

LANCASTER COUNTY FARM SCENE  
*Courtesy Pennsylvania Department of Commerce*

# PENNSYLVANIA HISTORY

---

VOL. XXII

APRIL, 1955

No. 2

---

*The question is often asked, "What exactly was the contribution to American agriculture made by those early settlers of German, Swiss, and French nationality whose blend came to be known as Pennsylvania Dutch or Pennsylvania German?" We present a careful discussion of the question by Dr. Leo A. Bressler, Associate Professor of English, Pennsylvania State University.*

## AGRICULTURE AMONG THE GERMANS IN PENNSYLVANIA DURING THE EIGHTEENTH CENTURY

LEO A. BRESSLER

AMERICAN agriculture during the eighteenth century was confined, for the most part, to subsistence farming and was marked by little progress. One of the most authoritative and comprehensive treatises on agriculture of this period states that poor husbandry was general throughout the colonies; failure to rotate crops, little use of fertilizer, and poor care of farm animals are cited as common indexes of the low state of agriculture.<sup>1</sup> Other eighteenth-century writings on the subject contain similar observations of wasteful, unprogressive farming.<sup>2</sup>

Certain contemporary observers noted, however, that the agriculture of the Germans in Pennsylvania did not conform to this general pattern. Washington, for example, wrote that ". . . her [Pennsylvania's] husbandry (though not perfect) is much better and her crops proportionately greater." He singled out particularly

<sup>1</sup> *American Husbandry*, by "An American" (London, 1775).

<sup>2</sup> See C. Varlo, *A New System of Husbandry* (Phila., 1781), p. 311; also J. B. Bordley, *Sketches on Rotation of Crops* (Phila., 1792), p. 32.

the Germans as being superior farmers, pointing to the appearance of German farms in Lancaster and York counties.<sup>3</sup> Many tributes to the husbandry of the Pennsylvania Germans may be found in the accounts of foreign travellers and of Americans of the period and in later popular and scholarly studies;<sup>4</sup> a recent history says flatly that the Pennsylvania Germans of the colonial period "were by far the best husbandmen in America."<sup>5</sup>

In contradiction to this high praise, certain other scholars have regarded the agriculture of the Germans in Pennsylvania as having been no more advanced than, and in some cases inferior to, that of other ethnic groups.<sup>6</sup> Carl Van Doren and Dixon Wecter, although they do not deal directly with the agriculture of the Pennsylvania Germans, summarily relegate them to a lower economic level than that of the English.<sup>7</sup>

In view of these diverse contentions, it seems worth while to attempt to arrive at more satisfactory conclusions concerning some of the questions to which we have been given contradictory answers. Were the Pennsylvania Germans better farmers than the English and the Scotch-Irish? Has their importance to the economy of the province and state been exaggerated or underestimated? What specific contributions did they make to agricultural practices? Clues to these and other questions may, perhaps, be found in the accounts of foreign travellers and native observers, in the German newspapers of the period, and in the writing of our earlier historians.

Indispensable to an understanding of the agricultural economy of the Pennsylvania Germans is a knowledge of the character of this ethnic group. While a familiarity with the history of their immigration and settlement may be assumed, it is perhaps not

<sup>3</sup> Franklin Knight, ed., *Letters on Agriculture from his Excellency George Washington*, etc. (Phila., 1847), p. 32.

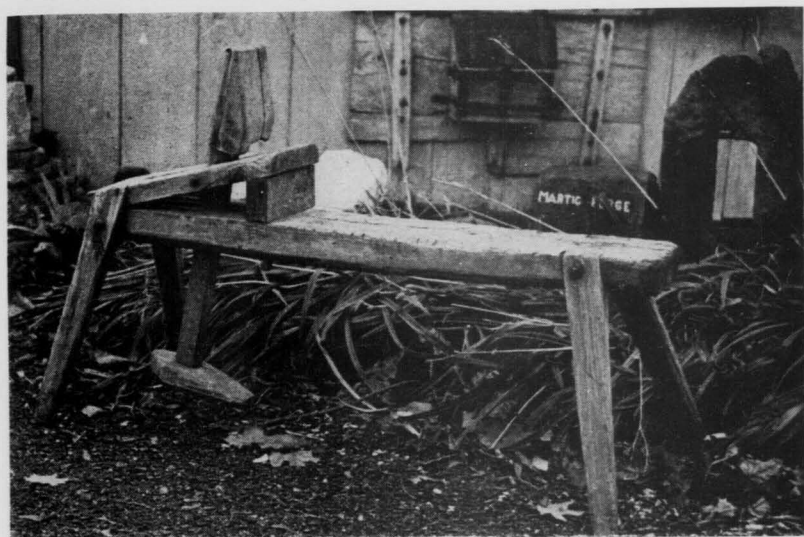
<sup>4</sup> The *Proceedings* of the Pennsylvania German Society and *The Pennsylvania-German* contain many complimentary articles. See also Ralph Wood, ed., *The Pennsylvania Germans* (Princeton, 1942), and Richard Shryock, "British vs. German Traditions in Colonial Agriculture," *Mississippi Valley Historical Review*, XXVI (June, 1939), pp. 39-54. Dr. Shryock is very generous in his praise of Pennsylvania German agriculture.

<sup>5</sup> S. E. Morison and H. S. Commager, *The Growth of the American Republic* (New York, 1940), I, p. 197.

<sup>6</sup> Ralph Gabriel, *Toilers of Land and Sea* (Pageant of America Series), (New Haven, 1926), III, p. 70; Albert Bolles, *Pennsylvania: Province and State* (Phila., 1899), II, p. 161.

<sup>7</sup> Carl Van Doren, *Benjamin Franklin* (New York, 1938), p. 218; Dixon Wecter, *Saga of American Society: A Record of Social Aspiration, 1607-1937* (New York, 1937), p. 22.

amiss to review certain other facts concerning the Pennsylvania Germans which have important implications in the present study. Of primary significance is the fact that their numbers—about one-third of the population in 1775<sup>8</sup>—made them an important factor in the economy of Pennsylvania. Secondly, most of them had been peasant farmers<sup>9</sup> and had cultivated small holdings in Germany, where intensive farming and capable husbandry were imperative to gaining a livelihood. Their ancestors had cultivated the soil for thirty generations and had acquired reputations as husbandmen



#### SCHNITZELBANK

*A shaving horse used to trim down long pieces, such as shingles and barrel hoops.*

*Courtesy Pennsylvania Farm Museum of Landis Valley*

second to none in Europe.<sup>10</sup> The Germans in Pennsylvania, moreover, had become accustomed to hard labor for a bare existence and had learned to limit their wants to the few essentials that their simple tastes required.

<sup>8</sup> Albert B. Faust, *The German Element in the United States* (New York, 1909), I, pp. 128-129. (This estimate agrees with approximations by Franklin, Rush, Proud, Muhlenberg, and Schlatter.)

<sup>9</sup> Benjamin Rush, *An Account of the Manners of the German Inhabitants of Pennsylvania*, I. D. Rupp, ed. (Phila., 1875), footnote p. 11.

<sup>10</sup> Henry F. James, *The Agricultural Industry of South Eastern Pennsylvania: A Study in Economic Geography* (Phila., 1928), p. 37.

Religion was a vital element in the lives of these people. Religious considerations induced them to settle close together and to found permanent settlements. "What the New England town meeting was to the Yankee, the church was to the Pennsylvania German. The soil made him a farmer; the church made him a member of the community."<sup>11</sup> It is not illogical to assume that such an active religious life would leave its imprint upon the character of a people; that it would make for stability, sobriety, and industry. Among some of the sects, for example, work was emphasized as a necessary part of man's lot. A wise Creator had constructed the earth so that it would supply the wants of all men by their labor.<sup>12</sup>

Characteristic habits of life and work were frequently noted by foreigners who travelled among the Pennsylvania Germans. Mentioned perhaps most often are their industry and frugality. Johann David Schoepf, one of the most competent of these observers, noted that the economy of the German farmers in Pennsylvania was precisely the same as that customary in Germany, and he described their manner of life as "retired, industrious, and frugal."<sup>13</sup> Schoepf was impressed, too, by the sight of an entire German family engaged in drying apples. This method of using "superfluous fruit," he observed, was not generally used by the English.<sup>14</sup>

Another characteristic of these Pennsylvania Germans, most of whom had been tenant farmers in Germany, was an eagerness to accumulate land. Moreover, it was customary among them to give farms to their sons as soon as they became of age.<sup>15</sup> Farms were passed down from generation to generation; even today, land cleared by these early Germans in Lancaster and some of the other counties is in the hands of their descendants. Such high regard for

<sup>11</sup> Wood, *The Pennsylvania Germans*, p. 87.

<sup>12</sup> See *Hazard's Register*, VIII, No. 9 (Feb. 26, 1831), pp. 129-132; also No. 10 (March 5, 1831), p. 166.

<sup>13</sup> Johann David Schoepf, *Travels in the Confederation* [1783-84], (Phila., 1911), I, p. 103. Schoepf, a physician and natural scientist, served as a surgeon with the Hessian mercenaries. He spent seven years in the United States. See also Francis André Michaux, *Travels to the West of the Allegheny Mountains in the State of Ohio, Kentucky, and Tennessee* (London, 1805), p. 52; and Isaac Weld, Jr., *Travels through the United States of North America* (London, 1800), I, p. 122.

<sup>14</sup> Schoepf, *Travels*, I, p. 208. See also Rush, *Account of Manners*, p. 17.

<sup>15</sup> See Rayner W. Kelsey, ed., *Cazenove Journal, 1794* (Haverford, Pa., 1922), pp. 33-34. Theophile Cazenove, agent for the Holland Land Co., gives an account, in this *Journal*, of his journey through New Jersey and Pennsylvania. It is especially valuable for detailed observations on industry and agriculture.

patrimonial property and such willingness to settle permanently have important implications for the agricultural economy of these people. Since they looked upon farms as legacies, they were more likely to labor for their improvement and to employ a husbandry of conservation than were those farmers who regarded their land merely as a stepping stone to something else.

That there were such farmers in Pennsylvania in the eighteenth century is shown by the frequent contrasts which contemporary observers were prompted to draw between the Germans, on the one hand, and the Scotch-Irish and English, on the other. The Germans, for example, took up land in the fertile limestone regions which the Scotch-Irish had passed up as being too difficult to cultivate and too liable to frost, and on this land developed some of the most productive farms in America. While the Scotch-Irish moved from one spot to another, generally selecting the wild frontier and infertile crystalline uplands for their farms, the Germans usually remained where they first settled.<sup>16</sup> However, the contrast between the Germans and other groups lay not only in the tendency of the former to settle permanently, but also in the quality of their husbandry. Theophile Cazenove, who was a discerning observer, noted that in places where the Irish [*sic*] became poor, the Germans thrived.<sup>17</sup> Others tell of the indolence and unsystematic farming of the Scotch-Irish and of the industry and perseverance of the Germans.<sup>18</sup> Washington, in commenting upon the differences between the Germans and the Scotch-Irish, said that the former "made the best tenants."<sup>19</sup>

The Pennsylvania Germans thus demonstrated certain qualities which were widely recognized and which set them apart from other Pennsylvania settlers. They were industrious and frugal; they were devoted to their farms and settled permanently. They retained a peasant's sense of values, simple tastes, and a high regard for patrimonial property. How some of these traits were reflected

<sup>16</sup> See James, *The Agricultural Industry*, pp. 39-40. Similar contrasts between habits of Germans and Scotch-Irish are found in Weld, *Travels*, I, p. 307.

<sup>17</sup> Kelsey, *Cazenove Journal*, p. 23.

<sup>18</sup> Schoepf, *Travels*, I, p. 307.

<sup>19</sup> Knight, *Letters on Agriculture*, pp. 37-38. See also article from *Village Record* (early newspaper published in West Chester, Pa.) quoted in Sherman Day, *Historical Collections of the State of Pennsylvania* (Phila., 1843), p. 209.

in their agriculture can be seen by examining the physical characteristics of their farms.

The size of their farms was apparently somewhere between 150 and 200 acres, of which usually about half was cleared land.<sup>20</sup> Advertisements of farms in the German newspapers seem to indicate that most farmers actually cultivated fewer than 100 acres, although occasionally there were farms of three, four, and even six hundred acres.<sup>21</sup> Lack of efficient tools, transportation difficulties, scarcity of markets, and the problem of securing labor placed a definite limit upon the number of acres that could be utilized.

The buildings which the Germans erected upon their holdings, in general, appear to have been unusually commodious and substantial. As early as 1753, Lewis Evans, map-maker and natural scientist, commented upon the prosperous-looking farms of the Germans. He was especially impressed with the huge barns, which he described as being "as large as palaces," at the same time noting that the owners lived in log huts.<sup>22</sup> These structures, which came to be known as "Swisser barns," distinguished the German farms and were soon adopted by the English and the Scotch-Irish. At first they were built of logs, but these buildings were soon replaced by more substantial stone structures.<sup>23</sup>

J. B. Bordley, a successful Maryland farmer, gives us an excellent contemporary description of these barns:

Farmers in Pennsylvania have a commendable spirit for building good barns, which are mostly of stone. On the ground floor are stalls in which their horses and oxen are fed with hay, and straw, and rye-meal; but not always the other beasts. Roots are seldom given to their

<sup>20</sup> Weld (*Travels*, I, p. 112) estimated that the farms between Philadelphia and Lancaster were usually about 200 acres, and that farms in the cultivated parts of Pennsylvania rarely exceeded 300 acres except in the back country.

<sup>21</sup> An advertisement in *Die Germantauer Zeitung*, Nov. 2, 1790, offers for sale a farm of 600 acres, with 100 acres of farm land and 100 acres of meadow.

<sup>22</sup> Lawrence H. Gipson, *Lewis Evans* (Phila., 1939), pp. 100-101.

<sup>23</sup> Examination of a great many advertisements of *Plantasche* offered for sale in contemporaneous German newspapers revealed that stone barns were common among the Germans by the time of the Revolution. See, for example, *Die Germantauer Zeitung*, April 19, 1785, Nov. 2, 1790, Nov. 9, 1790; also *Pennsylvanische Staatsbote*, Jan. 7, 1774.

live-stock, being too little thought of. The second floor with the roof contains the sheaves of grain, which are threshed on this floor. A part of their hay is also stored here. Loaded carts and waggons are driven in, on this second floor; with which the surface of the earth is then level; or else a bridge is built up to it, for supplying the want of height in the bank, the wall of one end of the house being built close to the bank of a hill cut down. For giving room to turn waggons within the home, it is built thirty-six to forty feet wide, and the length so given that may be requisite to the design or size of the barn. . . . There are not many instances of sheds tacked to their modern barns. Their mode of building, of late, does not well admit of them; and room is gained by all being under one roof, covering one or more stories, having deep sides or pitch. . . .

Their barns on the sides of hills (which they chiefly prefer) may be built three stories high, instead of the usual two stories. Cut down the hill perpendicularly seven or eight feet, and built up one end of the barn close to the bank. The other walls are to be quite free and airy from bottom to top. The ground story seven or eight feet high, the next thirteen feet—the third also thirteen feet; into which grain in the straw is pitched up, and threshed out.<sup>24</sup>

Other sources point out that the barns were from 60 to 120 feet long and from 50 to 60 feet wide, and that the upper story was made to project 8 to 10 feet over the lower in front, or with a forebay attached to shelter the entries to the stable and passageways.<sup>25</sup> The size and the utility of these structures mark them as an outstanding contribution of the Germans to the agricultural economy of Pennsylvania. The soundness of their construction is attested to by the fact that some of them are still standing and that their essential plan is still in vogue. They are also evidence of the prosperity of the eighteenth-century Pennsylvania Germans and, as will be pointed out later, of the superiority of at least some aspects of their husbandry.

The magnificence of the Swisser barn was not matched, how-

<sup>24</sup> J. B. Bordley, *Essays and Notes on Husbandry and Rural Affairs* (Phila., 1801), p. 134.

<sup>25</sup> Franklin Ellis and Samuel Evans, *History of Lancaster County* (Phila., 1833), p. 349; also M. D. Learned, "German Barns in America" (University of Pennsylvania Lectures, 1913-14), pp. 338-349.



ever, by the dwellings of the Germans. As has been noted, their homes often consisted of log huts, at least in the early years of the century. Later on these were often replaced by plain stone structures. Occasionally the houses were fairly large, containing four rooms on each floor, and a cellar under the entire house.<sup>26</sup> Schoepf, while travelling among the German farmers near Allentown, noted that there were "many good stone houses, many of them very neat," and that ". . . everything about the premises shows order and attention."<sup>27</sup> Weld observed that the houses ". . . are mostly built of stone, and are about as good as those usually met with on an arable farm of fifty acres in a well cultivated part of England."<sup>28</sup>

The furnishings of the German farm homes, in keeping with their economy and simple wants, were few and austere. Cazenove observed that some of the wealthier farmers in Berks, Dauphin, and Lancaster counties lived in large stone houses, with English windows, which lacked everything but the most important necessities—a stove, a table, and a few chairs. Another traveller, familiar with the background of the German farmers, noted that their economy was precisely that which was customary in Germany and that they had no desire to imitate the more gracious living of their English neighbors: "A great four-cornered stove, a table in the corner with benches fastened to the wall, everything daubed with red, and above, a shelf with the universal German farmer's library: the Almanack, and Song-book, and a small 'Garden of Paradise,' Habermann, and the Bible."<sup>29</sup>

A necessary adjunct to the house was a spring-house, a building, usually of stone, constructed over a cold spring which served as a means of refrigeration for milk, butter, etc. In the caves were stored various herbs and roots. Sometimes the farmer's house was built over a spring, so that the cellar could be used as a spring-house.<sup>30</sup>

The appearance of the German farmer's fields probably elicited more favorable comment than that of either his barn or his house. Attracted by topography similar to that of their homeland, or

<sup>26</sup> *Die Germantanner Zeitung*, Nov. 9, 1790.

<sup>27</sup> Schoepf, *Travels*, I, p. 194.

<sup>28</sup> Weld, *Travels*, I, p. 112.

<sup>29</sup> Schoepf, *Travels*, I, p. 194.

<sup>30</sup> See *Pennsylvania Staatsbote*, Jan. 2, 1774.

selecting land by a knowledge of soil fertility, the Germans settled practically all the limestone regions of Pennsylvania. Frederick Jackson Turner wrote that "The limestone areas in a geological map of Pennsylvania would serve as a map of the German settlements."<sup>31</sup> The fertility of these lands is frequently mentioned by those who travelled through the interior of Pennsylvania. Speaking about the famous Tulpehocken region, Schoepf praised the "fine and fertile landscape," noting that the inhabitants were "well-to-do and almost all of them Germans, for long since the Germans have been looking out for the best and most fertile lands. Everywhere here the limestone protruded from the ground. . . ."<sup>32</sup> To these favorable appraisals could be added the testimony of Cazenove, Michaux, Weld, Washington, and numerous other observers who were impressed by the great fertility of the limestone areas cultivated by the Germans.<sup>33</sup>

The implements which the Germans used to work their lands differed little from those used by other groups. For the most part they were the tools that had been used for centuries: wooden-toothed harrows and rakes, old-fashioned spades, pitchforks, hoes, and mattocks. Threshing was done with the ancient flail or by using horses to trample the wheat on the barn floor. For most of the eighteenth century wheat was cut with the primitive sickle.<sup>34</sup> The grain cradle which replaced it was one of the few improved tools used by the Germans. (It was not known in New England until after 1800.)<sup>35</sup> It consisted of a broad scythe to which was attached a light frame composed of four wooden fingers almost the length and shape of the blade. By swinging it properly and giving it a dexterous turn, the operator could cut the grain, gather it, and put down a swath ready to be bound into sheaves. Unfortunately, no such improvement came to help the German farmer in plowing. His plow was a heavy affair, generally with a mouldboard of wood, but sometimes of wood and iron. This frequently became clogged with grass and manure, so that a boy

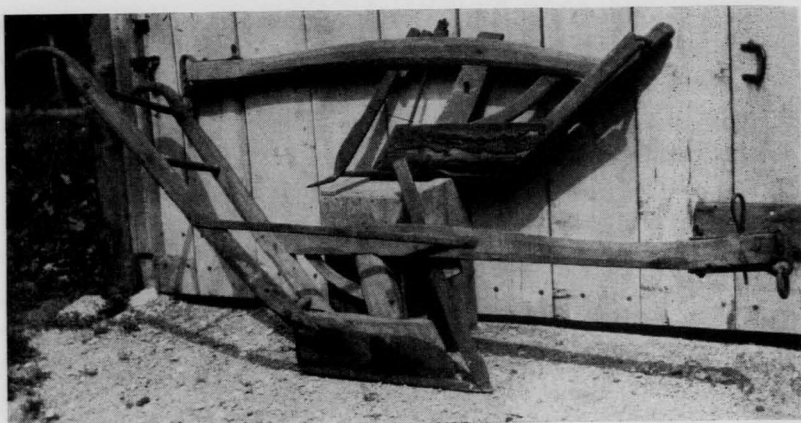
<sup>31</sup> Quoted in Faust, *The German Element*, II, p. 34.

<sup>32</sup> Schoepf, *Travels*, I, p. 203.

<sup>33</sup> For descriptions of fertile country near Reading, Lebanon, York, and Lancaster, see Kelsey, *Cazenove Journal*, pp. 44, 50, 67, and Michaux, *Travels*, pp. 29, 53.

<sup>34</sup> *The Pennsylvania-German*, XII, pp. 213 and 291.

<sup>35</sup> Perry W. Bidwell and John Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Washington, 1925), p. 124.



#### WOODEN PLOW (HULSIGER PLUGE)

*The wearing parts of iron are the coulter or sod cutter and the share on which the plow rests. The landside and mouldboard are of wood sheathed with iron to take up the wear.*

*Courtesy Pennsylvania Farm Museum of Landis Valley*

had to run alongside and take care to keep it free of debris. Plowing with this tool was a backbreaking job; to plow deeply enough was almost impossible.<sup>36</sup> The only noteworthy farm machinery that was used by at least some of the Pennsylvania Germans was a grain fan, or cleaning mill. Several manufacturers of these mills advertised in the German newspapers as well as in the *Pennsylvania Gazette*. As early as 1756 one Adam Acker advertised a "Dutch Fan" that would clean wheat, rye, and other grains, stating that it would clean two hundred bushels a day.<sup>37</sup> In view of the fact that others were also manufacturing these mills, their use must have been fairly wide. Although it was a heavy affair, requiring the efforts of a strong man to turn it, the "Dutch Fan" was no doubt a great improvement over the common method of cleaning grain by throwing it into the air with a shovel and letting the air blow out the chaff. At any rate, the device was still in use at the turn of the present century.<sup>38</sup>

<sup>36</sup> See Levi B. Huber, "Two Hundred Years of Farming in Lancaster County," *Lancaster County Historical Society Papers*, XXXV, pp. 97-110.

<sup>37</sup> *Pennsylvania Gazette*, July 8, 1756. In an advertisement in *Pennsylvanische Staatsbote*, August 14, 1770, Acker stated that he had already made over 1660 of these fans.

<sup>38</sup> Frank H. Eshleman, *Historic Background and Annals of the Swiss and German Pioneer Settler of South-Eastern Pennsylvania* (Lancaster, 1917), p. 324.

Just as they showed little inclination to adopt new tools, and thus fell into the general pattern of American agriculture in the eighteenth century, so the German farmers of Pennsylvania were reluctant to accept innovations in farm practices. Washington tells us that “. . . they do not seem inclined to make innovations to the ancient practice of agriculture.”<sup>39</sup> There is little doubt that the richness and availability of soil tempted many, during the first half of the century, at least, to resort to wasteful practices. Neither Peter Kalm<sup>40</sup> nor the author of *American Husbandry* excepts them from charges of bad husbandry, although neither refers to the Germans specifically.

The fact that there was an awareness of bad agricultural practices among at least some of the Germans and that there were attempts to improve farm methods is shown by articles on agriculture in some of the German newspapers. Two of these, *Die Germantäuner Zeitung* and *Neue Unpartheyische Lancaster Zeitung*, contained articles on agricultural subjects so frequently that they may be regarded as forerunners of present-day agricultural journals.<sup>41</sup>

Some of these articles indicate an advanced knowledge of agricultural practices. For example, one treatise dealing with orchards, which ran for several issues, gives a detailed account of the entire process of fruit-farming from laying out the orchard to caring for full-grown trees. The writer gives precise instructions for preparing the ground, for using fertilizers, and for spacing trees properly; he advocates clearing the orchard of weeds, plowing deeply to within three feet of the trees, and sowing clover and barley in the plowed areas. He also advises the prompt removal of dead trees and the pruning of dead limbs in January or February before the sap begins to flow. An article on the use of

<sup>39</sup> Knight, *Letters on Agriculture*, p. 34.

<sup>40</sup> Peter Kalm, *Travels into North America* (London, 1772), I.

<sup>41</sup> James Owen Knauss, Jr., *Social Conditions among the Pennsylvania Germans in the Eighteenth Century as Revealed in the German Newspapers Published in America*, *Pennsylvania German Society Proceedings*, XXIX (Oct., 1922), p. 129. A series of articles which began in *Die Germantäuner Zeitung* on May 29, 1787, covered such subjects as how to prepare land with lime by proper plowing and harrowing, how to take care of an orchard, how to use manure, how to improve the quality of potatoes. Another series in 1791 carried extensive treatises on such subjects as the improvement of meadows, the cultivation of fodder, the use of fertilizer, and the stall feeding of cattle.

manure presents a detailed and informed discussion not only of the value of animal fertilizer and the best methods for collecting it, but also of the best methods of manufacturing artificial fertilizers.

Just how many of the German farmers read this material or made use of it cannot, of course, be determined. The appearance of a number of "letters to the editor" indicates that the efforts of the journalist were not entirely in vain.<sup>42</sup> However, taking into account the traditional conservative outlook of the Pennsylvania Germans, one suspects that their reaction toward "book farming" was hardly enthusiastic.<sup>43</sup> The fact, moreover, that these articles were prompted by an awareness of poor husbandry indicates a resistance to change in farm practices as late as the last decade of the century. Nevertheless, as will be shown, conservatism and malpractice in the husbandry of the Germans were frequently accompanied by real virtues.

Benjamin Rush tells us that the Germans distinguished themselves from the English by their method of clearing land. Instead of girdling or belting the trees and letting them die, as was customarily done, the Germans cut them down and burned them. Next they proceeded to grub out the underbrush, so that a field was as fit for cultivation the second year after it was cleared as it was twenty years after. Thus they had the advantage of the immediate use of the field, and could plow, harrow, and reap with greater ease.<sup>44</sup>

The Germans' peasant heritage of patience and willingness to toil is further demonstrated by their insistence upon doing their own work. With a few exceptions, they showed a disinclination to use slave labor throughout the century.<sup>45</sup> It is not our pur-

<sup>42</sup> See, for example, *Die Germantäuner Zeitung*, Aug. 10, 1799, and June 22, 1790.

<sup>43</sup> A letter written by "Ein Bauer," which appeared in *Die Germantäuner Zeitung* for Sept. 4, 1787, ridiculed the editor and said that farmers did not require his help, since they had always got along very well without it in the past.

<sup>44</sup> Rush, *Account of Manners*, pp. 14-15. Schoepf (*Travels*, I, p. 192) pointed out that this method was not universal among the Germans; but we cannot discount Rush completely, since he had no particular reason to falsify with respect to this point.

<sup>45</sup> For example, in the German county of Berks, with a total population of 30,179 in 1790, there were only 65 slaves, a ratio of one slave to 464 whites. In the same year in Cumberland County, originally settled by Scotch-Irish, there were 360 slaves out of a population of 15,655, or a ratio of one slave to every 44 whites. Rush, *Account of Manners*, editor's footnote, p. 24.

pose to explain this dislike of slave labor; it was probably due to a mixture of reasons—economic, religious, moral, and racial. What is more important than the cause of their rejection of slave labor is the fact that, by repudiating the use of slaves, the Germans avoided the multiple evils attendant upon the practice. Although white indentured servants were employed rather extensively, most of the work of the German farmer was done by himself and his family. Large families were a *desideratum*, for children went to work in the fields at an early age. Wives and daughters, in addition to taking care of the manifold duties about the house, worked in the fields with the men. We may be certain that this cooperative enterprise contributed markedly to their agricultural prosperity.

One common fault of American farmers of the eighteenth century was the poor care which they gave to their livestock. Farm animals were usually allowed to roam in the woods, to forage for themselves. Little attention was paid to sheltering them or feeding them a balanced ration. The Pennsylvania Germans, however, appear to have given considerably better care to their stock. It has already been pointed out that they constructed large barns which were amply provided with stables. Sometimes additional stables were built, probably for the purpose of housing sheep and hogs. The statement of Rush that the Germans kept their horses and cattle well sheltered is corroborated by Cazenove, who wrote that "the cattle stay in the stable from December to April."<sup>46</sup> Another source tells us that the Germans often kept large trees in their pastures to afford shade from the heat of the sun.<sup>47</sup> During the first half of the century adequately fenced pastures were apparently lacking, since one of the main features of the German newspapers consisted of lost-and-found advertisements of cattle and horses.<sup>48</sup> By the time of the Revolution, however, the Germans gave considerable attention to the construction of fences.

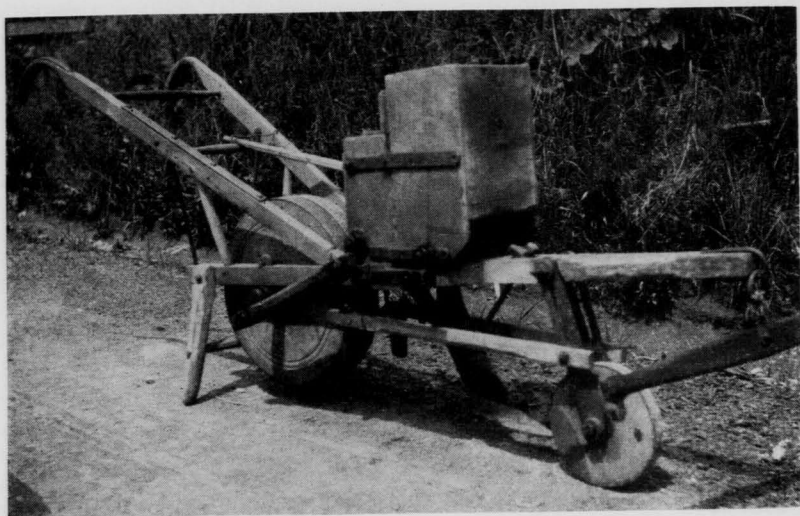
<sup>46</sup> Kelsey, *Cazenove Journal*, p. 49.

<sup>47</sup> Faust, *The German Element*, I, p. 134.

<sup>48</sup> Conrad Weiser, who kept the pound for his locality, at various times during the '40's announced that anywhere from six to fourteen horses and cattle were being detained at his farm; on one occasion there were twenty-four horses on his premises. See *Pennsylvanische Berichte*, April 16, 1745; October 16, 1745; Dec. 16, 1746; Oct. 16, 1747.

Advertisements of farms for sale often stress the fact that the land is "well fenced" or "in good fence."<sup>49</sup>

Bordley gives us perhaps the best summation of the contrast between animal husbandry in Pennsylvania, presumably among the Germans, and that practiced farther south. He wrote that to the south of Pennsylvania stock cattle were kept ". . . though indeed meanly, in winter on cornhusks and straw, without roots or 'drank' or any aperient or diluent material that could correct the costive



EARLY CORN PLANTER OF LANCASTER COUNTY

*Courtesy Pennsylvania Farm Museum of Landis Valley*

effect of dry food; unless mayhap a nibble of a few weeds and buds, when they ramble abroad poaching the fields, and exposing themselves to debilitating cold rains and sleet."<sup>50</sup> Testimony from the German farmers themselves is unfortunately rare, but we do have an account by "Ein Ackermann" of how he carefully stabled his livestock and took care of manure.<sup>51</sup> There is sufficient evidence to conclude that the animal husbandry of the Pennsylvania Ger-

<sup>49</sup> See *Die Germantäuner Zeitung*, April 20, 1775, and March 19, 1777.

<sup>50</sup> Bordley, *Essays and Notes*, p. 61. Rush tells us that the Germans fed their horses and cows well, so that the former did twice the work and the latter gave twice the milk that could be obtained from less well fed animals. *Account of Manners*, pp. 16-17.

<sup>51</sup> *Die Germantäuner Zeitung*, June 22, 1790.

mans, though by no means perfect, was superior to that practiced by most of their contemporaries.

An important contribution of the Germans was the development of the Conestoga horse, a particularly large and strong draught animal. This horse was derived from English stock by the Swiss Mennonites who had settled along Conestoga Creek in Lancaster County.<sup>52</sup> Described by Rush as "a peculiar breed," these animals attracted considerable attention among foreign travellers. Schoepf noted their size and strength and pointed out their superiority to the animals of other farmers: "They have here a strong and large breed of horses, kept in good condition, and always looking sound and fit, whereas the skeletons along the coast are thin to the point of collapsing."<sup>53</sup> The Germans seem to have been well supplied with good horses as early as 1755.<sup>54</sup> However, despite the availability of horses, many continued to use oxen for plowing throughout the century.<sup>55</sup>

Since manure was the only means of improving the soil during most of the colonial period, the oxen and cattle which the German farmer kept were valuable to him in maintaining the fertility of his land. This was especially true in Lancaster County, where the fattening of beef cattle was an important industry from early colonial days.<sup>56</sup> Straw, cornstalks, and stable refuse were thrown into the barnyard, where they were trampled by fattening cattle during the winter. The yards were cleaned once a year, and the refuse was spread over the fields and plowed under. "The farmer who had a large barnyard full of manure to haul out, after harvest, was looked upon as a model, and, consequently, a prosperous landowner."<sup>57</sup> In this respect the husbandry of the Pennsylvania Germans differed from that of most other eighteenth-century colonial

<sup>52</sup> Rush, *Account of Manners*, footnote p. 26.

<sup>53</sup> Schoepf, *Travels*, II, p. 21.

<sup>54</sup> In May of this year Franklin addressed a letter to the Germans of Lancaster, York, and Cumberland counties, requesting 150 wagons, with four horses for each wagon, and 1,500 pack or riding horses, for the use of Braddock's army. The response was so good, exceeding the request for wagons by fifty, that Braddock wrote a letter to the king praising the Germans. (See *Pennsylvanische Berichte*, May 16, 1755.) The fact that the Germans supplied almost all the horses and wagons for the American army during the Revolution, as well as horses and teamsters for the British, is of course well known.

<sup>55</sup> See article dealing with use of oxen in *Germantäuer Zeitung*, June 12, 1787.

<sup>56</sup> Huber, *Two Hundred Years of Farming*, p. 98.

<sup>57</sup> *Ibid.*, p. 99.



farmers. The use of animal manure, according to Bidwell and Falconer, was uniformly neglected. If it was used at all, it was applied to maize and potatoes. The main reason for this failure to use manure, of course, was the fact that most livestock ran at large; even in New England pasturage extended through nine or ten months of the year.<sup>58</sup> The Germans, on the other hand, were more careful in stabling their livestock, so that the manure could be collected.<sup>59</sup>

They were not so ready, however, to use artificial fertilizers. Only lime appears to have been used by them to any extent prior to the Revolution. Advertisements of farms for sale frequently mention the existence of limekilns and supplies of limestone. One observer wrote in 1775, "Every farmer has a Limekiln burnt for the dressing of his land. . . ."<sup>60</sup> Gypsum, or sulphate of lime, was first used as a fertilizer by Jacob Berger, a German who experimented with it on a city lot on the Philadelphia commons shortly before the Revolution.<sup>61</sup> In 1786 we find it advertised in the German newspapers.<sup>62</sup> By 1800 the more progressive farmers were hauling away the gypsum that was occasionally brought to Wilmington and Philadelphia as ballast.<sup>63</sup>

It is, of course, difficult to determine precisely the extent to which fertilizers were used by the Pennsylvania Germans. Animal fertilizer seems to have been used fairly commonly throughout the century; lime and gypsum came into use comparatively late and were not applied extensively until after 1800. The fact remains, however, that none of the German sections of the state were

<sup>58</sup> Bidwell and Falconer, *History of Agriculture*, p. 88.

<sup>59</sup> See Kelsey, *Cazenove Journal*, pp. 29, 36, and 48 for references to use of manure in Northampton and Berks counties. Even among the Pennsylvania-Germans, however, the use of fertilizer was sometimes neglected. An article in *Die Germantäuner Zeitung*, July 24, 1787, stated that many farmers, presumably German, thought manuring wasn't worth the trouble. The writer, however, praised two of the German sects, the Schwenkfelders and Menonites, for using manure freely.

<sup>60</sup> Thomas Pownall, *Topographical Description of Pennsylvania* (Phila., 1775), p. 28.

<sup>61</sup> Rush, *Account of Manners*, footnote p. 38. Most of the credit for experimenting with gypsum goes to Judge Richard Peters, of Philadelphia, who was a pioneer in the use of artificial fertilizers.

<sup>62</sup> *Die Germantäuner Zeitung*, March 21, 1786.

<sup>63</sup> Huber, *Two Hundred Years of Agriculture*, p. 102. In 1794 Cazenove reported the use of "Plaster of Paris," or gypsum, by Germans in Berks, Northampton, and Chester counties, adding that it was too expensive, since it cost a dollar a bushel in Philadelphia. See *Cazenove Journal*, pp. 29, 36, and 48.

marked by the soil exhaustion that characterized a large tract near Philadelphia, an area that was finally abandoned. A competent student of the agricultural history of Pennsylvania points out that Lancaster County fields held their own while other sections were depleted.<sup>64</sup> Nor was there found in any of the German farming lands the desolation that resulted from the land-skimming practices in the South. One is thus led to conclude that the Pennsylvania Germans, though not uniformly diligent and prompt in the use of fertilizers, were more aware of their utility and importance than were most of their fellow American farmers.

Another important measure in restoring and maintaining the fertility of soil is the use of grass crops, especially clover. With the exception of grasses produced in natural or irrigated meadows, the Germans paid little attention to the cultivation of grasses and clover before 1773. At this time "Lancaster County Red Clover Seed" was first advertised in the *Pennsylvania Gazette*.<sup>65</sup> By 1785 it was frequently advertised in the German newspapers, and its merits as a soil restorative and feed for animals were extolled.<sup>66</sup> At about this time, James Vaux, of Montgomery County, after experimenting extensively with clover, was convinced of its great value and was instrumental in popularizing it.<sup>67</sup> Watson tells us that there was great interest in this new process of "making grass," since fifty well-tilled acres could now produce twice the crop that one hundred acres had formerly produced.<sup>68</sup> In some of the German districts clover came to have a regular place in the plan of rotation,<sup>69</sup> and its value in restoring the fertility of the soil was generally recognized by 1800.<sup>70</sup>

The Germans practiced various systems of rotating crops before the general introduction of clover, but, in most cases, the plan of rotation involved letting the ground lie fallow every three years.<sup>71</sup>

<sup>64</sup> Huber, *Two Hundred Years of Agriculture*, p. 100.

<sup>65</sup> Eshleman, *Historic Background and Annals*, p. 294.

<sup>66</sup> *Die Germantäuner Zeitung*, Feb. 22, 1785.

<sup>67</sup> Huber, *Two Hundred Years of Farming*, p. 102.

<sup>68</sup> John F. Watson, *Annals of Philadelphia and Pennsylvania, in the Olden Time*, etc. (Phila., 1856), II, p. 66.

<sup>69</sup> Kelsey, *Cazenove Journal*, p. 29. Description of plan of rotation employed near Allentown.

<sup>70</sup> Bordley, writing in 1801, noted that "Quick renewals of clover, in entire fields, are coming into practice; and with various manures are seen to restore abused soil, and yearly improve it." *Notes and Essays*, p. 67.

<sup>71</sup> *Cazenove Journal*, p. 35.

Near Lebanon, freshly cleared land was cultivated according to the following six-year cycle: (1) wheat, (2) wheat, (3) oats, (4) fallow, (5) wheat, (6) fallow. Land that had been in use for some time was cultivated according to a five-year plan: (1) wheat, (2) barley, (3) corn or oats, (4) fallow or buckwheat, (5) fallow if buckwheat in fourth year.<sup>72</sup> The best plan of which the writer was able to find any record was that employed near Allentown, late in the century. This consisted of a four-year cycle composed of wheat, oats or corn or buckwheat, clover, and clover and plowing to sow.<sup>73</sup> No uniform practice seems to have been common to the Germans, and, like other contemporary farmers, they depended largely upon fallowing to restore the productivity of their fields. On the other hand, they were not so patently guilty as were other groups of cultivating the same crop year after year until the soil was exhausted. Haphazard though the rotation was, it was preferable to the concentration upon a single crop which characterized southern tidewater tobacco plantations.

A recent article contends that the practice of rotating crops was among the important contributions of the Philadelphia Society for Promoting Agriculture. "From the little group of 'gentlemen farmers' of the Philadelphia Society for Promoting Agriculture," the writer says, "came many important contributions, the most notable of which was the practice of rotating crops. This has been commonly, but erroneously, attributed to the Germans."<sup>74</sup> If by *this* the author means the *introduction* or *origin* of the practice, his contention does not appear to be valid. In the first place, the Philadelphia Society for Promoting Agriculture was not founded until 1785—several years after Schoepf observed the plans for rotating crops just discussed. It seems reasonable to assume, also, that the various systems noted by Cazenove in 1794 were not recent innovations, but had been fairly well established.<sup>75</sup>

<sup>72</sup> *Ibid.*, pp. 48, 49. Schoepf notes the following system used by Germans in Bucks County: 1st year—maize; 2nd year—wheat and English grass seeds; 3rd to 6th year—pasture. Sometimes buckwheat or turnips were sowed after wheat. *Travels*, I, p. 130.

<sup>73</sup> See footnote 69.

<sup>74</sup> Stevenson W. Fletcher, "Expansion of the Agricultural Frontier," *Pennsylvania History*, XVIII (April, 1951), p. 123.

<sup>75</sup> Cazenove also found that among the farmers near Carlisle, most of whom were Irish [*sic*], "those who are reputed good farmers" used a four or a six-year plan for rotating crops. *Journal*, pp. 58-59.

He does not mention these plans for rotating crops as isolated or occasional practices in such German areas as Lebanon and Allentown, but implies that they were common procedures. After all, since the Germans brought with them to Pennsylvania a heritage of careful husbandry, it is not surprising that some of them should be prompt to rotate their crops. At any rate, the worthies of the Philadelphia Society for Promoting Agriculture, although they performed a valuable service by their experimenting with fertilizers and farm practices and by publishing their findings, were not the first to employ a plan for alternating a series of crops. It would be more accurate to say that they, rather than the Germans, were instrumental in publicizing and encouraging the practice. Even in this they were not remarkably successful, however, since it was not until about 1820 that the practice of rotating crops became somewhat general.

One of the most notable features of Pennsylvania-German agriculture in the eighteenth century was the extent to which irrigation was employed. An early history tells us that "farms were valued in proportion to the quantity of land capable of irrigation," and that watered meadows were so highly regarded that "when the original tracts came to be divided, the rights thereto were carefully set forth in the title deeds, generally giving the use and control of the stream to the owners of the several tracts a certain number of days in each week alternately."<sup>76</sup> The importance which the Germans attached to watered meadows is further indicated by the advertisements of farms for sale in the German newspapers. Practically all advertisements stress the fact that farms have a certain number of acres of watered meadow, that there are strong springs or streams upon the premises, and that additional lands may be irrigated.

Irrigation was used by Pennsylvania German farmers before 1750.<sup>77</sup> By 1754, Governor Thomas Pownall, on a visit to Lancaster, expressed his admiration of the practice of irrigation as well as of the German farms:

I saw some of the finest farms one can conceive, and in the highest state of culture, particularly one that was

<sup>76</sup> Ellis and Evans, *History of Lancaster County*, p. 347.

<sup>77</sup> See *Der Hoch-Deutsch Pennsylvanisch Geschlicht-Schreiber*, Nov. 16, 1743; also *Pennsylvanische Berichte*, June 16, 1743.

the estate of a Switzer. Here it was I first saw the method of watering a whole range of pasture and meadows on a hillside, by little troughs cut in the side of the hill, along which the water from springs was conducted, so that when the outlets of these troughs were stopped at the end the water ran over the sides and watered all the ground between that and the other trough next below it. I dare say this method may be in use in England. I never saw it there, but I saw it here first.<sup>78</sup>

Irrigation, it is certain, was important to the farm economy of the Germans throughout the century. The stock which was a part of every farm, and especially in those areas where beef-fattening was practiced extensively, demanded adequate pasturage. It is to the credit of the Germans that they were sufficiently ingenious and industrious to extend their limited natural meadows by this method. The fact that they were willing to make the large investment which the construction of an irrigation system often entailed is a tribute to their husbandry. That the expense was justified seems to be indicated by the resulting increase in the hay crop.<sup>79</sup> Moreover, the superiority of their farm animals was no doubt due, in a large measure, to the feeding made possible by irrigated lands.

As has been noted, the Germans of Pennsylvania cultivated a variety of crops. As early as 1753, Lewis Evans, the eighteenth-century map-maker and natural scientist, listed thirty-six varieties of crops, classified as grains, "roots," greens, melons, berries, and fruits, which were being cultivated in Pennsylvania.<sup>80</sup> Of course not all of these were grown extensively or successfully; but it is apparent that the Germans, instead of relying upon a single crop, "multiplied the objects of culture."<sup>81</sup>

The most common, and apparently the most profitable, crop was wheat. It constituted an important part of every plan of rotation. During the Revolution the grain fields of the Germans supplied much of the bread that was consumed by the contending

<sup>78</sup> Quoted by Oscar Kuhns, *The German and Swiss Settlements of Colonial Pennsylvania: A Study of the So-Called Pennsylvania-Dutch* (New York, 1901), p. 90.

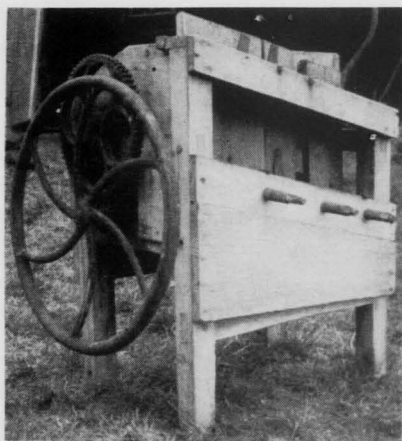
<sup>79</sup> See Bidwell and Falconer, *History of Agriculture*, p. 103.

<sup>80</sup> Gipson, *Lewis Evans*, pp. 113-115.

<sup>81</sup> Brissot de Warville, *New Travels*, p. 334.

armies. Its importance is further shown by the fact that during the '80's and '90's, when the Hessian fly was especially bothersome, the German newspapers carried numerous articles discussing means for combating the destructive insect.<sup>82</sup> In addition to wheat, corn and rye were also cultivated extensively; barley and oats appear to have been grown less often.

The interest of the Germans in dairying and in the fattening of beef cattle has already been mentioned. In addition to offering large barns and stables, the advertisers of farms for sale frequently pointed out that the location was favorable for raising



CORN SHELLER (*WELSCHKORN SCHAELE*R)

*Courtesy Pennsylvania Farm Museum of Landis Valley*

cattle. The German farmers not only produced milk, cheese, butter, and meat for their own consumption, but were able to turn some of their animal products into cash by taking them to Baltimore and Philadelphia. There is evidence that at least some butter produced by the Germans was exported to the West Indies as early as 1754.<sup>83</sup> The German Society, founded in 1789, offered a gold piece to the farmer who produced the largest amount of English cheese, stipulating that the quantity submitted had to weigh at least 500 pounds.<sup>84</sup>

<sup>82</sup> For a list of these see Knauss, *Social Conditions*, p. 128.

<sup>83</sup> See *Pennsylvania Berichte*, Jan. 1, 1754.

<sup>84</sup> *Die Germantäuner Zeitung*, April 28, 1789.

Another important part of practically all German farms was the orchard. As early as 1748 Peter Kalm observed that there were some apple trees on every German farm, the fruit of which was either sold or made into cider.<sup>85</sup> Later travellers also frequently made note of the Germans' special concern with fruit-growing; apple and peach trees are mentioned most often, with occasional reference to cherry trees. But the best evidence of the popularity of orchards among the Germans is found in the advertisements of farms for sale.<sup>86</sup> The frequency with which orchards, ranging anywhere from one to five or six hundred trees, are mentioned indicates unquestionably that fruit-growing was a regular part of Pennsylvania German agriculture. This is explained in part by the practice of making cider and distilling brandy, which was extensive,<sup>87</sup> and in part by the practice of drying apples and peaches.<sup>88</sup>

The Pennsylvania Germans seem to have given their orchards better care than other groups gave theirs during the eighteenth century. Although there was little systematic cultivation of fruit in this country before 1800, the Germans occasionally grafted and pruned their trees, and sometimes even seeded the soil between rows of trees with maize, rye, or oats.<sup>89</sup> How common these practices were, we cannot tell, but there is evidence that the value of grafting, at least, was realized and that the practice was not uncommon.<sup>90</sup>

Gardens also were a part of every German farm. Benjamin Rush regarded these as an important contribution to the economy of Pennsylvania; to the German gardeners settled near Philadelphia he gave credit for introducing the citizens of that city to a variety of vegetables. And to this change of diet he ascribed the freedom from dermatitis enjoyed by the people of Philadelphia.<sup>91</sup> Whether there is any basis for this last contention or

<sup>85</sup> *Travels*, I, p. 97.

<sup>86</sup> *Pennsylvanische Geschichte-Schreiber*, Sept. 16, 1743; Nov. 16, 1743; also *Pennsylvanische Berichte*, April 16, 1747; Oct. 16, 1747; *Die German-tauner Zeitung*, April 20, 1775.

<sup>87</sup> See pp. 125-126.

<sup>88</sup> See Weld, *Travels*, I, p. 112.

<sup>89</sup> Bidwell and Falconer, *History of Agriculture*, p. 100.

<sup>90</sup> See *Pennsylvanische Staatsbote*, Sept. 29, 1772; Nov. 17, 1772; Jan. 24, 1775.

<sup>91</sup> Rush, *Account of Manners*, pp. 23, 24.

not, the Pennsylvania Germans did grow most of the vegetables then known to northern Europe. And the German mercenaries of the Revolution introduced a number of vegetables unknown in this country at the time.<sup>92</sup>

Mention should also be made of flax and hemp, both of which were cultivated rather extensively. Flax was of course important for the home manufacture of clothing; flax seed and hemp found a ready market. While flax was common on German farms in all areas, the greatest production of hemp was found in the valleys of the Susquehanna, the Conestoga, the Pequea, and adjacent regions.<sup>93</sup> The growing of hemp was such an extensive industry in Lancaster County that representatives from that district urged a tariff in the First Federal Congress; and on July 4, 1789, such a tariff was passed.<sup>94</sup>

In addition to tilling the soil, the Pennsylvania German farmers also engaged in a variety of small-scale manufactures. One historian has described German Pennsylvania as a beehive of small industries.<sup>95</sup> Some domestic manufacturing was, of course, a necessity on all eighteenth-century farms, but the Germans seem to have been extraordinarily active in this respect. Along with the common looms and spinning wheels, operated by the women, we find on the German farms blacksmith shops, cooper shops, grist mills, saw mills, oil mills, tanneries, and distilleries.<sup>96</sup> Most ubiquitous of these were the distilleries; malt-houses, malt-mills, "brandy houses," and distilleries were frequently advertised as special features of farms. Sometimes several buildings for brewing and distilling were found on the same farm. Tax records of York and Lancaster counties show that there were more than six hundred distilleries in these districts alone by 1800.<sup>97</sup> Investigation would probably show that they were equally numerous in other counties. It was thus common for the German farmer to turn his excess corn, wheat, barley, and occasionally rye, into whiskey and beer,

<sup>92</sup> Schoepf, *Travels*, I, p. 94.

<sup>93</sup> Eshleman, *Historic Background and Annals*, p. 338.

<sup>94</sup> G. D. Luetscher, "Industries of Pennsylvania after the Adoption of the Federal Constitution, etc.," *Americana Germanica* (New York, 1911), p. 22.

<sup>95</sup> T. J. Wertenbaker, *The Founding of American Civilization, The Middle Colonies* (New York, 1938), p. 282.

<sup>96</sup> All of these are mentioned repeatedly in advertisements in German newspapers.

<sup>97</sup> Luetscher, *Industries of Pennsylvania*, pp. 28-29.



his apples and peaches into brandy. A detailed study of industries in some of the German counties explains the popularity of distilling by the fact that it was more profitable to distill grains than to transport the raw product.<sup>98</sup> Another reason for the importance of this industry was that it offered a means of securing ready cash with a small investment.<sup>99</sup> We are probably safe in assuming that the distillery, the malt-house, and the cider press were often instruments in attaining what financial prosperity the German farmers enjoyed.

The best evidence of the quality of any husbandry lies, of course, not in its diversification or in its reliance upon related industry, but in the yield it produces. Unfortunately precise and comprehensive statistical information concerning the productivity of the German farms in Pennsylvania is lacking. Moreover, we have only approximations of the productivity of farms throughout the Middle Colonies. There seems to be sufficient evidence, however, to show that the yields of the Pennsylvania German farms were above average.

The yield of wheat in the Middle Colonies during the eighteenth century has been estimated at between ten and fifteen bushels per acre, with the lower figure being the more common. The average yield in Pennsylvania has been approximated at as low as six bushels.<sup>100</sup> Corn and rye yields in the Middle Colonies are generally put at from twenty to twenty-five bushels per acre and ten to fifteen bushels per acre respectively; the average yield of hay in six counties in Massachusetts was .77 ton per acre.<sup>101</sup> The testimony of contemporary observers of the German farm lands shows that their yields frequently exceeded these figures. The Germans appear to have been especially successful with wheat. For instance, Schoepf states that farmers near Reading and in the Tulpehocken Valley produced from twenty to thirty bushels per acre.<sup>102</sup> Another traveller gives the following production figures of German

<sup>98</sup> *Ibid.*, pp. 24-26.

<sup>99</sup> An article in the *American Daily Advertiser* for Sept. 30, 1791, explains the popularity of the industry as follows: "Any man, therefore, who, after severe struggling, is able to purchase the utensils of a distillery, considers himself as in a way to get above absolute drudgery, and to make a shilling faster and more easily than by the mattock and the plow alone."

<sup>100</sup> Bidwell and Falconer, *History of Agriculture*, p. 104.

<sup>101</sup> *Ibid.*, p. 105.

<sup>102</sup> Schoepf, *Travels*, I, p. 130.

farms in various locations: Bethlehem, 15 bushels; Allentown, 12 to 18 bushels; vicinity of Kutztown, 20 bushels; near Reading, 10 to 15 bushels; Lebanon, 15 to 20 bushels.<sup>103</sup> Washington noted several instances at York and Lancaster where "between forty and fifty bushels of wheat have been raised to the acre."<sup>104</sup> These were, of course, exceptional yields, but the production of between twenty and thirty bushels to the acre was not uncommon among the Germans of Pennsylvania.<sup>105</sup> There is evidence, too, that they were at least moderately successful with corn. Yields of forty bushels were reported at Allentown, twenty to thirty at Reading, and twenty-five at Lebanon.<sup>106</sup> The same observer also reported hay crops ranging from one to two tons per acre for two cuttings, which is considerably above the average quoted earlier. Speaking of productivity in general, the hyper-critical author of *American Husbandry* had the following to say: "But for wheat and all kinds of plants cultivated in Europe, with fruits, few parts of America exceed the back country of Pennsylvania."<sup>107</sup> Since this "back country" was largely the domain of the Germans, we may regard this as a compliment to the productivity of their farms.

Production alone, however, did not insure prosperity. After raising a surplus of wheat or corn, the Pennsylvania German farmers were still faced with the task of transporting it to a market. Since many of them lived a great distance from urban centers, this presented a difficult problem. The rivers offered a partial solution: farmers west of the Susquehanna, despite the shallowness of the river, carried some of their produce on its waters to Baltimore; at Reading wheat was collected in large quantities during the winter and floated down the Schuylkill to Philadelphia in the spring; other farmers, some of them living over a hundred miles in the back country, awaited the spring and fall freshets to bring their wheat to Philadelphia. But river transportation presented difficulties and inconveniences. The Delaware was shallow in some places and so swift in others that ordinary sailboats could not be used. The specially constructed Durham boat made the trip downstream safe and inexpensive, but the return trip was a slow procedure because

<sup>103</sup> Kelsey, *Cazenove Journal*, pp. 24, 29, 41, 43.

<sup>104</sup> Knight, *Letters*, p. 39.

<sup>105</sup> Bidwell and Falconer, *History of Agriculture*, p. 106.

<sup>106</sup> Kelsey, *Cazenove Journal*, pp. 24, 29, 41.

<sup>107</sup> *American Husbandry*, I, p. 154.

propulsion was provided by "setting poles."<sup>108</sup> Moreover, the cost of twenty-five cents per barrel downstream and fifty cents upstream between Easton and Philadelphia was prohibitive.<sup>109</sup> The Schuylkill, as has been noted, was so shallow that transportation depended upon freshets to make the waters navigable. And the Susquehanna presented the same problem.

Despite the deterrents of distance and bad roads, the Germans soon found a satisfactory substitute for river transportation. They devised a large, sturdy wagon capable of withstanding the jolting of rough roads and the wear of long trips. This became known as the famous Conestoga wagon. Usually associated with the romantic excitement of covered-wagon trains, marauding Indians, and the Gold Rush, it is seldom connected with the plodding Germans or the prosaic use for which it was created. Yet it played a very vital part in the economy of these farmers and is one of the best monuments to their resourcefulness.



#### CONESTOGA WAGON

*Fully developed six-horse bell team of the nineteenth century. Drawing made from a print in "The Planting of Civilization in Western Pennsylvania."*

*Courtesy Pennsylvania Department of Commerce*

Hitching four large, powerful horses to these wagons, they brought heavy loads of wheat and other produce from distances of

<sup>108</sup> Wertenbaker, *Founding of American Civilization*, p. 289.

<sup>109</sup> Kelsey, *Cazenove Journal*, p. 19.

fifty, sixty, or more miles to Philadelphia. In a day when overland transportation was almost universally confined to short distances, this was a remarkable accomplishment. As early as 1728 we find "a great many wagons going down . . . to Philadelphia from Lancaster."<sup>110</sup> Writing in 1753, Lewis Evans said that

. . . the Oeconomy of the Germans has since taught us the method of bringing their produce to Market, from the remotest part at a small Expençe. The Method is this, ev'ry Farmer in our province almost, has a Waggon of his own, for the Service of his Plantation, and likewise the horses for tillage, in the Spring and Fall of the Year . . . they load their Waggon and furnish themselves with beasts, and provender for the Journey. The Waggon is their Bed, their Inn, their everything, many of them will come one hundred and fifty Miles without spending one Shilling.<sup>111</sup>

In 1789 Benjamin Rush observed that ". . . it is no uncommon thing, on the Lancaster and Reading roads, to meet in one day fifty or one hundred of these wagons, on their way to Philadelphia, most of which belong to German farmers."<sup>112</sup>

On Wednesdays and Saturdays, which were market days, Philadelphia's Market Street was lined with the great covered wagons, filled with produce to be sold and rations and feed for the farmers and their horses. Other cities and towns, particularly Lancaster and York, also furnished a market for their crops. The great market at Lancaster, resembling closely the markets of German cities in Europe, attracted a great many German farmers, especially of the Amish and Mennonite sects. "In boxes or little trestles the farmers, picturesque in their broad-brimmed hats, displayed their wares,—fowls, butter, eggs, apples, cider, apple-butter, sausage, beans, beets, corn, carrots, turnips, lettuce, *snits*."<sup>113</sup> The Pennsylvania Germans

<sup>110</sup> Eshleman, *Historic Background and Annals*, p. 230. Quoted from letter written by Samuel Blunston to James Logan, May 12, 1728.

<sup>111</sup> Gipson, *Lewis Evans*, p. 100.

<sup>112</sup> Rush, *Account of Manners*, p. 26. Schoepf, who considered these wagons "the best in America," described them as follows: "The freight-wagons of the Pennsylvania Farmers are strongly built; the front and hind-wheels stand close together; the body of the wagon slopes very much forward, so that with the help of the very high front-wheels, the laden wagon more easily gets over unevennesses in the road and other obstacles." *Travels*, II, p. 22

<sup>113</sup> Wertenbaker, *Founding of American Civilization*, pp. 290-291.

were thus not mere subsistence farmers; their surpluses helped to feed many dwellers in towns and cities and brought them considerable profit.

Precisely what the Germans contributed to the exports from Pennsylvania, of course, cannot be determined. By 1765, however, Philadelphia was clearly ahead of New York in the amount of flour, bread, and grain exported. In that year, 367,522 bushels of wheat and 18,714 tons of flour and bread were shipped out of Philadelphia; New York exported only 109,666 bushels of wheat and 5,519 tons of flour and bread. Just before the Revolution, Philadelphia averaged 268,000 barrels of flour per year; in 1789, 369,000 barrels; and in 1792, 420,000 barrels. Between 1791 and 1800 it averaged 426,000 bushels of wheat annually.<sup>114</sup> In addition to wheat, flour, and bread, corn was also shipped in considerable quantities. Not only did Philadelphia become the largest city in the colonies and the busiest port, but Pennsylvania enjoyed the reputation of having the best agriculture and had "a far greater degree of economic independence than the tobacco or sugar colonies."<sup>115</sup> It seems logical to attribute a good share of this prosperity to the Pennsylvania Germans: they constituted a third of the population and the great majority of them were devoted to agriculture, by far the most important industry of Pennsylvania.

Even if we cannot accept at its face value the assertion of Benjamin Rush that the millions of dollars produced by the German farms made possible the foundation of the Bank of North America, we cannot ignore either the abundant evidence of their prosperity or their contributions to the wealth of the province and state. As early as 1747, Governor George Thomas, in a letter to the Bishop of Exeter, said that the Germans had been "the principal instruments of raising the state [*sic*] to its present flourishing condition, beyond any of his Majesty's Colonies in North America."<sup>116</sup> This opinion was also expressed in an address to the Assembly, and the encouragement of further immigration of Palatines was urged. Foreign travellers, too, frequently noted the prosperity of the Germans. Michaux wrote that "with them [the Germans] every thing announces ease."<sup>117</sup> Cazenove found that the German farmers in

<sup>114</sup> Bidwell and Falconer, *History of Agriculture*, p. 139.

<sup>115</sup> Wertenbaker, *Founding of American Civilization*, p. 288.

<sup>116</sup> Rush, *Account of Manners*, footnote, p. 265.

<sup>117</sup> Michaux, *Travels*, p. 52.

the vicinity of Allentown were becoming rich. In Lancaster County he encountered farmers worth from ten to fifteen thousand pounds.<sup>118</sup> Schoepf, who criticized the Pennsylvania Germans severely for lacking the social amenities, was free with his praise of their farming and their prosperity:

From very insignificant beginnings, the most of them have come to good circumstances, and many have grown rich . . . where a German settles, there commonly are seen industry and economy, more than with others, all things equal—his house is better-built and warmer, his land is better fenced, he has a better garden, and his stabling is especially superior; everything about his farm shows order and good management in all that concerns the care of the land. . . . I daresay that Pennsylvania is envied for the greater number of them [Germans] settled there, since it is universally allowed that without them Pennsylvania would not be what it is.<sup>119</sup>

The prosperity of the Pennsylvania German farmers stemmed from a number of causes. Many had had training in careful husbandry; they had a capacity for the hardest labor; they were thrifty in the extreme. Another reason, less tangible but no less important, is that they regarded agriculture as a way of life as well as a way to make a living. Economic, cultural, and religious influences prepared these Germans to accept the lot of the farmer and to perform their work well. Their stolid plodding, their conservatism, and their peasant's sense of values, qualities which often put them at a disadvantage in other affairs, fitted them well for the demands of eighteenth-century American agriculture.

Certainly not all Pennsylvania Germans were good farmers. Some groups, such as the Moravians, Mennonites, Amish, and Schwenkfelders, were more successful than others. Poor husbandry was not an uncommon thing among others of them. In the frontier lands there were Germans who were content as long as they had plenty to eat and drink, little work to do, and no taxes to pay. They described their condition complacently as "Wir machen just so aus."<sup>120</sup> These, however, were exceptional.

<sup>118</sup> Kelsey, *Cazenove Journal*, pp. 29, 83, 84.

<sup>119</sup> Schoepf, *Travels*, I, p. 103.

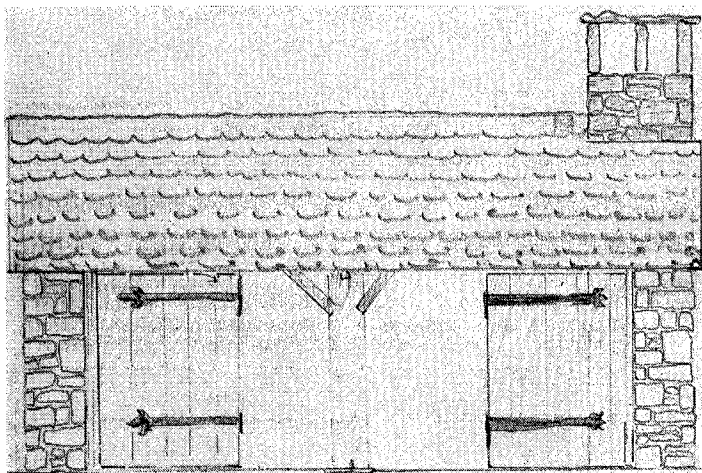
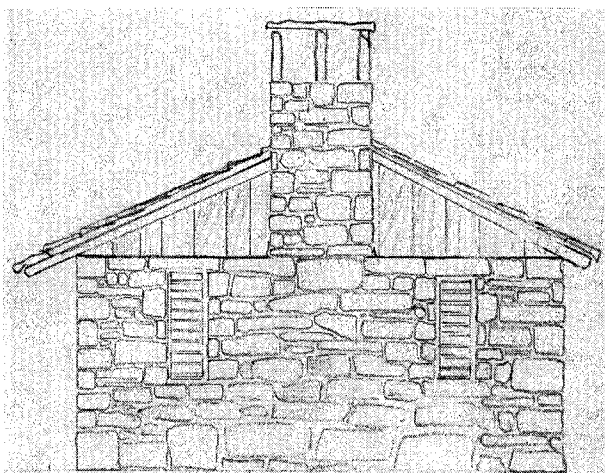
<sup>120</sup> "We get along so-so." Schoepf, *Travels*, I, p. 165.

It is evident that the Pennsylvania Germans have not generally been given full credit for their prominent role in American agriculture during the eighteenth century. This may be due in part to the tendency of the historians to accept the generalization that farming was poor throughout the colonies, without questioning the various degrees of bad husbandry or looking for the occasional exception. The main causes, however, lie with the Germans themselves. First, their failure to take a very active part in the affairs of the colony and their tendency to live near one another, isolated from other groups, tended to create the impression that they were ignorant, stubborn, and unprogressive. Secondly, the differences in language and culture between the Germans and their neighbors, and especially the odd dress and quaint customs of some of the sects, often made the Germans objects of curiosity and even of ridicule. Both these circumstances, though largely superficial, worked to preclude a proper appreciation of the agricultural achievements of the Germans. Another contributing factor is that they remained inarticulate for a long time, providing no writers to express their views or to claim credit for their accomplishments. It was not until late in the nineteenth century that Pennsylvania German historians and folklorists began to defend their folk and to relate their history.<sup>121</sup>

As has been shown, no remarkable innovations can be claimed for the agriculture of the Germans; but, judged by contemporary standards, some of their contributions and practices mark their husbandry as superior. They devised a successful system of irrigation; they solved an important problem of transportation with the Conestoga wagon and a powerful breed of horses; they built large, efficient barns; they took better care of their farm animals than was commonly done. In a day when land-skimming and one-crop farming were common, the Pennsylvania Germans practiced a diversified and fairly intensive agriculture. In such practices as rotation of crops, grafting, and the use of fertilizers they did not lag behind, and occasionally preceded, other American farmers. Many of them, starting with nothing and sometimes spending their first years in Pennsylvania as servants, acquired considerable holdings and even reached a certain degree of affluence. Eighteenth-century Pennsyl-

<sup>121</sup> Only a few items in Meynen's comprehensive bibliography were published prior to 1885.

vania German farms were admired for their appearance of industry and prosperity by American and foreign observers alike. And Pennsylvania, in whose economy they played an important part, made such rapid progress that it out-stripped other provinces which had a head start of a century.



#### FORGE HOUSE

*Architect's drawing, based on the POOL FORGE in Lancaster County, of a projected forge and smithy for the Pennsylvania Farm Museum. The building will display tools, appurtenances, objects made, and services rendered.*

*Courtesy Carl W. Drepperd, Curator,  
Pennsylvania Farm Museum of Landis Valley*