A History of Agriculture at Longwood Farms, 1906-1951

By

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ABSTRACT

Proper research, documentation, and dissemination of historical information is essential to understanding the basis and future direction of any landmark institution. In the case of Pierre S. du Pont's Longwood Gardens, research has traditionally focused on the physical development of the house and gardens, the conservatories, the fountains and on the performing arts in the garden. Very little information has been collected to link the garden to land acquisitions procured primarily to support farming operations which sustained the developing estate and garden.

The primary purpose of this thesis research is to locate and document information concerning the land acquisitions and agricultural activity at the country estate of Pierre S. du Pont between 1906-1951. The information obtained through this research will provide an understanding of the development of the estate and also provide insight and impetus for future research.

INTRODUCTION

During the mid-1800s and continuing through the mid-1900s, wealthy industrialists and their descendants began the era of the country estate. Large houses and extensive gardens, developed in the countryside outside industrialized and populated urban areas, were the hallmark of such families as the Barbers, du Ponts, Firestones, Gettys, Huntingtons, Rockefellars, Seiberlings, Vanderbilts and others. In conjunction with their expansive estates, many of these wealthy businessmen developed farming operations and considered themselves gentlemen farmers. Some of these individuals, indeed, were agriculturists and actively participated in the day to day operations of the farm. Others hired competent farm managers and were content to oversee operations and the financial aspects from a comfortable distance.

The circumstances and development of the country estates of the aforementioned families were as different as the individuals themselves. Pierre Samuel du Pont's (1870-1954) Longwood Farms was developed as a consequence of his

impulse purchase of a historic house and landscape. Mr. du Pont purchased the Peirce farm and park near Kennett Square, Chester County, Pennsylvania, on July 6, 1906 to save a historically significant arboretum from being cut for timber. Originally the land was a 202.75 acre remnant of an original 402.5 acre Penn Grant deeded to George Pearce on December 14, 1700. The acquisition of additional land, the establishment of garden areas, and the development of a large agricultural base were important in the transformation of the Peirce farm and park into what is known today as Longwood Gardens.

The development of the early gardens drove the land acquisitions and expansion of Longwood Farms and vice versa. The development of the gardens, conservatories, and fountains made it necessary to have a large number of staff and support persons available. Also, the expanding gardens required buffer land to add to the security, to save the scenic integrity, and to protect the Gardens from unsightly development or commercialization. In response to these pressures Mr. du Pont acquired farms and strategic properties to act as buffer lands. They provided space for employee housing, recreation and acreage to produce high quality agricultural products for his estate, employees, and friends.

Although Longwood Farms did not make money, except for the first five years of operation, Mr. du Pont continued the venture. In lieu of his other significant sources of income and wealth, he used the farms as a way to reduce his taxable income up until the Internal Revenue Service eliminated this tax break in the early 1950s. It was this tax change near the end of his life that provided the impetus to terminate the farming operations at Longwood.

Agriculture at Longwood presently consists of leasing approximately 125 acres of non-garden land to a neighboring farmer. New facilities, greenhouses, gardens, and lawns now mask the agricultural past of the estate of a self-made industrialist, philanthropist, and gentleman farmer. This thesis will present a history of agriculture at Longwood Farms from 1906 through 1951 by documenting land acquired, crops grown, and livestock raised in support of the growing gardens and country estate of Pierre Samuel du Pont.

CHAPTER 1

EARLY PEIRCE HISTORY

The Peirce farm, at the time Mr. du Pont purchased it, was a 202.75 acre parcel of an original 402.5 acre grant conveyed to George Peirce by William Penn on October 14, 1700. Although some confusion exists on the dates of the conveyance, due in part to dating errors in succeeding deeds and indentures, the sequence of events was: 402 acres and 54 perches assigned to George Peirce on October 14, 1700, surveyed at Penn's discretion on October 25, 1700, and officially granted and conveyed on December 14, 1700 for the consideration of 44 pounds sterling.[1]

Prior to this grant, George Peirce (Pearce as it was written by him) of Winscom, Somerset County, England, his wife Ann and three children, Betty, George, and Joshua, emigrated from the seaport of Bristol, England in 1684 to escape religious persecution. This same year George Peirce secured his first land-holding, a 490-acre tract in Thornbury township, Chester County, Pennsylvania. Once it was surveyed and conveyed to him, he and his family arrived

about September 4, 1684[2]. After settling, George and Ann Peirce had seven more children, for a total of 10, who would go on to prosper and populate Chester County and the region of the Delaware Valley.

George Peirce became an active member of the Chichester Friends Meeting and was religiously and politically active. In 1706 he represented Chester County in the Provincial Assembly and was one of a group who erected the "Concord Mill", the first mill erected in his neighborhood.[3] After a long and fulfilling life he moved to East Marlborough township in 1732 and died there in 1734.

Betty Peirce, born September 18, 1680 was four years old and the eldest of the Peirce children to make the voyage from England. In 1703 she married Vincent Caldwell and received the southern half, 200 acres, of the 1700 Penn Grant as a wedding present from her father. (See Figure 1, page 6.) Vincent Caldwell died in 1720 leaving the property to Betty. She remained a widow until her death September 13, 1757.

Joshua Peirce, born January 5, 1684 was one year old and the youngest of the three children to make the voyage

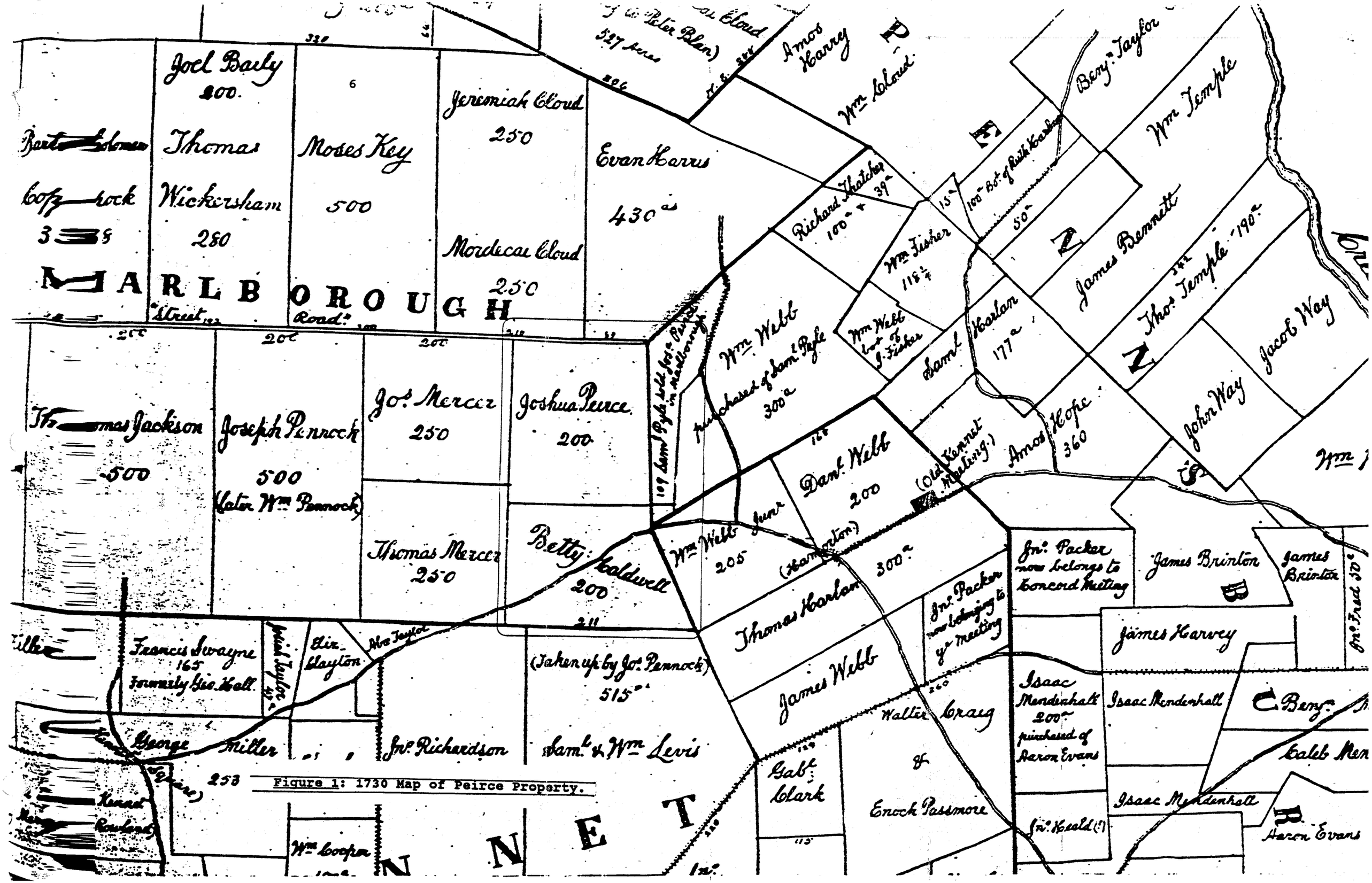

Figure 1: 1730 Map of Peirce Property.

from England. In 1709, at the age of 25 years his father granted him the remaining 202 acres to establish a homestead north of the Betty (Peirce) Caldwell property. Joshua began clearing and farming the land adjacent to a spring fed lake on the property and built a small log house on the site where he would later build the core of the 1730s Peirce brick farm house.

After establishing his homestead, Joshua first married Ann Mercer of Westtown, Pennsylvania, January 8, 1713. She bore him three children before her sudden death. He later married Rachel Gilpin of Birmingham township, Chester County, Pennsylvania, on September 15, 1722. Rachel bore four boys: Joshua, born 01-22-1724; Joseph, born 10-16-1725; Caleb, born 12-02-1727; and Isaac, birth date unknown. Caleb's twin sons, Joshua and Samuel, developed the arboretum, from 1798 through the early 1800's, later known as the Peirce Park Arboretum. See the Peirce Genealogy as related to Longwood Gardens[4], Figure 2, page 8.

In 1730, Joshua built the core of what is now the Peirce wing of the Pierce-du Pont house to shelter his nine member family. The red brick, two story, five room, Quaker farm house replaced the earlier log cabin on the same site.

Peirce Genealogy
as it relates to
Longwood Gardens
1700-1905

PENN LAND GRANT 1700 --- George Pearce m. Ann Gaynor (1646-1734)

HOMESTED BUILT --- Log House 1909, Brick House 1730 — Joshua Peirce m. Rachel Gilpin (Ann Mercer) (1684-1752)

Caleb Peirce m. Hannah Greaves (Neice of Humprey Marshall) (1727-1815)

PEIRCE ARBORETUM ESTABLISHED 1798 --- Joshua Peirce m. Susan Bennett (1766-1851); Samuel Peirce (1766-1838)

PEIRCE'S PARK DEVELOPED mid-1800s --- Mary Ann Bennett Peirce m. Sumner Stebbins (1808-1897); George Washington Peirce (1814-1880)

PROPERTY OUT OF PEIRCE FAMILY 1905 — Six offspring sold property to Mary E. Stebbins wife of Channing Stebbins

Lucy Richards May, 1905---> Jesse Ringrose March, 1906---> Lydia Bevan April, 1906

Peirce property purchased by Pierre Samuel du Pont July 6, 1906

Figure 2: Peirce Genealogy as related to Longwood Farms.

The bricks were laid in Flemish bond on a stone foundation. Rumor had it that the brick, window sash, and glass for the house were brought from England. But in reality, only the sash and glass were probably obtained from England. The extreme cost of shipping the brick to an American port and then transporting them for long distances over poorly constructed dirt roads to the site would have been costly and impractical. Even if the brick were shipped to an American port, such as Wilmington, Delaware, or Philadelphia, Pennsylvania, they most likely would have been consumed by those rapidly expanding colonial cities.[5] With the ready supply of local, high quality brick, the rumor was probably a misinterpretation of the type of brick used. The English type of brick being characterized by its size and shape as opposed to its origin.

> Bricks were made in the vicinity of Wilmington in the 17th century and in Virginia as early as 1612. William Penn's records show many references to the brick kilns established in and near Philadelphia, and at Pennsbury as well. In 1683 a law was passed that all standard bricks must be 2-3/4 x 4-1/2 x 9-1/2 inches in size and official inspectors were appointed to destroy those of inferior quality or insufficiently burned. This did not regulate however special size bricks for unusual purposes to be made. This suggests the inference that in time, the regulation or common bricks became known as English brick, which represented a type rather than those brick actually imported. That they were shipped as ballast is an argument which has little weight, as the small ships of the day were always overloaded with goods essential to the Colonists and it is inconsistent that these much

> needed articles were relegated to an embargo in favor of loading ordinary bricks which were being made here in abundance at a small fraction of the cost of the foreign material. The atrocious roads from the ports of entry would have been a serious handicap and added to the already prohibitive costs of building with English made bricks.
>
> That there were a few small houses built from imported English or Dutch brick in certain localities where brick clay was absent, is possible, but the extravagant claims which have gained in the telling, that most early mansions and even the Quaker Meeting Houses are of English material is impossible to substantiate by positive evidence.[6]

Joshua Peirce died in 1752 and, through his will proved the 23rd of September 1752, left this farm and house to Caleb[7]. This will contained a fairly detailed inventory and documented how Joshua distributed his money, possessions and property among his wife, four sons, and two daughters.[8]

Caleb purchased the 200 acres to the south from the executors of the Caldwell estate in 1757 in order to increase his land holdings and to retain adjacent family land. In 1764 a kitchen/dining room with a 'walk-in' fireplace was added to the east end of the first floor of the Peirce farmhouse with another bedroom, now called the school room, directly above on the second floor. By 1767 the tax records show Caleb's possessions as "250 Land and Buildings, 3 horses & cows, 4 sheep."[9]

Caleb Peirce married Hannah Greaves, who was a niece of Humphry Marshall.[10] Marshall was a noted area botanist who had ties to John Bartram of Philadelphia. It would be Caleb's twin sons Joshua and Samuel who would establish the arboretum destined to become the famous Peirce's Park. (See Figures 3 and 4, page 12.) It is believed that contact with noted Chester County botanist Dr. William Darlington and the work of Humphry Marshall influenced the twins to search the countryside and nurseries for suitable specimens for the arboretum.

> The laudable example of Humphry Marshall was not without its influence in the community where he resided....about the year 1800, also, the brothers Joshua and Samuel Peirce, of East Marlborough, began to adorn their premises by tasteful culture and planting....[11]

Joshua married Susan Bennett but Samuel never married. In the tax records of 1796 and 1802, each twin is recorded as possessing "half large brick house and frame barn, 1 horse, 2 cows."[12] From these and other tax records I assume that Caleb Peirce transferred the house and property to both sons before his death and lived with them until he passed away on October 30, 1815.

Joshua was the tax assessor for East Marlborough Township. In a list of the taxable township inhabitants and

Figure 3: Southwest corner of the Peirce House, 1867.
[HML PL L857 1867 1]

Figure 4: Allee of specimen trees in Peirce's Park, 1884.
[HML PL L857 1884 11]

their occupations he developed in 1807, he listed himself and his brother Samuel as farmers.[13]

> The word "farmer" is descriptive of their place in society; however, this does not definitely rank them socio-economically, as farmers, then as now, vary greatly in this respect. There is no evidence to indicate that Joshua and Samuel Peirce were gentlemen farmers. If in fact they were simple farmers, their achievement of establishing Peirce's Park must be recognized as one of the outstanding accomplishments in the botanical efforts of their time.[14]

Before the ground east of the main house was used to display collected plant specimens it was cultivated as a wheat field. When the soil was judged too poor for wheat it was turned into a peach orchard before being converted, about 1798, into the Peirce Park Arboretum.

In 1824 the size of the house was practically doubled with the addition of the resting room and the den on the first floor and the northeast and northwest bedrooms on the second floor. To accommodate the widening of the house in the north-south direction, the roof was raised and expanded.

In 1834, Samuel sold his half interest in the house, property, and livestock to Joshua.[15] By this time the trees in the park and surrounding grounds had grown and had gained

local and regional recognition. One of the many accounts made by famous early American botanists of the park is confirmed in The Book of Evergreens written by Josiah Hoopes and published in 1868.

> About the year 1800 two brothers, Joshua and Samuel Peirce, residing a few miles south-west of West Chester, Pa., commenced their collection of trees consisting principally of the well-known Conifers. They are mostly planted in a double avenue, extending some distance from their dwelling to a beautiful small lake at the rear of the premises. After a lapse of sixty-seven years, these trees have grown to an immense size, and present the most imposing sight imaginable. This little select arboretum is, as Dr. Darlington has recorded, "certainly unrivalled in Pennsylvania, and probably in these United States."[16]

Not only were well known conifers grown at the park, but so were species indigenous to the eastern United States and Europe. Several newspaper articles mentioned that Joshua Peirce traveled on horseback from the Catskill Mountains of New York to the Cypress Swamps of Maryland collecting seedlings for the arboretum.[17] There were also accounts which track the source of exotic plants to nurseries in West Chester, Philadelphia and Long Island.

After nurturing the plantings which he and his brother had worked so hard to accumulate and grow, Joshua Peirce died March 28, 1851. Fortunately, the property was

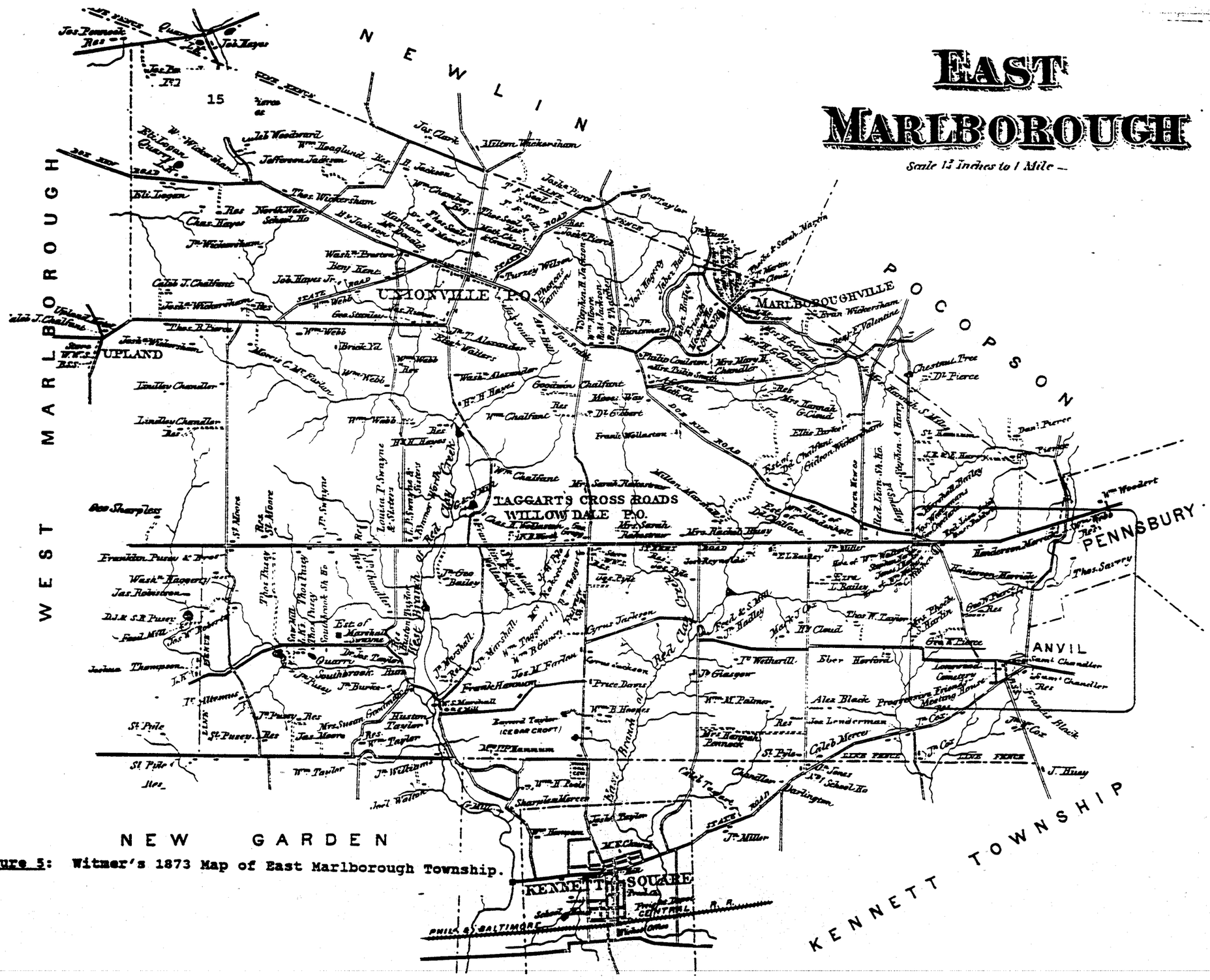

Figure 5: Witmer's 1873 Map of East Marlborough Township.

willed to Joshua's son George Washington Peirce (see Figure 5, page 15) who continued to maintain it and add to its beauty.[18] George was a skilled craftsman, who was well versed in iron and woodworking, and was a social person. These two traits led to the development of flower beds, the installation of swings, park benches, and garden ornaments, combined with a new openness towards public use of the park for picnicking and social events.

> The fact that George W. Peirce, of East Marlborough township, permits the use of this park for social purposes is exceedingly gratifying to the writer. This beautiful grove of trees was planted by the immediate ancestors of the present owner. It was the admiration of the neighborhood, and attracted a large share of attention some thirty years ago. Doubtless at the time it was regarded as a delightful spot in Chester County. Having enjoyed frequent opportunities of visiting the location in question, I am disposed to bear witness to its owner has shown towards promoting the social fellowship of his fellowman.[19]

George Peirce died in 1880 leaving no descendants, and the property reverted to his sister Mary Ann Bennett (Peirce) Stebbins. (See Figure 6, page 17.) She lived at the Peirce homestead until her death in 1897. The property was left to her 6 children who had moved out of the area and did not care to hold onto the property. In March, 1899 the children conveyed the Peirce property to Mary E. Stebbins, wife to one of the children of Mary Ann Bennett Stebbins, Channing Stebbins for $11,500.00.[20] On May, 1905, the property passed out of the family's hands when it was sold to Lucy

Figure 6: Stebbins family members at the south side of the Peirce house, 1884. [HML PL L857 1884 8]

Richards of New York. On March 26, 1906, Richards sold to Jesse Ringrose, who sold to Lydia Bevan and her son Howard April 2, 1906.[21] To reduce her debt on the property Lydia Bevan sold the logging rights to forty-one acres of woodland, including some of Peirce's Park, to Milton Heidelbaugh of Lancaster, Pennsylvania, for $4400. Mr. Pierre Samuel du Pont, who had been a previous visitor, learned of the plans to denude the landscape of the large old trees and quickly moved to purchase the property. On July 6, 1906, at the age of 36, he became a property owner and gentleman farmer.

In 1945 Pierre wrote, in confirmation of his intent, a document titled, "Memorandum in Regard to the Purchase and Maintenance of the Longwood Estate." In it he stated:

> The original purchase of two hundred acres of the Longwood Estate, including what was then known as "Peirce's Park" and the old Peirce mansion, dating back to 1730, was made in July, 1906. The purpose was to save the collection of old trees, which had been accumulated by the Peirce family for more than one hundred years, many of them of extraordinary growth and arresting appearance.[22]

By the middle of August, 1906 the reality of the impulsive and spontaneous purchase had set in. In fact, he appeared to be as astonished by his actions as those who knew him.[23] Pierre had generally thought of real estate as a poor investment, and in a letter to his close friend Elias Ahuja, commented about the purchase:

> I have recently experienced what I would have formerly diagnosed as an attack of insanity: that is, I have purchased a small farm about ten miles from here. As I have always considered the purchase of real estate a sign of mental derangement and have so proclaimed, I fear that my friends may be looking for permission to inquire into my condition. However, I believe the purchase worth the risk, for my farm is a very pretty place, and I expect to have a great deal of enjoyment in restoring it to its former conditions and making it a place where I can entertain my friends.[24]

ENDNOTES

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2. J. Smith Futhey and Gilbert Cope, History of Chester County, Pennsylvania, (Philadelphia: Louis H. Everts, 1881), p. 193.

3. Ibid.

4. Original format and research done by Suzanne Knowles for Treetops to Tunnelbottoms, Longwood Garden's Inservice Training Manual, 1985.

5. P.S. du Pont to N.R Ewan, June 9, 1934, PSduP 516, HML.

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7. Joshua Peirce, Will No. 1444, book 6, vol. 3, p.365, proved September 23, 1752. Chester County Archives and Records Services.

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9. Tax record, 1767, Chester County Archives and Record Services.

10. It is a common mistake to spell Humphry Marshall's first name "Humphrey." Source: Robert R. Gutowski, Humphry Marshall's Botanic Garden: Living Collections 1773-1813, Thesis, University of Delaware, Newark, 1988.

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18. John W. Hershberger, "The Old Gardens of Pennsylvania", Garden Magazine, February, 1921, p.326.

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22. Pierre S. du Pont, "Memorandum In Regard To Purchase And Maintenance of the Longwood Estate", originally written January 6, 1945 and read and corrected December 3, 1947, PSduP 516, HML.

23. Betsey A. Ney, The Early Flower Gardens of Longwood, Thesis, The University of Delaware, Newark, 1988.

24. Pierre S. du Pont to Elias Ahuja, August 21, 1906, PSduP 507, HML.

CHAPTER 2

EARLY FARMING OPERATIONS, 1906-1912

The purchase and acquisition of the Peirce homestead required Mr. du Pont to spend time at Longwood to assess the state of the house and out-buildings, the park, and the agricultural fields. A closer look at his holdings revealed that he owned,

> ...202.75 acres of woodland and farmed land, two barns, stables, sheepfold, two ice houses, a water wheel, smoke house, blacksmith shop, woodshed, two carriage houses, summer house, washhouse, one small old tenant house, and the main Peirce house, built in 1730 - all for the original purchase price of $15,500.[1]

Pierre further scrutinized the grounds, recording in the annual farm report dated December 31, 1906, that he owned a 15-acre park, 40 acres of timber, and 147 acres of farmed land.[2] Because of the neglect of the post-Peirce owners, many of these structures were dilapidated beyond repair and had to be removed. Over the next 10 years most of the pre-existing farm support structures were removed to improve the aesthetics of the house and surrounding park and gardens.

During the first months of operation, management decisions were made directly by Mr. du Pont. These

decisions were focused to accomplish five goals: to rehabilitate the trees and grounds in Peirce's Park, to clean out and upgrade the large lake (see Figure 7), to improve the supply of potable water to the house, to make the house more habitable for himself, the property manager and his wife, and guests, (see Figure 8) and to get the farm in first-class shape.

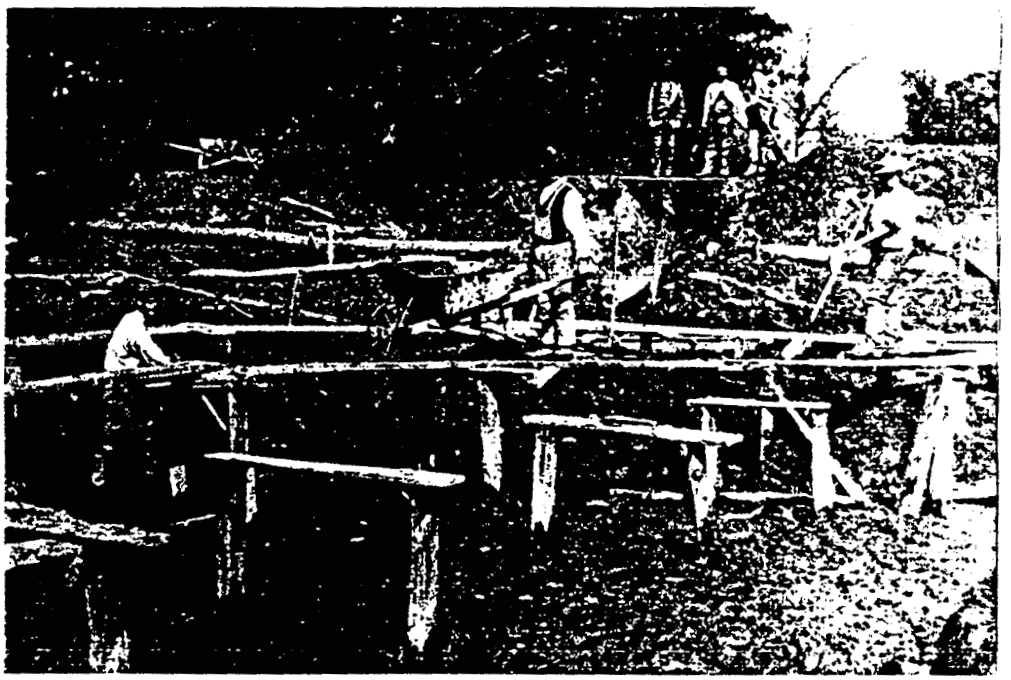


Figure 7: Italian laborers cleaning silt out of the large lake. [HML PL L857 1907 3]

After a large investment of time, Pierre knew that he would be away from Longwood most of the time. Therefore, he contracted Bell Telephone Company to install service to

Figure 8: Preparing for the first addition to the north of the Peirce house, April 7, 1909. The Baily's occupied the whitewashed addition to the east. [HML PL L857 1909 38]

Longwood at a set fee of $24 per month.[3] This insured his ability to stay on top of developments at the farm and provided a vital communication link in case of an emergency.

Mr. du Pont took a couple of first steps in addressing the fertility of the fields by contacting the Delaware College Agriculture Experimental station in a letter dated July 30, 1906 concerning soil testing. But, his management background quickly brought him to the conclusion that he would need a competent farm manager to advise him and to build the farming operations to productive

and sustainable levels. As the rumor of his purchase of the property and his need for a property manager spread, many of the local farmers offered their services. After carefully scrutinizing many applications, Mr. du Pont interviewed several candidates. On August 11, 1906 he selected Mr. Joseph H. Baily of Wilmington as the first farm manager. Immediately after his selection, Mr. du Pont formulated an initial contract, combining his meticulous attention to detail with the pride and protectiveness of a new owner:

> I beg to confirm the understanding of our conversation in regard to your employment at my farm at Longwood. Starting Monday, August 13th, you are to take up the work of managing my farm at $55 per month, the arrangement being from month to month until you should decide that you are satisfied with the arrangement, when a more permanent arrangement can be entered into.
>
> The present occupant of the house on the farm expects to vacate on or before October 1st, at which time I will make the necessary improvements towards cleaning the house and expect shortly to have the latter in condition for you to occupy. I am to give you the two back bedrooms on the lower floor and the kitchen for your use, also the dining room, which I will need from time to time as I wish to entertain my friends.
>
> I understand that Mrs. Baily will prepare such meals as I and my friends may wish from time to time, preparation of which will be included in your compensation. However, as the amount of work involved is at present very indefinite, I will expect to make an adjustment of this account as experience shows necessary. I will expect you to furnish necessary supplies for meals but will, of course pay for the same.
>
> As soon as practicable I wish you to go over carefully the farm and lay out a plan of work which we will put in writing as a future guide to our operations. It is my desire to keep records

of our work so that I may study same with a view to determining our condition as times goes on.

In general the plan will be to bring the farm to a first class condition, it being thoroughly run down. This will doubtless require pretty thorough fertilizing at the proper time, as well as a thorough cleaning out of all the fence rows and a very vigorous campaign against horse nettle, which pretty well covers many of the fields.

The work on the park, lake, etc. I am placing in the hands of Wm. F. Francis so that you will not have to trouble yourself concerning it.

We are to consult freely in regard to the farm and its management, I rely very largely on your suggestions for outlining a plan, expecting the ultimate results to warrant expenditures.[4]

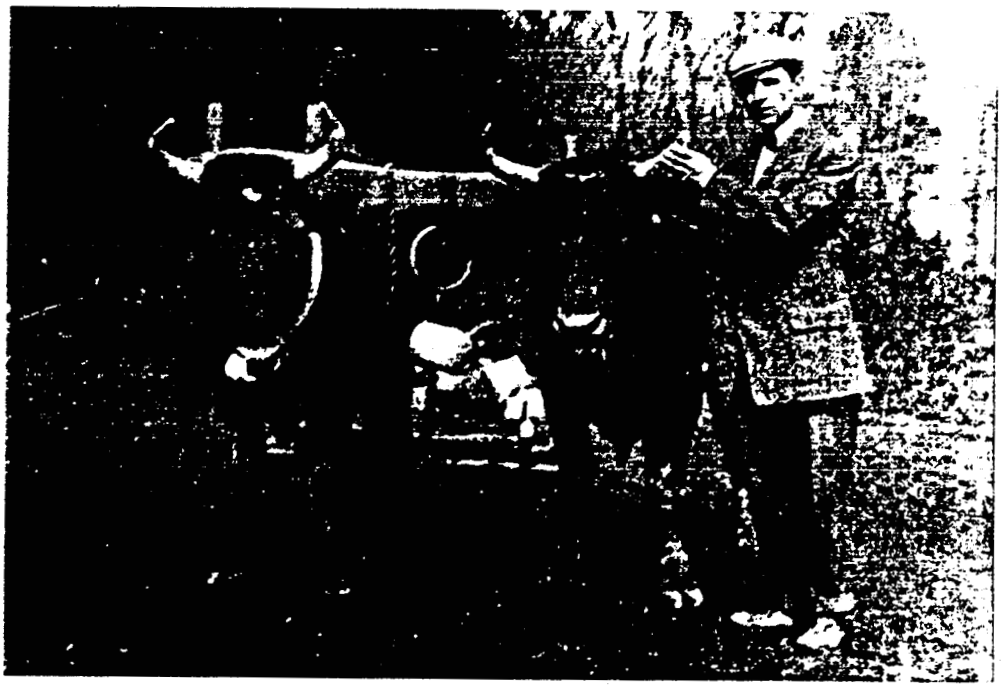


Figure 9: William Francis with oxen team, 1907.
[HML PL L857 1909 53]

Figure 10: Flower garden developing south of the Peirce house, 1907. [HML PL L857 1907 16]

It was very clear at this point that the park, the grounds and future gardens around the house would be accounted the same but managed separately from the farm and that his overall intent was to return the property to its past splendor.

> The main feature of the whole place is the Park and lawns surrounding the main dwelling. This park was planted by the Peirce brothers, former owners of the property, in the year 1800 and the years following. Many of the trees are of the original planting and nearly all of them are brought from varying distances. The Park is a well known-point of interest and it is the owner's desire to keep it in as near its original condition as possible.[5]

This is confirmed in letters to his attorney Miss Isabella Darlington in the fall of 1906:

> I have arranged to drain the lake on the park with a view to restoring it to its original condition and hope some day to find an 'oldest inhabitant' who can advise me definitely as to the size of the lake. It is rather difficult to discover this, as years have restricted the area considerably and the old banks are not clearly defined.
>
> I hope that everything will be in order next spring, so that at least a partial restoration of the original beauties will have been accomplished.[6]

With the support and backing of Mr. du Pont, Baily quickly acted to improve the farm. On September 24, 1906 Baily had Mr. du Pont order six horses from C.K. Lennig of Orange, Va. He acquired a 1905 blueprint survey of the property by N.R. Rambo of West Chester and commenced planning strategy to plot the agricultural fields. (See Appendix 1, page 114.) Baily divided the tillable acreage into 9 fields containing approximately 10 acres each and was instructed to plant only necessary field crops such as hay, corn, oats, potatoes and wheat. (See Table 1, page 28.) The remaining tillable acreage of the farm was used for straw production and as pasture for the horses and steers.

Table 1: Acreage and field crops grown at Longwood Farms, 1906-1911.

		YEAR					
Field	Acres	1906	1907	1908	1909	1910	1911
1	12.5	hay	hay	hay	corn	potatoes	wheat
2	11.0	oats	wheat	hay	hay	corn	-----
3	10.8	corn potatoes)	corn (2A.	wheat	hay	hay	ensilage
3.5	10.8	corn	corn	-----	wheat	hay	ensilage
4	12.0	hay	-----	hay	hay	ensilage	-----
5	10.2	hay	-----	hay	ensilage	ensilage	wheat
6	9.5	corn	corn	corn	ensilage	wheat	hay
7	10.2	potatoes	corn	ensilage	wheat	hay	hay
8	10.4	corn	corn	ensilage	potatoes	wheat	hay
	97.4						

It is interesting that oats were grown in 1906 and never grown again. In the annual reports for the years following 1906, oats and bran were a major feed expense. With the commencement of the steer fattening operations in 1907 and its expansion in 1908 and 1909 (see Table 2, page 77), ensilage and hay became a larger percentage of the field crops grown. Beginning in 1911, the Statement of "Home Farm" Operations[7] begins to show that the crops produced by the farm were not enough to cover the total consumption, so Baily had to purchase approximately 12% of the feed needed from outside sources. This illuminates a very important point about the common exchange of

agricultural products and commodities between Longwood Farms and its neighbors. In many cases when a farmer needed a commodity because of a shortage, he would solicit local farmers, who may have had a surplus, to fill his needs. In the early years before the land expansion in the mid-1900s, Longwood would purchase crops from its neighbors to fill its needs. As the gardens grew, the house and public areas expanded, and additional staff were added, the farm lands were squeezed and it became obvious as time passed that the operations would need to be expanded.

In 1907, Baily began the steer fattening operations with 15 steers obtained from Lancaster. They were originally kept in the old Peirce barn which was located to the south of the entrance drive between old Doe Run Road and the Peirce House just west of the present open air theater. Mr. du Pont was not particularly pleased with the proximity of the barn, but put up with it initially. To the south of the barn was the cow lot, where the steers were kept. This area is located directly to the front-left of the main visitor entrance and encompasses the largest expanse of manicured lawn in the gardens.

Mr. du Pont was an astute businessman and was obsessed with proper accounting practices. He carried his

business savvy into his farming operations and demanded that the farm manager take proper care of the books as well as the grounds and livestock. A memo written to bookkeeper William Raskob, younger brother of Mr. du Pont's secretary John J. Raskob, dated December 13, 1906 illustrates this fact:

> In closing the farm books for the year, you should have made an inventory of tools, cows, horses, grain, hay, chickens, etc., to be carried forward next year.
>
> I note that chairs and commodes, purchased sometime ago, were not charged to the Farm Furniture Account, this should be changed.
>
> Please note that the chickens purchased for the farm should not be placed in Expense Account.[8]

On March 5, 1908, in order to standardize the accounting procedures at the farm, Mr. du Pont sent Baily a "detail of the farm expense accounts"[9] for his information and guidance. (See Appendix 2, page 116.) This three page document outlined 28 farm accounts and described what to expense or credit to those accounts. It would be the repeated faulty accounting practices of Mr. Baily that would later lead to his dismissal.

In 1908, Baily doubled the total number of steers carried to 31 and found that he was in need of a larger barn to store winter foodstuffs and to house the growing herd. Once it was decided to build a new barn, Baily gave

Mr. du Pont his specifications based on calculations to carry the steers, horses, cows and chickens through the winter. In a letter dated April 6, 1908, to Mr. W.H. Fenn, Jr.[10], the barn's designer, Mr. du Pont relayed the information to begin the process.

> The following storage capacity is considered necessary for the new barn at "Longwood" by Mr. Bailey:-

Hay,	120,000 lbs.
Fodder,	40,000 lbs.
Wheat, unthrashed	50,000 lbs.
" , thrashed	36,000 lbs.
Straw,	40,000 lbs.
corn,	40,000 lbs.
Potatoes,	60,000 lbs.
Silage,	500,000 lbs.
Bran,	10,000 lbs.
Shelled corn,	5,600 lbs.[11]

In another memo to Mr. du Pont dated July 10, 1908, Baily described the specifications of the barn's silo:

> ...the silo should have a 16' outside diameter and be 34' high , with a capacity of 137 tons or 9 to 11.5 acres of corn. ....32-38 cows should be able to be wintered on one silo.[12]

As it turned out, the barn was built with a twin silo to allow for future expansion of the cattle operations.

During the summer of 1908, when the barn was being raised, Mr. du Pont had several correspondences with

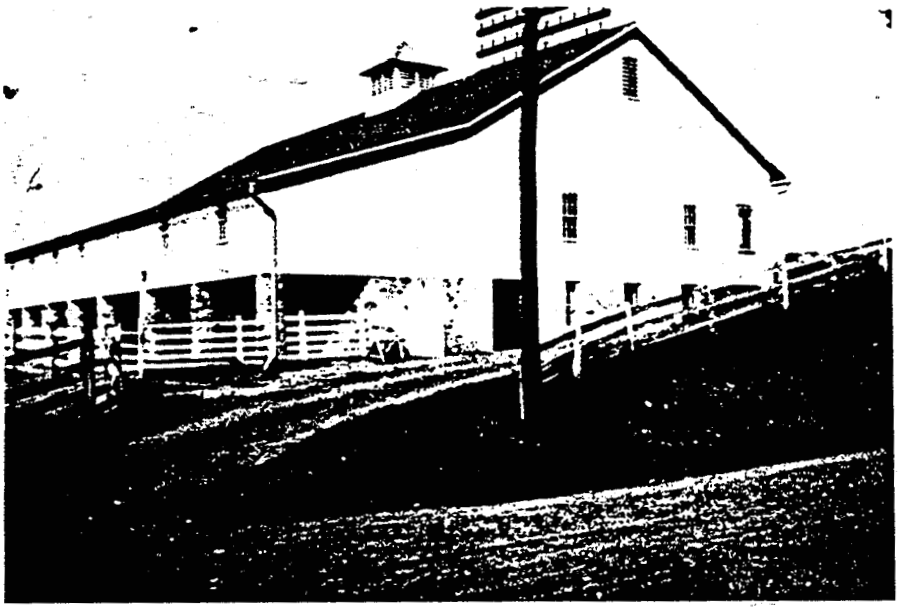


Figure 11: Longwood barn, 1909. View across Doe Run road from the driveway to the house. [HML PL L857 1909 3]

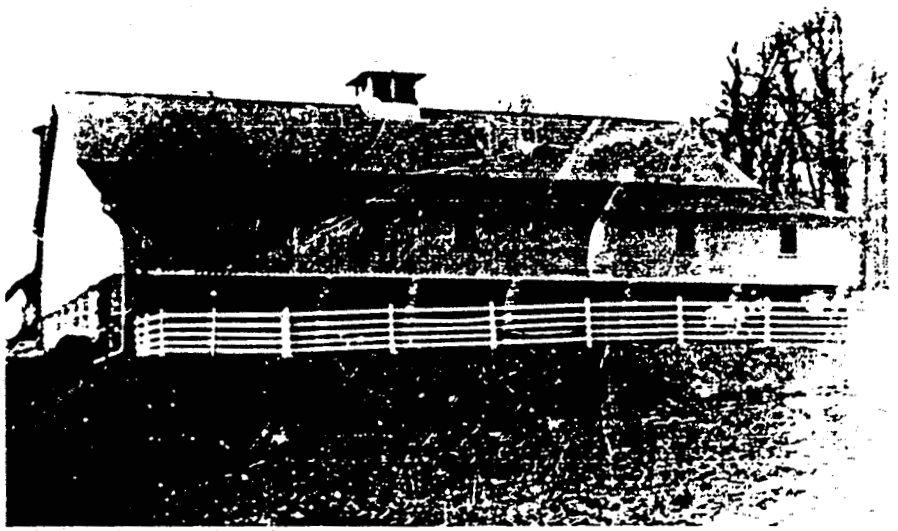


Figure 12: Longwood barn, 1909. Southern exposure. [HML PL L857 1909 53]

Figure 13: Longwood barn, 1920. West of the barn was the location of one of the first three hollow tile tenant houses built by Mr. du Pont in 1911-1912. It was torn down in 1919 to make way for the new conservatories. Notice the tent to the right in the picture, it was erected for the annual garden party held in early June. [HML PL L857 1919]

Colonel C.S. Stebbins, one of the last Peirce descendants to live at the Peirce homestead. In these letters, Mr. du pont asked many questions about the property, and some specifically about the old barn. In a letter dated August 7, 1908, Mr. du Pont wrote,

> I have recently torn down the old barn which had reached a condition of dilapidation that necessitated either very radical repairs, or else complete removal. I decided on the latter, as the location of the barn was not altogether to my liking. Moreover, the old structure was not capable of modernizing in a way that would preserve its old features. I was much interested in the construction of the barn and its evident age. Have you any record of the time of its building? From the fact that hewn timbers were

> used in the construction, and that black walnut and white oak boards were used, I judge that it was many years old.[13]

Colonel Stebbins reply came in a letter dated August, 18, 1908.

> I have no record of the date of construction of the old barn, from which circumstance I conclude that it was built prior to the recollection of my mother who was born in 1811. I remember that extensive improvements were made to it in 1855 or 1856, which were said to have "made a new barn of it"; but I think that the improvements consisted of a new roof, and perhaps some change in the upper portion of the main barn, with possibly some additions.[14]

With the old barn removed and the completion date of the new barn estimated to be between August 20 and September 1, 1908, Mr. du pont contacted the insurance firm of McFarland and Haines of West Chester to update his insurance. As of August 7, 1908 Mr. du Pont carried $6000. on the house, $4000. on its contents, $250. on the wagon house and corn crib, $5000. on the new barn, and cancelled the $1750. policy on the old barn.

By 1909 Baily had increased the steer herd to 60 head. He was also responsible for planting the fields, cultivating the Longwood vegetable garden to the west of the farmhouse, overseeing the orchards, maintaining the farmhouse and barn and tending the growing gardens to the

south of the house recently developed by Mr. du Pont. Sensing the need for more staff to care for the expanding responsibilities at his country estate, Mr. du Pont ordered the first three, of a final total of 106, tenant houses to be built.

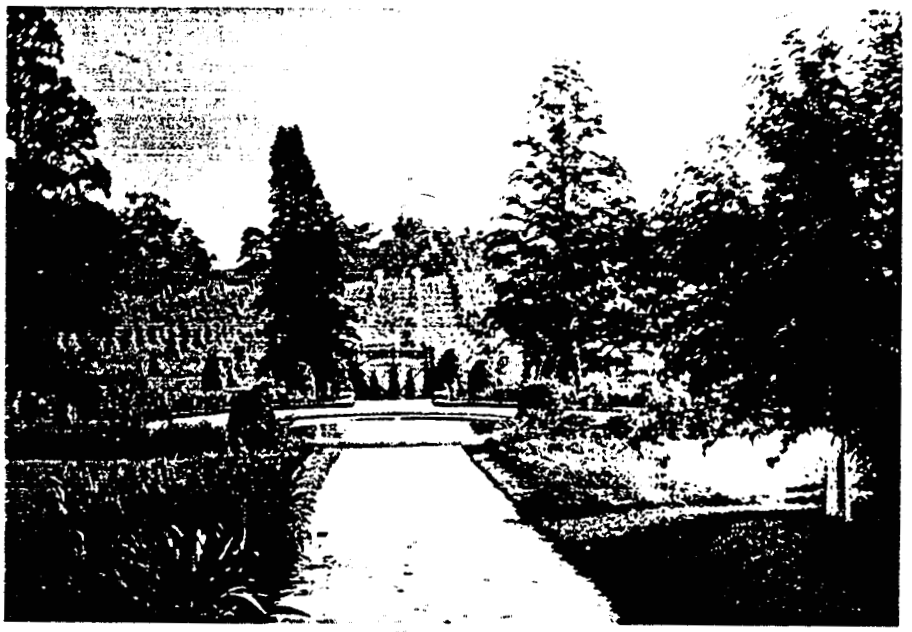


Figure 14 : Longwood flower garden, 1909. Notice the cornfield to the south of the garden and mansion house. [HML PL L857 1909 22]

Mr. du Pont was cognizant of the importance of the location of real estate and employee housing and during 1909 purchased the historic Anvil Tavern. (See Figure 15, page 36.) The property was strategically located at the intersection of US Route 1 and the roads to Kennett Square, Pennsylvania and the public road to West Chester,

Pennsylvania (Route 52). (See Appendix 3, page 120.) The old tavern, which pre-dated the civil war, was converted to house the Italian laborers. It was torn down in 1917 and replaced by two stone tenant houses.[15]

Figure 15: The Anvil Tavern circa, 1909. [HML PL L857 1907 54]

In 1910, because of escalating operating costs, Mr. du Pont made a very important decision to separate the estate from his personal finances. It was at this time that "Longwood Farms" became the official accounting vehicle for the farming operations of P.S. du Pont, gentleman farmer.

By the summer of 1910, Mr. du Pont needed full-time seasonal help with the gardens south of the farmhouse and hired Englishman Henry Hannum of West Chester, Pennsylvania as the first professional flower gardener.

> I have decided to give you a trial in caring for the flower garden and the grounds adjacent thereto. I will leave the vegetable garden in the hands of Mr. Baily. As I am absent for a greater part of the time, Mr. Baily will be in charge. He will give you seed orders as may be necessary and will look to you for execution of the orders at the proper time and for the general results in the garden you will have two men regularly under you. I understand that the wages you expect will be $12 dollars a week and that you do not expect a position in the winter.[16]

In a letter dated December 23, 1910, concerning Mr. Hannum's rehiring in the spring of 1911, Mr. du Pont designates the first full-time keeper of the Longwood Vegetable Garden.

> Work for the winter is practically over. As soon as spring arrives I shall be glad to have you back again and shall give you an advance of $1 per week. I understand that Ambrose (Alexander) will arrange to give you board at the new house which will be ready for him quite early in the spring. We are planning to let Ambrose have the vegetable garden next year and would like to have another apt man to work with you in his place.[17]

In the spring of 1911, Mr. du Pont built a tenant house to the west of the Longwood vegetable garden for Ambrose Alexander and designated him as the first full-time vegetable gardener. His activities kept the main house in fruits and vegetables during the year. An apple cellar

located between the eastern edge of the garden and the house provided a convenient storage space for harvested root crops and fruit. In preparation for winter, the vegetable gardener was also responsible for canning fruits and vegetables for the main house. A letter of confirmation about the seasons quantity of fruits and vegetables canned, from the Wilmington office to vegetable gardener Fred Miller, denotes this activity:

> Complying with your telephone request of yesterday, we are listing below the number of cans of vegetables and fruit you canned last year:
>
> 359 Cans Lima Beans
> 5,597 " Peaches
> 2,579 " Tomatoes
> 1,216 " Corn
>
> If there is any other information you require we will be glad to furnish same.[18]

In October of 1912, Mr. du Pont built a tool shed, greenhouse and coldframes east of Alexander's house to enable him to get a jump on the growing season in the spring and to extend the season into the winter. (See Figure 16, page 39.) The greenhouse was 132 feet long by 25 feet wide and was separated into four sections of 33 feet each. The first two sections were hot houses used by Henry Hannum to produce flowers for the house. The second two compartments were a grapery and vegetable house maintained by Ambrose Alexander. During various times throughout the 1920s and

Figure 16: The Longwood vegetable garden west of the mansion house, 1922. [Collection of Isaac Evans, Jr.]

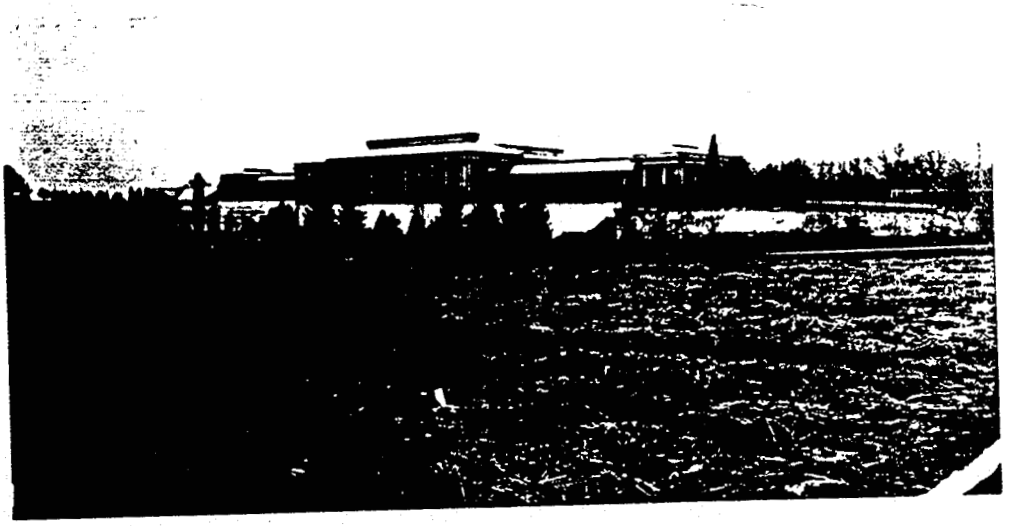


Figure 17: Longwood vegetable garden in front of the new conservatories. [HML PL L857 1922 63]

1930s the vegetable garden was expanded to areas west in the garden. (See Figure 17, page 39.) One area utilized in the early twenties was the field in front of the new conservatories which the topiary garden now occupies. Ambrose Alexander retired in June, 1933, and the duties were transferred to Fred Miller. (See Figure 18.)

Figure 18: Fred Miller overseeing "Longwood kids" shucking corn, 1940. L to R, Freda Miller, Duane Drake, Malcolm Drake, Lorna Drake, Fred Miller, Phronsie Miller. The Drakes were children of poultryman Walter Drake. Lorna (Drake) Deckman recalled that living at Longwood was like having one big happy family. The children had lots of fun exploring, playing in the barns, and occasionally working. She recalls Mr. du Pont paying the kids of employees between 5 and 25 cents per unit to pick berries, and shuck corn and beans for canning purposes. The employees referred to Mr. du Pont as Mr. Pierre and the Peirce-du Pont house as the the Big House. Mrs. Deckman later worked at Longwood as secretary for Director Everitt Miller and current Director Frederick Roberts before retiring. [Collection of Lorna (Drake) Deckman]

The records of the Longwood vegetable garden from its beginning to the year 1945 show remarkably little varietal change, except for some variation in production.[19] The vegetable list for the year 1923 includes:

asparagus	egg plant	potatoes
lima Beans	endive	peppers
string Beans	grapes	radishes
beets	gooseberries	raspberries
cabbage	lettuce	rhubarb
carrots	muskmelon	spinach
cauliflower	okra	squash
celery	oyster plant	sweet potatoes
corn	parsley	tomatoes
	peas	turnips

In the fall of 1912 Mr. du Pont dismissed Mr. Baily from his duties as manager of Longwood Farms. The premises being described as "unsatisfactory services" for which the most weight was placed upon "poor accounting practices." In a letter to his close friend Ahuja Elias dated December 31, 1912, Mr. du Pont explained:

> I have had a grand upheaval in the servant line at Longwood. Mr. Baily's services turned out to be rather unsatisfactory and I let him go about the first of October. This was followed by a general exodus of all the house servants and I have been unable to get a new caretaker until yesterday. Thus there has just been closed an epoch during which the farm has been of very little use.[20]

ENDNOTES

1. George E. Thompson, A Man and His Garden: the Story of Pierre S. du Pont's Development of Longwood Gardens, (Kennett Square, Pennsylvania, Longwood Gardens, Inc., 1976), p. 23.

2. Annual Statement of Home Farm Operations, 1906, PSduP 516-187 and 516-14, HML.

3. George E. Thompson, op. cit., p. 27.

4. Pierre S. du Pont to Joseph Baily, 1906, PsduP 516-187, HML.

5. Ibid.

6. Pierre S. du Pont to Isabella Darlington, 1906, written correspondences, PSduP 516, HML.

7. Longwood Farms Annual Report, 1911, PSduP 516-187 and 516-14, HML.

8. P.S. du Pont to William Raskob, December 13, 1906, PSduP 516, HML.

9. Pierre S. du Pont to Joseph Baily, March 5, 1908, PSduP 516-187, HML.

10. W.H Fenn Jr. was a classmate of Pierre S. du Pont at the Massachusetts Institute of Technology.

11. Letter from P.S. du Pont to W.H. Fenn Jr., April 6, 1908, PSduP 516-187, HML.

12. Joseph Baily to P.S. du Pont, July 10, 1908, PSduP 516-187, HML.

13. Pierre S. du Pont to Col. C.S. Stebbins, August 7, 1908, PSduP 516, HML.

14. Col. C.S. Stebbins to P.S. du Pont, August 18,1908, PSduP 516, HML.

15. George E. Thompson, A Man and His Garden: the Story of Pierre S. du Pont's Development of Longwood Gardens, (Kennett Square, Pennsylvania, Longwood, Inc.), 1976, p. 139.

16. P.S. du Pont to Henry Hannum, 1910, PSduP 516, HML.

17. P.S. du Pont to Henry Hannum, December 23, 1910, PSduP 516, HML.

18. Memorandum from Alice S. Pierson to Fred Miller, March 30, 1943, PSduP 516, HML.

19. Longwood Farms Vegetable Garden Summaries, PSduP 516-28, Box 689, HML.

20. George E. Thompson, op. cit., p. 35.

CHAPTER 3

PREPARING FOR GROWTH, 1912-1914

The search for a new farm manager was a long process encompassing the better part of two months. Pierre contacted friends and relatives for advice on possible replacements and in a letter to his brother-in-law and close friend Winder Laird, outlined some of the requirements of the farm manager's job:

> The manager of the farm would have pretty free rein in his work and the hiring of labor; or, as put in the inquiry, the manager would be allowed to do as he thought best, of course with regard to my wishes and consultations with me. I do not think that there will be any question of proper treatment of this phase.
>
> The caretakers are to have entire charge of the house as to its up-keep, preparation of meals, etc., etc.; also complete charge of the servants, who will be in sufficient number to look after my needs when living in the house, which covers a period of six weeks in summer and week-ends periodically, though I wish to feel at liberty to arrange the time of occupancy at will. In order to meet the requirements when I am in the house there would be ample servants to look after everything. The house-keeper will be required to manage well, but would not be called upon for much house-keeping work. This undoubtedly can also be arranged properly. The pay allowed has been made in one payment heretofore. In addition to the monthly cash payment heat and fuel for cooking are included, also provisions offered by the farm (such as chickens, eggs, milk,

> vegetables and fruit). The owner is to have choice of these products, but it is intended that there shall be ample for the caretaker as well. Proper means of transportation is also furnished the caretaker.
>
> The fundamental aim of the place is to do everything that is attempted in a first-class way. On the farm nothing has been attempted in the way of fancy farming or crops; the latter being hay, wheat, corn - both ear and ensilage - and potatoes, though the latter have never been particularly successful. We buy sixty head of steers in the Fall and carry them until May or June. We have six draft horses and three cows on the place. The farm has been in my possession for six years and a great deal of work has been done, so that the property is in pretty fair condition.[1]

Mr. du Pont carefully considered suggestions for the position of farm manager and chose Malcolm Farquhar to take control beginning November 1, 1912. Mr. Farquhar's credentials were impressive. He was educated at Friends School of Sandy Springs, Maryland, and at Georges School, Bucks County, Pennsylvania, and when hired was employed as the manager of a 400-acre farm in Montgomery County, Maryland. Soon after Farquhar started Mr. du Pont wrote <u>The Manual of Instructions</u>[2], a detailed, 113 page document recording the farms current condition and status in combination with the owners wishes, ground rules and regulations. The manual was updated regularly and proved to be a thorough and useful guide to the farm, house, grounds, and operations of the estate.

Also during the early 1910s, Mr. du Pont set up a Longwood Farms office in Wilmington, Delaware, to handle the expanding amount of account supervision and paperwork generated by his rapidly growing country estate. These Wilmington "farm" employees, who numbered from 6 to 11 persons, checked all accounting and operations paperwork for consistency, completeness and accuracy, and acted as a liaison between the various estate managers and Mr. du Pont.

Throughout the course of the farming operations Mr. du Pont kept a careful eye on general farming trends and was cognizant to obtain the best information for his employees. An example of this philosophy was shown by the encouragement of his managers to participate in agricultural clubs on behalf of Longwood and by his constant purchase of agriculture literature. Douglas Gilpin, who was later selected as Assistant Farm manager, was the treasurer[3] for the Pennsylvania chapter of the Eastern Guernsey Breeders Association and was instrumental in bringing a E.G.B.A field day to Longwood Farms in 1925. Some examples of books and periodicals Mr. du Pont purchased on behalf of his employees included Breeding Farm Animals, Feeds and Feeding, Farm Buildings, and Berkshire World and Cornbelt Stockman.

In conjunction with the farm managers position, Mr. du Pont desperately needed good reliable servants to operate the household in an stable and orderly fashion. While on a business trip to New York, Mr. du Pont visited the Finnish and Swedish Employment Agency, 2107 Fifth Avenue, to speak with the owner about acquiring domestic help. Upon his return to Wilmington, Mr. du Pont made his decision and drafted the following letter dated October 30, 1913.

> As stated to you on my recent visit to your agency I desire to obtain four Finnish servants, two men and two women. My residence is in the country about twelve miles from Wilmington Delaware and about a one hour train ride from Philadelphia. I live alone but have many visitors, as there are five guest rooms in the house. The house is double; part being occupied by me and part by a gentleman and his wife who look after the general management of the house, surrounding grounds, gardens and farm. They also have charge and direction of the servants, though I wish the latter to be sufficiently capable to require little attention when once their duties are made known. I have one large room on the third floor of the house and another on the ground floor of the garage wing, both are steam heated and have small bathroom adjoining. There is a well equipped kitchen and pantry and a sitting room for the servants. Meals for both sides of the house are served from the one kitchen.
>
> As I have much company on Saturdays and Sundays, I cannot give time off on those days, but each servant has one entire day off during the week.
>
> As there are two rooms I can take two single men and two single women, or two couples. They must be sober, honest and cheerful and willing workers. No others will be satisfactory.
>
> The following are the duties:
>
> Cook: To cook all meals for both sides

of the house; three adults and two small children and for the servants, five in number. Breakfast, 7 - 7:30.

Maid: The maid is to be a helper in the kitchen and will serve breakfast to the caretakers side of the house; she will also do such chamber work as may be needed in the caretaker's apartments (two bed rooms) and may be called upon at times to watch after his children.

Butler: The Butler waits on my table at lunch and dinner serves afternoon tea in the house or on the porch or lawn, according to the season. He washes all the dishes from my table for all meals and looks after the silver, china and table linen. He keeps in order and cleans the two parlors, den, dining room and small hallway and stairs, as well as the porch, which is not large. He also acts as my valet, presses and brushes my clothes and polishes shoes and attends to such similar work as the guests may need.

Second man: The second man is on duty at 6:30 in the morning. He sets in order the parlors, den, porch and dining room and attends to the polishing of shoes that may be set out of the rooms. He waits on my breakfast table. He takes the automobiles, all bags or packages to be sent away. He cleans the sitting room and kitchen and the cellars and the lower toilet room, as well as the brick pavement around the house.(There is no heater in the cellar, as the steam boiler is outside). He carries up coal from the basement for the kitchen fire and takes out ashes; also carries in wood for wood fires, but does not cut it. He waits on lunch and dinner table on the caretaker's side of the house and assists in my dining room at large dinners. He carries the ice from ice house about fifty feet away to the refrigerator. He breaks the ice and churns the ice cream used in the house and also churns the cream for butter.

The servants will look after the cleaning of their own rooms and the women wash their own clothes. The bed linen, towels, and men's clothes will go out to the laundry. The servants are expected to be neatly dressed at all times. I furnish their outside clothing or uniforms while on duty.

The cook does no ordering except in keeping the housekeeper informed as to what is

> required. All bread is made in the house and hot bread or griddle cakes are made for breakfast. The house must be supplied with cake at all times. (Afternoon tea is served frequently). The cook or her assistant attends to making the butter for the house. The butler is not expected to be on duty until after breakfast, but remains on duty in the evening until I and my guests retire.
>
> Wages: I have been paying the butler Forty Dollars per month; the cook Seven Dollars per week; the assistant cook Five Dollars and a half per week. The second man would get about Twenty-five or Thirty Dollars per month.
>
> Will you please let me know as soon as you find some servants you think will suit me, in order that I may call at your agency. I wish to get them as soon as possible.[4]

In a remarkably rapid fashion the agency located four servants and contacted Mr. du Pont by wire. In a response dated November 7, 1913, Mr. du Pont sent a confirmation letter.

> In regard to the four servants engaged from you: I understand that they will leave New York on Monday, November 17th. I think it would be best if they came direct to Wilmington, Delaware, where I will have them met by the automobile which can take their baggage as well. If they leave New York, Pennsylvania Station, on the 8:08 a.m. train, arriving in Wilmington at 10:58 a.m., I will have the car meet them. I enclose herewith my check for $11.68 to cover railway fares, which I judge is all that is necessary.[5]

Other employees hired included University of Delaware engineering graduate Roland W. Taylor (1912) and chauffeur Charles H. Mason (1914). Roland Taylor was hired to assist William Francis with the multiple projects which began to arise at Longwood. His first project was the

development of the Open Air Theater which was constructed on the site of the Peirce carriage house and stable. In response to the increase in staff and need for transportation, Francis and Taylor also built a large garage with two apartments therein. (See Figure 19.) Charles Mason was responsible for operating Mr. du Pont's personal cars: a Cadillac, Hupmobile, and Packard.

Figure 19: Peirce house and garage, fall 1913. Note the large garage to the north (left) of the house. In 1914 a major addition would be constructed on the northern side of the Peirce house. [HML PL L857 1913 21]

In 1913 the federal government enacted the first income tax laws. Vehemently opposed to the taxation of citizens Mr. du Pont noted:

> ...the recently passed income tax laws would destroy the country by placing too much power in the hands of politicians not qualified to shoulder such grave responsibilities.[6]

In response to the initial tax laws Mr. du Pont created Longwood, Incorporated, the holding corporation under which Longwood Farms would operate. On November 2, 1914 New Castle County, Delaware Notary Public George Dare Hopkins filed the Articles of Incorporation for Longwood, Incorporated, recognizing Pierre S. du Pont, President, H. Rodney Sharp, Treasurer, and Frank A. McHugh, as subscribers to the corporation's stock. On November 9, 1914 the first official board meeting was held. The initial stated purpose of the corporation being in part:

> THIRD: The nature of the business and the objects and purposes to be transacted, promoted and carried on, are to do any or all of the things herein mentioned, as fully and to the same extent as natural persons might or could do and in any part of the world, viz:
>
> To buy, sell, raise and handle livestock and poultry of all kinds and description.
>
> To plant, cultivate, purchase, sell, and otherwise grow and deal in grain, vegetables, fruit, of every name and nature, and all other products of the farm; and in general to carry on a general farming business, including the right to purchase, sell, own, hold, lease, and operate farms, to build buildings on the same and to equip said buildings with furnishings, apparatus, and machinery.[7]

Over the course of his life Mr. du Pont would attempt to stay one step ahead of the Internal Revenue Service by forming and positioning three different corporations which

would keep his farm and gardens in the best possible tax situation.

On May 12, 1914, Mr. du Pont purchased two additional properties from Harry Craig of Wilmington; they were the 13.13 acre Red Lion Tavern Property and an adjacent lot to the south at the intersection of Doe Run and Street Roads. (See Figure 22, page 59.) The importance of these acquisitions was twofold. The Red Lion Tavern provided tenant space to house single working men and the land provided strategic control of both sides of the intersection. Mr. du Pont also purchased the three-acre Cox Farm at Red Lion which included a tenant house and frame barn.

In 1914 Mr. du Pont decided to build an annex to the Peirce house to provide comfortable lodging and room to entertain the increasing number of guests and visiting family members. The addition was connected in part by a small atrium conservatory and mimicked the original Peirce house in architectural style but provided all the modern conveniences of a house of the era. (See Figure 20, page 53.)

Figure 20: The Peirce-du Pont House. [HML PL L857 1920 14]

At this time the development of the gardens, house additions, garage/dormitory, tenant houses and entertainment facilities started to reduce the farmland available foragriculture. As the estate, grew the total acreage did not and it became evident that the estate would need more land to grow and support itself.

ENDNOTES

1. P.S. Du Pont letter outlining Farm Managers position, September 14, 1912, PSduP 516, HML.

2. Pierre S. du Pont, "Manual of Instructions Prepared By P.S. du Pont For The New Farm Manager", PSduP 516-2, HML.

3. Douglas Gilpin bank savings book kept for the E.P.G.B.A. Show, 1925, PSduP 516-88, HML.

4. P.S. du Pont to the Finnish and Swedish Employment Agency, October 30, 1913, PSduP 516, HML.

5. P.S. du Pont to the Finnish and Swedish Employment Agency, November 7, 1913, PSduP 516, HML.

6. George E. Thompson, A Man and His Garden: the Story of Pierre S. du Pont's Development of Longwood Gardens, (Kennett Square, Pennsylvania, Longwood, Inc., 1976), p. 186.

7. Articles of Incorporation, Longwood, Incorporated, November 2, 1914, PSduP 516-187, Box 616, HML.

CHAPTER 4

THE GROWTH YEARS, 1915-1936

In the late 1910s and the early 1920s Longwood Farms was still isolated from the urban areas of Wilmington and Philadelphia. Consequently, relatively short spells of inclement weather would render the primitive roads useless for days at a time. This made it necessary for the farm to be self-sufficient in order to support its operations and produce a surplus to sell. The steady growth of the garden, the current staff and projected labor needs for ongoing projects prompted Mr. du Pont to look at neighboring farms for acquisition. His thoughts that real estate was a poor investment still held true, but in this instance the purchase of additional farmland and support buildings would serve the purpose of keeping his estate supplied with the best available milk, eggs, fruit, and vegetables. The independence of the need to buy staples from others was a matter of pride and principle.

In anticipation of the land expansion, Mr. du Pont hired Douglas Gilpin as Assistant Farm Manager in 1915.

Throughout his tenure at Longwood Farms, Gilpin played an important role in the steer and dairy operations and took over as Farm Manager upon the retirement of Malcolm Farquhar in 1929. Isaac Evans was promoted from timekeeper/orchard supervisor to Assistant Farm Manager at that time. (See Figure 21.)

Figure 21: Farm employees, 1922. Clockwise from lower left, Earl England, Mr. England, Herbert Goodwin, Doug Gilpin, F. Nesbitt (hat), and Isaac Evans (middle) on the steps of the Merrick House where the Evans family resided. [Isaac Evans, Jr.]

The marriage of Pierre du Pont to his first cousin Alice Belin had a significant impact on how the household and estate were operated. She had previously accompanied

him to Europe many times and shared his love of flowers and plants. Throughout 1914 and 1915 they attended many dinners, plays and concerts together, and in June, 1915, Pierre surprised Alice with the proposal of marriage. They were married in New York City at the Park Avenue home of her brother, F. Lammot Belin on October 6, 1915. After a short honeymoon, Mrs. du Pont moved into the house, "...easily and graciously, taking over household staff management and the responsibility for the ever-increasing number of social and business functions at Longwood."[1]

> The arrival of Mrs. du Pont produced a major improvement program and a series of alterations, costing $117,000. These were made in 1916 and included new stairways, cedar closets, a new plumbing and heating system, teak flooring and structural steel reinforcing. New roofs were added to the conservatory and winter garden, the library was refinished and fire proofed and a bowling alley installed in the basement.
>
> Mrs. du Pont proved to be a gracious complement to Pierre in the operation of Longwood. Employees came to respect and admire her, as she was never to busy or too disinterested to listen to their problems and requests, and to lend a helping hand. Although an ardent traveler, most of Mrs. du Pont's time was spent at Longwood and, occasionally, at the apartment in Wilmington.[2]

Mrs. Douglas Gilpin, in an earlier interview, noted that "it was really Mrs. du Pont that had the real interest in the farming operation, since she kept abreast of all the agricultural accomplishments and was the person who called up and offered congratulations when any of the animals won blue ribbons at shows."[3]

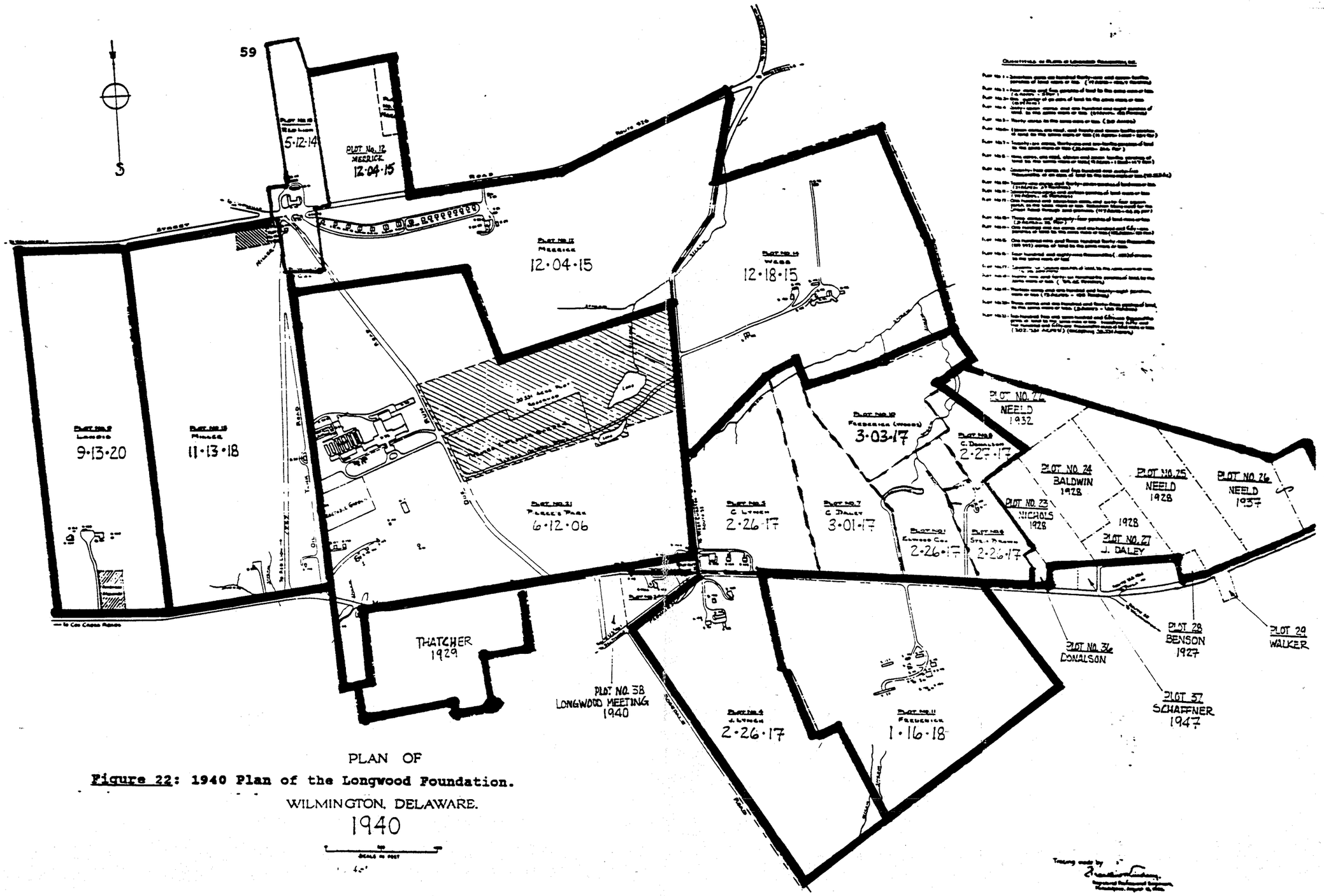
Initial Farmland Acquisitions, 1915

With Mrs. du Pont residing at Longwood, Pierre began an ambitious land acquisition program. In 1915 he purchased two critical properties, the Merrick and Webb Farms. (See Figure 22, page 59.) In combination with the original Peirce Farm these farms created the core for all future development. (See Appendix 4, page 122.)

Merrick Farm

The first and probably most important farmland purchase which Mr. du Pont made was the acquisition of the Robert Merrick Farm directly to the north. (See Figure 22, page 59.) This land represented the northernmost parcel of the original 1700 Penn grant to George Peirce which had been sold by his heirs. The problem for Mr. du Pont was that the Merrick pasture was directly adjacent to the northern border of his property and at one point came within 20-30 yds. of the garage and house.

The proximity of the Merrick pasture and a twist of fate led to the acquisition of the Merrick Farm. Pierre had just purchased a new washing machine which was placed in the garage building for use by the servants. One day



PLAN OF

Figure 22: 1940 Plan of the Longwood Foundation.

WILMINGTON, DELAWARE.

1940

thereafter, a large discharge of soapy water found its way down the natural drainage slope into Merrick's field. Unfortunately, by account of Merrick, some of his cows drank the water and became sick; one died. Mr. Merrick asked to be compensated and after careful consideration, Mr. du Pont declined. Mr. Merrick then contacted his attorney, who in turn contacted Mr. du Pont. At this point, Mr. du Pont, thinking forward about a long term solution versus a short term remedy to the problem, offered to purchase the Merrick farm at a fair market price. Mr. Merrick seized the moment and asked $75,000.00 for the 140 acre farm, house and barn. Mr. du Pont was astonished that anyone in the vicinity would command that type a price and asserted that it was a hold-up to expect him to buy.[4] Mr. du Pont quietly pursued the deal through his attorney, Miss Isabella Darlington, and on December 4, 1915, purchased the 140 acre farm and adjacent 3.5 acre lot, for $50,000. The significance of this acquisition was that it gave Pierre control of the frontage on the south side of Street Road (Route 926) and the west side of the State Road to West Chester (Route 52) and it provided the cornerstone for the development of the dairy operations for the farm group and land to develop tenant housing. Its proximity would be beneficial to the production and distribution of dairy products to the growing estate while being far enough removed not to interfere with

the development of gardens and grounds. Red Lion row, the initial and foremost tenant area on the property, was developed at this site to accomodate the rapidly growing staff. (See Figure 23, page 62.) This purchase also consolidated the northern 345 acres of the original 400-acre Penn grant.

In 1916, Mr. du Pont made improvements in the poultry and swine capabilities at the Merrick farm, adding additional chicken houses and a hog house. (See Figure 24, page 62.) Up until this time the pigs had been kept in a yard to the north of the Longwood barn. The first mention of swine at Longwood is officially cited in the Statement of Farm Accounts written for Joseph Baily in 1908. (See Appendix 2, page 116.)

The records of the Longwood pigs, from 1916, show that the majority of the animals bred and raised were Berkshires registered with the American Berkshire Association, headquartered in Springfield, Illinois. The pigs were bred, raised and sold as breeding stock or sold to "butchers" in Wilmington.[5] (See Figure 25, page 63.)

In 1917 a modern creamery was added to the west side of the Merrick barn. (See Figure 26, page 63.) This enabled

Figure 23: Red Lion Row looking east from the water tower. The Merrick house and barn in the upper left corner and the Webb farm group in the distance. [Longwood Archives, Peirce House]

Figure 24: Eastern exposure of the Merrick Barn. [Isaac Evans, Jr,]

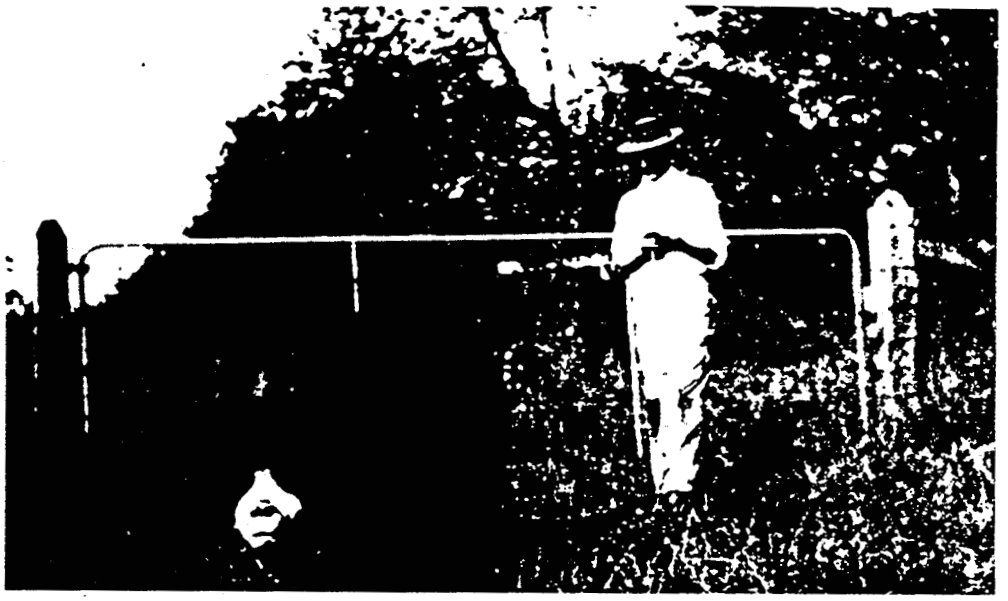


Figure 25: Abe Sellars with Longwood Champion. Abe was the keeper of the pigs and Merrick barn and lived on Red Lion row. He is shown here with Longwood Champion, a prize Berkshire and herd sire. [Isaac Evans, Jr.]

Figure 26: The Merrick barn. This southern exposure shows the main barn and the smaller creamery building to the left. [Isaac Evans, Jr.]

Pierre to meet the dairy needs of the house and growing staff.

About this time the Guernsey breed of cow was chosen as the mainstay of the infant dairy operations. Each of the animals was registered with the American Guernsey Cattle Club, headquartered in Peterborough, New Hampshire. The Guernsey breeding operations under Farquhar and Gilpin produced many fine specimens. (See Figures 27 and 28, page 65.) Longwood heifers, cows and bulls consistently won honors at the Pennsylvania State Fairs held in Harrisburg, the Eastern Pennsylvania Guernsey Breeders Shows held in Devon, Pennsylvania, the Great Chester County Fairs held in West Chester, Pennsylvania, and at the Delaware State Fairs held in Wilmington, Delaware.[6]

One of the most famous Longwood animals was Longwood Jewess, a registered Guernsey cow. In 1939 she was chosen, from 18,000 offered, as one of 150 cows representing 34 states and 3 Canadian provinces to participate in The Dairy World of Tomorrow, a dairying exhibit sponsored by the Borden Company at the New York World's Fair. Within hours of her arrival at the fair in Flushing Meadows, New York, she gave birth to a calf. Press releases and photographs of mother and daughter soon appeared in several east coast

Figure 27: Brittleware Buttercup. A prize winning Guernsey cow and excellent dairy producer, she was photographed by Isaac "Rowland" Evans, Sr. at the Merrick farm. [Isaac Evans, Jr.]

Figure 28: Longwood Billy. A premium bull developed by Longwood Farms and sire of many Longwood cows. He won the first premium for bulls 3 years and over at the Great Chester County Fair and second premium at the Delaware State Fair in 1921. [Isaac Evans, Jr.]

Figure 29: Longwood Jewess and calf. Here they are shown at The Borden Company's Dairy World of Tomorrow during the 1939 World's Fair held at Flushing Meadow, New York City, New York. [HML PSduP 516-88-724]

newspapers. (see Figure 29) A letter from the public relations department of The Borden Company to Mr. du Pont dated May 13, 1939, stated:

> When Longwood Jewess joined us at the Dairy World of Tomorrow she was, obviously, in an interesting condition. Nevertheless, the press was quite taken with her action when she finally

> became a mother and numerous publications have taken cognizance of the event.
>
> You may be interested in the release that this office has sent out in mat form on the subject.
>
> Longwood Jewess and her child have been among the most popular members of our bovine population and I think that it is fortunate that glass walls separate them from petting hands.[7]

One of the major agricultural events held at Longwood Farms occurred at the Merrick Barn and creamery in 1925 when Mr. du Pont hosted the Eastern Guernsey Breeders Association Field Day. The activities included animal judging, professional exchanges, and was highlighted by a luncheon on the fern floor of the main conservatory featuring produce of Longwood Farms. (See Figures 30, 31, 32, and 33.)

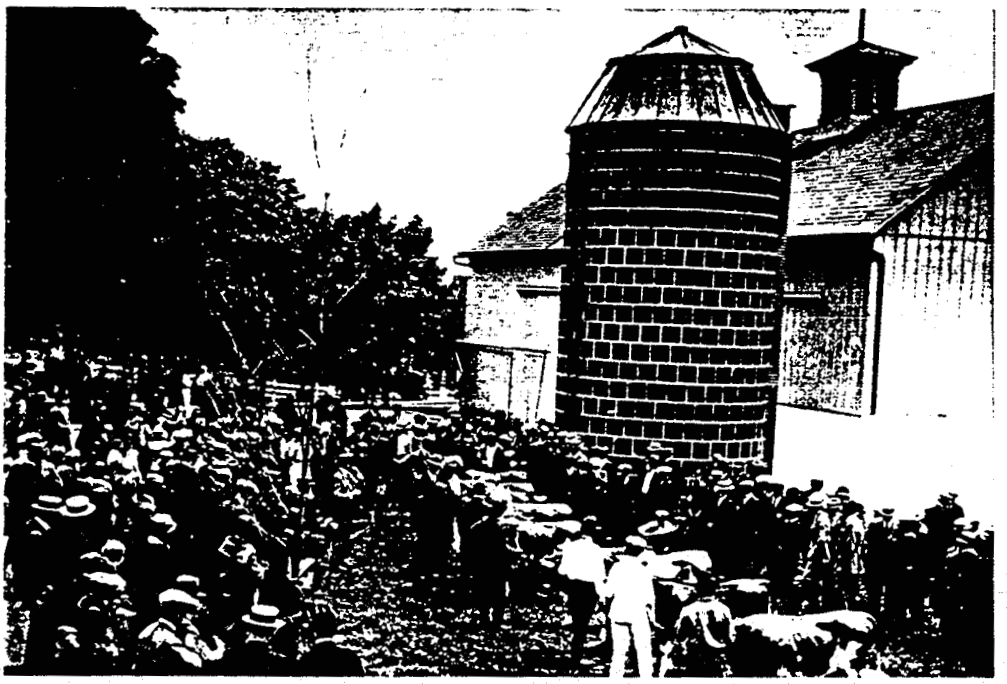


Figure 30: Cow judging at the Merrick barn, Eastern Guernsey Breeders Field Day. [HML PL L857 1925 10]

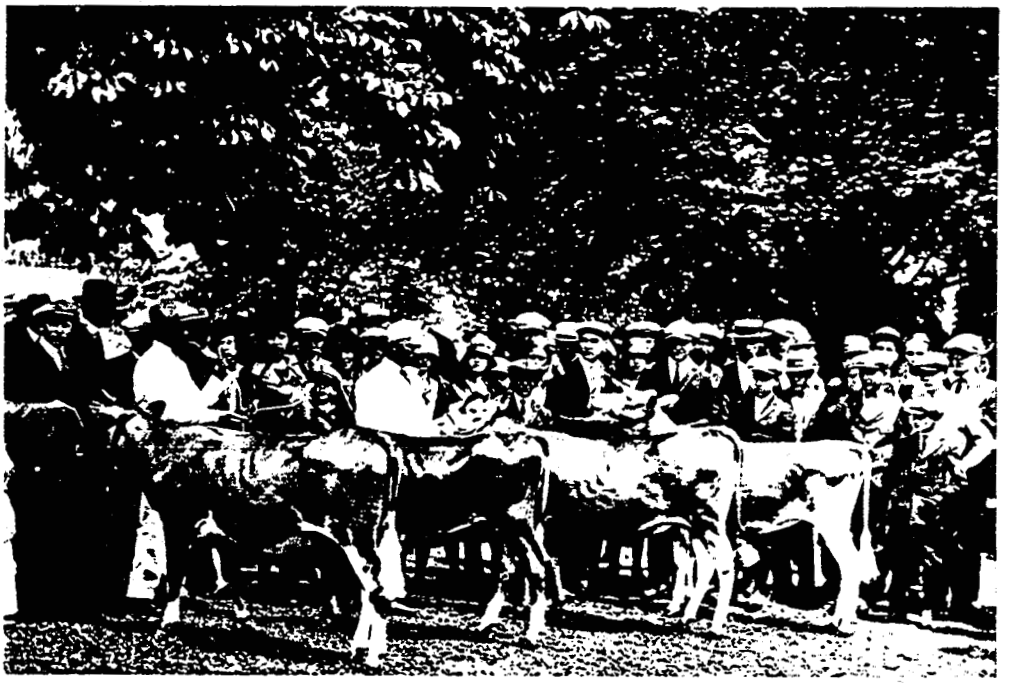


Figure 31: Eastern Guernsey Breeders Field Day at Merrick farm. Boys and girls heifer judging. [HML PL L857 1925 11]

Figure 32: Eastern Guernsey Breeders Field Day at Merrick farm. One year heifers as placed, first place left to right. [HML PL L857 1925 9]

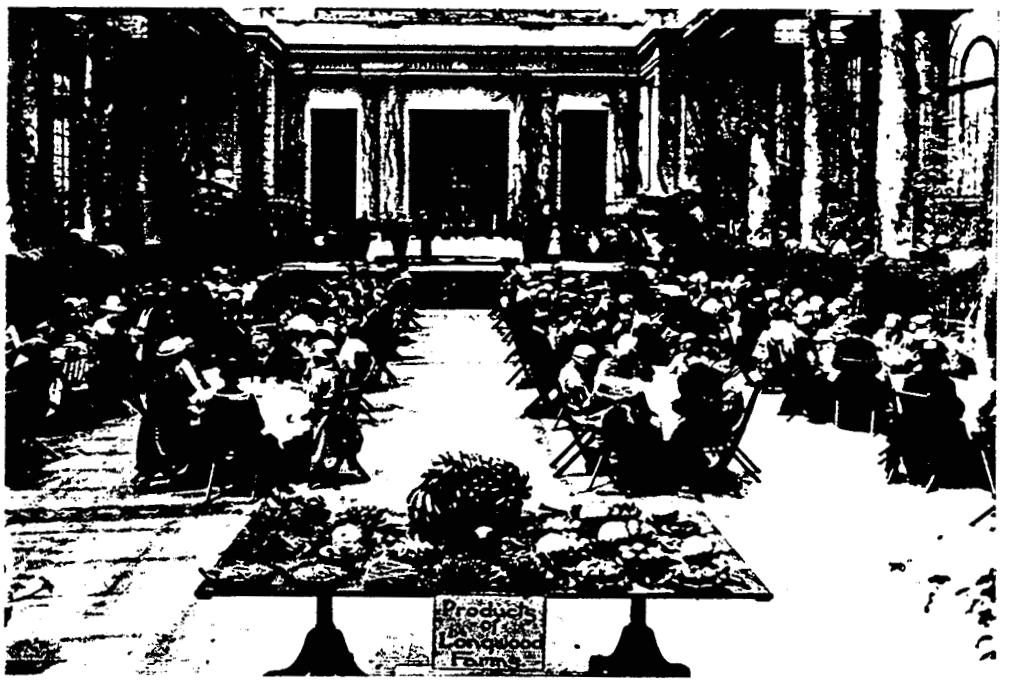


Figure 33: Eastern Guernsey Breeders Association luncheon on the fern floor of the main conservatory, 1925. [HML PL L857 1925 7]

Webb Farm

With the Merrick property secured Mr. du Pont looked to the northeast to acquire more agricultural land to replace that being used in the garden and estate expansion. On December 15, 1915, Mr. du Pont purchased the 106 acre Webb Farm, to the northeast and across the State Road to West Chester (Route 52), for $20,000. This property included a house and large barn but more importantly it provided control of the eastern frontage of the West Chester road and room for future agricultural expansion.

In May of 1916 favorable spring weather and the additional acreage produced an abundance of field crops for internal consumption and outside commerce. The alfalfa hay crop was so large that Longwood Farms sold Wawa Dairies of Media, Pennsylvania, several shipments of hay, the largest lot of the season was 64,968 lbs., amounting to $649.60. Crop insurance records reveal the crop production and storage at the Webb and Merrick barns:

Webb Barn:	40	tons of mixed hay
	575	bushels of corn
Merrick Barn:	50	tons mixed hay
	10	tons of straw
	250	bushels of wheat
	1000	bushels of corn[8]

In late May of 1916 it was decided that Longwood Farms would diversify its bovine capabilities by raising registered Hereford cattle in addition to the steers and Guernseys. In a letter dated June 7, 1916, between Longwood Farm Manager Malcolm Farquhar and P.C. Green of Kenna, West Virginia, the deal for the stud bull of the new herd was finalized:

> Enclosed herewith find certificate and pedigree of Beau Kenna, which I just received today. We also acknowledge receipt of your letters and check for which we thank you. We trust the bull will be entirely satisfactory to you and that we may be able to serve you in (the) future.[9]

The addition of the Herefords served a dual purpose. They diversified the source of beef raised at the farm but also contributed as a much needed source of manure. Douglas Gilpin stated:

> When I arrived, Mr. du Pont had already set up a program of buying beef cattle in Lancaster, bringing them to Longwood for fattening purposes. They were housed in the barn which he had built in 1908 and stood where the main greenhouse now stands....
>
> When they were ready to be slaughtered, generally March or April, we would drive the cattle down the dirt road from Longwood to the Wilmington Provision Company on Front Street in Wilmington, Delaware. Quite a few people would help us get the cattle past the Mendenhall Station and then three or four of us would herd them into Wilmington.
>
> Mr. du Pont wasn't really in the beef business and I doubt if the venture made enough money to make the effort. What he really wanted was the manure. He was planting alot of flower gardens and wanted a ready supply of good manure. The beef cattle operation gave him an assured supply at no cost to the garden.[10]

Gilpin's statement is validated by a letter Mr. du Pont wrote to the "American Agriculturist" on June 18, 1912:

> I have experimented with fattening steers for three seasons, purchasing young animals in the early fall and selling them in May or June. So far the operation has not been profitable, though, of course, the large amount of manure returned to the land is probably important in increasing the fertility of the soil[11].

The impetus for the purchase of the Webb farm came from the development of recreational facilities at Longwood. By September, 1916, Mr. du Pont realized the need for

recreation at Longwood and developed a golf course and tennis court. He wrote the specifications for the tees and greens and designed the course layout himself.[12] The 9-hole course was laid out to the south of the existing house and gardens and extended from Doe Run road to the west and the road to West Chester to the east. The course was very popular with the employees and at its peak, 61 employees and their families played regularly. Its major impact to the agricultural production at Longwood Farms was the reduction of the tillable land by fifty acres, which had been in cultivation of corn and ensilage. (See Figures 14, page 35, 34 and 35, page 73.)

In 1919, the original Webb barn was razed and a large modern barn was constructed to house the Hereford cattle and horses. In 1927 the Hereford cattle operation was terminated to expedite the 1924 decision to increase the number of Guernsey cows (See Table 2, page 77.) and increase dairy production. In 1928 the dairy operations were moved from the Merrick Farm to the new Webb barn which was retrofitted with new creamery equipment and remodelled to house the Guernsey herd. (See Figures 36 and 37, page 75, 38, and 39, page 76.) Output had increased substantially in 1924 and increased further when the Webb barn creamery

Figure 34: Longwood Golf Course. The eighth tee in the Peirce Park arboretum looking south across the large lake. The hole was a 158 yard par four, dog-leg to the right. [HML PL L857 1922 105]

Figure 35: The flower garden with the golf course as a pastoral backdrop. [HML PL L857 1922 17]

became fully operational in 1928. (See Table 3, page 79.) By 1932 and through the year 1950, Longwood Farms, in the name of Pierre S. du Pont, was listed on the National Dairy Association's National Honor Roll.[13] The Diploma awarded to Longwood Farms August 31, 1945 read:

> The National Dairy Association awards this diploma to Longwood Farms-Pierre S. du Pont and adds the name to the NATIONAL HONOR ROLL in recognition of the achievement of developing a herd of 54.50 cows to a yearly production average of 437.4 pounds of butterfat for year ending August 31, 1945.
>
> By authority of the Board of Directors.

The Merrick and Webb farm acquisitions also allowed Mr. du Pont to expand the orchards, fields and pasture lands substantially to accommodate additional staff and farm animals. The types of livestock reared at the farm diversified and expanded and by 1916 the annual report recorded:

Steers	Guernseys	Herefords	Hogs	Horses
60	9	27	56	16
Chickens	Turkeys	Ducks[14]		
330	25	29		

Table 2 (page 77) and Figure 40 (page 78) indicate the number and diversity of livestock at Longwood Farms. The bolded area within Table 2 indicates the period of the most activity at the farm and is supported by Figure 40.

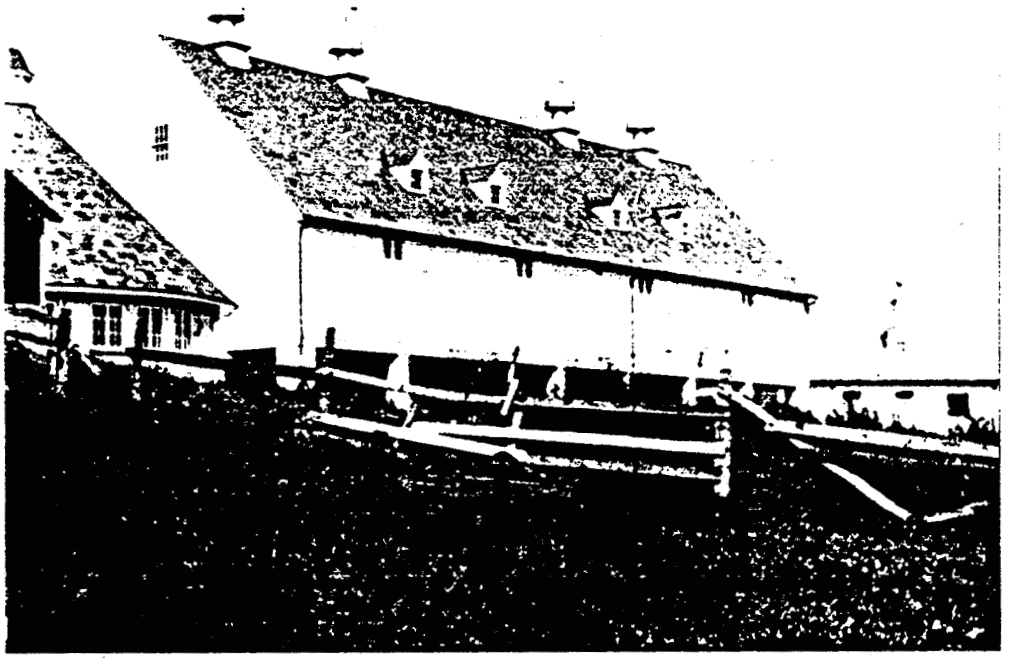


Figure 36: The southern exposure of the Webb barn. The round building to the left in the photograph was the testing room where the Guernsey cows were tested for their butterfat content to be certified for entry into the American Guernsey Cattle Club. [Isaac Evans, Jr.]

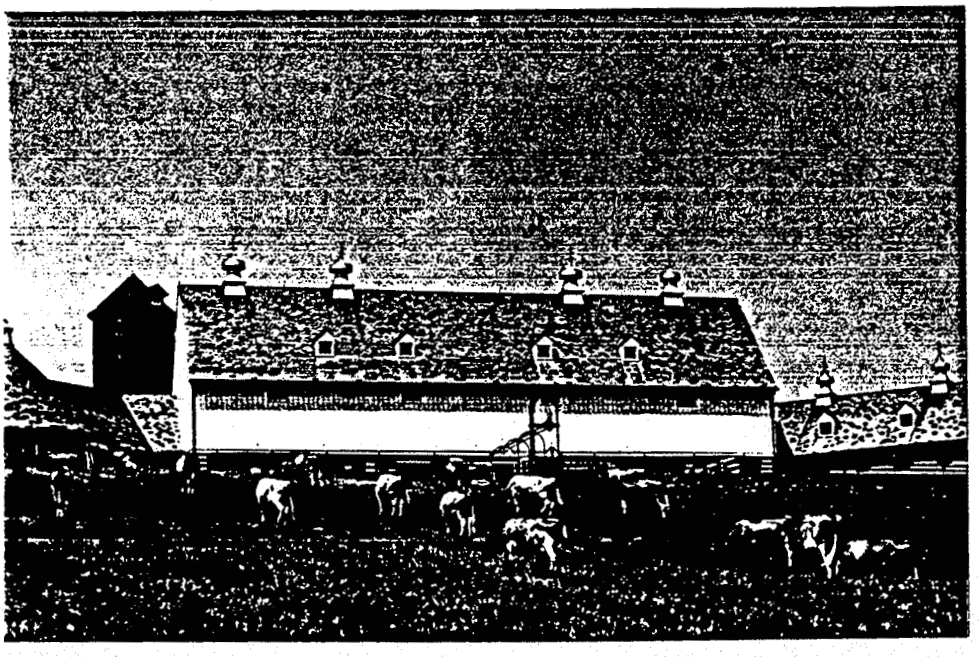


Figure 37: Webb Barn, 1925. Guernseys in field south of Webb Barn. [Longwood Archives, Peirce House]

Figure 38: South side and pasture of Webb barn, 1925. The round building attached to the west (left) of the barn is the testing room. The unattched building to the east is the bull barn. [HML PL L857 1925 15]

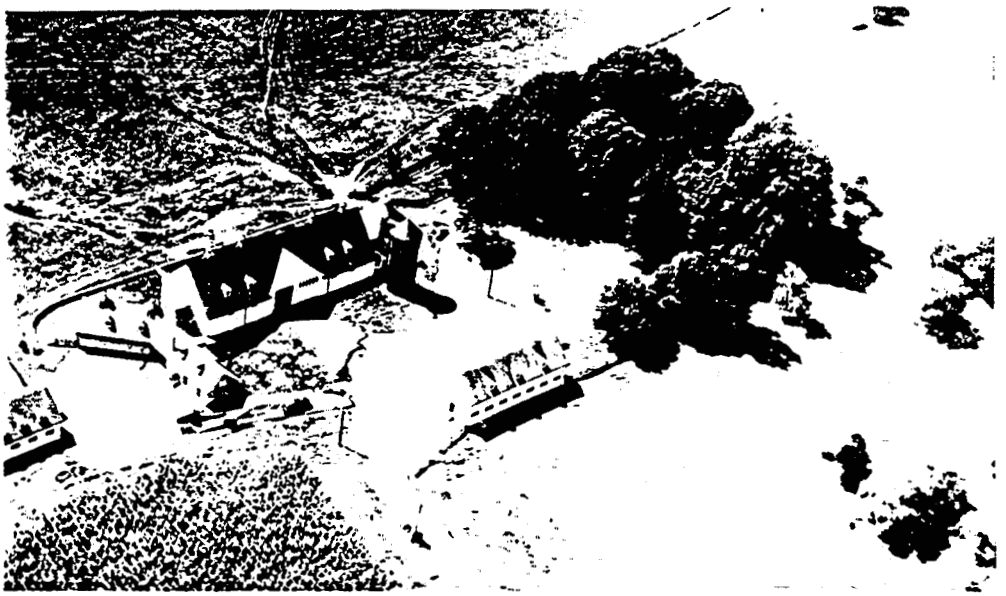


Figure 39: Webb farm aerial, 1951. The main barn in the center (1919), the bull barn to the left (1920), the creamery addition to the east (left) attached to the barn (1928), and calf barn (1929) to the bottom center of the photograph. [HML PL L857 1951 23]

Table 2: Livestock at Longwood Farms, 1906-1951.

Year	STEERS	Guernsey COWS	HEREFORD COWS	HOGS	HORSES
1906	N/A	N/A	NO	N/A	N/A
1907	15	02	NO	N/A	05
1908	31	03	NO	YES	07
1909	60	02	NO	YES	07
1910	61	02	NO	YES	07
1911	60	02	NO	YES	07
1912	29	03	NO	YES	07
1913	30	03	NO	YES	06
1914	60	03	NO	25	06
1915	60	15	NO	44	16
1916	60	09	27	56	16
1917	60	12	26	91	19
1918	60	18	49	155	19
1919	60	34	38	146	19
1920	74	42	45	120	21
1921	70	42	44	57	20
1922	65	40	52	49	15
1923	79	41	60	39	14
1924	75	70	85	53	12
1925	75	51	67	8	12
1926	118	53	67	43	12
1927	125	61	25	23	11
1928	99	75	END	40	11
1929	66	82	-	29	09
1930	58	89	-	35	10
1931	43	95	-	30	19
1932	39	107	-	48	08
1933	29	100	-	31	10
1934	END	106	-	28	10
1935	-	106	-	24	09
1936	-	108	-	13	09
1937	-	117	-	END	07
1938	-	120	-	-	04
1939	-	115	-	-	09
1940	-	124	-	-	04
1941	-	123	-	-	04
1942	-	118	-	-	04
1943	-	111	-	-	04
1944	-	115	-	-	N/A
1945	-	118	-	-	N/A
1946	-	117	-	-	N/A
1947	-	120	-	-	N/A
1948	-	118	-	-	N/A
1949	-	120	-	-	N/A
1950	-	120	-	-	N/A
1951	-	121/END	-	-	N/A

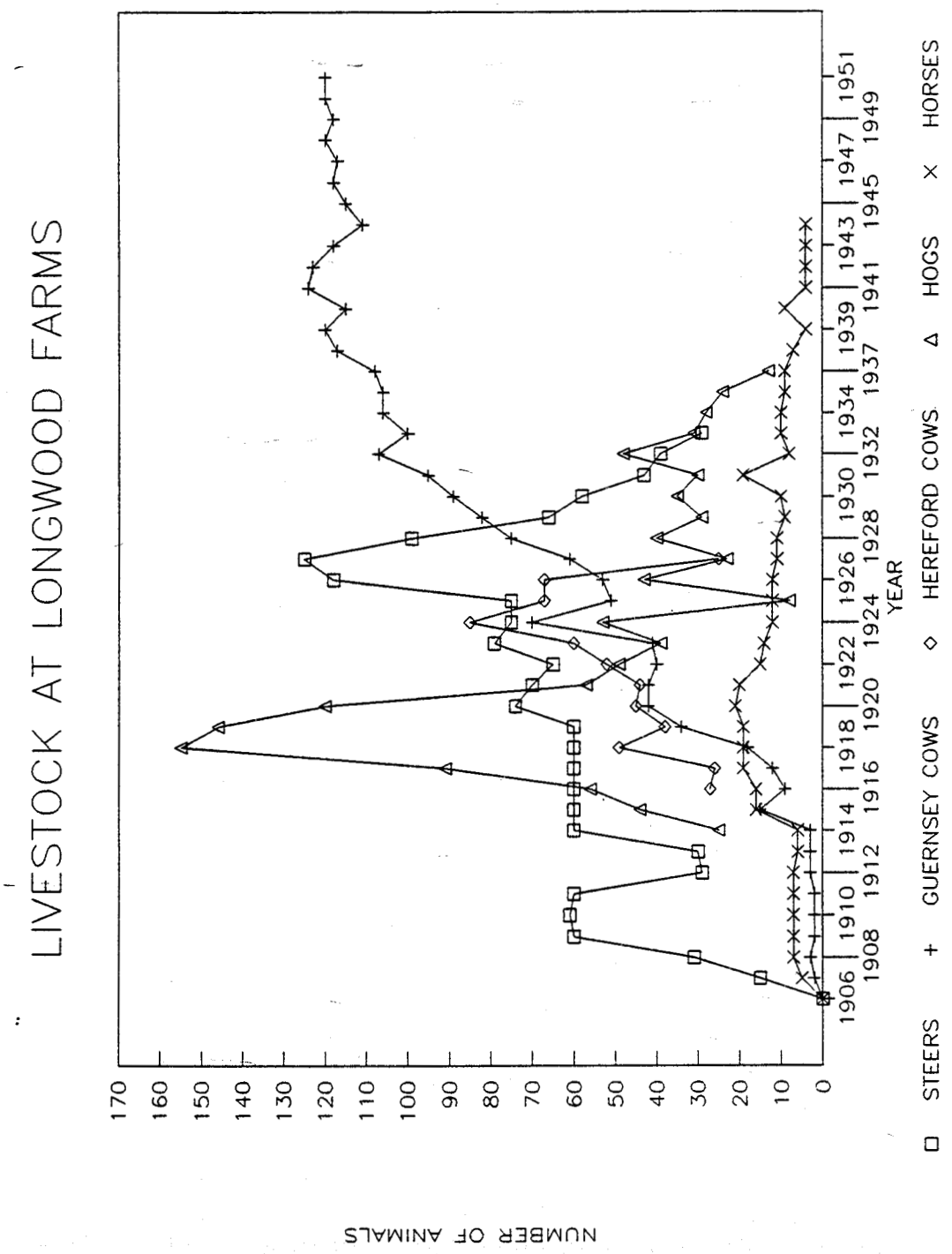


Figure 40: Chart of livestock at Longwood Farms, 1906-1951.

Table 3: Dairy Products of Longwood Farms, 1921-1945.

MERRICK FARM CREAMERY - est. 1916

Year	Milk gallons	Skim Milk gallons	Buttermilk gallons	Cream quarts	Butter pounds
1921	596	570	---	103	152
1922	968	898	---	101	297
1923	714	545	---	113	127
1924	10,222	9,833	---	1,345	3,043
1925	9,598	768	9	1,425	3,027
1926	12,697	10,273	49	1,435	4,300
1927	10,060	7,852	174	1,351	3,162

WEBB FARM CREAMERY - est. 1928

1928	12,127	9,089	532	1,432	3,667
1929	NA	9,866	100	1,518	3,378
1930	17,716	1,202	530	1,726	5,043
1931	17,859	12,638	276	1,770	5,191
1932	15,556	12,784	293	1,654	4,613
1933	22,742	16,036	233	448	7,056
1934	21,224	17,252	41	410	6,870
1935	19,733	15,721	88	426	6,108
1936	24,593	18,683	112	408	8,118
1937	19,301	16,976	242	415	5,949
1938	15,609	12,248	126	380	4,505
1939	18,184	14,345	98	400	6,183
1940	22,183	17,965	127	350	8,065
1941	24,752	15,710	165	347	9,667
1942	19,773	15,840	233	311	7,680
1943	26,702	NA	292	442	9,420
1944	27,375	21,630	350	714	8,960
1945	28,427	21,700	318	785	8,030

Miscellaneous Dairy Facts

- One quart of whole milk weighed 2.15 lbs.
- Ten quarts of milk produced one quart of cream.
- One quart of cream produced about one pound of butter.

Guernsey Feed

Dairy Feed	Ensilage	Manggolds	Oats
Cow Ration	Bran	Corn fodder	Beet Pulp
Hay	Corn	Salt	

Guernsey Bedding

Straw Peanut Hulls

Land Acquisitions 1917-1920

Between 1917-1920, a major land expansion occurred. Mr. du Pont purchased 8 farms and 2 properties in the village of Hammorton to the east of Longwood Farms and 2 farms to the west. (See Figure 41.)

Eastward Land Expansion, 1917-18			
Stephan Brown	11 acres	February	26, 1917
Ellwood Cox	18 acres	"	" "
Catherine Lynch	30 acres	"	" "
John Lynch	67 acres	"	" "
Camby Donalson	9 acres	February	27, 1917
Clarence Dailey	26 acres	March	1, 1917
Frederick Woods	21 acres	March	3, 1917
Midfield Farm	79 acres	January	16, 1918
Westward Land Expansion, 1918-20			
Maris Miller	109 acres	November	13, 1918
Landis Farm	74 acres	September	13, 1920

Figure 41: Longwood farms land expansion, 1917-1920.

These farms, in combination with previous acquisitions, provided substantial acreage for orchards, vegetable gardens and field crops. The Cox, Lynch, Dailey, Frederick, Miller and Landis properties had remnant orchards when acquired, most were enhanced by new plantings. The orchard crops included multiple varieties of apples, cherries, peaches, pears, plums, and quince. (See Figures 42, page 81, and 43, page 82.)

	Orchard Location	
Alexander's	Greenhouse	Merrick Apple
Dailey	Landis	Merrick Peach
New Dailey	Longwood	Miller
Frederick	Lynch	Webb
	Crop	
Apple	Peach	Plum
Cherry	Pear	Quince
	Apple Variety	
Smoke House	Grimes Golden	Winter Banana
Baldwin	Wolf River	Northern Spy
York Imperial	Roman Beauty	Paragon
Delicious	Bell Flower	Jonothan
Stayman Winesap	Stark	Winesap

Figure 42: Longwood Farms Orchards, 1923.[15]

The Dailey, Frederick and Miller farm's vegetable gardens produced asparagus in good quantity, with the Lynch and Dailey farms producing blackberries and strawberries. (See Table 4, page 83.)

Lynch Farms

The Lynch Farms to the north and south of the intersection at the anvil corner were both agricultural and strategic purchases. They provided control of the intersection of State Road (US Route 1), West Chester Road (Route 52) and Rosedale Road (Route T-432). The 67 acre farm to the south, which provided a storage barn, tenant

Figure 43: Longwood aerial, 1927. This aerial view of Longwood Farms is taken looking to the east from an unknown altitude above the conservatories. The Longwood Vegetable Garden and greenhouse show up in the lower left hand corner. Further east is the Peirce-du Pont house with an orchard to the north and in the distance in the upper left corner is the Webb Farm complex and orchard. To the south of the Webb farm to the upper right in the photograph are the Dailey and New Dailey orchards. Notice the golf course to the south of the mansion house and garden. Confirmation of the location of the orchards and the types of trees grown can be confirmed by cross referencing numerous aerial photographs available with topographic maps of the acquired farms and Longwood Farms Orchards and Field records.

The open fields surrounding the Webb Farm and the Dailey orchards were used for field crops and pasture. [HML PL L857 1927]

Table 4: Longwood vegetable garden expenses--Summary 1924.[16]
Amounts listed in US dollars.

	Dailey	Frederick	Lynch	Miller	Total
Labor	15.30	57.44	128.03	84.59	285.36
Teams and tractors	---	2.40	15.90	5.00	23.30
Hauling asparagus	---	1.80	---	1.87	3.67
Asparagus tape	---	1.88	---	1.80	3.68
Blackberry Plants	---	---	56.18	---	56.18
Expenses 1924	15.30	63.52	200.11	93.26	372.19
Production	======	=========	======	======	=======
Asparagus	110 bu 19.65	403 bu 137.41	---	765 bu 254.80	1278 bu 411.86
Blackberries	---	---	95 qts 11.88	---	95 qts 11.88
Production	19.65	137.41	11.88	254.80	423.74
Net earnings	4.35	73.89	188.23	254.80	423.74

Net earnings for 1923 - $262.53
Net earnings for 1924 - $ 51.55

house, orchards, and approximately sixty acres of tillable acreage, became the third major center from which farming activities were operated. The northern part of the farm above State Road (US Route 1) was agricultural fields and woods. In 1920 the main farm office was constructed here because of the farms proximity to roads and its central location. This became the main headquarters for Farm Division managers. (See Figures 44 and 45, page 84.)

Figure 44: The new farm office just south of US Route 1 on the Lynch Farm, 1920. Douglas Gilpin's office was just inside the door in the right section of the building. Clark Pyle's blacksmith shop was located through the double doors in the left portion of the building. [Isaac Evans, Jr.]

Figure 45: Aerial view of the Lynch Farm complex. [HML PL L857 1951 22]

Frederick Woods and Midfield Farm

On March 3, 1917 Pierre bought the 21-acre Frederick Woods south of the Webb farm and north of the Dailey, Brown and Donalson properties. Because of its remote wooded location and a deep, stream-cut ravine located at the northern boundary, this area became the estate dump. The dump is now closed and the majority of the forest remains as one of the few naturally wooded areas left at Longwood.

January 16, 1918 Christian Frederick's Midfield farm was added to the Longwood Farm group. (See Appendix 5, page 124.) This farm and barn would become the fourth focal point for farming operations and through the years would develop into the poultry farm. Initially, the barn and farm were used to stable and pasture 15 Lancaster Steers. In his farm notebook dated October 11, 1918, Malcolm Farquhar recorded bringing the steers in from the field, 45 to the Longwood barn and 15 to the Frederick barn.[17] The 45 steers which were brought to the Longwood barn were recorded as 30 Chicago steers and 15 Lancaster steers.

On November 30, 1918 Farquhar recorded, "J. Douglas and D. Gilpin to Chicago Stock Breeders Exhibition." In correspondence to this information, Longwood Farms Livestock Expense Summaries for the years 1918-1924 note the presence

of Chicago and Lancaster steers at the farm. In 1925 only Lancaster steers were recorded, but in 1926 "St. Paul" steers were recorded with the Lancasters. Between 1920 and 1930 the steer fattening operations were at their peak, with 1926 and 1927 being the banner years. In 1926, 104 Lancaster and 88 St. Paul steers were raised. In 1927, 65 Lancaster and 148 St. Paul steers were raised. Table 2 (page 77) denotes the maximum number of steers on the property at any one time and records that the steer fattening operations started in 1906 and ended in 1933.

In the early through mid-1900s Mr. du Pont showed a personal interest in obtaining the best possible price for his steers on the open market. He wrote many commodities dealers, some as far away as Denver, Colorado to obtain prices for the steers on major U.S. markets. Finally he engaged Roger W. Babson of Babson's Statistical Organization[18], Boston, Massachusetts to compile the average farm value of beef cattle in Illinois, Pennsylvania and Delaware and to obtain the wholesale prices of steers on specified markets such as Pittsburgh, Pennsylvania; Buffalo, New York; and Chicago, Illinois. When the steers were determined ready for slaughter he would pick the highest priced markets and send a letter hoping to get the best price for his herd. This is a sample letter sent to the

Consolidated Dressed Beef Company, Philadelphia, Pennsylvania dated March 24, 1915.

> Would your house be interested in bidding on a herd of sixty (60) steers that I have been fattening at my farm near Kennett Square, Chester County, Penna? They are high grade animals (practically show cattle), suitable for Philadelphia or New York markets.
>
> If you are interested, I can arrange for an inspection, or furnish any additional information you require.[19]

About 1920 farming operations at Midfield farm were geared towards cultivating field crops, producing asparagus at the Frederick vegetable garden and raising poultry. (See Figures 46, page 88, 47 and 48, page 89, 49 and 50, page 90.)

Initial orders of chicks show that the White Wyandotte chicken was popular, and this continued when Leghorns were also added to the flocks in 1930. The White Wyandotte[20] was a general purpose fowl exhibiting good laying and table characteristics. The Leghorn[21], for its smaller size, produced a great quantity of large white eggs and was probably obtained for the specific purpose of increasing egg production. In 1925 the poultry farm produced 6557 dozen eggs. (See Table 5, page 91.)

Figure 46: Aerial view of the Frederick Farm complex. The large, long, white building to the top left in the photograph was the brooder house and fenced chicken yard. The large, long, white building to the bottom of the photograph is the laying house. The two story structure in the middle of the laying house was where the feed was stored, mixed and dispensed, and where the eggs were "candled." During the candling process the eggs were backlit to check for double yolks, imperfections or fertilization. There was a battery of coops and large fenced chicken yard to the south of this building.

The large house with the ivy growing on the side was Poultyman Walter Drake's house. The house between the brooder house and Drake's was occupied by Assistant Poultryman Clarence Nead and family. The two story white house was occupied by Caleb Toulson, he was listed as Longwood handyman and chauffeur. He later worked in the Longwood vegetable garden. [Lorna (Drake) Deckman]

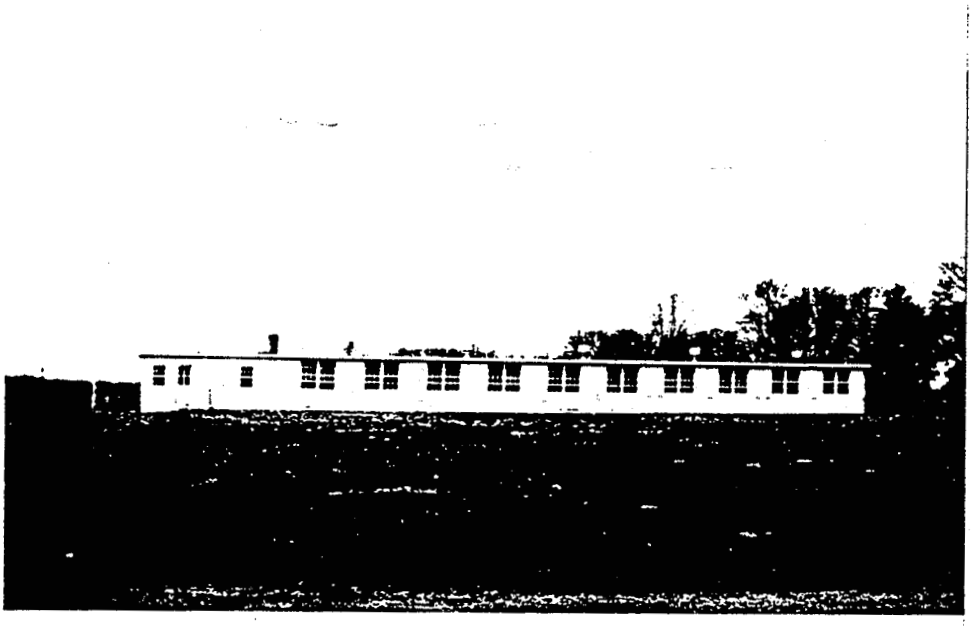


Figure 47: **Brooder House, 1934.** [Collection of Hazel Nead]

Figure 48: **Laying House, 1934.** [Hazel Nead]

Figure 49: **View from the laying house door towards the tenant houses occupied by Nead, Toulson and, Drake.** [Hazel Nead]

Figure 50: **Frederick farm turkeys.** [HML PL L857 1929]

Table 5: Poultry Operations at Longwood Farms 1906-1935.

Year	Chickens	Eggs dozen	Turkeys	Pigeons	Guinea Fowl
1906	NA	-	-	-	Production
1907	60	-	-	-	began
1908	58	-	-	-	1937
1909	53	-	-	-	
1910	80	-	-	-	
1911	64	-	-	-	
1912	90	-	-	-	
1913	NA	-	-	-	
1914	323	-	9	-	
1915	222	-	9	-	
1916	330	-	25	-	
1917	372	-	32	-	
1918	346	-	46	-	
1919	430	-	13	-	
1920	389	-	7	-	
1921	309	-	11	20	
1922	695	-	54	62	
1923	847	-	56	80	
1924	1405	-	62	80	
1925	1500	6557	243	80	
1926	1692	6037	154	80	
1927	2209	5201	407	80	
1928	1740	4412	462	80	
1929	1157	-	749	70	
1930	4058	-	37	70	
1931	NA	-	NA	NA	
1932	NA	-	NA	NA	
1933	NA	-	NA	NA	
1934	1603	-	294	88	
1935	NA	-	NA	NA	

Miscellaneous Poultry farm facts

-Original chicken house built 1911 northeast of the vegetable garden and northwest of mansion house, replaced in 1912 by apple cellar.
-Poultry operations moved to Merrick farm in 1915, several chicken houses were built.
-Poultry operations moved to Frederick Farm 1919-20. Large chicken house built in 1924 and major expansions of facilities in 1927 and 1931.
-R.H. Stabler was hired in the late 1910s and tended the poultry until Walter M. Drake took over the responsibilities in February, 1934.

Miller Farm

On November 13, 1918 Pierre acquired the 109 acre Miller farm adjacent to the western edge of the property. It stretches from Hadley Mill Road[22] (Country Club Road) in the south to Street Road (Route 926) to the north. Originally, there were two houses and one barn on the property: one house and barn on the northern end of the property to the west of the Red Lion Inn south of Street Road, and one house on the south end of the property just north of Hadley Mill Rd. (See Appendix 6, page 126.)

Between 1919 and 1921, the construction of the 330,000 gallon oil storage tank took place on the eastern edge of this property as part of the construction of the glass house and conservatories complex. (See Figure 51, page 93.) As a result of the construction, the Longwood barn was torn down in late 1920 (see Figure 52, page 94) and that group of steers was moved to the Miller barn.

In 1929 Conservatory Road was built through the eastern part of the Miller property, to the west of oil tank hill, linking Hadley and Street Roads. This allowed Mr. du Pont to close Doe Run Road to public traffic, thereby uniting the conservatories complex to the eastern part of

the estate. Shortly thereafter a parking lot was built to the south of oil tank hill to accommodate visitors and staff. (See Figure 53, page 95.)

The Miller property, noted for its asparagus garden, produced over 785 bushels in 1924. (See Table 4, page 83.)

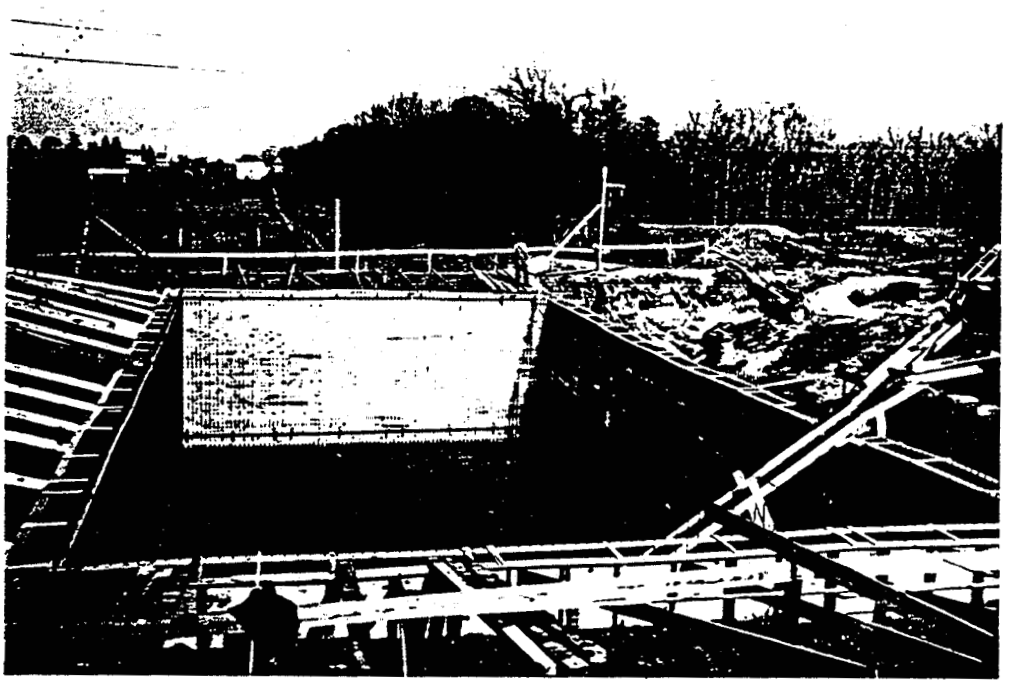


Figure 51: Miller farm during construction of the 330,000 gallon oil tank. Note the orchards and Miller barn in the background. [HML PL L857 1919 39]

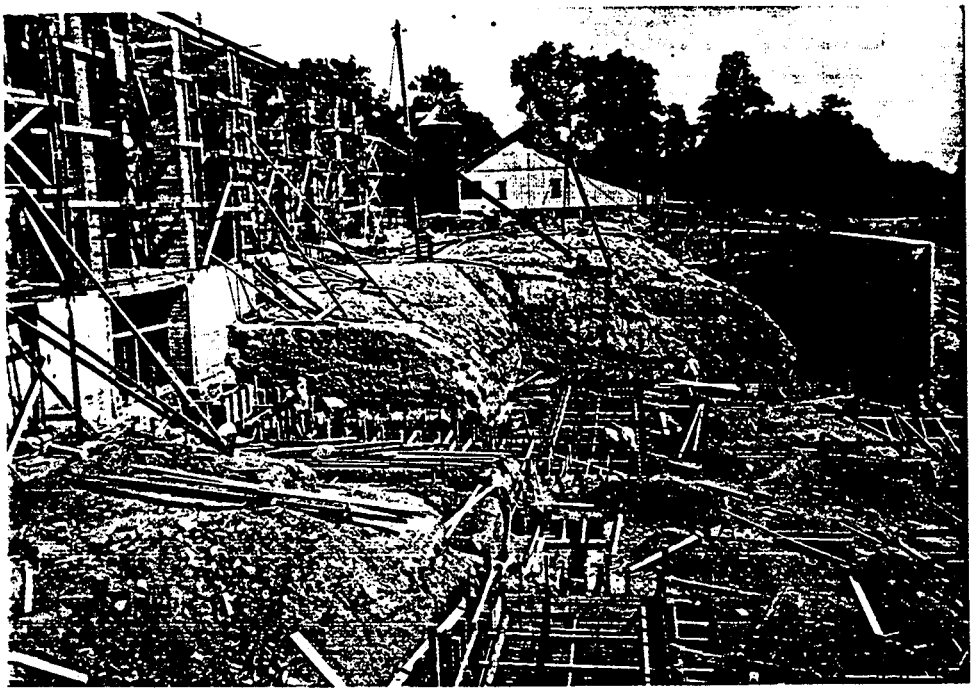


Figure 52: Longwood Barn during the main conservatories construction, 1920. The excavation in the foreground accommodated the construction of the sub-level of the conservatory called the reception suite. [Longwood Archives, Peirce House]

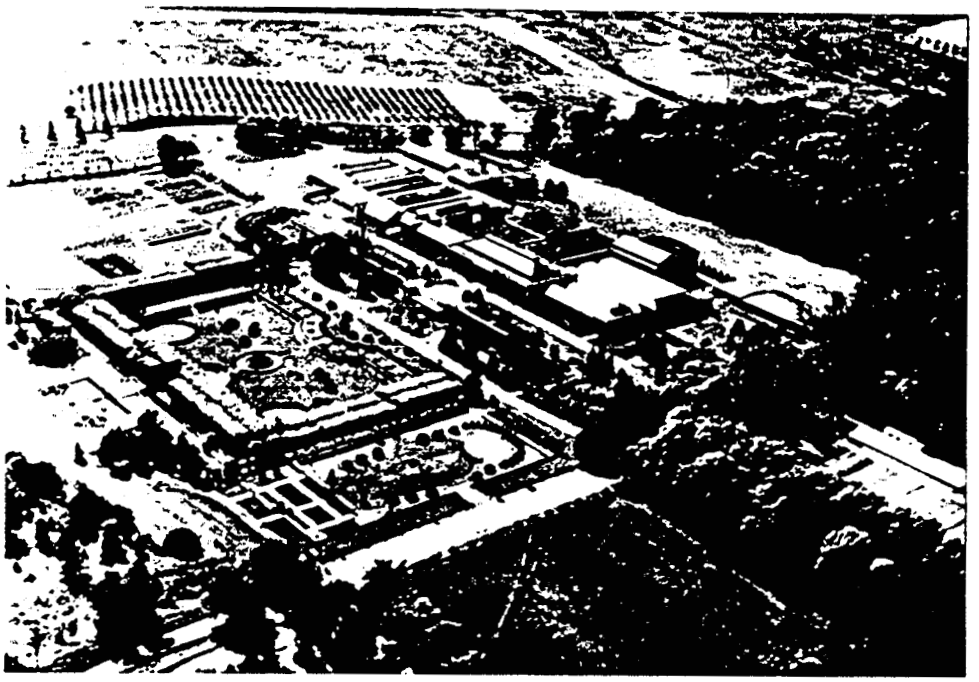


Figure 53: Longwood aerial, 1934. This is an aerial view looking east to west from an unknown altitude above the golf course. The Miller farm orchards are depicted in the upper right and middle at the top of the photograph. Notice the parking lot and new Conservatory Road to the east of the orchard in the upper left corner. The large clump of trees to the north of the parking lot and east of the orchard indicates the location oil tank hill. [HML PL L857 1934]

Landis Farm

The acquisition of the Landis Farm, September 20, 1920, was the last farmland purchase which would have an impact on the farming operations at Longwood. It was situated adjacent to and west of the Miller Property. At the time of purchase it contained 74.5 acres of land and had a frame house, barn, blacksmith shop and hog house. In the mid-twenties the Landis barn was used to quarantine abortive Hereford cows.[23]

After a flurry of activity, Mr. du Pont realized the need to evaluate the farming operations to cut costs and waste, and to efficiently use the acreage to its fullest potential. In 1923 he commissioned Mr. R.W. Heim, the Director and Supervisor of Agriculture, Bureau of Vocational Education of the Department of Public Instruction, Newark, Delaware, to evaluate the farming operations[24]. Mr. Heim toured the farm group with Malcolm Farquhar, Douglas Gilpin and farm secretary Shoemaker and after thoroughly scrutinizing the facilities, fields, and livestock presented some observations and recommendations to Mr. du Pont. One recommendation was that Mr. du Pont expand the dairy and poultry operations. Mr. Heim felt that the expansion of these quality operations could generate enough income to cover the cost of their operation and produce a profit. Other observations included insight about the use and purchase of feed and fertilizer, the rotation of field crops, the use and storage of tools, and the overall logistical operation of the farm group in lieu of its sprawling nature. A copy of this report, which denotes the general condition of the farm, can be found in Appendix 7.

Table 6: Longwood Farms field usage. Representative years 1924-1928, 1933, and 1940-1943.

	Year/Acres				
Crop	1924	1925	1926	1927	1928
Alfalfa	96.4	104.4	118.0	12.5	---
Barley	23.7	27.8	30.6	9.0	9.4
Beets	---	0.5	2.0	---	41.0
Corn	114.6	126.4	92.9	84.5	63.4
Ensilage	6.3	---	---	---	---
Hay	51.4	32.8	22.2	155.8	142.3
Oats	---	---	---	---	---
Pasture	119.8	181.3	184.8	184.8	170.6
Potatoes	4.0	8.2	6.0	5.0	5.0
Rye	---	5.5	---	---	---
Soybeans	9.0	---	3.0	---	---
Wheat	47.3	51.5	60.6	66.9	54.6
Total A.	472.5	538.4	520.1	518.5	486.3

	Year/Acres				
Crop	1933	1940	1941	1942	1943
Corn	35.2	13.4	13.4	13.4	21.0
Corn & Beets	8.3	8.3	8.3	8.3	---
Hay	215.1	10.0	---	---	30.0
Pasture	169.8	157.7	149.7	157.7	199.6
Idle	9.4	246.8	237.1	227.1	221.0
Total A.	437.8	436.2	408.5	406.5	471.6

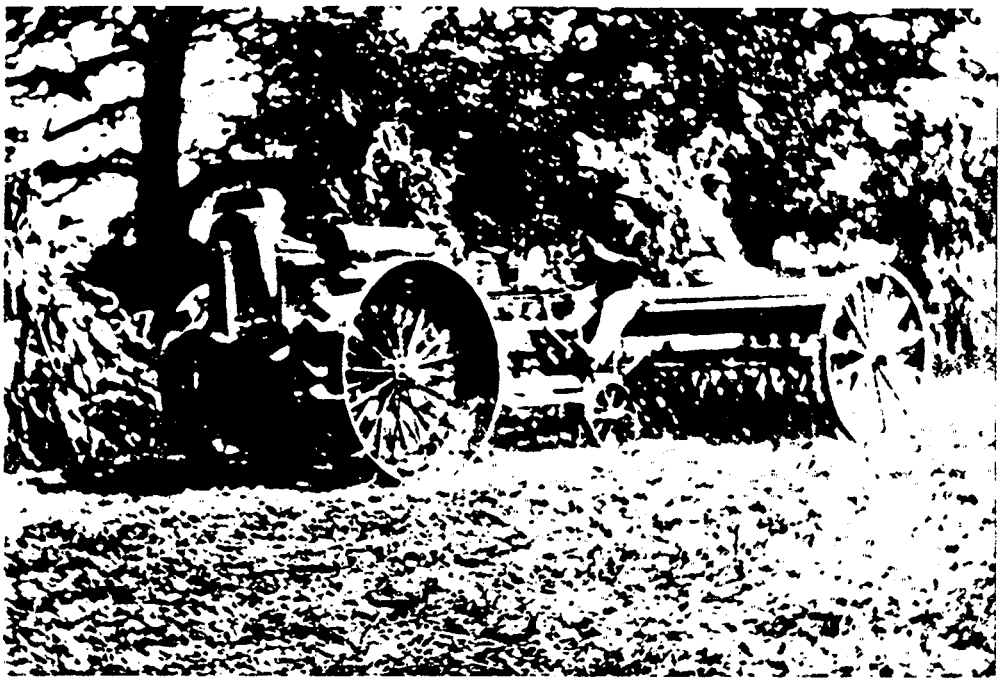


Figure 54: **Longwood farm hand on a Moline tractor planting wheat circa 1920.** [Isaac Evans, Jr.]

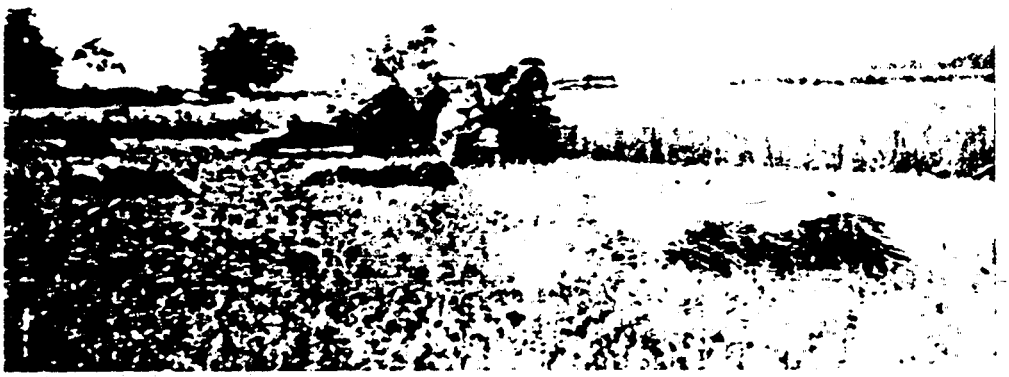


Figure 55: **Longwood farm hand cutting wheat circa 1920.** [Isaac Evans, Jr.]

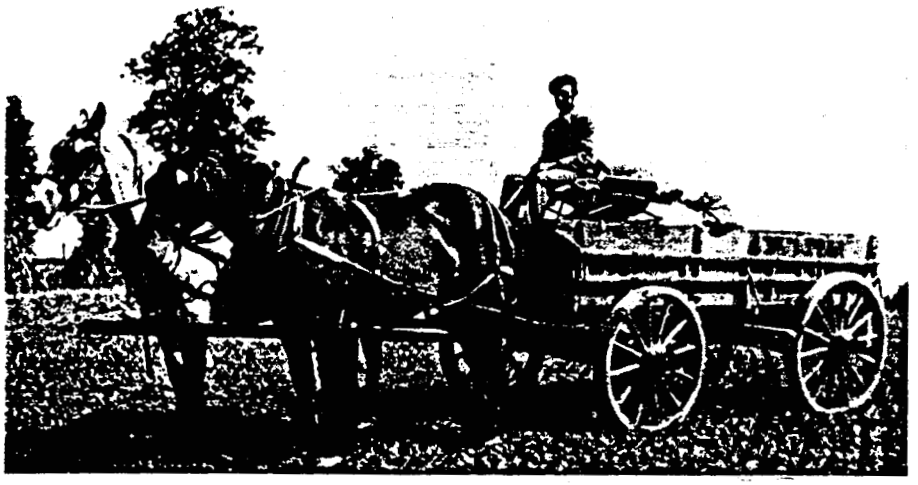


Figure 56: Transporting wheat to the Webb barn for storage. Herbert Goodwin was a "teamster" who also took care of the Webb Barn. Before the use of farm trucks in the early to mid-1920s there were four teamsters, one stationed at each of the major farm barns; Frederick, Merrick, Lynch, and Webb. Each was responsible for a team of horses and was relied upon to transport harvested crops to storage areas. [Isaac Evans, Jr.]

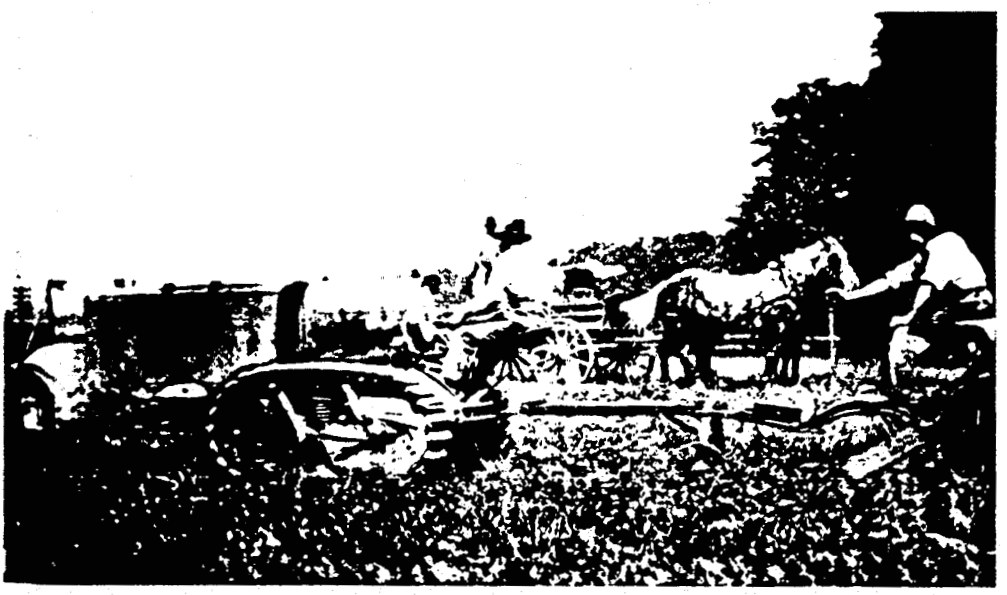


Figure 57: Yuba tractor mechanically digging potatoes, circa 1920. [Isaac Evans, Jr.]

Figure 58: Longwood farm laborers putting up hay by hand, 1922. The hay was forked into wind rows, piled into cocks, then loaded on the wagon for transport to the barn. [Isaac Evans, Jr.]

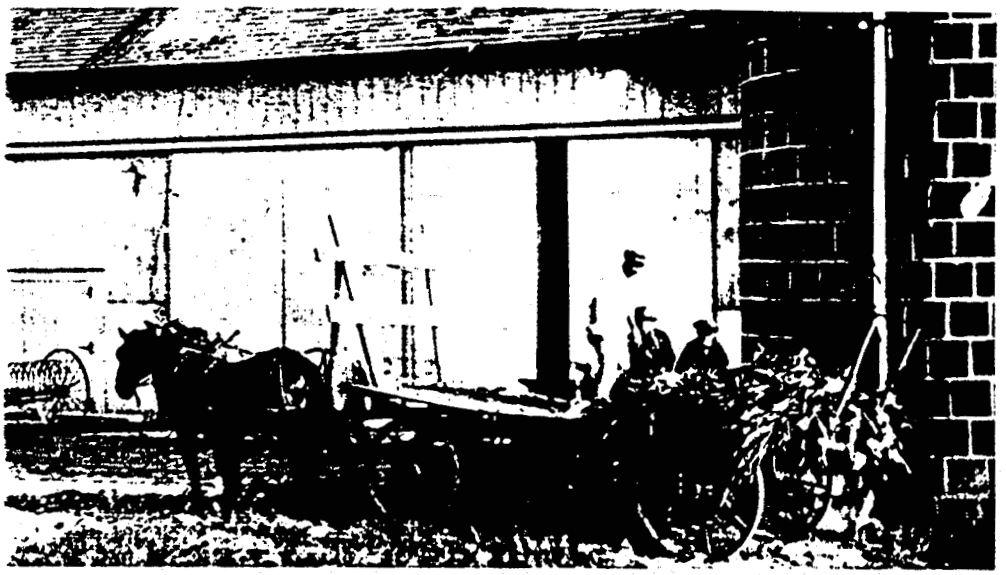


Figure 59: Storing ensilage in the Merrick silo, 1920. Green fodder was blown into the silo through an ascending pipe, then a man would enter the silo and compact the biomass with his feet. [Isaac Evans, Jr.]

Additional Farmland Acquisitions

In the late 1920s and early 1930s Mr. du Pont again felt the need to expand the farm. (See Figure 22, page 59, and Figure 60.) The lands acquired at this time increased his land holding but were not purchased solely for agricultural purposes. These properties provided room for the development of a planned tenant community on the far eastern border of the property north of US Route 1 at its intersection with Route 52 south.

Eastward Land Expansion 1928-1932			
John Dailey	8.293 acres	March 13,	1928
Robert Baldwin Property	8.530 acres	March 29,	1928
Sam Nields #1	14.206 acres	March 29,	1928
Elwood Nichols	6.227 acres	March 29,	1928
Thatcher Tract (near Longwood Cemetery)	25.238 acres	NA	1929
Sam Nields #2	8.940 acres	NA	1932
Sam Nields #3	18.050 acres	NA	1937

Figure 60: Longwood farms land expansion, 1928-1937.

Most of the property not used for building purposes became pasture or laid fallow.

By this time the number of employees at Longwood had expanded from a hand-full of farm employees in the early

1910s to 339 full and part-time persons employed in five divisions at Longwood, as well as other capacities related to the operation of the estate, by 1929. (See Table 7, page 103.) Samples of personnel records including pay rates are located in Appendix 8 (page 150). In December, 1930 the Longwood Farms "Comparative Statement - Salaries & Wages, December 1930"[25] denotes:

	December, 1930		December, 1929	
	Employees	Amount	Employees	Amount
Construction Division	123	$12,886.29	160	$16,788.75
Farm Division	27	$ 3,742.18	27	$ 3,783.18
Horticultural Division	43	$ 5,805.28	42	$ 5,222.48
Vegetable Garden	05	$ 645.15	05	$ 613.94
Maintenance Division	34	$ 4,687.45	27	$ 4,128.08
Miscellaneous	03	$ 355.00	03	$ 355.00
Garage Division	04	$ 755.00	05	$ 885.00
Carlton House	03	$ 140.00	03	$ 140.00
Wilmington Force	11	$ 3,020.00	10	$ 2,975.00
Boarding House	03	$ 178.00	-	---
T o t a l s	256	$32,214.35	282	$34,891.43

In response to the increase in staff, the village of Hammorton was substantially enlarged by a building program north of Pierre's current tenant house holdings. These new dwellings provided quality local housing for Longwood's employees.

By 1935, the continuous acreage of the farm and gardens had reached 926 acres[26]. With the housing problem solved and the onset of the great depression, Mr. du Pont decided to start reducing the non-essential farming

Table 7: Longwood Farms Personnel, selected years, 1923-1930, 1945-1952. (=== means records unavailable 1931-1944)

Year	Staff Max.	Staff Min.	Farm Staff	Veg. Garden Staff
1923	212	146	29	05
1924	190	148	28	05
1925	170	155	29	05
1926	194	142	29	05
1927	213	158	28	05
1928	250	175	28	05
1929	339	223	27	05
1930	309	256	27	05
===	===	===	===	===
1945	148	---	17	07
1946	158	---	16	07
1947	106	---	15	07
1948	111	---	15	08
1949	110	---	16	07
1950	111	---	16	07
1951	106	---	13	06
1952	85	---	01	06

operations and concentrate on the protection of the garden and the security of his workforce.

The diversity and quantity of field crops increased throughout the 1920s before succumbing to lower levels during the depression in the 1930s and World War II in the early 1940s. (See Table 8, page 107.) A marked decrease in both the diversity of crops and livestock was noticeable by the late thirties signalling the cessation of the farming operations in the years ahead. (See Tables 2, page 77, and 8.)

ENDNOTES

1. George E. Thompson, A Man and His Garden: the Story of Pierre S. du Ponts Development of Longwood Gardens, (Kennett Square, Pennsylvania: Longwood, Inc., 1976) p. 168.

2. Ibid.

3. Interview of Mrs. Douglas Gilpin by George E. Thompson, op. cit., p. 42.

4. George E. Thompson, op. cit., p. 40.

5. American Berkshire Association Records of Longwood swine, PSduP 516-174, HML. There is evidence indicating that the "butcher" was the Wilmington Provision Company, Front Street, Wilmington, DE.

6. Guernsey winnings records, PSduP 516-173, HML.

7. Charles M. Bayer, Department of Public Relations, The Borden Company to P.S. du Pont, May 13, 1939, PSduP 516-172, 516-173, HML.

8. Letters from F.A. McHugh to McFarland and Haines, 1916, PSduP 516, HML.

9. P.C. Green to Malcolm Farquhar, June 16, 1916, PSduP 516-88, 516-187, HML.

10. George E. Thompson, op. cit., p.40.

11. Ibid, p. 41

12. Golf course layout drawn and specifications written by P.S. du Pont, PSduP 516-42, HML.

13. National Dairy Association's National Honor Roll citations to Longwood Farms-Pierre S. du Pont, PSduP 516-88, Box 723, HML.

14. Annual Report 1916, PSduP 516-14, HML.

15. Longwood orchards, PSduP 516-20, HML.

16. Longwood Farms, Vegetable Garden Summary, PSduP 561-28, 1924, HML.

17. Malcolm Farquhar's datebook, 1916, PSduP 516-190, HML.

18. Roger W. Babson, President of Babson's Statistical Organization to P.S. du Pont, December 24, 1913, HML 516-187.

19. P.S. du Pont to the Consolidated Dressed Beef Company, March 24, 1915, PSduP 516-88, Box 723, folder 28, HML.

20. S.H. Lewer, Wright's Book of Poultry, (New York: Funk and Wagnalls Company, 1915), p. 315.

21. Ibid, p. 411.

22. Hadley Mill Road is sometimes referred to as Locust Lane in older documents describing Longwood and surrounding properties. These roads have also been called Country Club Road or Longwood Road.

23. R.W. Heim, Farm Survey, 1924. See Appendix 7, page 128.

24. R.W. Heim, "General Survey of Farming Operations at Longwood". Survey completed January 30, 1924 and report submitted February 11, 1924. PSduP 516-126, HML.

25. Longwood Farms "Comparative Statement of Salaries and Wages", December, 1930, PSduP 516-14, HML.

26. Memorandum from Roland Taylor to Mrs. A.S. Pierson regarding acreage at Longwood, July 18, 1935, PS duP 516, HML.

Chapter 5

THE DECLINE AND END OF OPERATIONS, 1937-1951

During the late twenties and early thirties, the farm prospered, but about 1937, the depression and other events brought an end to most of the farming activities and major development in the garden. The statement "growth complete, necessary maintenance only"[1] became the operating norm. In 1940, in order to support the war effort, Pierre limited the use of gasoline and rubber by eliminating the golf course and suspending all field operations except those supporting the poultry or dairy operations. By this time, all of the livestock was eliminated except for the poultry and Guernsey herd. The reduction of the farming operations had a dramatic effect on the losses Mr. du Pont had been experiencing. (See Table 8, page 107.) Concentrating on the poultry and dairy aspects of the farm, as Mr. Heim had suggested in the 1924 Farm Survey, lowered the operating costs. In 1927 the diversity and quantities of farm animals (See Table 2, page 77.) and field operations (See Table 6, page 97.) were at or near their peak. When the diversity of animals and crops diminished and the farm increased the

number of dairy animals and poultry, costs began to come under control. (See Table 8 and Figure 61, page 108.)

Table 8: Longwood Farms-Farm Division Operations, 1927-1943.

YEAR	EXPENSES	INCOME	NET LOSS
1927	94085.13	49260.61	44824.52
1928	87542.06	43343.55	53198.51
1929	93005.09	44136.03	48869.06
1930	95449.68	43657.17	51792.51
1931	83099.38	47423.01	35675.47
1932	87214.31	34167.42	53046.79
1933	69443.16	33778.33	35664.83
1934	71246.65	32267.01	38979.64
1935	60602.85	31997.71	28605.14
1936	61995.25	28528.97	33466.28
1937	64446.38	31222.13	33224.25
1938	54960.53	27258.29	27702.24
1939	52003.35	28087.23	23916.12
1940	57026.03	30163.89	26862.14
1941	57647.57	32043.42	25604.15
1942	57097.76	37171.19	19926.57
1943	59200.01	44178.32	15021.69

On June 23, 1944, Alice Belin du Pont died suddenly and Pierre started spending less time at Longwood. It was apparent at this time that he had come full circle in the physical development of Longwood Farms and Longwood Gardens.

> The death of Mrs. du Pont in 1944 produced a change in Pierre's interests and activities. Longwood saw less and less of him, as he spent most of his week days in his Wilmington office, one floor below, where he was generally the first one in to work and the last one out.
>
> Pierre had a tireless love for work, particularly research, and here he could devote

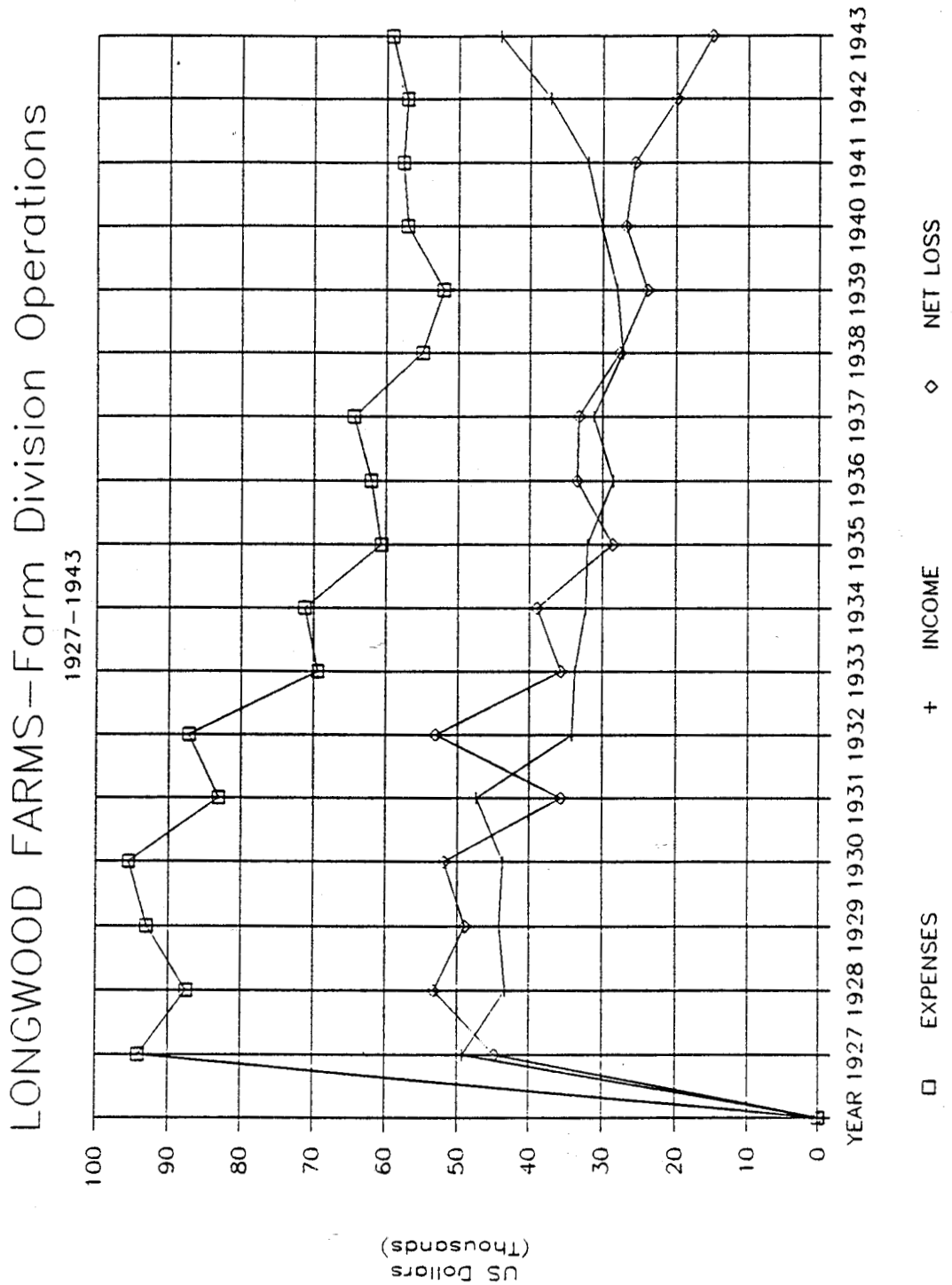


Figure 61: Graph of operating expenses, 1927-1943.

> all the time he wanted to, since now there was little social life at Longwood. For several years he buried himself in researching a number of historical and family records, compiling a very accurate and detailed genealogy of the extensive du Pont family as far back as the year 1500. He translated into English hundreds of old family letters written in France centuries before. He also devised an accurate perpetual calendar and a moon calendar.[2]

In the early 1900s and 1910s he had a very active role in the day to day operations of the farm and estate, reviving a old farm and arboretum to its past splendor before accumulating additional land and making gentle changes to accommodate his tastes and lifestyle. In making these additions and changes he never lost sight of the historical significance of the house and landscape.

As Pierre became more involved in the corporate world[3] and had less time to spend at the farm, he hired competent managers and surrounded himself with the proper administrative staff to accomplish as much as he could professionally, while keeping abreast of the operations at Longwood.

By the early 1920s the farm and estate had grown tremendously. The largest and most diverse populations of livestock[4] and agricultural crops[5] were recorded during the roaring twenties. The concurrent growth of the physical

facilities of the garden, the size of the farm, and the size of the staff led to the construction and accumulation of over 106 staff tenant houses.

As Pierre phased out all the operations which pertained to the farming division, he was very generous to offer jobs in the other divisions to those who had worked on the farm. Mrs. Hazel Nead, widow of Assistant Poultryman Clarence S. Nead, who came to live at Longwood in the bungalow on the Frederick Farm during 1934 noted,

> After the poultry farm was closed down in 1951 Clarence moved to the garden. He then took the I.C.S. (International Correspondence Course) in stationary engineering, worked in the boiler house, then became foreman. He later became Assistant Department Head.

Finally, in 1951 the Longwood Farms story was closed. The Internal Revenue Service changed the tax laws to state that after five consecutive years of farm deficits the owner could no longer write off the losses against other income. This fact, in conjunction with Mr. du Pont's wishes to divorce his personal contact with all facets of Longwood's operations, led him to sell the poultry operations and the Guernseys. Mr. du Pont graciously offered to donate the Guernseys, with provisions for use of the Webb Farm and barn, to Douglas Gilpin, but he refused the offer. Pierre then sold the herd to his nephew, Robert

N. Downs[6], the manager of Glenden Farms in Wilmington. Downs dispersed the Guernsey herd at an auction held at the Webb Barn Friday, August 17, 1951 at 10:30 am. The 121 head of prize Guernseys brought $41,995.

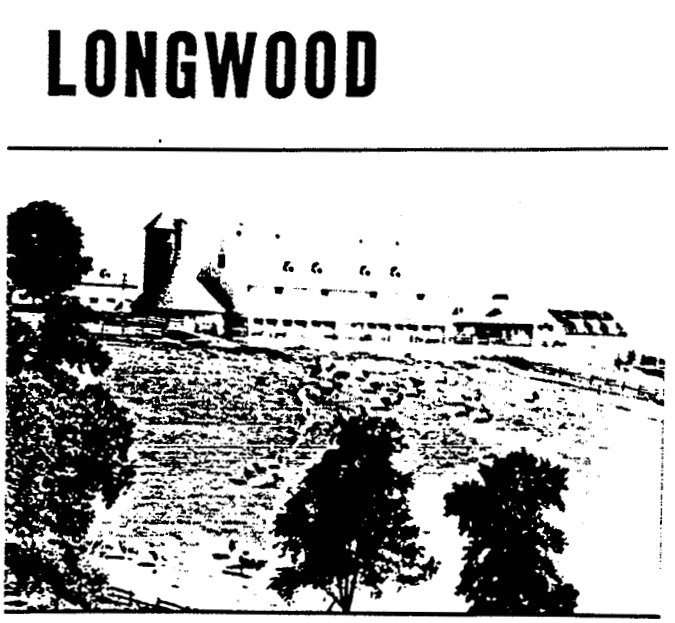


Figure 62: Cover of the sale catalogue for the Guernsey auction. [HML PSduP 516-88-724]

Between 1951 and 1953 the fields were maintained by mowing and all the personnel were absorbed by other divisions or left service. (See Table 7, page 103.) Most of

Pierre's time was consumed by an anti-trust suit[7], as he was a key witness, filed by the United States versus the DU PONT Company and General Motors.

Catalog of the

LONGWOOD GUERNSEY DISPERSAL

Owned by GLENDEN FARMS
Robert N. Downs, Mgr., Wilmington, Del.
(Farm Telephone, Douglas Gilpin, Kennett Square, Pa., 530)

FRIDAY, AUGUST 17, 10:30 A.M. D.S.T.

FREE LUNCH SERVED

AT THE FARM 1 mile north of U.S. Route 1 on Route 52, East of Kennett Square, Pa.

121 HEAD (Bangs Certified since 1933
6 BULLS 60 COWS 20 BRED and 35 OPEN HEIFERS
(Over one-third are late summer and fall fresheners.)

The Longwood Guernsey herd was established in 1916 by P. S. DuPont. The herd recently sold to Mr. Downs who has no plans to carry on with Guernseys therefore this quick dispersal.

Douglas Gilpin has been connected with this herd since its beginning and has been manager for the last 21 years. Under his guidance and wise selection of bloodlines mainly built on LANGWATER and GREEN MEADOW blood, he has built a most uniform type and consistently high producing herd. Along with it a continuous AR testing program since 1919 has backed up the building program to give you in this sale every animal with AR records for three or more generations.

On DHIA the herd has averaged over 400 lbs. of fat with one exception 1939, with an average of 55 cows in the herd. In recent years the average has been consistently over 425 lbs. of fat.

Auctioneers
DUPES and HESS, Elizabethtown, Pa.

Sales Managed By
THE PENNSYLVANIA GUERNSEY BREEDERS' ASSOCIATION
P. O. Box 491 Telephone 4-4062 Harrisburg, Penna.
Wm. H. Lan, Field Secretary

Figure 63: Inside cover of the catalogue advertising the Guernsey dispersal. [HML PSduP 516-88-724]

On April 10, 1954 at the age of 84, and after 48 years as the owner and director of Longwood, Mr. Pierre Samuel du Pont passed away, leaving a most admirable legacy of leadership and philanthropy.

ENDNOTES

1. George E. Thompson, A Man and His Garden: the Story of Pierre S. du Pont's Development of Longwood Gardens, Longwood Gardens, Inc., Kennett Square, Pennsylvania, 1976.

2. Ibid, p. 171.

3. Ruthanna Hindes, Inventory of the Longwood Manuscripts, Group 10, Series A, Files 1-1207, Papers of P.S. du Pont, (Greenvile, DE, Eleutherian Mills Historical Library, 1970).

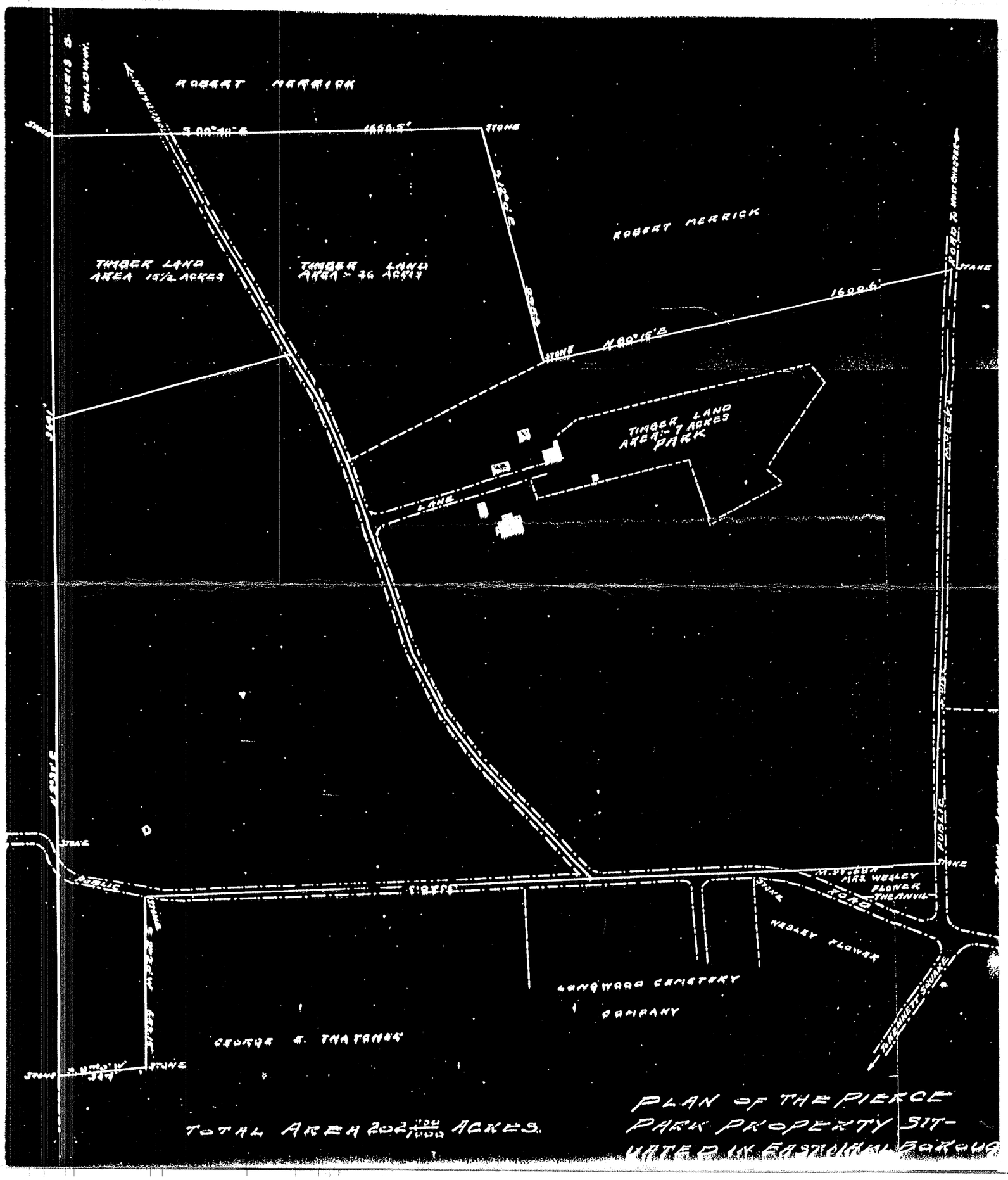
4. Longwood Farms, Livestock Expense records, PSduP 516-27, HML.

5. Longwood Farms, Field Operations records, PSduP 516-22, Box 686, HML.

6. Robert N. Downs was married to Mr. du Pont's blood niece Alletta Laird Downs.

7. George E. Thompson, op. cit., p. 173.

APPENDIX 1: 1905 MAP OF PEIRCE PROPERTY


ROBERT MERRICK
STONE
S 88°40'E
1484.5'
STONE
S 12°0'E
ROBERT MERRICK
TIMBER LAND
AREA 15½ ACRES
TIMBER LAND
AREA = 36 ACRES
1600.6'
STONE
N 80°18'E
STONE
TIMBER LAND
AREA = 7 ACRES
PARK
LANE
CREEK
PUBLIC
ROAD TO WEST CHESTER
PUBLIC
PIERCE
STONE
PUBLIC
PIERCE
STONE
MRS. WESLEY
FLOWER
THE ANVIL
ROAD
WESLEY FLOWER
LONGWOOD CEMETERY
COMPANY
GEORGE E. THATCHER
STONE
S 84°30'W
STONE
TOTAL AREA 202 100/100 ACRES.
PLAN OF THE PIERCE
PARK PROPERTY SIT-
UATED IN EASTTOWN BOROUG

APPENDIX 2: DETAIL OF FARM EXPENSE ACCOUNTS, 1908

March 5, 1908.

Mr. Joseph H. Baily,
Rural Route, #3,
Kennett Square, Pa.

Dear Sir:-

Below is a detail of the farm expense accounts for your information and guidance.

FIELDS	Nos. 1 to 8,
LOT	No. 1,
LOT	No. 2, (formerly peach orchard)
LOT	No. 3, (unused ground)
ORCHARD	
WOODS	
BARN EXPENSES & REPAIRS	This to include all labor and expense in connection with the care of the live stock; also any repairs to the barn. Monthly, you should make an estimate of the amount of labor used in the care of the horses calves, steers, etc. separately and credit this account with the total.
ROADS	Expense in connection with the repairs of roads in the farm, as well as repairs to the public highways for the benefit of the farm, but this is not in any case to include donations to the Road Commissioners.
IMPLEMENTS & TOOLS EXP.	Sharpening and repairing implements and tools. This is not to include any new tool purchased to replace or worn out.

P S DU PONT

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March 5, 1908.

FERTILIZER

SEED

FEED

This is to include all feed and straw for the live stock.

SUPPLIES

Apples, cider, vinegar and all other such supplies, excepting feed, seeds, etc., for which we have accounts.

FENCING

All expenditures in connection therewith.

HORSES

As stated under heading of "Barn Expenses & Repairs", periodically a charge should be made to this account, covering labor in caring for the horses, together with an estimate of quantity and value of feed consumed; also all other expenses such as horseshoeing and veterinarian services. Credit should be given for horse labor at the rate of 12-1/2¢ per hour per horse. Credit should also be allowed for manure.

STEERS

As stated under heading of "Barn Expenses & Repairs", periodically, a charge should be made to this account, covering labor in caring for the steers, together with an estimate of quantity and value of feed consumed, and credit should be allowed for manure.

COWS

As stated under heading of "Barn Expenses & Repairs", periodically, a charge should be made to this account, covering labor in caring for the cows, together with an estimate of quantity and value of feed consumed, and credit should allowed for milk, butter and manure

P S DU PONT

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HOGS — As stated under heading of "Barn Expenses & Repairs", periodically, a charge should be made to this account, covering labor in caring for the hogs, together with an estimate of quantity and value of feed consumed.

CHICKENS — As stated under heading of "Barn Expenses & Repairs", periodically, a charge should be made to this account, covering labor in caring for the chickens, together with an estimate of quantity and value of feed consumed. Credit should be allowed for eggs; also for chickens sold or killed for house.

PARK

HOUSE REPAIRS

HOUSE EXPENSE

TAXES

WATER SUPPLY

GROVE

FLOWER GARDEN

VEGETABLE GARDEN

ENTRANCE LANE

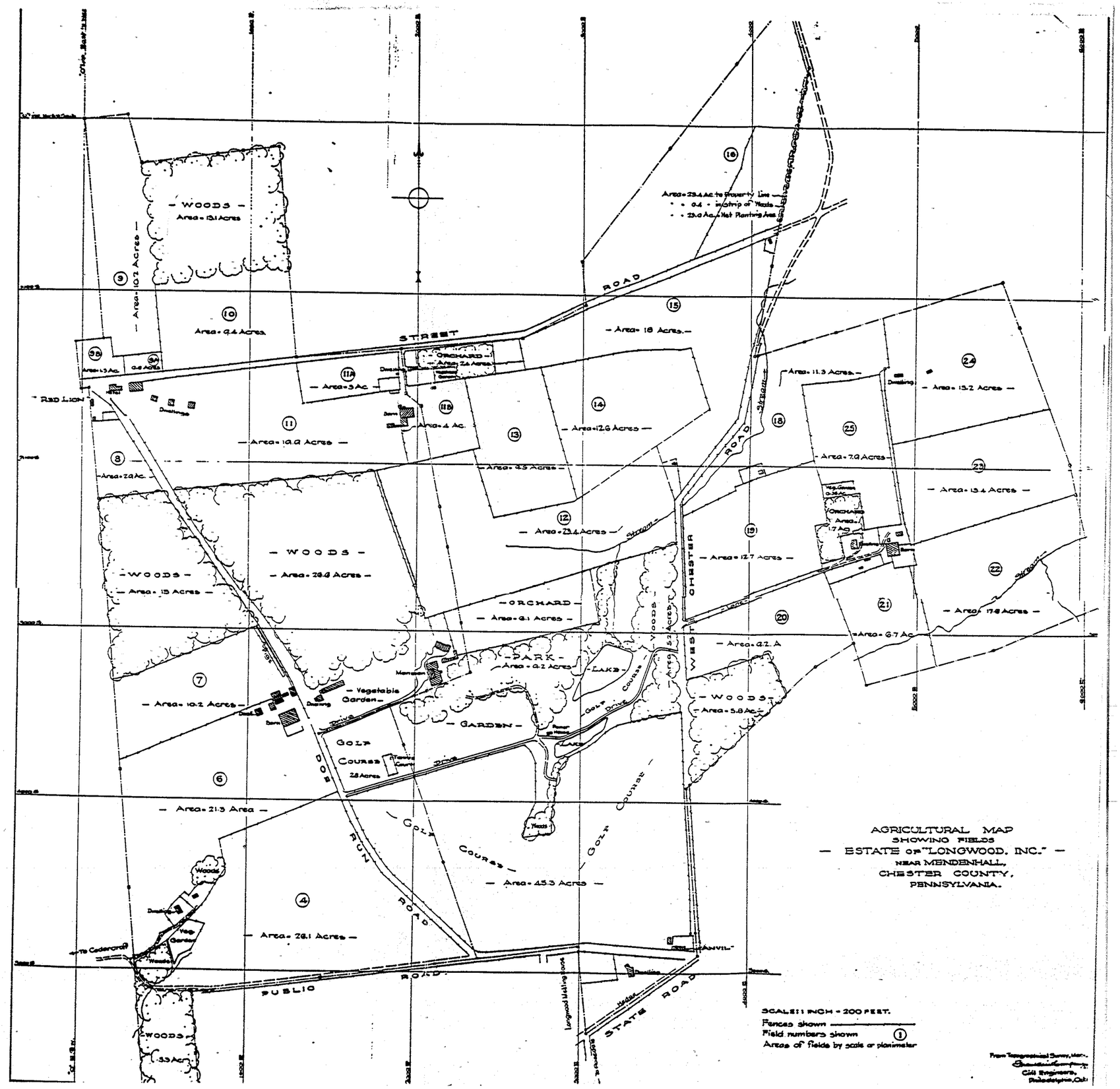
SHANTY

Any charges about which you are doubtful as to the distribution should be clearly explained on your report and proper distribution will be made by me.

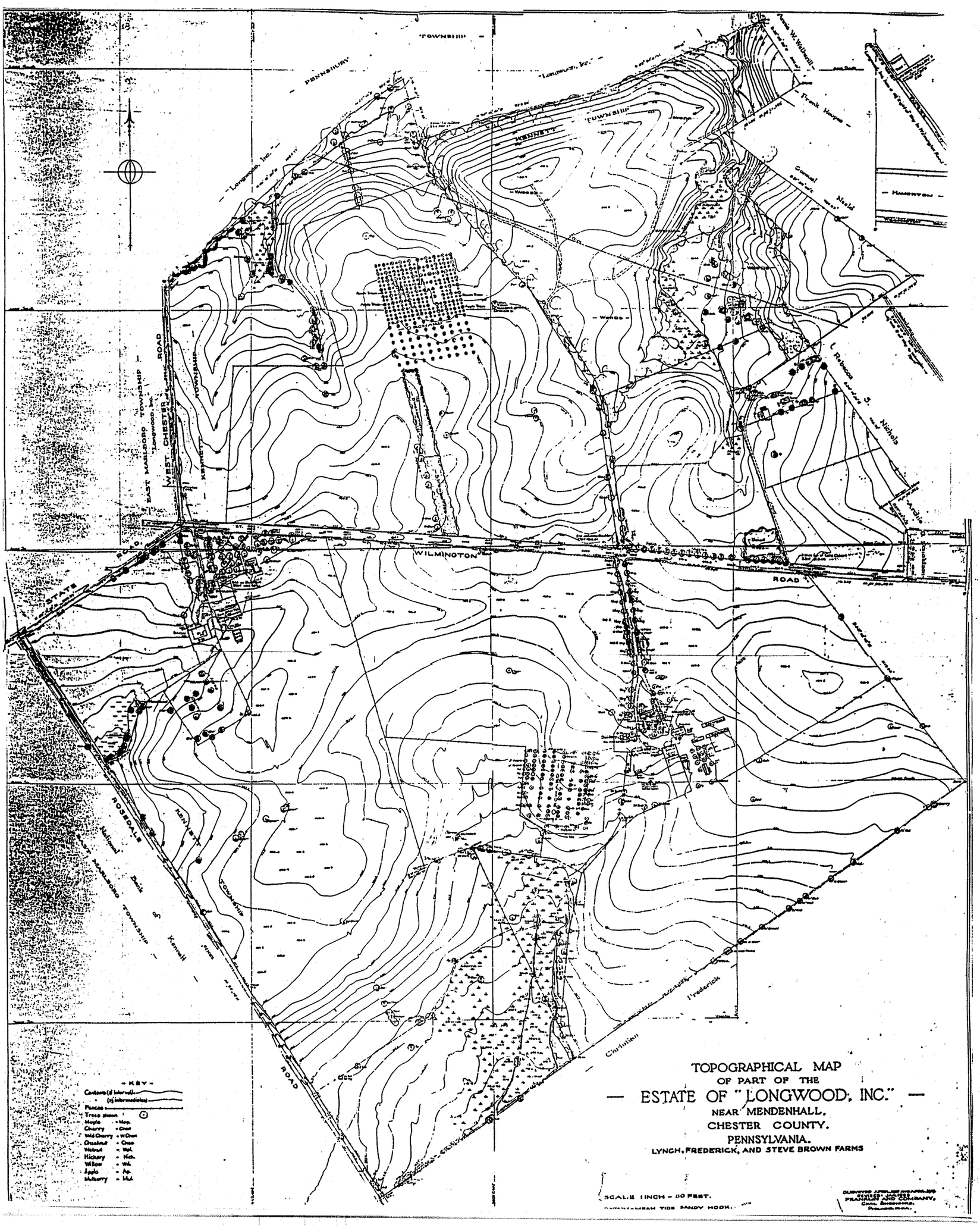
Yours very truly,

P S DU PONT

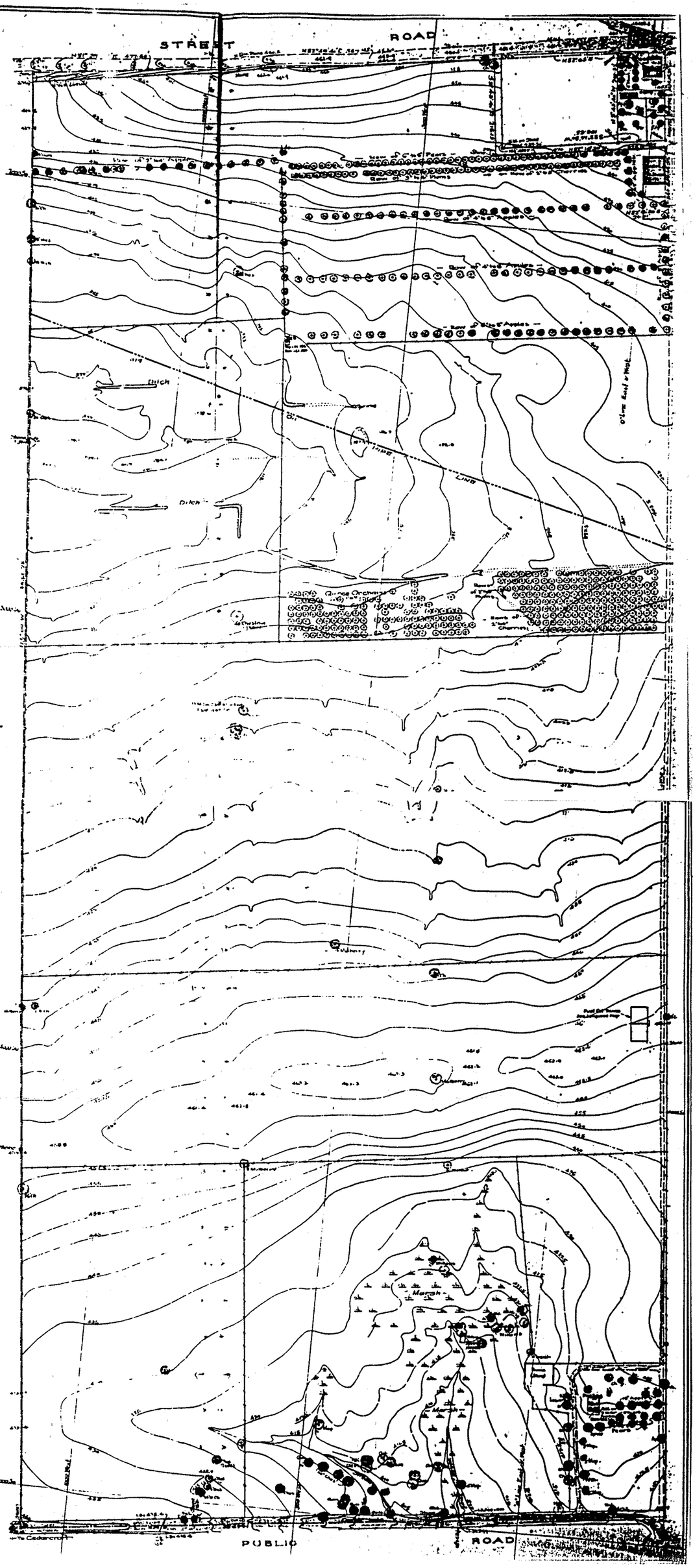
APPENDIX 3: MAP OF LONGWOOD FARMS, 1916


AGRICULTURAL MAP
SHOWING FIELDS
— ESTATE OF "LONGWOOD, INC." —
NEAR MENDENHALL,
CHESTER COUNTY,
PENNSYLVANIA.
SCALE: 1 INCH = 200 FEET.
Fences shown
Field numbers shown
Areas of fields by scale or planimeter
WOODS
Area = 13.1 Acres
Area = 10.2 Acres
Area = 9.4 Acres
Area = 18 Acres
Area = 11.3 Acres
Area = 13.2 Acres
Area = 19.9 Acres
Area = 12.6 Acres
Area = 9.5 Acres
Area = 7.9 Acres
Area = 13.4 Acres
Area = 23.4 Acres
Area = 12.7 Acres
Area = 17.9 Acres
Area = 6.7 Ac
Area = 29.4 Acres
Area = 15 Acres
ORCHARD
Area = 9.1 Acres
PARK
Area = 9.2 Acres
LAKE
Area = 10.2 Acres
Vegetable Garden
GARDEN
GOLF COURSE
Area = 21.3 Area
Area = 45.3 Acres
Area = 28.1 Acres
Area = 5.8 Ac
Area = 5.3 Ac
Area = 4 Ac
Area = 2.9 Ac
Area = 7.4 Ac
Area = 6.2 A
Area = 10.2 Acres
Area = 15.2 Acres
Area = 5.2 Acres
Area = 5.3 Acres
Area = 4.5 Acres
Area = 2.4 Acres
Area = 1.3 Ac
Area = 0.6 Acres
Area = 0.4 Ac
Area = 23.0 Ac. Net Planting Area
RED LION
STREET
ROAD
WEST CHESTER
DOE RUN ROAD
PUBLIC ROAD
STATE ROAD
"ANVIL"
To Cedarcroft
Longwood Multiplex Stock
Dwelling
Barn
Greenhouse
Vegetable Garden
Woods
Stream
Drive
Golf Course
Lake
Dam
Spillway
Hedge
Vineyard
Orchard
From Topographical Survey, Mar.
Civil Engineers,
Philadelphia, Oct.

APPENDIX 4: MAP OF LYNCH, FREDERICK, AND STEVE BROWN FARMS, 1923


TOPOGRAPHICAL MAP
OF PART OF THE
— ESTATE OF "LONGWOOD, INC." —
NEAR MENDENHALL,
CHESTER COUNTY,
PENNSYLVANIA.
LYNCH, FREDERICK, AND STEVE BROWN FARMS
SCALE 1 INCH = 80 FEET.
WILMINGTON
ROAD
STATE
ROSEDALE
KENNETT
TOWNSHIP
WEST CHESTER
EAST MARLBORO
PENNSBURY
Longwood, Inc.
Frank Hoopes
Canal
Nield
L. Rebecca S. Nichols
Kennett Square
National Bank
Kennett
Frederick
Christian
- KEY -
Contours (5' interval)
(1' intermediate)
Trees shown
Maple - Map.
Cherry - Cher.
Wild Cherry - W.Cher.
Chestnut - Ches.
Walnut - Wal.
Hickory - Hick.
Willow - Wil.
Apple - App.
Mulberry - Mul.

APPENDIX 5: MAP OF MILLER FARM, 1918



TOPOGRAPHICAL MAP
OF PART OF THE
ESTATE OF "LONGWOOD, INC."
NEAR MENDENHALL,
CHESTER CO., PA.
MILLER FARM

SCALE: 1 INCH = 80 FEET.

- KEY -

Datum - Mean Tide Sandy Hook.
Contours (5' interval) -
(2½' intermediates)
Fences
Trees shown
Maple - Map.
Cherry - Ch
Wild Cherry - W Ch
Chestnut - Ches.
Walnut - Wal.
Hickory - Hick.
Pear - Pr
Appl - Ap

SURVEYED APRIL, 1919.
FRANKLIN AND COMPANY,
CIVIL ENGINEERS,
PHILADELPHIA, MAY, 1919.

APPENDIX 6: LONGWOOD FARM SURVEY, 1924

November 7, 1923.

Mr. R. W. Heim,

Newark, Delaware.

My dear Mr.Heim:

The next time you are in Wilmington I should like to have an opportunity of talking with you. I may want to obtain your criticism of some farming operations in which we are engaged.

I also want you to meet Mr. E. R. Galvin, who is head of the Sporting Smokeless Sales Department of the duPont Company. It is possible that Galvin will be taking on some sellers within the next sixty days, and I believe an interview with him would beneficial to you both. Galvin is away from Wilmington a great deal of the time but he expects to be here on Friday and Saturday of this week. In case I should be absent at the time of your call, I am enclosing a letter of introduction to Galvin so that you may go right into action.

With kind regards, I am

Very truly yours,

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C O P Y

November 23, 1923.

M. Farquhar, Manager Farm Division,
Longwood, Inc., Kennett Square, Pa.

Dear Malcolm:-

Your 1924 Budget figures, contained in your letter of Octo 30, 1923, have been submitted to Mr. du Pont. 1924 figures show

expenses of	$ 90,950.00
Receipts and production of.	37,900.00
with a deficit in prospect for 1924 of.	$ 53,050.00

By consulting the results for past years, this deficit seem to be brought about largely from the following operations:

Creamery. . . . . .v.	$ 2,400.00
General	9,600.00
Fencing	600.00
Vegetable Garden. . . .	.00
Farm Manager's house. .	4,800.00
Orchards	2,200.00
Cattle.	7,000.00
Farm Buildings.	4,800.00
Farm Tools.	6,000.00
Fields.	8,000.00
Transportation.	3,600.00
	$49,000.00

Mr. du Pont has approved tentatively our 1924 Farm figures and has authorized me to insert these amounts in his budget. Howev in doing so, he has instructed me to obtain an independent servey our operations to see whether we are really engaged in the right operations and to see if they are economically pursued. Mr. Heim, Head of Vocational Education, University of Delaware, has consente to make this survey. In view of the prospective deficit of some $53,000 Mr. du Pont feels you also will be interested in a review of this operation. If so, and Mr. Heim's selection is agreeable will you ask me to invite him to Longwood for this purpose at a time convenient to you.

Very truly yours,

LONGWOOD, INC.,

(Signed) F. A. Mc Hugh

Secretary-Treasurer.

28.

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MEMO: R. W. Heim

TO: P. S. Du Pont

SUBJECT: General Survey of farming operations at Longwood

PURPOSE OF SURVEY: To determine as far as possible whether the present program of farming at Longwood, Inc. is that which ought to be continued in the light of increasing deficits; and to make recommendations for future consideration when plans pertaining to the farms are formulated.

Upon the suggestion and invitation of Mr. Frank McHugh, I spent Wednesday, January 30th at Longwood with Mr. Malcolm Farquhar, your farm manager, to learn at first-hand how the farming operations on your several farms are being conducted. I approached my problem with an open mind determined to find out if possible whether the farming operations as at present conducted were in keeping with the most up-to-date and economical agricultural practices, and to ascertain if, by making certain changes, savings could be affected which would enable the farms to increasingly more and more pay their own way.

Naturally, as one who was reared on a farm where the farming unit was compelled to make its own way, I thought first of productive farming. I realized, however, after talking the situation over with Mr. Farquhar, that this was not exactly the situation at Longwood, and so was compelled to view the problem along three separate and distinct lines, which grew out of my attemp to answer the question, "What is the aim and purpose of these farms under consideration"?

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It is obvious, I am sure, that without an objective or goal in mind a business venture would have little chance to succeed. The three objectives for which the farms may be operated are:

I For Profit - to make the farms pay their way and make a surplus besides. This is what farms taken by enlarge must do or farmers could not continue in the business. No farm, however small, poorly equipped, poorly located or poorly managed, can continue indefinitely unless the farmer makes it financially successful. If then, the main objective is to make money on these farms, all plans, policies and standards set up for their operation must be directed toward that goal. I believe that the farms in question could be operated under one management to better advantage than they were before they were taken over, when each farmer was operating his farm (productive unit) for the money he could get out of it.

II For display - to have the farms dressed up and made just as attractive as possible, regardless of whether or not the farms had turned in sufficient revenues to stand the expenses involved. Here we have a case where production is secondary and looks and outward appearances primary. Farms of this type are comparatively rare, since only those of considerable wealth can operate them.

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III For Utility and Display purposes combined - to have the farms operated along a line running somewhere between the two objectives enumerated above. In this twilight zone neither objective predominates since the farms must be made as attractive as possible (without undue expenditures of funds) and at the same time be made to produce for the commercial markets products which will help defray the expenses incurred in their operation. Many wealthy plantation owners of years gone by were able to build up rather showy homesteads and at the same time make their farming enterprises pay a good return in cash. The following factors, however, should be kept in mind as we analyze the estates of these early plantation owners in connection with those who are today planning to set up similar estates.

A. Initial Investment

B. Labor Costs

C. Farm Layouts

D. Type of Farming

E. Fertility of Soil

F. Etc.

The report which follows therefore is one which is more or less general, since I was unable to learn in my conference with Mr. Farquhar what really is the primary purpose for which these farms are being operated.

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General Statement of Situation

The first hour of the day spent at Longwood was in the office with Messrs. Farquhar, Shoemaker and Gilpin talking over the various farm activities conducted during the past year. This gave me an apperceptive basis upon which to intelligently build an unbiased report of the exact situation, as I later in the day observed conditions on the several farms making up your estate.

My first observations were made at the garage and farm mechanics building adjoining the office. Here I found conditions rather ordinary such as you would expect to find in any farm shop where repair work had been done. There was no work of a constructive nature being done that morning in the shop. One of the workmen, however, was busily engaged on a walnut table, which I learned was for personal use.

The storage room for tools and farming implement suppli etc. impressed me as being rather loosely kept and upon inquiry learned that there were other keys to the storage room besides th one carried by Mr. Gilpin, the farm foreman. I tried to learn what procedure is being followed in taking material and tools fro this storage room and learned that while there had been set up a system of careful checking of each bolt, hook, tool, etc. taken from the room, the plan was not working very satisfactorily. In

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reply to my question whether material was ever taken from the room without an authorized requisition from the office which is charged with this responsibility, I was told that material did leave the room without their knowing of it or to whom it was to be charged, and that therefore their records concerning this department were rather incomplete. I was also told that shovels, picks, and other tools were often times not returned to the storage after they had been used but left at the farms where they were taken. Consequently tools of this type are scattered over your estate without office records to show who had taken them from the room or where they had been left. I might mention also in passing, that some of the tools were marked whereas a large number of them were not. The condition of the room was not as orderly as I should have liked to have seen it.

The group of buildings on the Lynch farm (headquarters) was satisfactory insofar as general appearances go, although I must confess in making this statement that I was not agreeably impressed with the condition of the surroundings as I observed many irregularities in the implement shed below the garage and elsewhere, which were of an untidy nature.

The next place visited was the Poultry farm (originally Frederick homestead) where I found an ambitious poultryman by the name of Stabler hard at work. In conference with him I found that he was applying modern practices to the business and was getting good results, especially with the chickens. For example

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in one of the pens made up of 113 birds of last April's hatch he got an average of 55 eggs per day during December. The chickens are in first-class condition and their quarters are sanitarily and neatly kept. I was especially pleased to see the clean condition of the dropping boards, drinking fountains, grit troughs and feeding racks. The windows also were cleaned and all web accummulations overhead removed. The houses themselves, while old and antiquated, are serving the poultry needs quite satisfactorily. (Was informed that plans are under way for new poultry buildings).

With reference to the other types of poultry grown, I can only state that conditions here also are very satisfactory. The poultry unit, if conducted for commercial purposes, could be considerably larger with practically the same expense of overhead. Your poultry-man informed me that he would rather take care of 3,000 chickens instead of 800 chickens (approximately) together with the turkeys, ducks, pheasants and pigeons as at present. I mention this fact only to point out that considerable savings could be effected if your poultryman could specialize in chickens.

In visiting the building where the killing is done, I again was struck with the untidy condition of things. There seemed to be many loose boards, sticks, boxes, etc. scattered about. The incubator cellar however is rather neatly kept, although the quarters are entirely too damp for successful artificial incubation purposes and ordinary oil heaters are needed to make the incubator cellar usable, which is a very difficult handicap for Mr. Stabler to overcome.

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The barn on this farm is used for steer feeding. Your farmhand in charge was sweeping down the cobwebs while I was there and seemed considerably interested in keeping the feeding barn in an orderly condition. The condition of the steers deserves favorable comment and I have every reason to believe that they will be ready for the markets by early spring in first-class condition. As to whether the fattening ration used is the most economical one considering present feed costs, I am not able to say as time did not permit me to go into the figuring of feeding rations.

The next places visited were the Daly apple and peach orchards which looked very promising indeed. Both orchards give promise of good yields this coming season as is indicated by the enlarged and healthy condition of fruiting buds, although belated frosts may prevent a proper setting of fruit. Pruning and spraying practices are in keeping with good orchard management.

After inspecting the orchards I was taken to the Webb Barn, the outward appearance of which, considering it was my first visit to the place, impressed me very favorably. Without a question this building is a credit to your estate from every standpoint and represents what one would expect to see on such an estate. The Hereford steers kept here are typical specimens of the breed and are responding well to

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the treatment and care which your help is giving them. The cattle are uniformily in excellent flesh for this season of the year. The interior of the barn was in good cleanly condition, however, there is some room for improvement along this line. The condition here as at the places visited earlier on the tour was not what one should have wished or desired. The condition of the grounds also is not in keeping with the beautiful barn, and distracted somewhat from the favorable impression such a barn would make if placed in the proper setting. -("The frame of the picture is quite as important as the picture itself".)

The next stop was at the Dairy barn (Merritt farm) which again made a very favorable impression upon me. The grounds, however, were again noticeably untidy, with the result that by the time I had concluded my observations at this unit, my first impression had been changed considerably to one of unfavorable attitude. As regards to the splendid herd of Guernseys kept at this barn I have nothing but good to report. The dairy averages up well with other herds I have visited during the past, in all particulars except as to size. Most herds are considerably larger, since the dairy products sold must return sufficient receipts to warrant the continuance of the enterprise. In passing, I might add that this unit (dairy) is undoubtedly as economically conducted as any on your estate. The feeding is in accordance with good dairy practices and your manager told me the major part of the concentrated feed is chopped on the place. This practice certainly helps to keep the dairy expenses from reaching undue proportions.

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Concerning the Creamery, I have nothing to report except praise. The work of the morning had been finished before my arrival and everything in the way of creamery equipment was in its place again ready for the next day. I could not help but notice how cleanly everything looked in this department and how neatly the apparatus had been put away, as it should be - "With a place for everything and everything in its place".

The last stop of the forenoon was at the Landis farm which is quite ordinary. I was told that this place had just recently been purchased and that no attempt thus far had been made to beautify or modernize it. At present the barn on this farm is used to house and care for the abortive cows from the Hereford herd - a practice necessary to safeguard the unaffected ones, and <u>should be continued</u>. How many! Is this practice to the farm

The present farming practices insofar as they relate to field operations are undoubtedly conducted in an approved up-to-date manner. Your manager informed me that the yields per acre of corn, wheat, alfalfa, etc. were as high as those ordinarily secured on the <u>better operated farms</u>. The fertility of the land is being maintained with the present system of rotation of crops, which of course is paramount in any successful farming venture. Your manager informed me also that he was not using commercial fertilizers for the Spring crops as the majority of farmers do in the vicinity of Longwood and that he only applied in the neighborhood of 300 lbs. of a 3-12-3 fertilizer for wheat seeding in the Fall. This speaks very well for the present management in regard to this fertility factor, which I consider most important. Any successful farmer must

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not only take high yields of crops from the land but must see to it that there is returned to the fields, from which the crops were taken, sufficient plant food elements to replace the nitrogen phosphorous, and potassium removed by the crops.

The winter wheat and alfalfa which I observed in my tour of the farms look very promising and your manager told me that each year the crops are getting better because of the increased fertility.

? Not very

The afternoon was given over for the most part to a conference between Mr. Farquhar and myself in his home, which cleared up some matters concerning the farming operations which we did not care to discuss earlier in the day while Messrs. Shoemaker and Gilpin were present. (Messrs. Shoemaker and Gilpin accompanied Mr. Farquhar and me on the morning's tour)

Brief Statements of Favorable Impressions & Practices
(Regardless of Objective)

I Growing of alfalfa in the regular rotation with success

II Growing of green manure in the Daly Peach orchard.

III Overhauling certain farming machinery during the dull season in preparation for summer use.

IV Chopping grain and alfalfa for dairy needs (Very commendable from economic standpoint)

V Keeping windows, ceilings and floors of the barns clean.

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VI Main arteries of travel between the several farms improved and kept in usable condition the year around. (Very important since considerable travel is necessary with the present layout of fields and buildings)

VII Unnecessary expenses for the most part held to the minimum.

VIII Splendid morale of workers (Very essential)

IX Using hydrated and ground lime (CA CO_3) freely on fields to correct soil acidity.

X Keeping within safe and sane limits with reference to use of commercial fertilizers.

Brief Statements of Unfavorable Impressions & Practices
(Regardless of Objective)

I Untidy conditions of grounds surrounding farm buildings.

II Too much barnyard manure lost to fields to keep up the soil fertility without added expense. (From thirty to fifty per cen of present barnyard manure supply is carted to conservatory and greenhouses and used there)

III Too much labor employed on full time. (Year around)

IV Excessive labor charges due to time consumed by farm labors going to and from their work.

V Excessive costs of transporting manure and crops over long distances.

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VI Commercial fertilizers bought in mixed form ready for use.

7 VII Too many tools not returned to tool house.

VIII Some of the farming machinery not properly stored. (Some implements and machines however are being well preserved)

IX Tendency on part of laborers to abuse the freedom given them by your foreman. (Example: - The pruners working in the apple orchard on the Miller farm were not very industriously occupied. Commercial orchardists would need to get more labor out of their men).

X Present rotation of crops does not include enough legume growing to make up the manure loss referred to in Number II

XI In the present rotation too much land devoted to the growing of wheat.

XII Too much time and labor lost in caring for the several orchards scattered about the estate. (Example: During spraying season as much time will be required going from orchard to orchard as will be required for the actual spraying).

XIII Driving through fields instead of using the regular roadways on Landis farm. (This not only looks bad but destroys the crops as well).

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Statements of suggestions and Recommendations
(With dual objective in mind - See 111 -P 3)

I That more attention be given to beautification of grounds and buildings. This need not incur very much additional expense, aside from the initial cost of shrubbery, trees, etc. needed to balance up the landscape, as your present force of laborers could easily handle the extra work required.

II That the present farming rotation be modified to include more acreage for soy beans and less for wheat. Soy beans if incorporated into the present system of crop rotation would be of value from two considerations. First, the plant being a legume would benefit the soil upon which it grew. It may be grown directly for its manural value or indirectly, as in case the crop is utilized for other purposes. By either method, the results makes for better soil conditions. Secondly, soy beans make a hay of excellent feeding quality superior to red clover and cow pea hay. Some dairymen claim slightly better results from feeding soy bean hay than from alfalfa. The chief value of soy bean hay lies in its high content of digestible protein which is so necessary in feeding growing animals and for the production of milk. As compared with the hay from other leguminous crops adapted to this latitude, soy bean hay is equal or superior to any. It will be seen from the figures below that soy bean hay contains nearly as much protein as wheat bran, while the soy bean grain carries more protein than oil-meal and only a little less than cotton-seed meal. Thus it appears that either the

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grain or the hay from the soy bean plant serves as a first class source of protein with which to balance corn or corn stover in feeding growing stock, or in the feeding for milk production. These comparisons should be suggestive to your manager who is now buying large quantities of high-priced concentrated feed such as bran, gluten, or cotton-seed meal. The use of soy bean hay, which can be grown on the farm, would lessen the necessity for so much purchased feed.

At the Tennessee Experiment Station, soy bean hay and alfalfa hay were fed, in combination with corn silage and corn-and-cob-meal, to dairy cows. Each lot consisted of four Jerseys, and the test was conducted through three periods of thirty days each. The lot fed soy bean hay made 245 pounds of milk and 20.5 pounds of butter fat more than the lot receiving alfalfa hay. This experiment indicates that soy-bean hay is fully equal to alfalfa hay.

	T.Protein	Digest.Protein	Digest.Carbohydrates	T.
Soy bean hay.....	301	216	772	1[illegible]
Wheat bran.....	308	244	1078	1[illegible]
Cotton-seed meal..	908	752	432	3[illegible]

To summarize briefly (1) growing soy beans in the rotation adds fertility to the soil; (2) soy beans supply a high grade palatable stock and dairy feed.

III That fewer workmen be retained for year around employment.

IV That men be supervised more closely to the end that more work may be accomplished.

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V That laborers be called together for instruction in agricultural ethics from time to time (especially during winter months) so that all of your employees will realize their obligations and responsibilities to you, their employer, etc.

VI That commercial fertilizers be bought in quantities unmixed. The farm laborers can easily do the mixing on rainy days or during the winter months. (Considerable savings will be affected if this is done)

VII That all tools be marked and kept in their places when not in use.

VIII That complete records be on file at all times to show what materials and tools were taken from the storage room, -etc.

IX That all farm machinery be repaired, painted, greased and oiled as needed before being put away in storage for the winter.

X That established roads on the estate be used at all times. Cutting up fields unnecessarily should not be permitted.

XI If the farms were operated strictly for profit, I would recommend that:

A. More dairy cattle be secured in order that greater profits may be realized.

B. More chickens be kept for same reason stated above.

C. More steers be secured in order to utilize more of the feed grown on the estate and incidentally to increase the manure supply.

is there an excess

as they required or bought

XII That someone be groomed for the managership who could step in at any time to continue the work of Mr. Farquhar should he for some reason or other be unable to continue as manager. Good business organization demands this.

XIII That your present manager get around over the farms more frequently. This is very essential if he is to have an intimate knowledge of the work being done.

XIV That an up-to-date agricultural library be maintained at the central office. All employees should do some reading in order to keep abreast of the times.

Note: I want to express my appreciation and sincere thanks for the courteous treatment accorded me by Messrs. Farquhar, Shoemaker, and Gilpin while at Longwood. It was a pleasure, I assure you, to work with these men.

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State of Delaware

Department of Public Instruction

Dover, Delaware

PHONE 54

STATE BOARD OF EDUCATION

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STATE DIRECTOR OF MEDICAL INSPECTION, WILMINGTON

Ellis ✓
Send - Pls. note + return
RCW

Newark, Delaware
February 11, 1924

The Curator has felt
brought to his
Pete, personally
I he read report
4/10/

Mr. P. S. Du Pont,
Du Pont Building,
Wilmington, Delaware.

Dear Mr. Du Pont:

I am submitting herewith a survey report of the farming operations at Longwood, which is based upon my observations and conference with Mr. Farquhar on January 30th, 1924.

Please feel free to call upon me for additional information concerning any matter not thoroughly treated.

Very cordially yours,

R W Heim

R. W. Heim, State Director for V. E.

RWH:LL
Enc.

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February 13, 1924.

Mr. Malcolm Farquhar,

Longwood, Inc.,

Kennett Square, Pa.

Dear Malcolm:

Mr. Heim's typed report came in the office this morning and I am sending you a copy the first thing. I have not yet carefully examined it, but hope to have a discussion with you when I do.

Sincerely yours,

LONGWOOD, INC.,

By _____

Secretary-Treasurer.

FILE COPY

26.

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February 21, 1924.

Mr. R. W. Heim,

University of Delaware,

Newark, Delaware.

Dear Mr. Heim:

Your report on the Farm Division has been received and read by Mr. duPont, Mr. Farquhar, and the writer. The work is quite thoroughly done and I should like to discuss it more in detail with you sometime in the future.

It just occurs to me that in asking you to make a survey I failed to request you to bill me for the study. However, as this was always my intention, I am sure you will agree with me to do so, even though I neglected to mention this feature until this late date.

With kind regards, I am

Sincerely yours,

LONGWOOD, INC.,

BY _____

Secretary-Treasurer.

FILE COPY

APPENDIX 7: SELECTED PERSONNEL RECORDS

NAME	1914 RATE	1914 HOURS	1914 WEEKLY WAGES	1918 RATE	1918 HOURS	1918 WEEKLY WAGES	PERCENT INCREASE
Wm. Widdoes	16½¢	65	$ 10.73	31½¢	65	$20.48	90.9%
Wm. Carter, Sr.	17 1/7	83	14.23	33	70	23.10	92.5%
John Sommers, Sr.	16½	70	11.55	31½	60	18.90	90.9%
A. Alexander	weekly-----		11.20	monthly----		106.50	114.7%
John Sommers, Jr.	16½	60	9.90	31½	60	18.90	90.7%
Wm. Carter, Jr.	14½	60	8.70	32	60	19.20	120.7%
Elias Haskins	16½	60	9.90	31½	60	18.90	90.9%
John Brown	16½	60	9.90	31½	60	18.90	90.9%
Harry Littleton	monthly-----		50.00	monthly----		101.00	102.0%
	1916			1918			
Joseph Douglas	16½	66	10.89	31½	55	17.33	90.9%
Douglas Gilpin	monthly----		65.00	monthly----		123.00	89.2%

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1915 XMAS cash to farm employes

Grounds

Harry Littleton
Wm. Carter Sr.
Wm. Carter Jr

John Brown
Walter Carter
Cyrus Irwin

John Herron
Henry Hanmum
Ambrose Alexander

John Sommers Sr.
John Sommers Jr.
Wm. Widdoes (?)
Elias Hoskins (?)

* * * *

*Walter Brown
*Frank Littleton
*Douglas Gilpin
*Joseph Douglas

House & Garage

Chas. Mason
R. P. Brewer
Paul Meyers

Victor Johnson
Idà Johnson
Selma Haaparanta
Saina Suni
*Maindi Suni
*Anni Maisia
*Hannah Pikkarainen

The plan has been to give $10 to each employe who has served at least one year; those serving less than one year received $5.

* Under 1915 distribution have served less than year

Feb. 12, 1916

Method of arriving at avg No. of employes and avg. annual pay of Farquhars men given by him over phone this date:

Carter Sr.	$50.
" Jr	48.
John Brown	40.80
Watler Carter	40.80
Cyrus Irwin	40.80
John Herron	40.80
Jas. Douglas	40.
Am. Alexander	60.
H. Littleton	55.
Douglas Gilpin	65.
Wm. Mulliss	100.
M. Farquhar	225.
Monthly payroll	$ 806.20
One year	$9674.40

* - - -

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LONGWOOD, INCORPORATED

RATE OF COMPENSATION - MARCH 1, 1922

S U M M A R Y

	1 9 2 2 .		1 9 2 1 .	
	Number of Men	Amount	Number of Men	Amount
Construction Division.....	47	$6,287.17	97	$11,130.-
Farm Division.....	28 122	3,531.40	30 121	3,628.-
Horticultural Division.....	29 103	2,980.92	25 102	2,561.-
Maintenance Division.....	6 140	842.00	4 130	522.-
Garage.....	4	491.00	4	491.-
Longwood Vegetable Garden.....	5 112	560.48	2 121	242.-
Miscellaneous.....	4	550.87	5	594.-
Wilmington Office (Including J.P.N.)..	5	1,611.67	6	2,000.-
Total.....	128	$16,855.51	173	$21,170.-
Annual rate of.....	128 152	$202,266.12	173 147	$254,042.-

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LONGWOOD, INCORPORATED

RATE OF COMPENSATION-MARCH 1,1923

FARM DIVISION		MONTHLY RATE
Malcolm Farquhar	Farm Manager	$ 300.00
Douglas Gilpin	Foreman	185.00
J. J. Shoemaker	Farm Office	145.00
I. R. Evans	Timekeeper & Orchard Man	125.00
W. E. England	Guernsey Herdsman	130.00
John Crouch	Ass't Guernsey Man	100.00
R. H. Stabler	Poultryman	115.00
A. F. Sellers	Hog Herdsman & Barn Man	125.00
E. Smith	Teamster	125.00
Jos. Roberts	Machanic @ 63¢ per hour	163.80
C. W. Pyle	Blacksmith @ 60¢ per hour	156.00
W. Carter, Jr.	Truck Driver @ 45¢ per hour	117.00
W. Carter, Sr.	Janitor B-135 @ 45¢ per hour	117.00
Earl Reese	Tractor Man @ 41¢ per hour	106.60
Joseph Coyle	Tractor Man @ 40¢ per hour	104.00
J. Douglass	Teamster @ 45¢ per hour	117.00
Geo. Turner	Teamster @ 43¢ per hour	111.80
Chas. Warren	Teamster & Barn Man 43¢ per hr.	111.80
H. Goodwin	Teamster&Barn Man 40¢ per hr.	104.00
J. Lofland	Barn Man @ 42¢ per hour	109.20
Theo. Davis	Barn Man @ 41¢ per hour	106.60
W. Brown	Farm Laborer @ 45¢ per hour	117.00
Albert Green	Laborer @ 42¢ per hour	109.20
L. Folchmann	Laborer @ 42¢ per hour	109.20
Geo. Moore	Laborer @ 40¢ per hour	104.00
Lewis Smith	Laborer @ 40¢ per hour	104.00
W. Laws	Laborer @ 40¢ per hour	104.00
W. R. Uhde	Handy Man B-140@42¢ per hour	109.20
		$3,531.40

LONGWOOD, INCORPORATED

RATE OF COMPENSATION-MARCH 1, 1933

VEGETABLE GARDEN-LONGWOOD				MONTHLY RATE
Ambrose Alexander	Gardner			$125.00
Fred Miller	Garden Laborer	@	$26.00 per week =	112.88
Charles W. Love	Garden Laborer	@	26.00 per week =	112.66
Edgar White	Garden Laborer	@	24.25 per week =	105.08
Charles Hayes	Garden Laborer	@	24.25 per week =	105.08
				$560.48

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LONGWOOD, INCORPORATED

RATE OF COMPENSATION-MARCH 1,1933

HORTICULTURAL DIVISION		MONTHLY RATE
? Wm. Mullis,	Manager	$300.00 & Boa
? John H. Marx	Assistant Manager	135.00 & Boa
Archie McKelvie & wife	Steward	160.00 and meals for se
Walter Paul	Kitchen man	50.00 & Boa
Arthur McKelvie	Kitchen man @ 30¢ per hour (relief)	19.75
Madison P. Cloud	Chaffeur @ 40¢ per hour	104.00
Charles Briggs	Greenhouse Man	85.00 & Boa
John Rogers	Greenhouse Man	85.00 & Boa
Percy Green	Greenhouse Man	90.00 & Boa
Charles Green	Greenhouse Man	80.00 & Boa
Roland Cloud	Greenhouse Man @ 25¢ per hour	65.00
Roy Johnson	Greenhouse Man @ 42¢ per hour	109.20
Frank Littleton	Greenhouse Man @ 40¢ per hour	104.00
Clarence McKelvie	Greenhouse Man @ 30¢ per hour	29.12
William Ingram	Engineer Boiler Room	150.00
? John Johnson	Fireman Boiler Room @ 41¢ per hour	106.60
Lewis F. Johnson	Fireman Boiler Room @ 41¢ per hour	106.60
William May	Watchman @ 35¢ per hour	106.17
Wilson Bowman	Flower Garden Man @ 43¢ per hour	111.80
Wylie Johnson	Flower Garden Man @ 35¢ per hour	91.00
Newton Myers	Flower Garden Man @ 45¢ per hour	117.00
Fred Sommers	Flower Garden Man @ 40¢ per hour	104.00
John Sommers	Flower Garden Man @ 35¢ per hour	91.00
Llewellyn Hanway	Flower Garden Man @ 25¢ per hour	24.38
Benjamin Davis	Golf Course Man @ 40¢ per hour	104.00
Frank Johnson	Golf Course Man @ 41¢ per hour	106.60
William Widdoes	Golf Course Man @ 45¢ per hour	117.00
Elias Haskins	Grove Man @ 45¢ per hour	117.00
Ed. Satterthwait	Grove Man @ 43¢ per hour	111.80
		$2,980.92

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LONGWOOD, INCORPORATED

RATE OF COMPENSATION - MARCH 1, 1923

CONSTRUCTION DIVISION		MONTHLY RATE
William M. Francis	Engineer	$416.67
Roland W. Taylor	Assistant Engineer	250.00
George F. Alderson	Resident Engineer	225.00
J. E. Newman	Office & Engineer	195.00
Knowles R. Bowen	Time Keeper and Engineer	175.00
Walter Phillips	Office Man	160.00
I. J. Sharpley	Foreman Machine Shop	218.00
G. E. Sheppheard	Foreman Carpenter	195.00
W. D. Stout	Labor Foreman	185.00
W. D. Huffman	Labor Foreman	175.00
J. W. Mercer	Labor Foreman	160.00
L. Valeri	Shovel Oper. & Mechanic	175.00
S. Vandegrift	Foreman Bricklayer	175.00
Frank Smith	Foreman Painter	160.00
George Ruoss	Foreman Plumber	155.00
A. L. Bevan	Truck Driver	150.00
C. B. Irvin	Truck Driver & Janitor	135.00
Drayton Russel	Truck Driver	135.00
J. F. Griel	Concrete Worker	140.00
Chas. Myers	Tree Man	125.00
G. Patchel	Painter	119.25
James Rae	Painter	119.25
H. Waterman	Painter	119.25
W. Patchel	Painter	119.25
V. Beeby	Carpenter	130.00
C. Burnett	Carpenter	130.00
M. Cloud	Carpenter	130.00
H. Hoopes	Carpenter	130.00
C.C.Sheppherdd	Carpenter	130.00
S. R. Sheppherd	Carpenter Helper	87.00
3 Laborers at weekly rate of $25.00		225.00
1 Laborer at weekly rate of $21.00		91.00
1 Laborer at weekly rate of $20.00		90.00
11 Laborers at hourly rate of 30¢		715.00
1 Team at 35¢ per hour		191.25
1 Cart at 25¢ per hour		56.25
		$6,287.17

LONGWOOD, INCORPORATED

RATE OF COMPENSATION-MARCH 1, 1923

MAINTENANCE DIVISION		MONTHLY RATE
? Russell P. Brewer	Department Head	$121.00
Victor B. Thomas	Clerical Man	220.00 and dinn
Frank B. King	Plumber	170.00
Stewart W. Batten	Plumber	131.00
Charles B. Ruoss	Electrician	150.00
Marcus Youngcourt	Electrician's Helper	50.00 and board
		$ 842.00

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LONGWOOD, INCORPORATED

RATE OF COMPENSATION-MARCH 1,1922

MISCELLANEOUS		MONTHLY RATE
Harry Littleton	Main House & Flower Garden	$125.00
John Hamilton	Watchman-Main House @ 40¢ per hour	= 104.00
James Bradley	Handy Man-Bldgs.141 & 142 @45¢ per hour	= 121.87
Charles J. Speel	Assistant to Treasurer	200.00
		$ 550.87

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LONGWOOD, INCORPORATED

RATE OF COMPENSATION - MARCH 1, 1922

GARAGE		MONTHLY RATE
? Charles H. Mason	Garage Superintendent	$121.00
? Wiley U. Sallade	Garage & Driving	130.00
S. Dodd Shuster	Garage & Driving	120.00 and bo
Eugene J. Gibison	Garage & Driving	120.00
		$491.00

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December 6, 1939

GIFTS OF SECURITIES TO EMPLOYES

YEARS 1936, 1937, 1938 & 1939

FARM	Employed	Years Service	General Motors 5% Pfd.	General Motors Common	United States Rubber Com.	Yellow Truck & Coach 7%
Christy, Rowland G.	3/19/28	11	-	-	120	-
Coyle, Joseph F.	3/15/20	19	-	150	120	-
Evans, I. Rowland	8/18/19	20	-	150	120	-
Gallagher, William L.	3/1/23	16	-	140	120	-
Laws, Walter R.	5/10/20	19	-	150	120	-
Mackey, Mark H.	11/20/24	15	-	150	120	-
Racine, Irvin P.	11/1/23	16	-	140	120	-
Reese, Earl	3/13/19	20	-	150	120	-
Shoemaker, James J.	12/16/18	21	-	150	120	-
Toulson, Crawford	3/1/23	16	-	140	120	-
Wade, Walter R.	4/1/18	21	-	150	120	-
Warren, Charles M.	4/21/17	22	-	150	120	-
Other Farm Employes who have never received securities						
Drake, Walter M.	2/1/34	5	-	-	-	-
Mc Millan, James B.	9/1/38	1	-	-	-	-
Mead, Clarence S.	3/1/34	5	-	-	-	-
Rhoads, Nathan M.	4/1/30	9	-	-	-	-
Smith, Marshall	6/1/34	5	-	-	-	-
VEGETABLE GARDEN						
Dilworth, George M.	3/31/24	15	-	-	120	-
Fred Miller	4/1/19	20	-	-	120	30
Montgomery, Joseph J.	3/7/27	12	30	100	-	-
Edgar L. White	4/5/20	19	-	-	120	30
Other Vegetable Garden Employees who have never received securities						
Frank S. Miller	6/1/37	2	-	-	-	-
Schultz, Leon	5/16/33	6	-	-	-	-
Toulson, Caleb	5/5/39	1/2	-	-	-	-

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INCREASE IN SALARIES

MARCH 21, 1946 - SEPTEMBER 1, 1948

FARM DIVISION	Entered Service	Rate 3/21/46	Rate 9/1/48	Monthly Difference	Approximate Annual Difference
Christy, Rowland G.	3/19/28	175.00	185.00	10.00	120.00
Drake, Walter M.	2/1/34	180.00	195.00	15.00	180.00
Evans, I. Rowland	8/18/19	245.00	245.00	-	-
Gilpin, Douglas	6/25/15	335.00	335.00	-	-
Laws, Walter R.	5/10/20	75¢ hr.	160.00	22.00	264.00
Mc Millan, James B.	9/1/38	170.00	185.00	15.00	180.00
Mackey, Mark H.	11/20/24	205.00	210.00	5.00	60.00
Nead, Clarence S.	3/1/34	175.00	180.00	5.00	60.00
Racine, Irvin P.	11/1/23	175.00	185.00	10.00	120.00
Reese, Earl	3/13/19	75¢ hr.	160.00	22.00	264.00
Rhoads, Nathan M.	4/1/30	175.00	185.00	10.00	120.00
Shoemaker, James J. Jr.	12/16/18	245.00	255.00	10.00	120.00
Smith, Marshall W.	6/3/29	75¢ hr.	160.00	22.00	264.00
Toulson, Crawford	3/1/23	75¢ "	160.00	22.00	264.00
Uhde, Walter R.	4/1/18	185.00	190.00	5.00	60.00
Warren, Charles M.	4/21/17	75¢ hr.	85¢ hr.	18.00	216.00
VEGETABLE GARDEN					
Drake, Duane	6/2/47	65¢	140.	22.00	264.00
Hopewell, William J.	6/14/48	85¢	85¢	-	-
Miller, Frank S.	6/1/37	150.00	165.00	15.00	180.00
Miller, Fred	4/1/19	210.00	240.00	30.00	360.00
Miller, Lester L.	6/2/41	130.00	145.00	15.00	180.00
Toulson, Caleb S.	4/5/39	135.00	150.00	15.00	180.00
White, Edgar L.	4/5/20	160.00	160.00	-	-
MISCELLANEOUS					
Bickford, Stanley G.	5/20/34	185.00	185.00	-	
Frank L. Battan	10/9/22	200.00	250.00	50.00	600.00
Hedrick, Joseph W.	8/24 /33	75¢ hr.	85¢ hr.	18.00	216.00
Hipson, Fred	9/1/30	235.00	245.00	10.00	120.00
Murray, Thomas	4/30/33	150.00	165.00	15.00	180.00
Parsons, Newton	12/8/26	155.00	170.00	15.00	180.00
Glissman, Charles E.	10/1/23	165.00	165.00	-	-
Pyle, Carl F.	5/17/37	160.00	180.00	20.00	240.00
Lee, Paul A.	8/16/40	225.00	225.00	-	-

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WILMINGTON OFFICE

	Entered Service	Rate 3/21/46	Rate 9/1/48	Monthly Difference	Approximate Annual Difference
Gerald Montaigne	10/17/34	2,083.33	2,083.33	-	-
Truss, James P.	5/1/44	1,041.66	1,083.33	41.67	500.00
Thompson, George E.	7/1/30	315.00	450.00	135.00	1,620.00
Pierson, Alice S.	2/9/24	290.00	350.00	60.00	720.00
Wade, Edna S.	3/15/31	240.00	300.00	60.00	720.00
Kenyon, Ruth E.	2/25/47	-	225.00	-	-
Pape, Marguerite	8/1/47	-	175.00	-	-
Kane, Margaret L.	9/1/43	300.00	400.00	100.00	1,200.00
Lynch, Helen E.	7/23/44	250.00	275.00	25.00	300.00
Geesey, Titus C.	10/1/19	315.00	-	LEFT SERVICE	
Walker, M. Ellen	4/1/44	190.00	-	LEFT SERVICE	

NEW YORK

Mc Allister, Catherine A.	5/1/25	290.00	290.00	-	-
Garbright, Edward F.	5/1/25	220.00	220.00	-	-

FLB-9/18/47

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CHILDREN OF LONGWOOD EMPLOYEES (1943 RECORD)

	NAME		DATE OF BIRTH		AGE
LONGWOOD HOUSE	Mary Frances Pyle	---	April 19, 1941	--	6
	Barbara Ann Battan	---	May 3, 1936	--	11
	Emilie Trew Battan	---	April 23, 1938	--	9
VEGETABLE GARDEN	Emma Mary Miller	---	February 17,1932	-	15
	Freda May Miller	---	March 6, 1927	--	20
	64 Harry Smith	---	1936	--	11
FARM DIVISION	Yvonne Christy	---	June 25, 1928	--	19
	Harmar R. Christy	---	April 9, 1933	--	14
	Lorna Drake	---	March 4, 1927	--	20
	Duane Drake	---	Dec. 25, 1928	--	19
	Arlene Drake	---	Feb. 20, 1931	--	16
	Virgil Lang Evans	---	Feb. 12, 1927	--	20
	William F. Evans	---	April 17, 1933	--	14
	Miriam Barbara Gilpin	---	Feb. 4, 1928	--	19
	Frank Bailey Gilpin	---	Jan, 1, 1932	--	15
	Myrtle Joyce McMillan	---	March 30, 1939	--	8
	Joseph Hadley Mackey	---	Jan. 17, 1926	--	21
	Vernon Larry Nead	---	Jan. 1, 1938	--	9
	Robert Eugene Nead	---	Dec. 26, 1941	--	6
CONSTRUCTION DIVISION	Mary Lou Bowen	---	July 7, 1929	--	18
	Robert Bruce Burnett	---	June 7, 1927	--	20
	James Burnett	---	July 13, 1929	--	18
	David Reed Ewing	---	Jan. 4, 1933	--	14
	Judith Ann Gallagher	---	Aug. 21, 1938	--	9
	Lowell S. Mercer	---	May 5, 1928	--	19
	Charmaine Patchell	---	Nov. 12, 1928	--	19
	John Richard Rae	---	July 12, 1932	--	15
	Howard J. Waterman, Jr.	---	July 27, 1932	--	15
MAINTENANCE DIVISION	57 Carrol Erwin Clark	---	April 7, 1932	--	15
	57 John Eugene Clark	---	June 6, 1935	--	12
	Mary Lou Clark	---	Oct. 9, 1942	--	5
	72 Peter N. Greeley	---	Nov. 28, 1931	--	16
	72 Robert H. Greeley	---	March 25, 1934	--	13
	Lawrence E. Greeley	---	Nov. 5, 1936	--	11
	Patricia Ann Morrison	---	March 28, 1939	--	8
	Shirley Jean Parsons	---	Feb. 9, 1929	--	18
	Paul Parsons, Jr.	---	April 24, 1931	--	16
	Russell Erwin Parsons	---	Jan. 19, 1934	--	13
	Don Dwight Seal	---	April 17, 1935	--	12
	Theodore Gordon Seal	---	Jan. 5, 1937	--	10
	Charles William Schuck	---	July 20, 1935	--	12
	Reginald Way, Jr.	---	Aug. 23, 1930	--	17
HORTICULTURE DIVISION	Calreene Bausch	---	March 15, 1935	--	12
	74 James L. Bausch	---	March 12, 1937	--	10
	Bradford Wilson Bowman	---	Dec, 28, 1927	--	20
	Elizabeth Ann Briggs	---	March 23, 1931	--	16
	Sandra Briggs	---	April 22, 1933	--	9

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HORTICULTURE DIVISION (cont.)

60	Charles [illegible], Jr.	---	May, 13, 1935	-- 12
"	Edward Carter	---	June 14, 1937	-- 10
67	Donald LeRoy Crouch	---	Aug. 6, 1931	-- 16
	Ora Lee Veiler (Day)	---	July 15, 1928	-- 19
	William Joseph Deckman	---	Aug. 20, 1936	-- 11
	Joanne Adele Ford	---	April 11, 1934	-- 13
	Nancy Alaine Ford	---	June 10, 1936	-- 11
	Dorothy Eva Ford	---	July 18, 1937	-- 10
	Marguerite Franceschini	---	Dec, 15, 1929	-- 18
	Algisa "	---	March 15, 1931	-- 16
	Rosie "	---	June 8, 1933	-- 14
	Milania "	---	May 22, 1935	-- 12
	Cynthia Carol Hamilton	---	Nov.12, 1935	-- 12
63	Donald E. Hanway, Jr.	---	Sept. 17, 1936	-- 11
	Dorothy E. Hanway	---	Jan. 19, 1927	-- 20
	James Bittle Hedrick	---	Feb. 15, 1928	-- 19
	Loretta Ruth Hedrick	---	July 22, 1931	-- 16
	Louis Conrad Jacoby	---	Sept. 8, 1935	-- 12
	Mary Leah Johnson	---	Feb. 18, 1928	-- 19
	Eleandr Pauline Johnson	---	July 10, 1940	-- 7
	Joseph Wylie Johnson	---	Feb. 29, 1928	-- 19
	Betty Ann Johnson	---	March 10, 1940	-- 7
	Betty Jane Lanser	---	Jan. 30, 1935	-- 12
	John Peterson Marx	---	April 16, 1935	-- 12
	Elizabeth Jane Myers	---	June 29, 1928	-- 19
	Mary Louise "	---	Nov. 21, 1929	-- 18
	Shirley May "	---	Feb. 25, 1932	-- 15
	Joseph Franklin "	---	Feb. 11, 1933	-- 14
	Edith Clare Nash	---	Oct. 25, 1933	-- 14
	Ruth Ramona Parsons	---	Aug. 24, 1928	-- 19
	Joann Elaine Parsons	---	April 27, 1930	-- 17
69	James Marshall Peterson	---	Aug. 30, 1931	-- 16
	Lois Lorrain Peterson	---	Aug. 2, 1934	-- 13
69	Joseph R. Peterson, Jr.	---	June 17, 1934	-- 13
69	John Winfield Peterson	---	June 20, 1935	-- 12
	Barbara Ann Peterson	---	Jan. 26, 1937	-- 10
	Roland Howard Peterson	---	May 9, 1940	-- 7

WILMINGTON OFFICE

	Marie Breckenridge Geesey	--	April 12, 1936	-- 11
	Cornelia Ness "	--	May 8, 1937	-- 10
	George Thompson, Jr.	--	Jan. 7, 1935	-- 12
	Richard A. Thompson	--	April 13, 1936	-- 11
	David Lawrence Thompson	--	Dec. 3, 1938	-- 9
	Robert P. Wade	--	Feb. 9, 1929	-- 18

ESSAY ON RESEARCH TECHNIQUE, SOURCES AND BIBLIOGRAPHY

This thesis covers a topic in the history of Longwood Gardens which most people have taken for granted or heretofore ignored; therefore any information published prior to this publication had been taken at face value to be correct and true. I have found this assumption to be incorrect, as a significant amount of information published on the subject of agriculture and farming operations at Longwood is flawed. This provided the impetus for the research: to locate information on the subject, to document and record the extent of agriculture at Longwood Farms, and to provide a solid basis for further research.

I initially agreed to perform oral interviews with persons directly and indirectly associated with Longwood, and then do the documentary research to write the narrative. In performing preliminary research on oral history interviews conducted previously, such as the interview of Douglas Gilpin and his wife by George Thompson, Sr. on March 22, 1972, I found a portion of the information which made its way into print in A Man and His Garden to be erroneous.

For example, a quote from Gilpin about the cattle operations on page 42 states:

> When the original cattle barn was torn down in 1919 to make way for the new conservatories, the beef cattle operation was abandoned and Longwood Farms expanded into a rather extensive dairy farm operation.

In reality, the Longwood barn was built in 1908 and torn down late in the year, 1920. The beef cattle operations were diversified by raising registered Hereford cattle in 1916, in addition to the steers. On record, the greatest production of beef occurred in the years 1916-1927; with the Herefords being phased out in 1927 and the steers in 1933. (See Table 2.)

Another error was the mislabelling of a photograph in A Man and His Garden. On page 36, a photograph is mislabelled: "Theodore Davis and Walter Brown in front of the barn on Frederick Farm, around 1925." In reality, the barn in the photograph was located at the Merrick Farm. The barn at the Frederick Farm had a twin silo, and if one looks closely at the weather vane on the top of the barn in the photograph, one can discern the figure of a cow, indicating the dairy barn, which in 1925 was the Merrick Barn.

A final inconsistency, this time from another source, led me to alter my research method. In Issue 179, (November/December), 1991, of the Longwood Chimes it was recorded in print, from an interview with Isaac Evans, Jr. by Dave Thompson and the author in July, 1991, that "Fred Miller was in charge of growing fruits and vegetables in this garden from 1919 until his retirement in 1958." In reality, Ambrose Alexander was the Longwood Vegetable Garden gardener from 1911-June, 1933. Fred Miller took over as the head vegetable gardener in July, 1933.

In order to conduct individual interviews in the most effective manner, I decided to organize an outline to delineate the extent of the material which I wanted to present. I then gathered information from various archival sources and wrote a rough draft of my findings . I felt that after I had accumulated the information which I wanted to report, I could ask pertinent and well-formulated questions to supplement and confirm my research while eliminating any misinformation. Also, having copies of records available for the interviewees perusal during the discussion reduced the incidence of "misrecollection."

The information about the Peirce family was gathered from a number of sources. For initial background

information I utilized Fred Roberts thesis, Horticulture at Peirce's Park, 1798-1905. This thesis led me to many articles and references which I used in my work. I became a member of the Chester County Historical Society; this entitled me to use the library and archives of both the Chester County Historical Society and the Chester County Archives. The Chester County Historical Society provided me with the 1730 map, and the 1873 Witmer map of Longwood and the surrounding areas. I also utilized their copy of Futhey and Cope's, History of Chester County, Pennsylvania, and a highly useful document with a photograph entitled, The PEIRCES who developed and owned Peirce's Park and made the 1730 brick house their home ending with the STEBBINS FAMILY. The Chester County Archives contained deeds, tax records probate records, wills, and liens which I used to report and verify information in this document. A collection of newspaper articles and family papers are also located in the Soda House at the Hagley Museum and Library, Files 1148-1, 1148-2, 1148-3, 1148-4.

The bulk of the information which I used to piece together this work came from File PSduP 516 located in the Soda House at the Hagley Museum and Library. The photographic archives in the library provided many of the images incorporated within the text. A reference volume

entitled, Inventory of the Longwood Manuscripts, Group 10, Series A, Files 1-1207, Papers of P.S. du Pont by Ruthanna Hindes, published by Eleutherian Mills Historical Library, 1970, was used to narrow the search to the files which were of most importance. Within each file there could be from 10s to 10s of thousands of pieces of correspondence.

Mr. du Pont and his secretaries kept meticulous records of the farm, which include any and all property, buildings, personnel, livestock, agricultural products, etc. The vast quantity of information contained in File 516 of P.S. du Pont as related to Longwood, including Longwood Farms, Longwood Gardens, Longwood, Inc., and Longwood Foundation, Inc. from 1882-1955, includes 290,675 items and 370 boxes of uncounted items.

I have fashioned this work as a chronological history focusing on the assemblage of farms and property and the description of crops, livestock, and personnel involved with the farms after their incorporation into Longwood Farms. All of the information, assumptions, and conclusions are correct and documented to the best of my knowledge. Information in the charts and tables within the text have been compiled from summaries obtained from said files. Where information was lacking or missing, and there was no

definite indication of existence, I recorded N/A, not available. Where information indicated that something did exist, but exact numbers could not be located, I recorded yes. Where information was lacking but something did not exist, I recorded NO. (See Table 2.)

In conclusion, I would like to mention that this work only scratches the surface of a number of research subjects available to historians interested in events specifically relating to P.S. du Pont and Longwood Gardens, or generically, concerning the gentleman farmer and development of country estates around the turn of the 20th century.

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The Longwood Manuscripts, Group 10, Papers of Pierre S. du Pont, Series A and B. Located at the Hagley Museum and Library, Greenville, Delaware. Photographic records of the development of Longwood may be found in the Library's Pictorial Collections.

Additional manuscripts, blueprints, and images are on file at Longwood Gardens, Kennett Square, Pennsylvania. These sources are found in the archival vault in the basement of the Peirce-du Pont house. Not all of the information is catalogued.

Chester County Historical Society, located in West Chester, PA, has maps and records of the townships where Longwood is located. They also had a document entitled "The PEIRCES who developed and owned Peirce's Park and made the 1730 brick house their home ending with the STEBBINS FAMILY".

Chester County Archives, located in West Chester, PA, contains deeds, tax records, probate records, wills, liens, etc. for Chester County, PA, including those concerned with the Peirces, Stebbins, P.S. du Pont, and Longwood.

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VI. Oral History Interviews

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Douglas Gilpin interviewed by George E. Thompson, Sr., 1972.