ONE HUNDRED YEARS AGO.

A PAPER

READ BEFORE THE

PHILADELPHIA

SOCIETY PROMOTING AGRICULTURE,

AT THE

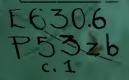
CENTENNIAL MEETING,

February 4th, 1885.

BY

GEORGE BLIGHT.

PHILADELPHIA: Press of McCalla & Stavely, 237-9 Dock Street. 1884.



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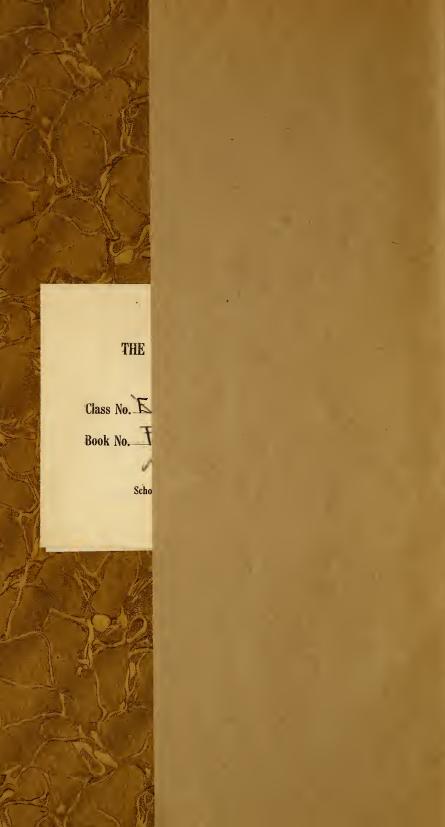
School of Agriculture and Experiment Station

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ONE HUNDRED YEARS AGO.

WITH the arrival of this year, 1885, this Society commemorates the venerable age of one hundred years. It is proper we should take notice of it, and recall some of the prominent events which have marked its existence, and the men who tried to promote its . usefulness and strove to carry out the objects of its formation.

On the 11th of February, 1785, the following gentlemen met at a public house on Water street, having the "Sign of the Cock;" and formed the Philadelphia Society for Promoting Agriculture :---Richard Peters, Gen. John Cadwalader, Col. George Morgan, Col. John Nixon, Thomas Willing, Samuel Meredith, Edward Shippen, Benjamin Rush, John Jones, Adam Kuhn, George Logan, George Clymer, Henry Hill, Philemon Dickinson, Samuel Vaugh, Tench Frances, Charles Thompson, Samuel Powel, Lambert Cadwalader, John Boardley. In this list many honorary members were added : George Washington, Timothy Pickering, Elias Boudinot, William Bingham, Charles Carroll, Robert Milligan, Reuben Haines, and many others. These are familiar names and recognized by all Philadelphians as distinguished in the various occupations of life. When the War of the Revolution had closed, and the Independence of the country had been recognized by the governments of Europe, they laid aside the implements of war and exchanged them for the plow, and endeavored to promote a fondness for the pursuits of peace. which alone would strengthen the nation.

The early transactions of this Society have been carefully preserved, and show how much care and attention were bestowed upon the cultivation of the soil; also the trial of experiments to test the value of plants as adapted to this region. These minutes embrace the period between 1785 and 1810—when no doubt a change in the secretary occurred, who failed to preserve the records. It is not improbable that the second war with England interfered with the meetings of this Society, as no regular minutes of its proceedings can be found. Our library contains a volume in which several interesting agricultural addresses may be found—delivered in the

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years 1818, 1820—one delivered by Chief Justice Tilghman, in 1822, by Hon. Nicholas Biddle, in 1822, by Richard Peters, in 1824, by Matthew Carey, and also by Robert Vaux. These were delivered at the annual meetings in January, and are evidences of the active workings of the Society.

In 1818 this Society issued an address to the people of Pennsylvania asking them to aid in the establishment of a Pattern Farm, where experiments could be made and young men educated in the science of Agriculture. Many large subscriptions were obtained, but it was an undertaking too gigantic for that period to accomplish.

In 1832 the publication of the "Farmer's Cabinet" was commenced, and much pertaining to agriculture can there be found. From this journal we learn that it was not until 1838 that our venerable Society resumed active work. It takes great pleasure in announcing in its editorial column that this Society had been revived under the most favorable auspices. For various reasons it had been allowed to languish—in fact, laid dormant for years. It makes an appeal to the farmers of Philadelphia county and Pennsylvania in general to come forward and aid the noble cause.

At the annual meeting held on the 23d of January, 1838, the Society was reorganized by the election of Mr. Nicholas Biddle as President; Dr. James Mease and Joseph Cloud as Vice-Presidents; Algernon S. Roberts as Treasurer, and Kenderton Smith as Secretary; Committee of Correspondence, Richard Peters and R. A. Parrish. In November of the same year the first exhibition was held at Rising Sun Hotel, on the Germantown road, three miles from the city. It was attended with great success. The Committee of Arrangements were: Kenderton Smith, Nicholas Biddle, James Thornton, Isaac W. Roberts, James Gowen, John Fox, Robert Parrish. The only improved breed then recognized was the Durham Shorthorn. Mr. Charles Wolbert took the first prize for his white bull "Colostria," Mr. Thomas Botch, for his bull "Bruce," Mr. Isaac W. Roberts, for his fat steer, and Mr. Algernon S. Roberts, for his native cow.

At the annual meeting in 1839 the same officers were elected, with the addition of Mr. Sidney G. Fisher as Corresponding Secretary —which office he held until his death, in 1864. From this period, 1839, the Society became an active organization, holding regularly its monthly meetings and the annual meetings alternately at the Rising Sun Hotel and at Ghem's Hotel, on the Lancaster turnpike, one and a half miles from Market Street bridge. To advance the cause of agriculture and to pay the premiums offered, application was made to the Legislature for an appropriation of \$600 per annum, and it was granted. This sum was regularly paid out of the County treasury until the Act of Consolidation was passed, when it lapsed. With this, premiums were paid, and no charge of admission was made at the exhibitions. After this we were obliged to resort to an entrance fee of 25 cents. It was in 1839 we first notice the value of imported cattle—in Mr. Dennis Kelly's imported bull "Prince of Wales," and in Mr. Gowen's cow "Dairymaid," and in Mr. Paschal Morris' cow "Alice." These were all Durham Shorthorns. At this period, 1839, my agricultural career commenced, and I can well recall those fine animals, as they were admired by all visitors.

Among the men who were then active in the affairs of the Society were Isaac W. Roberts, Samuel C. Ford, W. S. Torr, Philip Reybold, P. R. Freas, Aaron Clement, Henry Charley, Owen Sheridan, Owen Jones, Isaac Newton, George Uhler, C. W. Harrison, John Lardner, Cornelius S. Smith, Dr. Emerson, Robert T. Potts, John S. Haines, C. B. Rogers, Elias E. Boudinot, John McGowen, Morris Longstreth, Imanuel Eyre, William Wister, Chalkley Harvey, Dr. Robert Hare, R. Penn Gaskill.

At this time the Society encouraged the growth of fine crops, and offered liberal premiums for the best five acres of corn, potatoes, sugar beets, turnips. On many occasions I acted as one of the committee. Our visits to the many farms were the source of much pleasure. Especially do I recall the fine crops of roots raised on Mr. James Gowen's farm at Mount Airy, and the many prominent men who assembled there to talk on the subject of agriculture.

At the exhibition of 1842 the trial of plows was the main feature of the year. The Dickinson plow, Chestnut Hill, had been in universal use, but on this occasion the Proutty & Mear's selfsharpening plow was introduced and became the favorite with the farmers.

Also, in 1842, the Jersey and Guernsey cattle were first exhibited and classified for the award of premiums under the name of Alderney. Mr. Nicholas Biddle, Dr. Gibson and Mr. Philip Physick and Mr. Supplee contended for those premiums, Mr. Biddle taking the greater number. There was no distinction made between the cattle of the two islands, and many crosses were made with the full approval of the greatest admirers of both breeds. This continued for some years, when the great mistake was discovered. The establishment of the herd-book remedied this defect, but most of the breeders had great difficulty in registering their cattle, having mixed the blood of the two islands.

At this period of the Society's history the annual address was always an object of interest. Distinguished men were selected. In 1842 Mr. Peter A. Brown was the orator. He dwelt much on the raising of sheep. Those interested in this branch of husbandry would do well to read this address.

In 1844 Mr. Nicholas Biddle, declined re-election, and Dr. James Mease was chosen President; Mr. Kenderton Smith, Vice-President; Mr. Aaron Clement, Secretary; and in the following year, 1845, Mr. George Blight succeeded Mr. Algernon S. Roberts as Treasurer, which office he still holds—a period of forty years.

At this time the use of guano was introduced, and the mode of its application to plants was but little understood. Well do I recollect how my entire crop of corn was destroyed by a too liberal supply of this fertilizer, the germ being burnt off by the heat of fermentation.

In 1846 Mr. James Gowen, ever a great patron of agriculture, was desirous of establishing an agricultural school to educate young men to be *practical* farmers. This was accomplished in 1847, by leasing to Mr. John Wilkinson his farm at Mount Airy, Germantown, who carried on this school successfully for some years. This Society gave Mr. Wilkinson what encouragement it could, but finally he was obliged to abandon the project.

In 1846 the Society allowed Mr. John S. Skinner the free use of their rooms for the publication of the *Plough*, *Loom and the Anvil*. It advocated how mutually allied those three great interests are, and it had a large circulation.

At this period the Society was in its most flourishing condition. The meetings were largely attended. At times thirty were present, all desirous to promote the cause we had at heart. The potato disease then first troubled the farmer. This was thoroughly investigated, but no especial conclusions were reached. The proper season for cutting timber occupied our attention. Much correspondence took place with those most experienced, and the conclusion arrived at was that wood cut during the months of February and August was the most durable. Lectures on chemistry were delivered by Professor Johnson, and members of this Society attended. In this and in many other ways the Society showed its activity, and at each meeting new members were elected. Exhibitions were annually held, each developing some new feature in the improvement of stock and implements. These were held at the above mentioned places.

Members who became active at this time not heretofore mentioned were: Mr. John Wilkinson, Gen. George Cadwalader, Dr. James McCrea, Samuel Cooper, James and Adrian Cornell, of Bucks county; James S. Huber, Gustavus Engle, A. M. Spangler, Dr. Alfred Kennedy, Mr. Harry Ingersoll, Mr. Charles Fox, Mr. Dennis Kelly and Mr. Alexander Scott.

In 1847 the Farmers' Club was organized as auxiliary to this Society. To do this more effectually, monthly visits to each other's farms were made. The stock was examined and a general inspection of the crops was made. The original members of this Club were: Mr. David Landreth, Dr. Alfred Elwyn, Mr. James Gowen, Mr. George Blight, Mr. Philip R. Freas, Mr. Owen Sheridan, Mr. J. S. Huber, Mr. Charles W. Harrison, Mr. Samuel C. Ford, Mr. Casper Sharpless, Mr. John S. Haines and Mr. Harry Ingersoll. In the following year Gen. R. Patterson and Mr. McMichael were elected. This Club still exists, but has become a social organization.

In 1849, a German by the name of Nefflin was introduced to the Society at one of the regular meetings. He claimed to have a perfect knowledge of the cow, and to be able to distinguish her character; whether she be a milker or no. This he called "the Guinon system of judging cows." His theory was entirely new, and we all had misgivings as to the correctness of his powers of judging. A committee was appointed to visit with him the dairies in the neighborhood of the city, and it was surprising with what accuracy he portrayed the character of every cow, to the great astonishment of her owner. It was my good fortune to form one of the committee, and I have been a firm believer in the theories of Monsieur Guinon ever since. The appointment of a commission by Governor Hartranft to investigate the truth of the theory, and the report it made has done much to establish the correctness of this system.

In 1853-4 the properties on which the exhibitions were held changed ownership. Streets were opened and many city improve-

ments so altered their character that we were obliged to seek other locations. In 1854 the Pennsylvania State Agricultural Society was desirous of holding their exhibition in Philadelphia. They made application to the Pennsylvania Railroad for the vacant lot of ground now comprehended in the space from Powelton Avenue station to the River Schuylkill, and Market Street and Callowhill Street bridges. Their request was granted, and a fine show was held, being very profitable to the Society. In 1855, this large area, well graded, was still unoccupied by the same railroad, and its use was again obtained for an exhibition to be held by this Society. To follow in the wake of the State Society was considered a bold act which required great energy to perfect. The members were equal to the task, the citizens responded to our demands, and the officers of the Society opened to the public an exhibition equal to the one of the previous year and in some respects more attractive, especially in the exhibit of implements and produce. Nothing up to that period had exceeded the display of implements made by Mr. Landreth and C. B. Rogers and others. At this period the trotting course was considered a very important feature of an exhibition. It was so in this case; some celebrated horses were exhibited and attracted crowds. It was kept open from the 11th to the 14th of September, the weather was fine, and the success was beyond our expectations. This was a memorable fair, and the last ever held by this Society. In 1856 the United States Agricultural Society held its second exhibition on these grounds, and in the following year they were required for railroad purposes.

During this year (1855) the rooms of the Society were changed. In December we removed to No. 166 Chestnut street, near Seventh, in the Fisher Buildings, second story, south. The meetings continued to be well attended, notwithstanding we were prevented from holding exhibitions. These new rooms being adjacent to the hotels on Market street, where many of the "market" farmers "put up," it was desirable to open them on Friday evenings for their convenience, but this good purpose failed—the farmers could not see the advantages it offered. The most conspicuous event of 1856 was the celebration of its seventy-first anniversary by a grand dinner given on the 11th of February at the Sansom Street Hall, which was tastefully decorated with flags and agricultural devices. Mr. Landreth, then President of the Society, took the head of the table, Mr. Anthony Newbold and Mr. Aaron Clement, on each side as VicePresidents. Dr. A. L. Kennedy was then Secretary. Circumstances prevented your Treasurer from being present. General R. Patterson, Judge Conrad—then Mayor, and Mr. W. Meredith were among the invited guests. Mr. Landreth delivered a very interesting address, which was frequently interrupted by applause. This was a memorable occasion in the history of the Society.

After the year 1860 interest in the affairs of the Society began to diminish. In the adjoining counties the agricultural societies became more influential and drew away many of our active members. The public mind was then much excited by the political events of the day, which culminated in the Civil War in April, 1861. Meetings, however, were held and a few most interested would attend, but all active operations were suspended. On the seventyfifth anniversary a large attendance was secured. Notice had been given that Mr., now Judge, Craig Biddle would read a paper on the transactions of the Society. This was a most satisfactory article and gave great pleasure to all the members present. There are many who are familiar with the condition of the Society for the last twenty-five years. A few of the members still adhered to the old parent Society, and the minutes will show that the meetings have been more or less regularly held. At these meetings subjects prominent in agriculture of the day were discussed, such as the substitution of creameries for the manufacture of butter, and new invention of the separator, as well, as the introduction of greatly improved breeds of cattle. It is my fervent wish that this influence, though silent, may still continue to promote the noble cause of Agriculture.

9

Presidents of the Society.

1785—SAMUEL POWELL, ESQ. 1806—Richard Peters, ESQ. 1820—Richard Peters, ESQ.

1838—Nicholas Biddle, Esq.
1845—Dr. James Mease.
Algernon S. Roberts, Esq.
James Gowen, Esq.
Dr. Edward Elwyn.
David Landreth, Esq.
Aaron Clement, Esq.
Craig Biddle, Esq.
WM. H. Drayton, Esq.
1885—Dr. Chas. R. King.

THE different localities where the Society held its meetings were as follows: February, 1785, Byrnes' Tavern, Sign of the Cock; June, 1785, removed to Carpenters' Hall; April, 1805, the City Coffee House was temporarily used; in June, 1805, permanent arrangements were made with the Philosophical Society to pay one-half the rent of their hall, Fifth street, below Chestnut; in 1842 the Society removed to Washington Hall, South Third street, adjoining Head's Hotel. It was during the occupancy of these rooms that the Society attained its utmost activity. In 1855 the rooms of the Society were removed to the Fisher Buildings, Chestnut street below Seventh, and in 1862 to the south-west corner of Ninth and Walnut streets, and again in 1874 to No. 244 South Third street, the present locality.

On motion of Hon. Craig Biddle, the thanks of the Society were returned to Mr. Blight for his satisfactory paper, and a copy of the address was requested for publication.

Mr. Burnet Landreth read an interesting paper, giving the early history of agricultural societies.

The thanks of the Society were returned to Mr. Landreth, and a motion prevailed that the document be published in connection with Mr. Blight's paper.

On motion, Mr. Blight's paper was directed to be entered on the minutes.

A PAPER

READ ON THE OCCASION OF THE CENTENNIAL ANNIVERSARY

OF THE

PHILADELPHIA SOCIETY

FOR THE

PROMOTION OF AGRICULTURE,

FEBRUARY 4, 1885.

$\mathbf{B}\mathbf{Y}$

BURNET LANDRETH

One of the Vice-Presidents.



MR. PRESIDENT AND MEMBERS:

To-day we meet to celebrate the Centennial of the birth of the Philadelphia Society for the Promotion of Agriculture—a notable event, as one hundred years is a long time in this country of tran-Society in sient things for any society of such character to continue in existence, America, and especially interesting as it commemorates the founding of the first Agricultural Society organized in the western world, a Society which became the fertile mother of all other Agricultural Societies since established in America.

As an addenda to the history of this ancient and honorable Society as just read by Mr. Blight, it may not be out of place, certainly will be of some interest, to refer to the establishment of similar organizations for the advancement of agriculture preceding its Agri. organization and immediately following, and to the condition of development development of agriculture at those periods.

Under the expansion of the human mind succeeding the opening of the last century, producing a general advance in all things material, Agriculture rose to a higher plane, reason rather than habit, beginning to guide in the culture of the soil and in the administration of the farm. An advance in the system and theory of husbandry offered an inducement to a more intelligent class to embark in farming, the results of which took expression in more tidy farms, improved stocks of seed and domestic animals, a more complete organization and more profitable results. Societies for mutual improvement next followed, and Farm Schools in their order, till now the reading farmer finds it impossible to wade through the essays, reports, transactions and records of experiments issued from every press.

The avocation of the farmer of to-day, if he be a progressive man is scientific in the treatment of soils, in the developments of new ^{Farmer of} forms of grains, bulbs and roots by selection and processes of hybrid-

ization, in the perfection by selection and breeding of the most desirablequalities of domestic animals for the production of the heaviest carcasses of meat, most profitable forms of fibre, in the development of milk, of speed and of power. The intelligent farmer must be a mechanic, as the machinery of the present day is complex and expensive. He must be a good merchant to dispose of his products in the best markets, and at the most profitable moment.

Let us review some of the forces which have done so much to bring about these striking advances in husbandry:

The first Agricultural society of which there is any record was First Agri. Society in founded in the north of Italy about 1705, but it lasted only a few Europe,1705. vears.

First Agri.

Southern Europe was also first in systematic agricultural educa-School, 1706. tion, a Farm School having been founded at Hojwye in Switzerland in 1706. It is claimed that three thousand peasants were instructed in the higher systems of farming during a period of thirty years following, but no doubt the teaching was to a large extent fallacious as the theories of Virgil were not yet exploded. Nothing was known of vegetable nutrition, nothing of vegetable physiology, little was known of botanical science, Linnaeus was an infant.

The second scholastic effort at agricultural education was the Second Agri.School, foundation of a professorship of Agriculture at Edinburgh in 1790. 1790. To return more directly to the formation of Agricultural Societies

Scottish we find that the Scotch next appeared as exponents for a higher Agri. Socy., farm education, founding, in 1723, a "Society of Improvers in the

Knowledge of Agriculture for Scotland." This existed only a few 1723. years, but the society was reorganized in 1735 and continued to hold meetings for a brief period thereafter.

In 1731, The Dublin Agricultural Society was founded, under the Irish Agri. Society, 1731 title of "The Dublin Society for the Improvement of Husbandry."

Yorkshire. After this, in 1737, was organized the Yorkshire Agricultural Society. In 1779, the "Bath and West of England Society" was founded. 1737. Bath, This has since become an organization of great value to the cause 1779. of Agriculture, ranking only after the "Royal."

The oldest Horticultural Society in Europe is in Belgium, estab-First Horti, Society,1780. lished in 1780, and, as far as known, the first established in the world.

The "Horticultural Society of London" was founded in 1784, London Horticul-through the efforts of Mr. John Wedgewood and Sir Joseph Banks, tural, 1784. the latter of whom replied to an invitation to join as follows: "I approve very much of the idea, I know of no trade that conceals so many valuable branches of knowledge as that of the gardener, and few subjects where the public would be more benefited by the disclosures which such a society would immediately occasion. I shall be flattered if the gentlemen who are to arrange the plans give me the honor to set me down as an original member." This list of original members numbered sixty. The first volume of transactions were published in 1810, and until 1848 the Society poured out copious stores of information, the results of a multitude of important and well tried experiments. These papers were published in a series of ten volumes at a total cost of £25,250, or \$12,500 for each of the ten series. A sum very far exceeding the subscriptions, though each member received a volume as published. We have not heard of any American society that has been as liberal as this !

The next Agricultural Society on record, after the Bath and West Highland of England, is the Highland Society, instituted in 1783, and since Society, 1783 chartered as the "Highland and Agricultural Society of Scotland," holding its first meeting in 1784, the year preceding the organization of our own Philadelphia Society. This Highland Society upon its organization received from the government the sum of \pounds 10,000 accruing from the sales of attainted lands following the rebellion of 1745. In 1799 it began to publish its transactions. At present, its membership exceeds five thousand. To illustrate the scope of this society and the broad and practical views of its founders may be mentioned the objects which it designed to advance :

"1st. Agricultural meetings with a general show of stock, implements, farm and dairy produce to be held in the principal towns of Scotland.

"2d. Encouraging a system of district shows for the improvement of breeds of stocks most suitable for the different parts of the country.

"3d. The encouragement and promotion of a proper system of Agriculture and Forestry education.

"4th. For the advancement of the Veterinary art by conferring the Society's certificate upon students qualified to practice.

"5th. The appointment of Chemists in the science of Agriculture.

"6th. The establishment of an Agricultural museum.

"7th. The publication of reports and prize essays."

New York In 1791, the State Agricultural Society of New York was founded State Agri. and continued till 1819, when it was dissolved and a State Board of Society 1791.

Society 1791. Agriculture formed. In 1832 the present New York State Agricultural Society was organized.

Massachu. In 1792, the Massachusetts Society for Promoting Agriculture setts Socy., was established and still exists.

^{1792.} In 1792, the London Veterinary College was founded—the first Veterinary and ever the foremost. The British Board of Agriculture, the first Society, 1792. governmental effort made in Great Britain to advance husbandry, was

organized in 1793. It was conceived, developed and established British principally through the exertions of Sir John Sinclair and Arthur riculture, Young and continued active till 1812. It is interesting to note

that its character was to a considerable extent influenced by the opinions of George Washington, then in intimate correspondence with the gentlemen just named. Sir John Sinclair said of the British Board of Agriculture : "It made farmers residing in differ-" ent parts of the kingdom acquainted with one another and caused " rapid dissemination of knowledge amongst the whole profession. " The art of Agriculture was brought into fashion, old practices " were amended, new ones introduced and a degree of exertion " called forth, heretofore unexampled, among agriculturists in this " island."

Washington, writing to the first named on one occasion upon the subject of the Board, said: "I consider it an institution, of the utility of which I entertained the most favorable idea from the first intimation of it, and the more I have seen and reflected on the plans, the more convinced I am of its importance, in a national point of view, not only to Great Britain, but to all other countries, and am solicitous to protect it from the ignorance or inattention of future ministers, who, incapable of estimating the merits of such an institution themselves or concerning the advantages that might be derived from it, might heedlessly either diminish the sphere of its utility or terminate its existence."

Again he said, writing of the Board: "I am convinced of its importance in a national point of view, not only to your own country but to all others which are not too much attached to old and bad habits to forsake them, and to new countries that are just beginning to form systems for the improvement of their husbandry." Washington was made a foreign honorary member to the British Board of Agriculture in 1795. It was dissolved in 1813 in consequence of the withdrawal by the government of the annual Parliamentary grant, a party measure in which Agriculture was a shuttle-cock, as Washington had prophetically intimated it might be.

Here in serial order another American Society entered the field, South Car. "The South Carolina Agricultural Society," being incorporated in 1795. 1795. It did much to improve processes and still exists in an unbroken line.

Next after this, in 1798, the "Smithfield Club" of London was Smithfield, Club, 1798. organized, since famous for its cattle-shows.

The "Society of Horticulture of Paris" was founded in 1826, Paris, 1826. "for perfecting the art of gardening, for simplifying the method, for facilitating study and processes." It held its first exhibition in 1834.

Closely following, was founded the "Pennsylvania Horticultural Penna. Society" on June 2d, 1828, being the first society of the kind organized in America. Like its mother, the Pennsylvania Society for the Promotion of Agriculture, it became in turn the mother of numerous horticultural organizations throughout the Union for the advancement of rural education, taste and comfort. Philadelphia has thus the high honor of being the birth place of organized Horticulture, as well as of Agriculture, and her citizens yet retain their ancient prestige as patrons of these arts.

The first officers of the Pennsylvania Horticultural Society were :Horace Binney, President.N. Chapman, Vice-Prest.James Mease, Vice-Prest.Samuel Hazard, Cor. Sec'y.Matthew Carey, Vice-Prest.William Davidson, Treasurer.David Landreth, Vice-Prest.David S. Brown, Rec. Sec'y.

The "Royal Agricultural Society of England" was established Royal of in 1838 with four hundred members, now increased to over six England, thousand. It is now the leading Agricultural Society in the world.

The Royal Agricultural Society of Ireland was founded three years after its English namesake.

ee Royalof Ireland, 1^{841.}

Thus it appears, the eighteenth century may be termed the renaissance or new birth of Agriculture, little attention being paid preceding that era to the systematic cultivation of the soil; herding, with its freedom of movement, being preferred to the toil of tillage. A more settled state of political conditions made it possible for the owners of land to improve them and give personal attention to their management, though pursuing systems radically wrong judged in the light of the science of the present day. Tull, 1731. Jethron Tull, in 1731, published his famous book, notable for vigor in the assertion of systems, some of which were soon proved fallacious, but containing many truisms, far in advance of his day and generation. His scathing criticism of the so-called "Virgillian Husbandry of England" was well deserved and bore admirable results. Tull was the first in England to drill wheat in modern days. History records in very early days the use of appliances for the mechanical distribution of seed, but no machine of practical value is known to have been used till Tull invented his wheat drill in 1733 and his turnip drill seven years thereafter. Both being upon the

principle of revolving cylinders fitted with changeable cavities for the reception of variable quantities of seed. Turnip culture was introduced during this era, being first pursued

Turnp culture was introduced during this era, being first pursued culture,1750 in Norfolk, England, as early as 1750, and introduced into Scotland about 1770; growing there to gigantic proportions by reason of favorable soil and climatic influences and the keen business insight of the Scottish farmers.

Mangold Following the culture of Turnip came the growth of the Mangelculture,1786. Wurzel, which was introduced about 1786 as a field crop for cattlefeeding purposes. But to show the backward state of Agriculture

Orchard preceding these dates, we may refer to the fact that Orchard Grass, Grass, 1764. native to Europe, as well as America, was uncultivated preceding 1764, and to still further illustrate the undeveloped conditions, cite the astounding statement from the "Edinburgh Quarterly Journal of Agriculture," "that up to 1792 the processes of sowing Grass Seeds were unknown in Scotland." In England more progress had been made, but systematic seeding to grass was not practiced till after the introduction of Timothy and Orchard Grass—now about one hundred years ago.

Cattle bred With Cattle no effort had been made to give them distinct breed to fixed types characteristics till about 1720, when attention was first practically fixed upon their improvement. Short-Horns becoming, about 1750, a distinct type, a recognized breed, rapidly growing into favor and assembled in large herds. The Duke of Northumberland, in 1766, was dubbed the "Yorkshire Grazier," so fond was he of his Short-Horns.

Bakewell Sheep at this time were wonderfully improved through the efforts Sheep, 1765. of Robert Bakewell, 1765 to 1790. His processes of selection on the sheep of Leicester, producing such marked improvements as to induce others to develop improved types of other breeds. Bakewell was so successful in his processes of selection that his rams brought him f_{400} each per annum, a fabulous sum for that day.

Thus it will be seen that just preceding the establishment of our venerable Philadelphia Society, the attention of the land-holders of the old world was strongly turned to the advancement of Agriculture, similar fruit being born here as soon as the American soldiers were enabled to turn their swords into plowshares.

Philadelphia was a fitting place to organize the first Agricultural Society, it was the largest and most wealthy city. Surrounded by a country of wonderful fertility, its people had always taken much interest in rural affairs, and a retrospective glance over what had been done here in connection with things pertaining to country life will be worth a moment's time. .

As far back as 1728, John Bartram began to make his Botanic Bartram's garden and arboretum, the first in the United States. Some of his old Garden, 1728. trees still stand in their full majesty to-day. The old house and grounds are worth a pilgrimage by any one who has any reverence for antique things and the memory of one of nature's noblemen.

In 1748, Peter Kalm, a pupil of the immortal Linnaeus, settled Kalm, 1748. at Philadelphia and did much to extend the range of botanical research. Dr. Adam Kuhn, another pupil of Linnaeus, also set- Kuhn, 1768. tled in Philadelphia in 1768, and was the first Professor of Botany in America. In 1773, the second Botanical Garden was established a few miles out of Philadelphia by Humphrey Marshall, and his Marshall. example was followed by John Jackson, whose plantings, in part, 1773**.** still stand as his monument. In 1785, Humphrey Marshall published at Philadelphia the first American botanical work, one of credit to his attainments and enterprise.

Thus, Philadelphia was in a marked degree a nursery of rural Philadelphia tastes, even in Colonial days, and later, after the Revolution and a Nucleus of Rural Taste. during the early years of this century and to the present, it still leads in the horticultural beauty of its surburban homes and in the advanced methods pursued by its graziers, its dairymen, and its grain farmers. It may be interesting to note that those families who from early days till the present have retained their wealth and standing have been those who have rigidly held to their ancestral acres.

Among the first of American farmers of that day, stood Washing- Washington ton, who devoted all his leisure time and thought to the improvements of his lands, directing with his eye and hand and laying out his system of rotation, complete and rigidly adhered to. As before remarked,

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1786.

he was in constant communication with the foremost farmers of the old world, and on every occasion demonstrated his conviction that upon the farmer depended the wealth and prosperity of the nation. He realized the depressed condition of Agriculture in Americasaying in a letter to Sir John Sinclair, in 1786, "The system of Agriculture, if the epithet of system can be applied it, which is in use in this part of the United States, is as unproductive to the practitioners as it is ruinous to the landlords, yet it is pertinaciously adhered to. To forsake it, to pursue a course of husbandry which is altogether different and new to the gazing multitude, ever averse to novelty in matters of this sort and much attached to their old customs, requires resolution and without a good practical guide may be dangerous." In America up to 1790 there was no rational system of farming pursued, the soil ran down year by year and with a few exceptions everything was done in a slipshod manner.

Gypsum 1795.

The introduction of the use of Gypsum did much, in fact did introduced everything, to establish new systems with improved results. Its value in America was first demonstrated as a stimulant to the growth of Clover as a recuperative crop in the neighborhood of Philadelphia in 1795 by Judge Peters, then President of this Society, who by his zeal and perseverance did more than any one else to illustrate its value on light soils, and aid in the establishment of a practical system of rotation of crops or convertible husbandry.

Another Philadelphian, though residing in Jersey, a few miles Newbold invented the above the City, was the inventor and patentee of the first iron plow, iron plow, a patent being granted to Charles Newbold in 1797 for a cast-iron 1797. plow in which the mould board, share and land slide were all cast together. This was considered so valuable an invention that it attracted the attention of scientific men, and Jefferson, among others, applied himself to developing a mould embodying principles to lessen draft and friction; he was a strong advocate for mould boards

constructed upon mathematical principles, as appears by his letter of 1798 to the British Board of Agriculture, and also in a similar report to the Institute of France.

Systemsin culture.

About this time the intelligence of the advanced farmer began to teach him that different plants exhausted the soil in unequal degrees and in different manners producing varying after-results. This gave rise to systems in cropping, or the planting of crops in courses most advantageous to the soil, not only resting and cleaning the land, but in many notable examples raising it from a degree of moderate

fertility to great productiveness, distinct systems being adopted on lands of distinct formations. Before that, no difference in culture being made whether lands were calcareous, sandy, silicious or argillaceous. Virgil alludes to the use of limestone ash as a fertilizer, and tradition has it that the early inhabitants of Britain used it also, but it remained for a German, by the name of Meyer, in 1760, to practically and publicly demonstrate its value. The use of Gypsum, as a dressing to the grasses, was certainly a long step in advance, and did much to improve the tone of Agriculture.

In 1775, we first hear of the use of bone as a fertilizer, in England, first entire, then crushed, making another era of progress in as a fertilizer the development of Agriculture, and like all other good things connected with the history of the improvement of husbandry, requiring perseverance and determination on the part of its advocates.

We are indebted to Washington directly, and to Sir John Sinclair United indirectly, for the formation of a United States Department of States Department of Agriculture, well conceived, but miserably administered. Sir John Agriculture. Sinclair, September 10th, 1796, writing to Washington, as follows: "I hope you will recommend some Agricultural Establishment on a great scale before you quit the reins of government. By that, I mean a Board of Agriculture or some similar institution at Philadélphia, with Societies of Agriculture in the capital of each State to correspond with it. Such an establishment would soon enable the farmers of America to acquire Agricultural knowledge, and, what is of equal importance, afford them the means of communicating what they have learnt to their countrymen."

At the next session of Congress, Washington did recommend a National Board of Agriculture in the following language, under date of Dec. 5th, 1796, here again illustrating his breadth of mind and patriotism: "It will not be doubted, that, with reference either to individual or national welfare, Agriculture is of primary importance. In proportion as nations advance in population and other circumstances of maturity, this truth becomes more apparent and renders the cultivation of the soil more and more an object of public patronage. Institutions for promoting it grow up supported by the public purse; and to what object can it be dedicated with greater propriety. Among the means which have been employed to this end, none have been attended with greater success than the establishment of Boards composed of proper characters charged with collecting and diffusing information and enabled by premiums and small pecuniary aid to encourage and assist a spirit of discovery and improvement. This species of establishment contributes doubly to the increase of improvement by stimulating enterprise and experiment and by drawing to a common centre the results everywhere of individual skill and observation, and spreading them over the whole nation. Experience accordingly has shown that they are very cheap instruments of immense national benefits."

We have now a National Agricultural Department, but except as a valuable statistical bureau, which work could be managed by the Department of the Interior, what good does it accomplish in the line of its original conception? with its annual appropriation and expenditure of eight hundred thousand dollars. Its field experiments are entirely secondary to the practical work of several State Boards and its efforts towards the introduction of new plants, fibres and seed are eclipsed by the work of private individuals, though the broad plains and mountains of our half-developed globe doubtless bear a wealth of valuable plants awaiting the research of enterprise.

The Agricultural Department was founded originally for the special purpose of introducing *new varieties* of valuable plants, but how sadly it falls short of this important duty. Considering the age, considering the advancement of Agricultural intelligence, considering the opportunities at command of the United States Department of Agriculture, most prominent among which may be named its official connection with our Ministers and Consuls, the world over, and the courteous attention which would be given to its representatives or requests by every ruler, great or small, what has it done? Next to nothing ! What has it done in the way of introduction of valuable newly discovered, native or foreign forms, of fruits, of esculents, of fibres, of cereals, of oleaginous plants, of saccharine plants? It certainly does not advance these interests as designed by those active in its incorporation.

With this somewhat disjointed review of the history of Agricultural Societies and imperfect references to the contemporaneous development of Agriculture, I will close with the remark, that not only did our Society lead in the New World, but was almost as early established as those of the Old World, and is to-day, with three or four exceptions, the senior of any in Europe.

THE DAIRY.

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AN ARTICLE READ BEFORE THE BOARD OF AGRICULTURE, OF THE STATE OF NEW JERSEY, FEBRUARY, 1885, BY GEORGE BLIGHT, ONE OF THE GUINON COMMISSION OF PENNSYLVANIA.

In the neighborhood of large cities no branch of Agricultural pursuits can be carried on with more profit than a well-conducted dairy. The use of milk is so general that the supply seldom exceeds the demand. No region is more favorably situated for this purpose than the State of New Jersey, lying as it does between the two largest cities of the Union, and containing many large cities and towns of its own.

The proper selection of the cows is the first consideration—to secure such as will yield 15 quarts, and continue to milk close up to calving. Cows of this description will consume no more food than those of an inferior quality.

Within the past two years it has been my pleasure to visit many of the dairys of this State as well as of Pennsylvania, and to converse freely with the owners upon the character of their stock-in which I notice great improvement, and, also, in the manner of conducting their dairies. Being a strong advocate of the Guinon system of judging cows, I called their attention to it. In some cases they are ignorant of his discoveries, others, again, know of him, but ridicule the idea that ovals on the bag or the mode in which the hair on the escutcheon runs, can indicate the value of the cow, but when the character of the cow is portrayed, her abilility to yield as many quarts, and the time of its continuance is named, they are astonished. and want to know more about the system. In such dairies there are many fine large cows in appearance, but had the owner any knowledge of M. Guinon's theory, he would not have added them to his herd. The old and usual mode of selecting cows was good in its day, but this is a progressive age, and why not adopt all the means in your power to secure your interests in this matter, as in any other pursuit in life? One charm this system possesses-it does not require you to unlearn any of your pre-conceived views; it aids. you in your judgment and increases your knowledge of the bovine race. 9 000

That the system is complicated, and not easily understood, I

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> readily admit; like all good things it requires some trouble and attention to obtain a perfect understanding of all the minute points, but to one whose business it is to raise heifers for the dairy or to purchase cows in the market, it is worth all the time and attention required to secure this knowledge. To open his book and find there are no less than 64 different forms of escutcheons is enough to confound the learner, but let me assure him that a little perseverance and application of the system will soon open the road to its easy understanding. By constant study a perfect knowledge of the cow can be acquired, and the yield of her milk ascertained. Seldom have I failed to portray her true character, whether she be a milker or not.

> I do not claim for this system the impossibility of error. In examining a herd of 40 cows, two mistakes were made; those occured in animals not easily classified, and therefore in going into the market to buy I would not take those not possessing the marks. They are applicable to all breeds, and belong to the bovine race.

> My fondness for cattle has made me familiar with all the different breeds which have been introduced into this country. The greatest numbers have been imported from the Channel Islands, and no lover of fine stock can fail to admire their beauty and gracefulness, but how well adapted they are to the general milk dairy is yet to be ascertained. Now, that the consumer recognizes the good quality of their milk and is willing to pay an additional price, is greatly in their favor and a just tribute to their excellence.

> The introduction of the Friesian or Dutch cattle will prove of great value to our milk dairies. They are of large size, healthy animals and great producers, showing that much care has been bestowed upon their breeding.

> To those interested in supplying the market with butter, I strongly advocate the introduction of the blood of the Alderney cattle. I admire those from both islands. Let the farmer determine for himself. My predilections are in favor of those from the Island of Guernsey, because they are larger, stronger in their constitution, are equal in their producing powers, and being of the same size with our native stock, are better adapted for crossing. The fine limbs of the Jersey built will not give size and strength enough to the legs of his progeny to support the cow after she has reached her sixth or seventh year. My object in reading this article before you is to induce you to look into this subject and judge for yourselves whether Mons. Guinon has been deceived or not.



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To those in advocate the admire those self. My pr Guernsey, be are equal in t our native sto the Jersey bu his progeny t seventh year induce you (Mons. Guind Lithomount Pamphlet Binder Gaylord Bros. Makers Syracuse, N. Y. PAT. JAN 21, 1908

A PAPER

Read on the Occasion of the Centennial Anniversary

OF THE

PHILADELPHIA SOCIETY

FOR THE

Promotion of Agriculture,

JANUARY 4th, 1885.

BURNET LANDRETH,

BY

ONE OF THE VICE-PRESIDENTS.