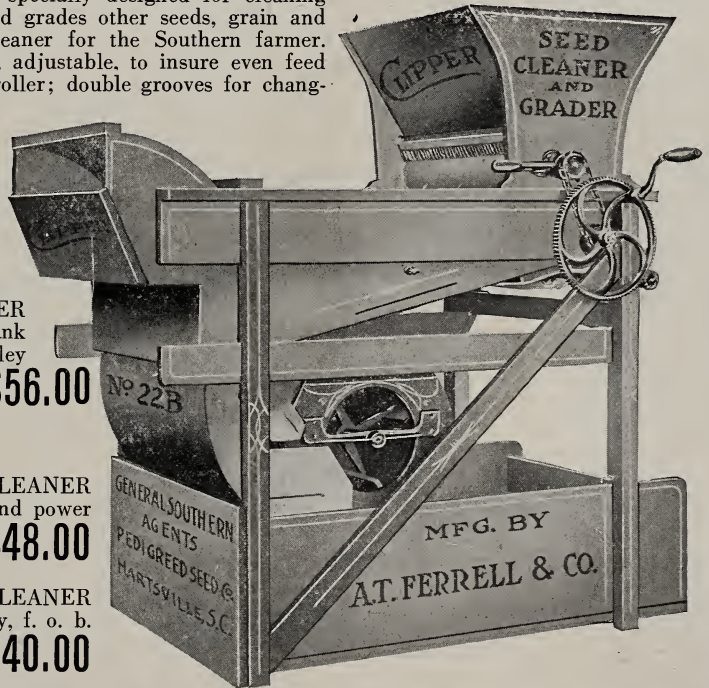
- Simple in Construction.
- Easy to Operate.
- No Complicated Parts.
- No Extras.
- Will Last Indefinitely.
- Operates by Hand or Power.

COKER'S IMPROVED No. 22-B CLIPPER CLEANER, equipped with 12 screens, crank pulley for hand operation and power pulley for operation by engine, COMPLETE, net cash, f. o. b. Hartsville, S. C..... **\$56.00**

### OTHER MODELS

COKER'S SPECIAL No. 2-B CLIPPER CLEANER equipped with 12 screens, crank pulley and power pulley, f. o. b. Hartsville, S. C. Price Cash with Order ..... **\$48.00**

COKER'S SPECIAL No. 1-B CLIPPER CLEANER equipped with 12 screens and crank pulley, f. o. b. Hartsville, S. C. Price Cash with Order ..... **\$40.00**



**OUR GUARANTEE** Try out any of the above machines for thirty days and if not satisfactory in every respect, ship it back and get your money.

In tests conducted by the Department of Agriculture, (Bulletin No. 285), cotton seed properly graded, made an increased yield of 103 pounds seed cotton per acre in one test and an increase of 88% pounds in another test against the same seed not graded. These results speak for themselves.

For further information, write for our special bulletin describing "Coker's Special Clipper" Cleaners.

## Pedigreed Seed Company, Hartsville, S. C.

GENERAL SOUTHERN AGENTS

For North and South Carolina, Georgia, Florida, Mississippi, Alabama, Louisiana, and Arakansas.



## VALUABLE NEW CREATIONS---COTTON AND OATS (Seed For 1922 Crop)

The advancement of agriculture necessitates new varieties, better than those now existing. It is with pleasure that we announce two important new creations that we are preparing to offer next year. These are the new Lightning Express\* Cotton and the new Hardiwhite\* Oat, short descriptions of which follow.

### COKER'S PEDIGREED LIGHTNING EXPRESS\* (Long Staple Upland Cotton)

The lightning Express Cotton is the earliest maturing or shortest season variety of cotton we have ever grown and is, we believe, the earliest cotton in existence. It is a very early selection from the Express which itself is a very early variety. The original superior plant that gave us our Lightning Express was chosen in 1917 and has since been carefully selected to purify the strain and thoroughly tested in comparison with other varieties.

The important characters favoring the Lightning Express over the ordinary Express are the following: 1st. It is earlier than the original Express; 2nd. It has longer lint, averaging about 1¼ inches; 3rd. It averages about 2% higher in lint turnout; 4th. It has rather larger bolls, averaging 69 to the pound of seed cotton in comparison with 71 for the parent variety; 5th. It has fewer large vegetative basal branches than the parent type; 6th. It is more uniform in all characters.

We believe the Lightning Express, because of its supreme earliness and its very open foliage, will be a particularly valuable boll weevil cotton. For the same reasons it is almost certain to be valuable in northern sections of the cotton belt where a short season cotton is desired. These qualities, coupled with its high yielding capacity and good lint quality, are certain to make it a popular cotton. It has attracted more attention and favorable comment from our thousands of visitors this year than any other cotton on our farms.



BREEDING PLOT OF EXPRESS COTTON: COMPARE PROGENY ROWS OF EXPRESS ON LEFT WITH CHECK ROW OR ORDINARY EXPRESS ON RIGHT

The seed of the Lightning Express will be offered for planting in the spring of 1922.

### COKER'S PEDIGREED HARDIWHITE\* OAT

This is a brand new, hardy, white winter oat. The original plant from which this new variety has come was found in the spring of 1915 in a field of Pedigreed Red Appler Oats. It was planted in a test row in our breeding plots in the fall of 1915 and has been under selection and trial ever since. It seems to have originated as a sport or mutation from the Red Appler but differs from that variety in being white instead of reddish brown, in being awnless instead of awned, and in being much more cold resistant, a week earlier in season of maturing, and a heavier yielder. ¶During the five years of comparative tests from 1916 to 1920, the Hardiwhite has made an average yield of 65.22 bushels per acre against an average of 53.6 bushels and 54 bushels for two different pedigreed strains of Fulghum. A twelve-acre increase patch in 1920 gave a yield of 68.3 bushels per acre of fine, heavy, white oats. ¶The Hardiwhite has during a five year test period exhibited a marked resistance to cold injury. In the first year increase blocks of the very cold weather of 1917 all varieties except Hardiwhite were killed out and required to be replanted. In 1918 which was also a severe winter, Hardiwhite in our test plots showed a winter killing of 39.2% as compared with Fulghum selected strain 18, 81.38%; Fulghum selected strain 46, 62.75%; Fulghum ordinary unselected 74.10%; Red Appler ordinary 96.51%; and all other varieties an average of 93.87%. We believe the Hardiwhite to be a winner and expect it to fill an important place in Southern agriculture. The first seed will be sold for planting in the fall of 1921. ¶If you want to try these important new varieties, write to us to book a temporary order subject to confirmation when descriptive price list is later sent to you. This will insure that you get the seed you want. Our supply of each will be very limited.

\*NOTE—The words LIGHTNING and HARDIWHITE as applied to special strains of cotton and oats are trade names used by this Company to designate particular products of its own breeding. The public is warned against the use of these words in the sale of seeds as application has been filed in the U. S. Patent Office for the registration of these trade names.

ORDER  
**PEDIGREED SEED COMPANY**

Operating the Pedigreed Seed Breeding and Experimental Farms

**DAVID R. COKER, President**

**HARTSVILLE, S. C.**

Date.....192.....

AMOUNT ENCLOSED

**Ship the following seed to**

NAME .....

POST OFFICE.....STATE.....

R. F. D. No.....Express or Freight Office.....

Shall we ship by freight, express or parcel post?.....

If by freight, what road shall we ship over?.....

(If by parcel post or charges prepaid, add sufficient amount to cover)

P. O. Order \$.....

Express Order .....

Check .....

Cash .....

Stamps .....

Total \$.....

**TERMS: Cash with order or sight draft with Bill of Lading attached.**

QUANTITY

KIND OF SEED WANTED

@

AMOUNT

PLEASE FILL OUT BACK SIDE OF THIS SHEET

**METHOD OF PAYMENT:** Use P. O. or Express Money Order or Check. Below is a bank check which may be used. Fill in amount, name and address of your bank, and sign. Send amounts of one dollar and less in stamps.

No. .... Date..... 192.....  
TOWN

**PAY TO THE ORDER OF PEDIGREED SEED COMPANY, \$.....**

HARTSVILLE, S. C.

DOLLARS

100

TO .....  
NAME OF BANK

ADDRESS OF BANK

SIGNED.....

PLEASE FILL OUT THE BLANKS BELOW

Pedigreed Seed Company,  
Hartsville, S. C.

Dear Sirs: I think the following planters would appreciate the high grade seed you are breeding, and I would suggest your sending them circulars and literature.

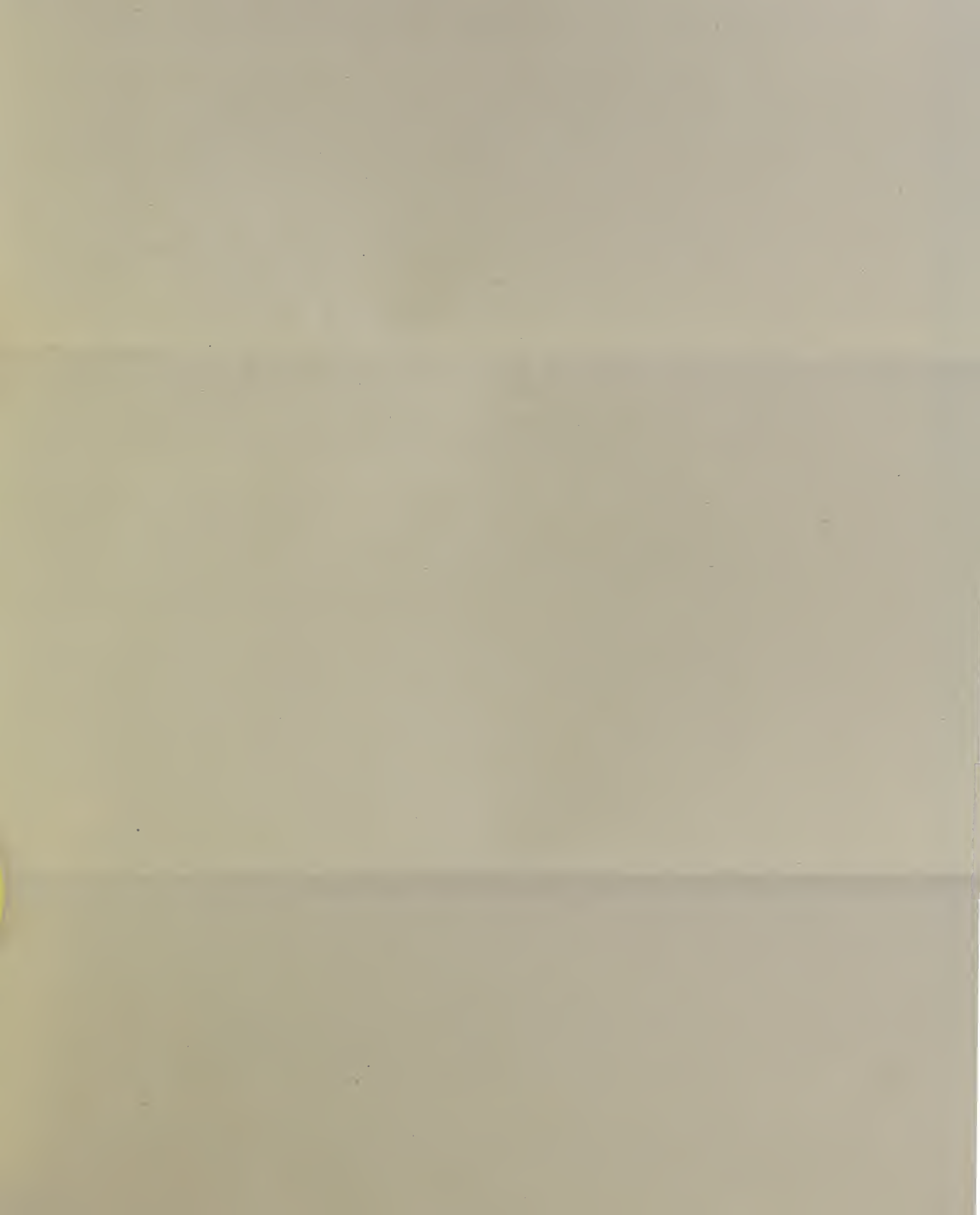
NAMES

ADDRESSES

NAMES	ADDRESSES

(Signed) \_\_\_\_\_

PAY TO THE ORDER OF PEDIGREED SEED COMPANY, 2



# A WORD FROM MR. D. R. COKER

President of Pedigreed Seed Company, Hartsville, S. C.

For the past twelve months the farmers of the South have been in a sad condition. The 1920 crop, made at very high cost, was sold at only a fraction of the cost of production. The 1921 crop has been cut to small proportions by the boll weevil and weather conditions. Few sections will realize enough to pay this year's production cost, including a fair wage to the laborer, unless the price advances much further.

The writer attended the World's Cotton Conference, and discussed world cotton problems with growers from almost every cotton producing country, and he has since returning home devoted much of his time to a study of cotton production problems. He is now fully convinced that cotton production with the average yield and at the average prices and average costs of the past ten years is a poor proposition.

We must not continue to produce cotton under the same conditions as in the past, for, under those conditions, the average farmer has eked out a precarious existence, and much of our own farm labor has been pauperized. Our educational and road systems have lagged far behind those of every other section of the country, and the advancement of our whole civilization has been retarded by the lack of an adequate recompense to the primary producer.

What is the remedy for these conditions? First, cotton production reduced to a point where the world will call for every bale at profitable prices. Second, fertilization and cultivation of the limited cotton acreage by scientific, intensive methods. Third, the use of varieties of well bred seed which will produce maximum crops of high quality and premium length under boll weevil conditions, and by properly preparing and marketing the product. Fourth, an active campaign to combat the boll weevil with early planting, poisoning, and picking up the fallen squares.

If these methods are actively followed, good crops of cotton can usually be produced in all sections of the cotton belt, except the warmer coastal areas. Acting on these principles, we ourselves have this year produced one of the largest yields per acre ever made on our plantations, although we have had to combat very severe weevil infestation and a very wet summer. The varieties planted are our new strains—"Lightning" Express and Deltatype—but we did not rely on these well adapted varieties and good fertilization to insure a crop, but every man on our farms has worked hard and intelligently.

The production of good crops of high-grade extra-length cotton under boll weevil conditions is no task for the lazy or shiftless. The farmer who cannot make up his mind to work hard and to apply the most approved methods to his operations had better "quit the drive" at once.

The writer does not approve of the propaganda for the total abandonment of cotton in the greater part of our cotton-producing area. He does heartily approve of diversified farming, the production of ample foodstuffs, and the use of all the livestock that can be profitably accommodated on the farm. The Southern farmer knows cotton, and it must remain the main money crop in all of the cotton belt except those regions in which experience has demonstrated that the boll weevil cannot successfully be met, or until other crops have been proved to be more profitable. The Mississippi Delta is still planting staple cotton after years of boll weevil infestation, and is raising most largely the varieties which we originated.

The situation presents a challenge to the courage, industry, and good sense of the Southern planter. We are not advising them to do anything except what we ourselves have demonstrated to be practicable and profitable.

September 1, 1921.

DAVID R. COKER



From \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PUT  
STAMP  
HERE

**PEDIGREED SEED COMPANY**  
OPERATING THE PEDIGREED SEED BREEDING AND EXPERIMENTAL FARMS  
DAVID R. COKER, President

**HARTSVILLE, S. C.**

*Knowing good seed is like knowing one of your own  
friends - the better you are acquainted,  
the warmer the friendship.*

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# READ CAREFULLY BEFORE ORDERING

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## PRICES

Our prices are for cash with order. If remittance is not sent with order, it means a delay until we can write you and receive the amount. Customers who have established their responsibility may have shipments made with sight draft attached to bill of lading.

We make no special prices or reductions. We believe our seeds are worth what we charge for them, to one customer the same as another. In case of general changes in price (owing to market fluctuations) orders received after the change will be filled at the new prices.

Remittance may be made by personal check, bank check, money order, cash or stamps. We are not responsible for your order until it reaches us.

## SHIPMENTS

Our excellent facilities enable us to fill practically every order the same day it is received. We exercise the same care with small orders as with large ones, but make a small additional proportional charge for the extra expense of handling, sacking, etc. This expense is included in the prices quoted.

On seed quoted Postpaid, we pay all delivery charges. But all prices marked not prepaid, and all bulk prices, including pecks, half-bushels, bushels and above, **DO NOT INCLUDE** transportation charges, and such shipments will be sent by express or freight collect, unless such charges are added to the prices quoted.

## OUR GUARANTEE AND RESPONSIBILITY

Attached to every bag of seed we ship is a card on which is printed the percentage of germination and purity of that particular lot of seed. In no case do we ship seed that do not measure up to the highest standards.

Our **PEDIGREED** Seeds are bred by the plant-to-row method on our own breeding farms and we guarantee them true to name. Our **IMPROVED** Seeds are bred by general or mass selection and are also guaranteed true to name. Our **GENERAL** Seeds (those not otherwise classified as **PEDGREED** or **IMPROVED**) are not bred by us, but otherwise are as good quality as can be obtained. On **GENERAL** Seeds, however, we give no warranty, expressed or implied, as to description, quality or productiveness.

**EXAMINE OUR SEEDS** when you receive them and test them in any way you see fit. If for any reason they are not satisfactory, they may be returned to us within ten days after they are received, in the original package, **AT OUR EXPENSE**, and **WE WILL REFUND ENTIRE PURCHASE PRICE**. We waive all responsibility for seeds which have been in a customer's hands more than ten days, as the vitality of any seed may be lessened or killed after leaving our warehouse, by subjection to moisture, heat, brine, chemicals, etc. Under no circumstances will we be responsible for the germination of seed after they are planted, whether within ten days or not, as there are many reasons for imperfect germination of planted seeds other than their vitality. In no case do we accept responsibility for more than the purchase price of seed. If purchaser does not accept seed under this condition, they are to be returned at once.

## OUR GROWTH IS NO MYSTERY

The large and increasing demand and wide popularity of Coker's Pedigreed Seeds is no mystery. Its explanation is simple to those who know our seeds, our methods and our men. Briefly, it is: We make no claims which our seeds do not prove; we give the best quality seeds that careful and expert breeding can produce; we exercise a personal care in handling our seeds at every point, recleaning and separating out all except the strong and vital; we sell only such as we can guarantee for high germination and purity, and give actual percentage figures of every lot; we stand absolutely behind every seed we sell with our nineteen years' reputation as breeders, with a substantial commercial backing and with a money-back guarantee; we give prompt and efficient service in our shipping department; and finally, we never allow any complaint, no matter what its nature, to go without a prompt investigation and, if well founded, a satisfactory settlement with the claimant. These are the methods and policies under which our work has grown from a small, one-man local enterprise, to one that now reaches every Southern State.

# PEDIGREED SEED COMPANY

DAVID R. COKER, President

HERBERT J. WEBBER, General Manager

HARTSVILLE, SOUTH CAROLINA



**TRADE MARK**  
**REGISTERED**