

Germans and Agriculture in Colonial Pennsylvania

THROUGHOUT most of the eighteenth century, Germans formed the largest national minority group within the British colonies. The first group immigration of Germans occurred in 1683, and the first major settlement, that of Germantown, was associated with Francis Daniel Pastorius, who, as agent for the Frankfurt Land Company of Germany, purchased 15,000 acres from William Penn. German immigration, spurred on by political, economic, and religious dissatisfactions in the homeland, steadily increased until in 1790 first-generation Germans and descendants of earlier settlers made up about one third of the total population of Pennsylvania.¹

The agricultural contributions of the colonial German farmers form a significant part of the history of Pennsylvania. Although the importance of specifically German farming methods and practices was to be attenuated somewhat by the introduction of a scientific agriculture after 1800, and by the gradual lessening of German cultural individualism, the Germans were in large part responsible for the reputation of Pennsylvania in the eighteenth century as one of the best farming provinces in North America.

The size of the German farm varied considerably from family to family. General abundance and relative cheapness of land enabled virtually every free settler to purchase some land within a comparatively short time after his arrival; on the other hand, farms of more than four hundred acres were rare. As a general rule, land prices rose

¹ Jesse L. Rosenberger, *The Pennsylvania Germans* (Chicago, 1923), 9. There has been some argument about the number of Germans in Pennsylvania. A higher estimate than the one above has been given by William Beidelman, *The Story of the Pennsylvania Germans* (Easton, Pa., 1898), 54; a lower one will be found in Oscar Kuhns, *The German and Swiss Settlements of Colonial Pennsylvania* (New York, 1901), 59.

throughout the eighteenth century as the number of settlers increased. A traveler of the 1750's remarked that rich Englishmen had already bought a great deal of land, even into the farthest back-country, in order to sell it again to the European immigrants who were coming to the country in increasing numbers. "Our German people who emigrate there," he commented, "do not get land enough for nothing upon which to build a cottage."²

Land prices decreased, however, as one moved away from eastern Pennsylvania, and particularly from Philadelphia, which was the distributing point for nearly all immigrants. As a result, the average size of farms in western areas of the settled portion of the state was larger, on the whole, than in the eastern sections.³ A visitor to Pennsylvania of the 1790's had the impression that farms around Kutztown were of an average size of one hundred fifty acres, and were larger than farms around Nazareth and Bethlehem to the east; correspondingly, he noted, farms in Cumberland County, west of Kutztown, averaged between 200 and 400 acres. Farms in York County, south of both Cumberland County and Kutztown, but between them on a east-west line, averaged 200-300 acres, with the average in the immediate neighborhood of Abbottstown about 200 acres.⁴ Doubtless this observer was concerned primarily with larger farms when he made these averages, for land warranties of the second quarter of the eighteenth century indicate that the average German farm in Cumberland County comprised about 150-175 acres, and farms in most other areas about one hundred acres.⁵ The difference between the average size of German farms in eastern and western areas of Pennsylvania tended to become smaller as the century wore on. By 1780, the average Cumberland County farm, for example, was only slightly larger than farms in other areas.⁶

² Gottlieb Mittelberger, *Gottlieb Mittelberger's Journey to Pennsylvania in the Year 1750 and Return to Germany in the Year 1754*, trans. by Carl T. Eben (Philadelphia, 1898), 119.

³ Land Warranties of Bucks, Cumberland, Lancaster, and Philadelphia Counties, *Pennsylvania Archives, Third Series*, XXIV.

⁴ Theophile Cazenove, *Cazenove Journal 1794: A Record of the Journey of Theophile Cazenove through New Jersey and Pennsylvania*, trans. by Rayner W. Kelsey (Haverford, Pa., 1922), 35, 58, 67, 69.

⁵ Land Warranties of Bucks, Cumberland, Lancaster, and Philadelphia Counties, *Pennsylvania Archives, Third Series*, XXIV.

⁶ Tax Lists of Berks, Bucks, Cumberland, Lancaster, and York Counties, 1779, *ibid.*, XIII, XVII, XVIII.

In the neighborhood of Kutztown, a 150-acre farm normally had fifty to sixty acres of woods and ninety to a hundred acres under cultivation. Cumberland County farms of 200-400 acres were normally half cleared, while the other half contained woods, with space for the house and barn. "Half or a large third" of farms of 200 acres around Abbottstown in York County remained in forest, while 300-acre farms in the county averaged 140 acres of plowland, 20 of meadow, and 140 of woods.⁷ Some acreage was allotted to orchards on every farm; observers' estimates ranged anywhere from two to twenty acres per farm.⁸ The exact amount of land given over to particular crops varied considerably, but wheat, recognized in the eighteenth century as Pennsylvania's main export crop, certainly was given a preferred position.

The German farmer in Pennsylvania was characteristically independent of sources of farm labor outside his own family. Centuries of peasant tradition in Germany encouraged an attitude of thrift, which one contemporary observer regarded as approaching the point of avarice, and the Germans depended upon members of the family for all types of work.⁹ The women as well as the men were included in the labor force: especially at harvest, the women "forsake the dairy and spinning wheel to share with [the farmer] in the toils of harvest."¹⁰ The practice of employing women in field work was not wholly approved by Thomas Hill, who, while traveling through German country near Easton in 1799, commented that "The women, all at work in the fields, seem very active, but are masculine in the extreme."¹¹

While field work was thus seldom hired, house servants were not uncommon among the Germans, especially as the farmers' wealth

⁷ Cazenove, 35, 58, 67, 69.

⁸ Israel Acrelius, *A History of New Sweden, or, The Settlements of the River Delaware*, trans. by W. M. Reynolds (Philadelphia, 1876), 152; Mittelberger, 67.

⁹ Cazenove, 34; Benjamin Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania*, ed. by I. Daniel Rupp (Philadelphia, 1875 [originally printed in Philadelphia, 1789]), 24-25.

¹⁰ Benjamin Rush, *Letters of Benjamin Rush*, ed. by L. H. Butterfield (Princeton, N. J., 1951), I, 403.

¹¹ Thomas Hill, "A Journey on Horseback from New Brunswick, New Jersey, to Lycoming County, Pennsylvania, in 1799," *The Pennsylvania Magazine of History and Biography*, XIV (1890), 191, hereinafter cited as Hill.

increased. House servants were frequently redemptioners: a German will of 1775 stated that the wife of the decedent "shall have the Services of my Servant Girl Polly during all the Residue of her Term of Servitude agreeable to her Indentures."¹² Other similar evidence confirms this use of indentured help. In the middle colonies in general throughout the eighteenth century, redemptioners were more commonly employed than slaves; Pennsylvania Germans rarely possessed slaves, for whom they apparently had little use and still less desire.¹³

Farm animals of the Pennsylvania Germans included horses, oxen, sheep, cattle, swine, goats and chickens. With the exception of oxen, all were to be found in numbers on farms during the eighteenth century. Not until late in the century, apparently, did the use of oxen make a serious bid to replace horses in such draft work as plowing and hauling. A traveler of the 1790's remarked that oxen were just beginning to be used in the neighborhood of Ealer's Tavern, near Allentown; farther west, in Maxatawny Township, around Kutztown, the custom of plowing with oxen was increasing, but in Cumberland County, still farther west, the use of oxen for any sort of farm work was little known.¹⁴ The lower price of oxen might have been responsible for their increasingly widespread employment: prices quoted in 1794 were £20 to £25 for a good plow horse, whereas a pair of oxen sold for from £18 to £20.¹⁵ On the other hand, an account of 1698 stated that oxen were usually used for plowing, although there was no lack of good horses.¹⁶ It seems clear, however, that for some time horses were preferred by the immigrant farmers who entered the province after 1700.

The horses of the German farmers, known generally as "Conestoga horses," enjoyed a wide reputation throughout Pennsylvania. Benjamin Rush, writing in 1789, attributed the remarkable size and strength of German horses to particularly good feeding and to the prevalence of large stoves, rather than fireplaces, in German farm-

¹² Russell W. Gilbert, "Pennsylvania German Wills," *Yearbook of the Pennsylvania German Folklore Society*, XV (1950), 97.

¹³ *Ibid.*, 96.

¹⁴ Cazenove, 29, 33, 59.

¹⁵ *Ibid.*, 29.

¹⁶ Gabriel Thomas, *An Account of Pennsylvania and West New Jersey*, (Cleveland, Ohio, 1903 [originally published in London, 1698]), 27-28.

houses. Since less wood for the same amount of heat was required in a stove than in a fireplace, the horses were spared much hauling of wood in the winter, "which frequently unfits the horses of their (*Scotch*) neighbors for the toils of the ensuing spring."¹⁷ A German observer who had an opportunity to compare Pennsylvania with other regions in the young United States remarked that Pennsylvanians regarded size and strength of breed in horses more than their beauty.¹⁸ Perhaps, for the practical Germans, beauty lay in size and strength.

The concern of Pennsylvanians with ensuring a continuing supply of large and powerful draft horses was manifested in at least two acts of the Pennsylvania Assembly during the eighteenth century. An act of 1724 stipulated that horses under thirteen hands (fifty-two inches) were to be prevented from running free and from breeding indiscriminately.¹⁹ In 1749 horse dealers were prohibited from introducing into the province horses shorter than fourteen hands (fifty-six inches), or more than eight years old, or unhealthy.²⁰

Animals on the German farm were raised chiefly to fill the needs of the household, or the needs of a rather restricted group of consumers in the immediate neighborhood. Horses and oxen were, of course, used for labor. Goats were raised for milk and cheese, chickens for eggs and meat, and swine and cattle for meat. Sheep were raised largely to supply the family with clothing.²¹ Apiaries, too, had a place on many farms by the end of the century.²² Since the main sale product of Pennsylvania farms was wheat, and other important exports were almost exclusively products of the soil, farm animals were not considered export commodities. The number of animals on a farm varied as the wealth of the farmer; tax lists of 1779 would indicate that the average German farmer possessed two or three horses (two were virtually a necessity, to form a team), and four or five cattle.²³

¹⁷ Rush, *An Account*, 17.

¹⁸ Johann David Schoepf, *Travels in the Confederation, 1783-1784*, trans. and ed. by A. J. Morrison (Philadelphia, 1911), I, 204.

¹⁹ *Statutes-at-Large of Pennsylvania from 1682 to 1801* (Harrisburg, 1896-1908), III, 422 ff.

²⁰ *Ibid.*, V, 65-68.

²¹ Cazenove, 34.

²² *Ibid.*

²³ Tax Lists of Berks, Bucks, Cumberland, Lancaster, and York Counties, *Pennsylvania Archives, Third Series*, XIII, XVII, XVIII.

The Germans differed from practically all other Pennsylvania farmers, with the exception of the few Dutch, in providing shelter for their animals in winter. A traveler of the mid-eighteenth century noted shortly after his arrival in Pennsylvania that cattle around Philadelphia were neither housed in winter nor tended in the fields; after having been in the country for some time, however, he remarked that while the English and Swedes had no stables, the Germans and Dutch had "preserved the custom of their country, and generally kept their cattle in barns during the winter."²⁴ In settling a tract of land, the Germans normally provided good quarters for their horses and cattle before they built any but the crudest accommodations for themselves. They kept their animals as warm as possible in winter, and thereby effected considerable savings in hay and grain, for they found that cold animals eat more than warm ones.²⁵ It was usually only in the hardest part of winter, from December to April, that stock was kept in the stables.²⁶

Except in winter, animals were apparently pastured on the farm proper, or were allowed to run about the countryside, where they found their own food by forage.²⁷ Those farmers who did not winter their stock in stables placed haystacks on a field for winter feeding.²⁸ The pasturing of horses and cattle on stubble fields was also a widely used practice: whatever grew on hay fields after the second cutting in August was used as forage, as were wheat sowed in September and early rye.²⁹ Land lying temporarily fallow was often turned into pasture on farms which had sufficient acreage.³⁰ Since pasture in the forest consisted mainly of leaves, orchards were in many cases used before the stubble fields and meadows were ready.³¹ Sheep and goats were treated in much the same way as horses and cattle, but hogs were often fattened on the peaches which fell from the trees in the

²⁴ Peter Kalm, *The America of 1750: Peter Kalm's Travels in North America*, trans. and ed. by Adolph B. Benson (New York, 1937), I, 55, 236.

²⁵ Rush, *An Account*, 19-20.

²⁶ Cazenove, 49.

²⁷ Mittelberger, 68; *American Husbandry*, ed. by Harry J. Carman (New York, 1939 [originally published in two volumes, London, 1775]), 119.

²⁸ Acrelius, 146-147.

²⁹ Schoepf, I, 128; Acrelius, 149.

³⁰ Schoepf, I, 130; Kalm, I, 308.

³¹ Acrelius, 154.

orchard.³² Since swine were not allowed to run at large, ³³ some farmers maintained peach orchards exclusively to feed the swine.³⁴

Hay was certainly the chief element in the diet of most farm animals, but, as has been noted, wheat and rye straw was also used. Other types of feed included oats, used exclusively for horses, buckwheat, blades from cornstalks cut at the moment of greatest growth, and wheat bran, normally fed only to milch cows.³⁵ Good farmers recognized clearly that hay alone was not sufficient to maintain weight and strength in stock, and they therefore added considerable amounts of grain to the diet.³⁶

"In the productions commonly cultivated," wrote the author of *American Husbandry*, "wheat is the grand article of the province."³⁷ Wheat was more consistently grown in Pennsylvania in the eighteenth century than any other export crop. Pennsylvania's position as the leader in wheat exports was due not only to the south's concentration on tobacco, but also to the poor quality of land in New England, and, of course, to the good land and favorable climate of Pennsylvania itself. Indeed, Israel Acrelius in the 1750's was convinced that climate was more responsible for Pennsylvania's high position in the cultivation of grains than was the fertility of the soil.³⁸

But there was a market demand for products other than wheat, and the self-sufficiency of the Pennsylvania farm, especially the German farm, required that attention be given to raising a wide diversity of crops. Field crops besides wheat included buckwheat, rye, barley, oats, speltz, clover, corn, hay, flax, hemp and grass. Buckwheat, along with rye and barley, became especially popular when farmers found that it was particularly resistant to attacks of the Hessian fly, an insect which plagued Pennsylvania wheat farms in the last two decades of the eighteenth century and on into the nineteenth. Germans raised flax and hemp partially as marketable

³² *American Husbandry*, 112.

³³ An act of the Pennsylvania Assembly of 1706 prohibited swine from running at large without a yoke to prevent them from going under or through fences, and a nose ring to prevent them from rooting up the ground. *Statutes-at-Large*, II, 261-263.

³⁴ Acrelius, 152.

³⁵ *Ibid.*, 148, 150, 156.

³⁶ *Ibid.*, 156.

³⁷ *American Husbandry*, 113.

³⁸ Acrelius, 147.

commodities, but largely to supply their own clothing needs: Cazenove remarked that in 1794 every farm in the neighborhood of Kutztown was self-sufficient in this respect.³⁹ Grass, especially timothy, was deliberately cultivated on many of the best farms as fodder for stock.⁴⁰ Especially characteristic of Pennsylvania was this attention to grass, which was grown in meadows which often were irrigated.

One of the earmarks of the German farmer in Pennsylvania was his assiduous cultivation of large vegetable gardens.⁴¹ Among the vegetables most frequently to be found were turnips, white and sweet potatoes, carrots, cabbage, peas, beans, cucumbers, beets, onions, lettuce and German lettuce. Both turnips and potatoes were often grown in large quantities as field crops. Less frequently seen, but still generally cultivated, were parsnips, red peppers, artichokes, and parsley.⁴² Kohlrabi, broccoli, and black radishes began to appear in gardens late in the eighteenth century, and were probably first introduced by German troops during the Revolutionary War.⁴³ Tobacco, too, had its place in the garden, but only in a quantity sufficient for the use of the farmer and his family. Some herbs for home remedies were also grown, including wormwood, rue, sage, thyme and camomile.⁴⁴

Plums, peaches, apples and cherries were the chief products of orchards on Pennsylvania farms.⁴⁵ Applies were used principally for apple juice, from which cider was made; virtually every farm possessed an apple mill and a cider press.⁴⁶ Peaches, as noted above, were frequently fed to the hogs, while cherries were converted into brandy. All of these, including plums, were used fresh on the table, and were also dried for winter use.

Wine making, one of the traditional occupations of many Germans, especially in the Palatinate, was not a major industry on

³⁹ Cazenove, 34.

⁴⁰ Cazenove, 67; Rush, *An Account*, 13-14.

⁴¹ *Ibid.*, 23-24.

⁴² These vegetables are mentioned in Acrelius, 150-151; *American Husbandry*, 118; Rush, *Letters*, I, 403; and Schoepf, I, 130. Many are mentioned as early as 1698, in Thomas, 35.

⁴³ Schoepf, I, 94.

⁴⁴ Acrelius, 151.

⁴⁵ Schoepf, I, 158; Cazenove, 24; Acrelius, 151; Mittelberger, 67.

⁴⁶ Gilbert, 43.

German farms in eighteenth-century Pennsylvania. Gottlieb Mittelberger at mid-century wrote that although vines grew plentifully, not much wine was made because of the large amounts of sugar required. Grapes in the area would be better, he said, if the vines were cut, as in Europe, but since the population was too dispersed to care for vines properly, animals and birds would soon put an end to any cultivation which might be undertaken.⁴⁷

The yields of different crops varied with the fertility of the soil, the amount of seed sowed, the amount and frequency of fertilization, and, of course, the weather. Gabriel Thomas wrote in 1698 that between twenty and thirty bushels of wheat were reaped from every bushel sowed.⁴⁸ This was certainly an excellent yield, and must have been due to the newness of the ground, for the author of *American Husbandry* some seventy-five years later noted that on good land between twenty-five and thirty-two bushels were harvested from two or three bushels of seed per acre, and that on inferior ground only fifteen to twenty-five bushels were reaped from the same amount of seed.⁴⁹ Schoepf remarked that old seed was sowed at the rate of one bushel to the acre, and new seed at half that proportion.⁵⁰ Other wheat yields, taken in 1794, were fifteen bushels around both Bethlehem and Kutztown; fifteen to twenty bushels, sowed with one bushel, in Cumberland County; twelve to fifteen bushels in York County; and twelve to sixteen bushels near Abbottstown.⁵¹ Thomas Hill, traveling in east-central Pennsylvania in 1799, found average yields around Easton to be about twelve bushels per acre, except on land on which red clover had been grown, where the yield was twenty-five bushels.⁵²

Buckwheat gave much higher yields than wheat, although as a food product it was not regarded as highly as wheat. In 1775, buckwheat sowed with one and a half bushels of seed sometimes yielded more than forty bushels per acre, but more commonly from thirty to thirty-six bushels.⁵³ Theophile Cazenove somewhat later listed buck-

⁴⁷ Mittelberger, 70.

⁴⁸ Thomas, 27-28.

⁴⁹ *American Husbandry*, 113.

⁵⁰ Schoepf, I, 130.

⁵¹ Cazenove, 24, 35, 58, 67, 69.

⁵² Hill, 190.

⁵³ *American Husbandry*, 119.

wheat yields around Kutztown at twenty-five bushels, in York County at fifteen to forty bushels, and in the immediate vicinity of Abbottstown at ten to forty bushels.⁵⁴ Oats gave a crop in Cumberland County reported at thirty to fifty bushels an acre⁵⁵; another statement indicated that thirty-five bushels were regarded as a good crop.⁵⁶ Hay, reckoned in tons per acre, yielded one to one and a half tons in Cumberland and York counties, and one and a half tons in the neighborhood of Easton in the 1790's.⁵⁷ Yields from "common meadows" around Philadelphia in 1797 were given at three tons, and as high as eight tons on meadows "in good situation."⁵⁸ Yields for other crops in 1794 were: fifteen bushels of rye in the area of Kutztown; twenty to thirty bushels of corn in Cumberland County, and twenty in York County; one to one and a half tons of clover in Berks and Cumberland counties; and fifteen bushels of barley in Berks County.⁵⁹ The land around Kutztown, in Berks County, must have been highly inferior or exhausted in 1794 to produce only fifteen bushels of barley, for the author of *American Husbandry* noted in 1775 that the barley yield on good land was from thirty to forty bushels, and on bad land from twenty to twenty-five bushels.⁶⁰ This example serves to indicate how irregular yields were, and how dependent upon soil care and other factors.

The abundance of good land in Pennsylvania unquestionably acted as a deterrent to the development of enlightened practices of soil conservation in the eighteenth century. German farmers were, in general, less given to thoughtless exploitation of the soil than other farmers of colonial Pennsylvania, largely by reason of attitudes stemming from their German traditions. But even they, to some extent, must have inclined toward the careless methods of cultivation fostered by the great amounts of land available to them in the new country.

It was apparent to all farmers, of course, that soil did become exhausted, and that its strength had to be renewed periodically. The

⁵⁴ Cazenove, 35, 67, 69.

⁵⁵ *Ibid.*, 58.

⁵⁶ *American Husbandry*, 115.

⁵⁷ Cazenove, 58, 67, 69; Hill, 190.

⁵⁸ Duke de la Rochefoucauld-Liancourt, *Travels through the United States of North America, 1795, 1796, 1797* (London, 1799), I, 11-12.

⁵⁹ Cazenove, 35, 58, 67, 69.

⁶⁰ *American Husbandry*, 115.

easiest method of restoring the land, and doubtless the one of most ancient institution, was simply to let the ground lie fallow. In Pennsylvania, farmers apparently observed no real system or definite time interval in this practice, the criterion generally being the capacity of a tract to produce a reasonably good crop. One contemporary observer in the 1750's commented that when a farmer had exhausted one piece of land, he moved to another, which he treated in the same manner, and so on, until he had exhausted all his lands; he then moved back to the first, which by that time had recovered its fertility.⁶¹ Similar practices were noted in 1775. The opinion was expressed that most farmers had bought too much land in their original purchase, and had insufficient means to care for the land properly through the use of artificial or other fertilizers.⁶² Those conversant with the problems and techniques of agriculture heartily condemned the policy of unthinking exploitation of the land. To the Swede Peter Kalm, who was aware of the problems in his own land caused by the scarcity of good soil, the system in use in Pennsylvania must have seemed a travesty, and he expressed his heartfelt disapproval of easy methods which had "induced [Pennsylvania farmers] to adopt the same method of agriculture as the Indians."⁶³

Combined with the custom of letting land lie fallow was the use of crop rotation. Depending, of course, on the individual farmer, these two practices could form a reasonably intelligent system of cultivation. Schoepf found that "usual practice" in Bucks County in 1783 was to plant maize the first year, wheat and English grass the second year, then to pasture for four or five years. Sometimes, he added, buckwheat or turnips were planted after wheat before the ground was allowed to lie fallow.⁶⁴ Cazenove in his *Journal* gives a very complete picture of crop rotation in various parts of Pennsylvania in 1794. Around Bethlehem, wheat was sowed the first year, followed by oats, corn, or buckwheat in the second year, clover in the third year, and clover and plowing to sow in the fourth.⁶⁵ The cycle was then repeated. Around Kutztown, on the other hand, a fairly regular system

⁶¹ Kalm, I, 97.

⁶² *American Husbandry*, 113, 123.

⁶³ Kalm, I, 308.

⁶⁴ Schoepf, I, 130.

⁶⁵ Cazenove, 29.

of allowing the land to rest fallow every three years, with the addition of artificial fertilizer at the same interval, was in use.⁶⁶

In the rotation of crops, a distinction was usually made between new land—*i.e.*, land being put under cultivation for the first time—and lands in use for some time. On new land around Lebanon, wheat was sowed the first two years, followed in the third by oats, fallow the fourth, wheat the fifth, fallow the sixth, and so on. On older lands, wheat in the first year was followed by barley in the second, corn or oats in the third, fallow or buckwheat the fourth year, and buckwheat the fifth year unless it had been sowed in the fourth year, in which case the land lay fallow.⁶⁷ In Cumberland County, no “consistent [or] very well thought-out” crop rotation was practiced, and the farmers “followed too much their humor,” but good farmers, on good land, sowed wheat the first year, after thrice plowing the land, oats or corn the second year, and clover and fallow the third and fourth years. An alternative rotation, practiced by those who apparently were not such good farmers, was wheat the first year, barley the second, corn the third, oats the fourth, fallow the fifth, and fallow and wheat the sixth, whereupon the cycle was repeated. On new ground in the same area, fields were planted with turnips and sweet potatoes in equal proportions the first year, followed by flax in the second.⁶⁸ Orchards, too, were in a sense rotated: Schoepf remarked that when trees in an orchard began to show age, a new orchard was set up on fresh land, since it was not regarded as good practice to put young trees where old ones had stood.⁶⁹ A travel account of 1794, which indicated that Lancaster County was the best cultivated of any part of Pennsylvania, gave the following account of rotation there: the first crop, Indian corn, was planted in late May or early June, and was harvested in the fall in time to sow the second crop, wheat. In the spring of the second year, before the wheat sowed the previous fall had been harvested, clover was sowed among the wheat. After the wheat was reaped in late summer, a few cattle were turned into the now ripe clover for a short time. In the third and fourth years, clover was sowed, and was mowed twice in each year. After the

⁶⁶ *Ibid.*, 35.

⁶⁷ *Ibid.*, 48.

⁶⁸ *Ibid.*, 58–59.

⁶⁹ Schoepf, I, 131.

last mowing in autumn of the fourth year, the ground was plowed and harrowed, and in May of the fifth year the cycle was begun again with Indian corn. Occasionally, rye or winter barley was substituted for wheat, and oats for Indian corn, in which case the oats were sowed in April. Frequently, buckwheat was sowed in June on a field containing wheat to be harvested in late summer, the buckwheat being reaped just before the November frosts.⁷⁰

Some rotation practices showed an almost criminal forcing of the land. For example, on a farm some fifty miles north of Philadelphia, on new land, wheat was grown the first two years, maize the third, wheat again the fourth and fifth, barley the sixth, seventh, and eighth, oats the ninth, barley the tenth, buckwheat the eleventh, barley the twelfth, oats the thirteenth, and peas the fourteenth. The ground then lay fallow for seven years. To the observer who noted the system, nothing could have provided better proof of the excellence of land in Pennsylvania!⁷¹ One reason for forcing the land may be found in the customs of land inheritance. Particularly among the Germans, a father often willed his farm to his eldest son, requiring him to pay a certain amount of money to younger brothers and sisters. In order to pay off the debts, which sometimes might even exceed the value of the farm itself, crops were forced beyond the normal ability of the land to produce.⁷²

Within the systems of rotation sketched above, the use of clover appears toward the end of the rotation cycle. In the last quarter of the eighteenth century, clover began to be generally recognized in Pennsylvania as an excellent crop for enriching and restoring the soil. It also provided good pasture for farm animals. Cazenove noted the use of clover around Kutztown in Berks County, and remarked that in Cumberland County and in the area of Bethlehem clover was just beginning to be sowed in considerable amounts in 1794.⁷³ Thomas Hill in 1799 commented that whereas seven years before he had been able to find no clover sowed except near cities, he now noticed its cultivation "wherever you find a mill, or a store."⁷⁴ Cultivation of

⁷⁰ Thomas Cooper, *Some Information Concerning America* (Dublin, 1794), 137-138.

⁷¹ *American Husbandry*, 122-123.

⁷² Cazenove, 33.

⁷³ *Ibid.*, 24, 59.

⁷⁴ Hill, 190.

turnips was also thought to be of some importance in restoring the vigor of the soil, and the product itself was used partly for table and partly for cattle.⁷⁵

The use of soil-restoring crops such as clover and the rotation of crops which went along with it were not, however, the only means of maintaining the fertility of the soil. Farm manure was one of the earliest fertilizers known to man, and its use in Pennsylvania in the eighteenth century was not neglected. But because of the large amount of land under cultivation and the relatively small number of farm animals, manure was not used as extensively as it was in Europe. The German farmers of Pennsylvania, in following traditional practice, were able to make wider use of manure than many other farmers, for they kept their cattle enclosed in their famous "Swisser" barns for a large part of the winter. This, of course, immensely facilitated the collection of dung.⁷⁶ Observers saw clearly that the common practice of allowing stock to run free through the countryside all year long was the chief reason for the lack of dung on many farms.⁷⁷ Those who did not have stables obtained their manure as best they could by picking up after their animals on pastures and fields; sometimes, too, they developed schemes to prevent too wide a scattering of dung. On the field in which the animals were fed in winter, for example, some farmers scattered haystacks about, which, trampled by the cattle feeding on them and becoming mixed with their manure, formed a compost which could then be gathered for distribution on fields. This mixture was reported to be both unequal and insufficient, but it did provide more natural fertilizer than many farmers would otherwise have had.⁷⁸

There were two soil amendments used in the eighteenth century: lime, used throughout the century, and gypsum, or plaster of Paris, which was introduced for that purpose apparently only after the American Revolution. Gabriel Thomas in 1698 remarked on the abundance of limestone in Pennsylvania, which he indicated was of great utility not only in building, but also in "Manuring land." At the same time, however, he suggested that there was little use for any

⁷⁵ *American Husbandry*, 118.

⁷⁶ Cazenove, 29; Kalm, I, 236.

⁷⁷ *Ibid.*, 55; *American Husbandry*, 125.

⁷⁸ Acrelius, 146-147.

fertilizer, because nature itself had made the land sufficiently fruitful.⁷⁹ At the latter end of the next century, however, farmers were using lime in great quantities: Cazenove remarked that German farmers around Bethlehem in 1794 were using forty bushels of lime per acre, along with farm manure.⁸⁰ Another traveler reported that fifteen to twenty bushels of lime per acre were spread on ordinary uplands, but more than twice that much on "clayey lowground."⁸¹ On the other hand, an observer of the 1790's reported seeing no lime used as manure around Easton, fifteen miles northeast of Bethlehem, and yet another traveler indicated that farmers in Cumberland County were loath to employ lime, claiming that it impaired their land.⁸² The use of lime depended to a certain extent upon its availability in different parts of Pennsylvania. The first settled areas of southeastern Pennsylvania had scattered deposits of limestone, from which lime was made.⁸³ German farmers were among the first to use it, and often had lime kilns on their own farms: Governor Pownall remarked in 1754 that every farm in Lancaster County possessed one.⁸⁴

An argument still exists as to who first introduced gypsum (plaster of Paris) into Pennsylvania as a fertilizer. Some claim the honor for the Germans, who supposedly had used it for years in Germany prior to its debut in America; others maintain that the English were responsible. Whoever deserves the credit, it seems clear that gypsum was not used for agricultural purposes in Pennsylvania until after the American Revolution. Travel accounts do not mention it prior to the Revolution, whereas in the 1780's and 1790's narratives are filled with references to it. Schoepf in 1783-1784 commented that the use of gypsum around Philadelphia and Germantown had recently become a favorite practice, "because there is less trouble involved than in the collecting, lading, hauling, and spreading of the common dung of cattle—trouble which the farmer here does not willingly sub-

⁷⁹ Thomas, 30.

⁸⁰ Cazenove, 29.

⁸¹ Schoepf, II, 2-3.

⁸² Hill, 190; Cazenove, 58.

⁸³ Stevenson W. Fletcher, *Pennsylvania Agriculture and Country Life, 1640-1840* (Harrisburg, 1950), 133.

⁸⁴ Thomas Pownall, "Address on the Early Settlement of the Valley of the Pequea," 1754, quoted in Fletcher, 133.

mit to.”⁸⁵ Gypsum found its greatest application on clover, where its salutary effects were first noted. The amount used for clover was reported in one area at four bushels per acre.⁸⁶ Around Kutztown, farmers found that gypsum was beneficial on clover for the first two years, but that after that it “used up” the land; just west of Kutztown, it was applied every three years only: put on more often, it ruined the ground.⁸⁷ As the use of gypsum increased, so did its price: Cazenove noted that the price of plaster of Paris before the war was a half-dollar per bushel, whereas in 1794 the same amount was a dollar.⁸⁸

Gypsum acted as a soil stimulant, but added none of the organic elements needed by the soil to retain its fertility. Naturally, any reliance on gypsum alone to improve land, without further fertilization, would end in disappointment. In the eighteenth century, before artificial fertilizers had been developed, manure remained the best fertilizer in every way. And because of their consistent concern for the collection of dung, German farmers for a long time maintained an important advantage over their English and Scotch-Irish neighbors.

Before land could be plowed or sowed, it naturally had to be cleared. Not only the original settlers, but virtually all other farmers who came after them were forced to reclaim from the forest much of the land they intended to cultivate. Even in areas that had been settled for many years, the clearing of land for crops was a steady occupation. But farmers did not indiscriminately rid themselves of their forest holdings; indeed, if we are to believe the testimony of one traveler, the exact opposite was the case: “The farmers keep too much woods, they are always afraid of not having enough, either for their fires, field-fences, or buildings.”⁸⁹ German farmers distinguished themselves from other farmers by their method of clearing land. English and Scotch-Irish farmers usually cleared by “girdling” trees—by removing a ring of bark, three or four inches wide, from the trunk of the tree, thus causing it to die and eventually fall. The Germans cut down their trees immediately and burned them. The

⁸⁵ Schoepf, I, 196 (note).

⁸⁶ Cazenove, 29.

⁸⁷ *Ibid.*, 33, 35-36.

⁸⁸ *Ibid.*, 29.

⁸⁹ *Ibid.*, 58.

German farmer, while able to clear less land initially because of the great amount of labor required by this method, nevertheless had the advantage of possessing a completely clear field right away, which made the tasks of plowing, harrowing, and reaping much easier.⁹⁰ Girdled trees did not fall for several years, but eventually they were chopped up, and the logs rolled together and burned; until this time, however, fields were plowed, sowed, and reaped around the fallen trees: ". . . one may often see fields filled with dry trees, and a heavy crop of grain growing under them."⁹¹ Underbrush and bushes, which English and Scottish farmers frequently cut off just at ground level, were entirely grubbed out by the Germans; the expense of repairing a plow broken on roots was greater than the expense of complete grubbing.⁹² Two men might clear twenty or thirty acres a year, and have them ready for plowing.⁹³

Once cleared, the land was plowed in preparation for harrowing and planting. The plowman, guiding the plow drawn by a pair of oxen or horses, turned the field up into high ridges and, plowing first on one and then on the other side of these ridges, turned up the whole field.⁹⁴ By this method, "the plow turns the stubs down and the earth up, and so the turf is sooner rotted, and the field kept free from weeds."⁹⁵ Deep plowing had not yet come into common use: the colonial plow was unfit for it, and there was a general prejudice against turning up the soil too deeply. Four or five inches was the normal maximum depth.⁹⁶ Harrowing was done immediately after plowing with a team of oxen or horses; sometimes two harrows were fastened together after the same team.⁹⁷ Twice over the field with a harrow was usually sufficient to prepare it for sowing.⁹⁸

⁹⁰ Rush, *An Account*, 14-15. There is evidence, however, that this practice was not universal among the Germans. Acrelius nowhere mentioned that cutting and burning was done, but did mention girdling, and Schoepf, while traveling from Christiansbrunn to Allentown, an essentially German region, mentioned seeing girdling done, but did not refer to the other method. Acrelius, 147; Schoepf, I, 192.

⁹¹ Acrelius, 147.

⁹² Rush, *An Account*, 15.

⁹³ Thomas, 27-28.

⁹⁴ Acrelius, 147.

⁹⁵ *Ibid.*, 147 (note).

⁹⁶ Rochefoucauld-Liancourt, I, 31.

⁹⁷ Acrelius, 148.

⁹⁸ Thomas, 27-28.

Where the seed drill or seeding plow was not in use,⁹⁹ both sowing and planting were done entirely by hand, the sowing mostly by the broadcast method. Wheat was sowed at the beginning of September, after three plowings (assuming that no crop was on the field immediately before the wheat was to be sowed) in May, July, and just before planting.¹⁰⁰ It was normally harvested before the end of June, but sometimes not until the middle of July.¹⁰¹ The wheat stalk was cut at about half its length, so that the stubble was quite high, and the wheat was gathered into short and small sheaves, with a dozen sheaves reckoned to one bushel.¹⁰²

Rye was sowed in November, mostly upon sandy ground or upon land which had borne wheat or some other crop the previous summer.¹⁰³ One plowing was normally regarded as sufficient, and rye was cut at the same time and in the same manner as wheat.¹⁰⁴ Oats were sowed at the beginning of March, usually on good ground which had been plowed some days before, and cut in July. If plowing was done the previous November or December, then again just before sowing, a better crop was produced.¹⁰⁵ Flax required new or especially fertile ground, and was sowed after the ground had been plowed some days before; it was pulled in July.¹⁰⁶ Hay was usually mowed twice—once in the second half of June, and once early in August. Hay was not kept under cover in most cases, but was left on the field in large stacks.¹⁰⁷ Buckwheat, sowed at the end of July, was harvested in October, poor ground and one plowing being sufficient.¹⁰⁸

Procedures involved in planting corn are known in some detail. After a plowing in March, corn was planted at the end of April or the beginning of May. Planting was done with a broad hoe, which opened up the ground in holes three or four inches deep and approximately four feet apart. In each hole the farmer put from three to five grains of corn, occasionally adding a few Turkish beans which ran

⁹⁹ See page 213.

¹⁰⁰ Acrelius, 149.

¹⁰¹ *American Husbandry*, 112; Thomas, 27-28; Acrelius, 149.

¹⁰² Acrelius, 149.

¹⁰³ *American Husbandry*, 115; Acrelius, 149.

¹⁰⁴ *Ibid.*, 149.

¹⁰⁵ *Ibid.*, 148.

¹⁰⁶ *Ibid.*

¹⁰⁷ Schoepf, I, 128.

¹⁰⁸ Acrelius, 149.

up the corn stalks. As soon as the young plants came up, they were plowed and even harrowed to rid them of weeds. At a height of about two feet, and again at four feet, ground was hoed up around the stalks. In September, the farmer sometimes plowed or hoed criss-cross between the rows of corn, sowed wheat, and harrowed it in; the wheat then produced a full crop the next year. The ears of corn were removed from the stalks in late October, and the stalks and roots were grubbed from the field during the winter.¹⁰⁹

Potatoes, which were cultivated in increasingly larger quantities as the century wore on, were planted in different ways according to type. Irish potatoes were generally planted by putting whole potatoes on a smooth, hard ground already prepared with a bed of dung; portions of dung were then thrown on the potatoes, and they were covered with any kind of soil. When stalks came up to a height of four inches, they were hilled up with earth. By another method, the potato was planted on manure in a long ditch dug to the depth of a spade. Maryland potatoes (sweet potatoes) were planted from sprouts in hills or round heaps of good earth.¹¹⁰

Apples and peaches were planted more or less formally in orchards. Peach trees stood in enclosures by themselves, and grew in even the poorest and most rock-ridden ground without special care. Apple trees were planted in rows, at intervals of from twelve to fifteen paces. Their cultivation consisted in grafting, if seedlings, and pruning in the spring, and every five or six years in plowing the ground. While the trees were young, either corn was planted or rye or oats sowed.¹¹¹ Cherry trees, whose fruit was normally ripe by the end of June, were planted "here and there" around houses and along roads.¹¹²

Agricultural methods in eighteenth-century Pennsylvania were in many ways not as primitive or backward as might be supposed. Among the techniques at which many farmers excelled was that of irrigating meadows. It was found that properly irrigated lands would produce much more grass than those left entirely to nature's whim. Peter Kalm in 1750 observed methods of irrigation then in use.

¹⁰⁹ *Ibid.*, 149-150; Cooper, 137.

¹¹⁰ Acrelius, 150.

¹¹¹ *Ibid.*, 151-152.

¹¹² *American Husbandry*, 112; Acrelius, 151.

Because a meadow usually lay in a dale between hills, farmers looked for streams on higher ground and channeled them to flow through the meadow in ditches dug for the purpose. Wooden irrigation flumes, or gutters, were used to bridge low areas between hill and meadow. Where necessary, high dikes were built near springs to raise the water level. Kalm went on to say that "Industry and ingenuity" went further: when a brook flowed away from a meadow, and it was found by leveling and surveying that the brook could be diverted, a dam was built. The water was then led around the hillside, "sometimes for the space of an English mile and further, partly across valleys in wooden pipes," until at last it was conducted into the meadow to be irrigated.¹¹³ The author of *American Husbandry* also commented on this practice, "the husbandry of watering meadow lands."¹¹⁴

Legislation in 1760 and later was passed by the Pennsylvania Assembly to tax farmers and others in the immediate vicinity of Philadelphia for the maintenance of banks, dams, and sluices for the irrigation of meadows—not, as might be supposed, for the benefit of the farmers primarily (although that, of course, was one of the effects), but for the protection of the health of Philadelphians: stagnant water was thought to give rise to disease, and by providing for the introduction of fresh water into the meadows around the city, the city insured itself against the dangers of foul water.¹¹⁵

Fences were another object of major concern on good farms in Pennsylvania. Frequent trespassing by both domestic and wild animals on lands under cultivation, and the quarrels and litigation arising from such trespassing, moved the Pennsylvania Assembly in 1700 to pass a law, elaborating on earlier laws of 1676, 1682, and 1685, which provided that all corn fields and grounds kept for enclosures must have fences, which had to be at least five feet high and be constructed of rails or logs.¹¹⁶ A law of 1729 specified that a fence was to be regarded as "sufficient" if it was four and a half feet high,

¹¹³ Kalm, I, 162.

¹¹⁴ *American Husbandry*, 119.

¹¹⁵ *Statutes-at-Large*, VI, 22-33, 33-46, 54-65 (all 1760) and others following.

¹¹⁶ *Ibid.*, II, 70-71. The earlier ordinances may be found in *Charter to William Penn and Laws of the Province of Pennsylvania Passed between 1682 and 1700, Preceded by Duke of Yorke's Book of Laws*, ed. by Staughton George *et al.* (Harrisburg, 1879), 15, 136, 179.

with the bottom rails not more than nine inches from the ground.¹¹⁷ Later acts passed against trespassing would indicate that the fence requirement was by no means universally observed. The most common fence in Pennsylvania in the eighteenth century, and by no accident the one which required the least amount of effort to build, was the worm fence, made of logs or rails of cedar, oak, and chestnut.¹¹⁸ The logs, ten to twelve feet in length, were laid upon the ground, without any further support, and were crisscrossed at the ends as they were built up. Not only did this type of fence require a certain width of ground, but it also demanded a tremendous supply of wood. It is understandable why the average farmer prized his forest possessions so highly. According to Dr. Rush, German fences were high, well built and well kept,¹¹⁹ but other evidence indicates that Pennsylvanians in general were quite careless about erecting and maintaining fences.¹²⁰

The eighteenth century, although a century of agricultural revolution in England and much of Europe, produced few changes in the farm implements used in Pennsylvania. What changes were made affected the Germans probably less than their English-speaking neighbors, both because there were few German-language publications through which they could learn of new methods and machines, and because the Germans as a group appear to have been less prone to experiment and to accept new ideas than the English and Scotch-Irish. Probably much of their stubborn adherence to old practices was tied up with superstitions and time-honored proverbs to which they seem to have been highly susceptible, and to which they assigned great importance.

The farm implement which was to see perhaps the greatest modification and improvement around the turn of the century was the plow. For the mass of farmers in Pennsylvania, however, the plow most used in the eighteenth century was in no essentials different from that used when the colony was first settled. The colonial plow was so made that two pieces with a handle on each ascended from the rear of the moldboard, about three feet apart at the handles. Put

¹¹⁷ *Statutes-at-Large*, IV, 119.

¹¹⁸ Kalm, I, 238.

¹¹⁹ Rush, *An Account*, 17.

¹²⁰ *American Husbandry*, 120.

together with screws, it was light (when the moldboard was made of wood) and easy to handle.¹²¹ In most cases, the moldboard was wooden, sometimes reinforced with strips of iron. The coulter was frequently of iron, but in the early part of the century almost always of wood. Iron moldboards and shares did not come into general use until the nineteenth century, in part because of the prohibitive cost of iron, but to some extent because of the mistrust of many farmers, among them the Germans, who believed that iron poisoned the soil.¹²² A double moldboard was extremely uncommon in the eighteenth century, and the single board was frequently not curved. Even where an iron share and a curved moldboard were to be found, however, as in Reading in the 1790's, the entire plow was characterized as ill-contrived, and the observer commented that the plow "turns up the ground very imperfectly." Two horses, in this case, were able to draw the plow "in a strong soil."¹²³ The so-called "seeding-plow," or seed drill, introduced into America after its invention by Jethro Tull in England about 1750, and improved by Tull and others in subsequent years, was not properly a plow at all; rather, it was a horse-drawn device which "drilled," or sowed, seed more efficiently than by hand. The use of a seed drill was observed in Pennsylvania in the latter part of the century,¹²⁴ but its use appears to have been quite restricted.¹²⁵

The harrow, designed to smooth and break clods of earth after plowing, was of relatively simple construction. To a heavy wooden frame, often made of logs, spikes or teeth were attached by various means, and the contrivance was then dragged by horses across the ground. In 1698, the teeth on the harrows were universally made of wood¹²⁶; as time went on, wood was often replaced with iron, although the frame itself remained wood. Harrows of two shapes could be found, one square or rectangular, the other triangular. The harrow was fastened to the traces with a link, which in the case of the triangular model made turning at the end of a field easy; the square

¹²¹ Acrelius, 147.

¹²² Fletcher, 93.

¹²³ Rochefoucauld-Liancourt, I, 31.

¹²⁴ *American Husbandry*, 114; Schoepf, I, 130, noted that the seed drill was called the "Bucks County plough."

¹²⁵ Cooper, 126.

¹²⁶ Thomas, 27-28.

harrow, on the other hand, was extremely difficult to turn, and was usually provided with two links, on opposite sides, so that the draft could be changed at the end of a field.¹²⁷

"Horse gear" included all the harness, which was made of rope, chain, and leather, or, in some cases, strips of raw deer hide dried and twisted together.¹²⁸ An arrangement of singletrees and doubletrees was used to attach the draft animals to the plow, for the beam of the plow did not come forward between the animals.¹²⁹ This type of harness obviated the necessity of putting wheels under the beam, a method sometimes employed to make plowing less erratic. The addition of wheels rendered the whole apparatus so heavy and clumsy, however, that the animals had difficulty in pulling the plow. Kalm, who observed wheeled plows in Canada, remarked that one horse was required merely to drag the contrivance along the surface of the ground.¹³⁰

There were many other everyday tools of farm life. According to a Pennsylvania German's will of 1760, his son was to inherit, among other things, a "Crobin How" (grubbing hoe) and an axe¹³¹; another German will of 1792 bequeathed to the son "two waggons Two ploughs 1 harrow all the Horse Geers Fan and Hand Screw one shovel spade Grubbing Hoe Pitch fork Dung fork."¹³² A will probated in 1736 listed weeding hoes, dung hooks, scythes, and sickles.¹³³ Apple mills and cider presses were frequently mentioned in wills, and Thomas Cooper confirmed the existence of at least one still on virtually every farm in Pennsylvania.¹³⁴

Perhaps the greatest single German contribution to farm equipment, and one for which the Germans were justly honored in their own day, was the Conestoga wagon.¹³⁵ Every German farm possessed

¹²⁷ Acrelius, 148 and note.

¹²⁸ *Ibid.*, 148.

¹²⁹ *Ibid.*

¹³⁰ Kalm, II, 383.

¹³¹ Gilbert, 64.

¹³² *Ibid.*, 66.

¹³³ Edward Welles, "Falkner-Swamp: Early Wills and Inventories of the Hollenbach Family," *The Pennsylvania German*, XII (1911), 679.

¹³⁴ Gilbert, 43; Cooper, 121-122.

¹³⁵ The name "Conestoga" was apparently first applied to the wagon by James Logan, who bought one of the vehicles to transport goods to and from his trading post on Conestoga Creek. Frederick B. Tolles, *James Logan and the Culture of Provincial America* (Boston, 1957), 90-91.

one of these vehicles, which were uncommonly stout and had a large carrying capacity. An observer of the 1780's remarked that these wagons were the strongest and best in America, and were covered with sailcloth stretched over hoops to protect their cargoes in any weather.¹³⁶ Drawn by four or five Conestoga horses, they were employed chiefly to take produce to the market centers of Pennsylvania, especially Philadelphia. Since the Germans often came from considerable distances, the wagons carried provisions and bedding as well as produce.¹³⁷ As one contemporary remarked, "The Waggon is their Bed, their Inn, their every thing, many of them will come one hundred & fifty miles without spending one Shilling."¹³⁸ It is interesting to speculate on the possible effects of the Conestoga wagon on the course of inland settlement and on the production of such crops as wheat, the extensive cultivation of which in an area without close urban or export markets would have been unprofitable. As professional wagoners developed in the later years of the eighteenth century, great amounts of grain and flour could be transported in these wagons, whose load capacity was greater than that of any other vehicle then on the road.

If one word could be used to describe the manner in which the German inhabitants of colonial Pennsylvania lived, that word would be "thrift." Luxury was a stranger to the Pennsylvania German. His life was dedicated to the development of the land and livestock of his farm, and the money he saved by denying himself an easy life contributed to make the farm more valuable to succeeding generations of his own family and to the community as a whole.

Examples of thrift among the Germans are manifold. They used large stoves, which enabled them to heat the farmhouse with a fraction of the amount of wood required in a fireplace¹³⁹; they sold their best products, such as wheat, and consumed the less profitable ones, such as rye, corn, potatoes, and buckwheat¹⁴⁰; they hired few farm laborers, relying almost exclusively on the members of their own

¹³⁶ Schoepf, I, 204.

¹³⁷ Rush, *An Account*, 26; Schoepf, I, 112.

¹³⁸ Lewis Evans, "A Brief Account of Pennsylvania," in Lawrence Henry Gipson, *Lewis Evans: To Which is Added Evans' "A Brief Account of Pennsylvania"* (Philadelphia, 1939), 100-101.

¹³⁹ Rush, *An Account*, 17.

¹⁴⁰ Cazenove, 34; Rush, *An Account*, 20.

families, wives and daughters as well as sons¹⁴¹; they bought few good clothes, and wore these only on Sundays.¹⁴² Especially noteworthy was their refusal to build nice houses for themselves before they had provided sufficiently, sometimes almost luxuriantly, for their animals, and had otherwise set the economy of their farms on a firm basis. The first house they built was usually of logs, and lasted their lifetime; it was left to the second generation to construct larger quarters.¹⁴³ Cazenove described the dwellings in which the new farmers lived as "wretched log houses without windows, and with chimneys of sticks and clay"; even when their land yielded good wheat and they came into better circumstances, the Germans began to build large barns rather than houses.¹⁴⁴ The attention paid by Germans to the construction of barns, which became the envy of the non-German countryside, was brought out by one observer of 1753, who commented that "It is pretty to behold our back-Settlements, where the barns are large as pallaces, while the Owners live in log hutts; a sign tho' of thriving farmers."¹⁴⁵

Those aspects of the farm which related strictly to the household, and did not touch the fields, crops, fences, barns, or livestock, were frequently neglected by the austere Germans. Cazenove disapprovingly noted that often no care was taken to keep the entrance to the farmhouse free and clear of stones and mud, and that neither trees nor flowers were to be seen in the farmhouse yard. The vegetable gardens were filled with weeds, intermingled with cabbages, turnips, and other plants. He commented further that although numbers of rich German farmers in Berks, Dauphin, and Lancaster counties possessed fine stone houses of two stories, with English windows and other improvements, inside they were almost totally unfurnished. He found dishes still standing on the immense stove, potatoes and turnips on the floor, beds without curtains (a fastidious criticism, indeed!), no mirrors, and no good tables, chairs, or wardrobes. Cazenove apparently made inquiry into this state of affairs, and was given to understand that the lack of neatness and improvements

¹⁴¹ *Ibid.*, 24-25.

¹⁴² Cazenove, 34.

¹⁴³ Rush, *An Account*, 12-13.

¹⁴⁴ Cazenove, 61-62.

¹⁴⁵ Evans, 100-101.

stemmed from the inheritance customs of the Germans. The eldest son usually received his father's farm mortgaged or in debt to the other children for their shares: "Then the new owner exerts himself, and employs all his savings in the payment of the debt; so being used to think only of making money, he keeps on after he has paid out." Sometimes a father might buy farms "part cash and part time-payment" and give these to his sons, indebted; the result, however, was still the same.¹⁴⁶ Wills of Pennsylvania Germans tend to confirm this explanation, at least as far as farmers' bequests are concerned.¹⁴⁷

Traveling through German country in the neighborhood of Germantown in the late 1790's, the Duke de la Rochefoucauld-Liancourt was led to remark that the farmers whom he met were by no means intelligent, that they were unusually stubborn in clinging to old customs, and loath to adopt new methods.¹⁴⁸ Rochefoucauld-Liancourt's use of the word "intelligent" might be disputed, but that the Germans were slower than their neighbors to adopt many of the more efficient tools and methods of the late eighteenth- and early nineteenth-century agricultural revolution in America is probably quite true. During the eighteenth century, however, the Germans were highly respected as farmers, and this reputation has survived to the present day largely, as Rochefoucauld-Liancourt himself admitted, because of their industrious nature: "their assiduity to labour counteracts, in some measure, their repugnance to all improvement."¹⁴⁹ Lewis Evans expressed what was perhaps the prevailing attitude of eighteenth-century Pennsylvanians: "it may be observed how much we are indebted to the Germans for the Oeconomy they have introduced amongst us & how serviceable these People are in an infant Colony."¹⁵⁰

In the final analysis, it was the personal traits of the Germans, their thrift, their unswerving loyalty to the land, and their sheer hard work, as well as their inherited and acquired knowledge of good farming, which were responsible for their outstanding success as colonial farmers. While it is true that certain agricultural practices of

¹⁴⁶ Cazenove, 82-84.

¹⁴⁷ Gilbert, 67; Welles, 677-678.

¹⁴⁸ Rochefoucauld-Liancourt, II, 392.

¹⁴⁹ *Ibid.*

¹⁵⁰ Evans, 100-101.

the Germans gave them some advantages over their neighbors, their inability (and, in some cases, unwillingness) to read English and their suspicion of things new deprived them for a long time of the beneficial effects of the agricultural revolution. The new methods and practices which arose from that revolution equalled, then surpassed, the particular achievements of the Germans, and after 1800 they fell somewhat behind in the march of agricultural progress. By that time, however, Pennsylvania's farm economy was already set on a permanently solid foundation, in the attainment of which the colonial German farmer had played a remarkably significant role.

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