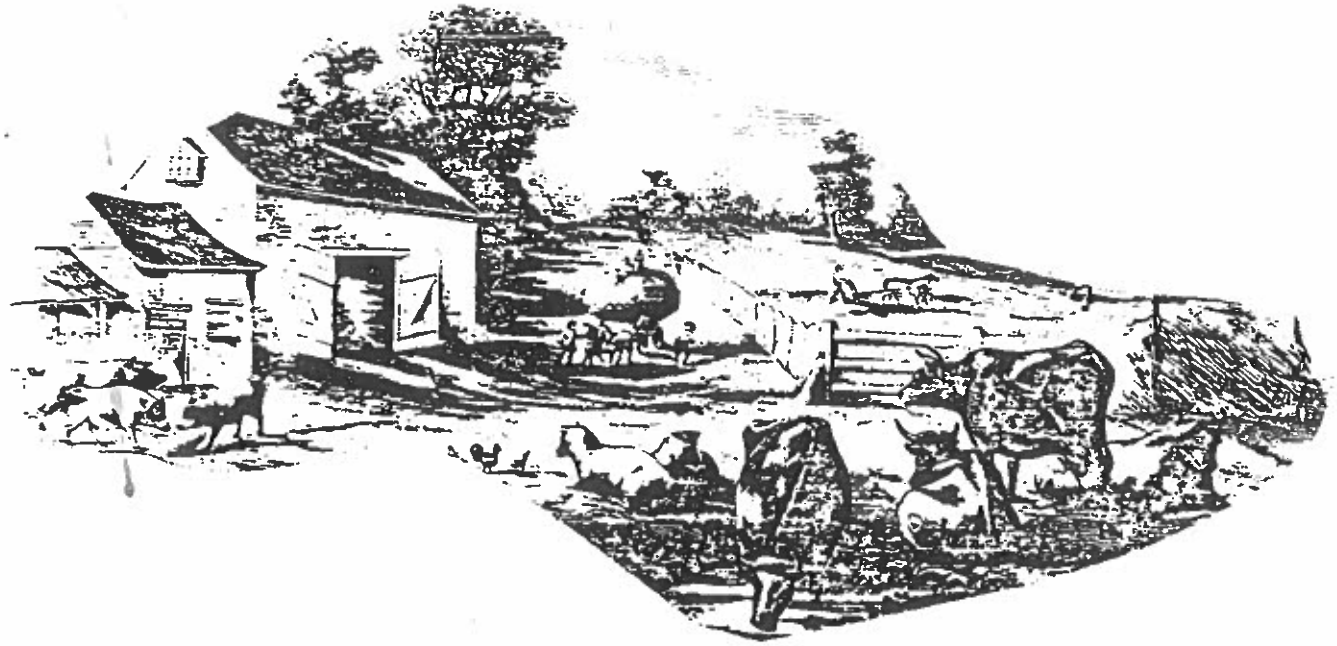
* Beef was primary diet source not sure

OF FAST HORSES, BLACK CATTLE, WOODS HOGS, AND RAT-TAILED SHEEP: ANIMAL HUSBANDRY ALONG THE COLONIAL POTOMAC

by

David O. Percy



The National Colonial Farm

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INTRODUCTION

The purposes for raising livestock in colonial America varied from region to region. The New England and Southern colonists valued their livestock as a source of specie. In those areas livestock and cured meats were an important part of intercolonial and international trade. The Chesapeake colonies of Maryland and Virginia, however, already had a more valuable trading commodity--tobacco. Thus the purpose of raising livestock in those colonies was that of contributing to the planters' subsistence and as a means of transportation.

Since most Maryland planters raised livestock for their own use, the numbers of animals were consistent with their needs. An average middle-class planter along the Potomac River would have had approximately the following kinds and numbers of animals: five horses, twenty to thirty cattle, twenty to forty hogs, and by the middle of the eighteenth century, ten to fifteen sheep.[1]

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[1]Carville V. Earle, The Evolution of a Tidewater Settlement System: All Hallow's Parish, Maryland, 1650-1783 (Chicago: The University of Chicago Department of Geography, 1975), Table 28, p. 124. Inventories of wills for Charles and Prince George's counties for 1719-1721 and 1767-1768 bear out Earle's figures for All Hallow's Parish. Note that these figures do not indicate the maximum holdings of an individual planter since the figures would vary widely according to the time of the year and the number of animals slaughtered. In addition, these inventories omit small planters who did not have their estates inventoried. The livestock holdings derived from the inventories of estates in Charles and Prince George's counties for 1719-1721 show that 85 percent of the planters held less than 19 cattle; 85 percent held 4 or less horses; 50 percent held between 10 and 40 hogs with 20 percent holding between 20 and 29 hogs. During this period only 8 of 20 inventories showed ownership of sheep. A small sampling of inventories for 1767-1768 shows a slight increase in the number of cattle with half of the six inventories listing 20 to 30 cattle; no significant change in the numbers of horses and hogs; and there is a marked change in the proportion of plantation inventories listing sheep. By 1767-1768, five of the six estates showed sheep holdings. Inventories, Liber 4, Folios 49, 80-88, 102-03, 235-42, 250-53, 287, 327-31; Liber 96, Folios 4-5, 85-87, 94-97, 208-10, Maryland Hall of Records, Annapolis, MD.

In addition to differences in the purposes for raising livestock, livestock types also showed differences from area to area. Livestock types in colonial Maryland and Virginia evolved into types which were most suited to the care available and the purposes for which they were intended.

These types of animals, their uses, and their care serve to illustrate how livestock fit into the Potomac planters' world. As with the land, the crops, and the buildings, horses, cattle, hogs, and sheep served the colonists in their efforts to make a living in the New World.

HORSES

A man without a horse was indeed a man of no means --even the poorest planter along the colonial Potomac had a horse to ride about and posture upon. More than just a means of transportation, the horse was a symbol of status: a mark of success carried over from Europe where horses only for riding were reserved for the gentry and the aristocracy. In America, the average man could possess enough horses for his whole family to be mounted and thereby visibly mark his status as a man of affairs.[2] Women matched men in both their riding skills and their riding habits. Gottlieb Mittelberger noted that Pennsylvania women carried "costly whips, which are elegantly made."[3]

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[2]T. H. Breen, "Horses and Gentlemen: The Cultural Significance of Gambling among the Gentry of Virginia," William and Mary Quarterly, 3rd Ser., XXXIV (April, 1977), p. 249; Francis Louis Michel, "Report of the Journey of Francis Louis Michel from Berne, Switzerland, to Virginia, October 2, 1701--December 1, 1702," ed. and trans. William J. Hinke, Virginia Magazine of History and Biography, XXIV (January, 1916), p. 36; Earle, Evolution of a Tidewater Settlement System, Table 30, p. 145.

[3]Gottlieb Mittelberger, Journey to Pennsylvania, ed. and trans. Oscar Handlin and John Clive (Cambridge: The Belknap Press of Harvard University Press, 1960), p. 89.

When it was necessary, women and children rode on a small cushion called a pillion which was strapped behind the saddle.[4] The middle-class planter took great pride in his horses even though they may have been little better than "scrubs."[5]

Throughout the seventeenth and most of the eighteenth centuries, the horses of the Potomac region were classified as "country" or "common" horses. Improvements in breeding did not begin until after the middle of the eighteenth century and it took fifty years before these improvements appeared in the general run of animals.

Maryland's early horses came from Virginia, the Barbadoes, and Massachusetts-Bay.[6] Horses in Virginia were the product of interbreeding of horses from Europe with Indian horses. In addition to the English horses brought over by the early settlers, Virginians obtained Breton or Norman horses from the sack of Port Royal in 1614. Irish hobbies were imported in 1620. By the time Virginia became a royal colony in 1621, the Virginia horses were a mixture of European and Indian "breeds." Sometime during the seventeenth century, Galloway horses from Scotland were added to the mixture.[7]

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[4]Alice Morse Earle, Home Life in Colonail Days (Middle Village, N.Y.: Jonathan David Publishers, Inc., 1975 [1898]), p. 332.

[5]Paul Leland Haworth, George Washington, Farmer: Being an Account of His Home Life and Agricultural Activities (Indianapolis: Bobbs-Merrill Co., Publ., 1915), p. 54; Hugh Jones, The Present State of Virginia: From Whence is Inferred a Short View of Maryland and North Carolina, ed. Richard L. Morton (Chapel Hill: The University of North Carolina Press, 1956), p. 84.

[6]Deane Phillips, Horse Raising in Colonial New England, Cornell University Agricultural Experiment Station Memoir 54 (Ithaca: Cornell University, 1922), p. 898.

[7]Robert W. Howard, The Horse in America (Chicago: Follett Publ., Co., 1965), pp. 33, 55-56; Frazier Hunt and Robert Hunt, Horses and Heroes: The Story of the Horse in America for 450 Years (New York: Charles Scribner's Sons, 1949), p. 12.

The type or breed of horse that was to have the greatest influence on the development of the common horse of the eighteenth-century Potomac area was the Chickasaw. The Chickasaw horses were descendants of Andalusian Barbs brought over to Florida by the Spaniards and captured by the Indians.[8] These small, strong, swift, Indian horses interbred with the English, French, Irish, and Scottish breeds to produce the common horse of the Southern colonies.

By the end of the seventeenth century, the common horse of the Potomac region had been developed. This horse was described as being from thirteen to thirteen and a half hands high (52 to 54 inches high at the shoulder), 600 to 700 pounds in weight, and a wide variety of colors and markings.[9]

These horses suited the colonial planters admirably They were a utility horse which could be ridden the day long, pack a load, and, if the occasion arose, run a race. The normal pace, according to a number of contemporary

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[8]Howard, The Horse in America, pp. 26-27, 56; George H. Conn, The Arabian Horse in America (New and Revised Edition, New York: A. S. Barnes and Co., 1972), pp. 23, 25; Thomas Jefferson, Thomas Jefferson's Farm Book: With Commentary and Relevant Extracts from Other Writings, ed. Edwin Morris Betts (Princeton: Princeton University Press, 1953), p. 87.

[9]Howard, The Horse in America, pp. 27,57; "The Equine FFVs: A Study of the Evidence for the English Horses Imported into Virginia before the Revolution," The Virginia Magazine of History and Biography, XXXV (October, 1927), pp. 332-33; Charles County Court Proceedings, February 4, 1663/4, Archives of Maryland, LIII, p. 448; Charles County Court Proceedings, February 18, 1663/4, ibid., LIII, p. 448; Charles County Court Proceedings, July 7, 1665, ibid., LX, p. 63; Charles County Court Proceedings, March 1, 1668/9, ibid., LX, p. 184; Charles County Court Proceedings, July 24, 1669, ibid., LX, p. 198; Charles County Court Proceedings, November 25, 1670; ibid., LX, p. 445; Charles County Court Proceedings, 1672, ibid., LX, p. 531.

observers, was a gallop.[10] Not surprisingly, horse racing became a common event and a passion among those who had the time and wealth to indulge in the sport of kings. Although horse races were occasionally run over greater distances, the quarter-mile was the most popular. Horses which could successfully compete at that distance became known as quarter horses. Thus the foundations for the quarterhorse breed lies in the colonial period.[11] Races in Maryland were run at Upper and Lower Marlborough, Bladensburg, Piscataway, Nottingham, Rock Creek, Queen Anne Town, Port Tobacco,New Port, and Leonardtown.[12] Such organized races were generally restricted to the upper class planters.[13] We may surmize, however, that the common planter was not immune from trying his mount against that of his neighbor when the two met along a back country road.

The tobacco planters of the Potomac region did not use their horses to any great extent as draft animals. The clumsy plows, the lack of good roads, and the size of the animals all were sufficient reasons for freeing the common horses of the colonial Potomac region from

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[10]John Clayton, The Reverend John Clayton: A Parson with a Scientific Mind: His Scientific Writings and Other Related Papers, ed. Edmund Berkeley and Dorothy Smith Berkeley (Charlottesville: The University Press of Virginia, 1965), p. 105; Michel, "Report of the Journey to Virginia," pp. 21-22; /Durand of Dauphine/, A Huguenot Exile in Virginia or Voyages of a Frenchman Exiled for His Religion with a Description of Virginia & Maryland, ed. and trans. Gilbert Chinard (New York: The Press of the Pioneers, Inc., 1934), p. 149.

[11]Hunt and Hunt, Horses and Heroes, p. 12; Hilton M. Briggs, Modern Breeds of Livestock (Revised Edition, New York: The Macmillan Co., 1958), p. 658.

[12]Francis Barnum Culver, Blooded Horses of Colonial Days: Classic Horse Matches in America Before the Revolution (Baltimore: The Author, 1922), p. 28.

[13]Breen, "Horses and Gentlemen," p. 240.

the harness.[14]

The failure to use horses as draft animals to any great extent has mystified both contemporary and modern observers. An occasional reference to a plow horse indicates that the colonial planters were well aware of this use of horses.[15] The cultivation of tobacco and corn required care so as not to destroy their root systems. The clumsy, crude plows of the era would have done just that in the hands of most husbandmen. Thus draft animals were very seldom used in the cultivation of these two main crops of the colonial Potomac region. Another factor limiting the use of plows was the preference of farmers to use new lands with their tree stumps and roots for tobacco and corn. Horses, however, were used for drawing wagons, tobacco hogsheads, harrows, and occasionally in plowing and rolling fields for small grains.[16]

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[14]Hunt and Hunt, Horses and Heroes, p. 233; Nelson C. Nye, Outstanding Modern Quarter Horse Sires (New York: William Morrow and Co., 1948), p. 13; Martha Ellicott Tyson, "An Account of the Settlement of Ellicott's Mills with Fragments of History," Charles W. Evans, American Family History: Fox, Ellicott, Evans, ed. Harry Les Hoffman and Charlotte F. Hoffman (Cockeysville, Md., 1976), p. 6a.

[15]/Durand/, A Huguenot Exile in Virginia, p. 117; Aubrey C. Land, "The Tobacco Staple and the Planter's Problems: Technology, Labor, and Crops," Agricultural History, XLIII (January, 1969), p. 76; Committee of Grievances and Courts of Justice, June 2, 1747, Assembly Proceedings, May 16--July 11, 1747, Archives of Maryland, XLIV, p. 522; Michel, "Report of a Journey to Virginia," p. 36.

[16]"Journal of an Officer who Travelled in America and the West Indies," Newton D. Mereness, ed., Travels in the American Colonies (New York: The Macmillan Co., 1916), p. 405; Olive Woolley Burt, The Horse in America (New York: John Day Co., 1975), pp. 228-29.

In spite of the horse's obvious value to the planters, their owners took only minimal care of them. For example, few men shod their horses. Since there were few hard surface roads, most planters probably saw little need for shoeing. Probably as a result, there were few blacksmiths in the colonies who could properly fit horses with shoes.[17] When not in use horses were merely turned loose to forage in the woods. An occasional feeding of oats or corn would keep most horses near enough to his plantation for the planter to catch his mount when needed. Livestock was seldom stabled. There are two reasons for this. First of all, these settlers were mostly transplanted Englishmen, if not in fact, then in attitude. The English people did not stable their livestock at all until after the reign of Henry VIII and then only the more well-to-do would have had the money to expend for such a supposed luxury. The second reason was more practical, the time required to produce tobacco. Stabling requires that a forage crop be raised, cut, and stored. Most middle-class planters would not have had the time to raise forage crops even if they believed it would have been beneficial to stable their animals.[18]

During the winter or when wild forage was slight, horses were fed a wide variety of fodder. The most common

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[17] Howard, The Horse in America, p. 79.

[18] /Durand/, A Huguenot Exile in Virginia, p. 122; /Janet Schaw/, Journal of a Lady of Quality: Being a Narrative of a Journey from Scotland to the West Indies, North Carolina, and Portugal in the Years 1774 to 1776, ed. Evangeline Walker Andrews and Charles McLean Andrews (New Haven: Yale University Press, 1921), p. 152n.; Howard, The Horse in America, p. 26; Avery Odelle Craven, Soil Exhaustion as a Factor in the Agricultural History of Virginia and Maryland, 1606-1860 (Gloucester, Mass.: Peter Smith, 1965 /1926/), p. 33.

was maize or Indian corn.[19] Thomas Jefferson noted that eight to ten pounds of corn leaves "serve a horse a night."[20] When fed grain, a half gallon of corn was considered an adequate ration for a horse.[21] For a work horse, it was estimated that a horse's yearly allowance of feed would be about ten barrels of corn.[22] This was generous ration when the total production of a middle-class farmer's corn crop is considered. It emphasized why most planters did not use their horses for draft purposes. Although oats were the traditional grain for horses, the middle-class planter would have only fed it to his own horses when he could not sell it. Taverns and inns were generally eager to purchase oats as this grain was valued as feed for road horses.[23] Horses were also fed potatoes and pumpkins when available.[24] Although little grass was raised for forage, there was some experimentation with lucerne (alfalfa) and clover. Most colonists, however, avoided planting clover for their horses.[25]

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[19]Jacques Pierre Brissot de Warville, New Travels in the United States of America. Performed in 1788 (New York: Augustus M. Kelley, Publ., 1970 [1792]), p. 254.

[20]Jefferson, Farm Book, p. 91.

[21]Charles William Janson, The Stranger in America: 1793-1806 (New York: The Press of the Pioneers, Inc., 1935 [1807]), p. 83.

[22]Jefferson, Farm Book, p. 72.

[23]Benjamin Mifflin, "Journal of Benjamin Mifflin on a Tour from Philadelphia to Delaware and Maryland: July 26 to August 14, 1762," Bulletin of the New York Public Library, XXXIX (June, 1935), pp. 427-38 passim; Hubert G. Schmidt, Agriculture in New Jersey: A Three Hundred-Year History (New Brunswick, N.J.: Rutgers University Press, 1973), pp. 93-94.

[24]Jefferson, Farm Book, pp. 87, 92, 255.

[25]Benjamin Smith Barton, "Journal of Benjamin Smith Barton on a Visit to Virginia, 1802," ed. W. L. McAtee, Castanea, III (November-December, 1938), p. 112.

This is not surprising since horses were simply turned into pastures where clover might be growing. Horses eating green clover often became bloated and sometimes died as a result. For the most part, horses foraged on the natural flora of the area. Native grasses such as herd grass and foul meadow grass provided horses with fodder throughout most of the summer. During the winter months, farmers would have to supplement the wild fodder with whatever they had on hand. With the coming of spring, horses filled themselves with horse balm (Collinsonia canadensis), which was also called rich weed, citronella, or horse weed.[26] There were also some native plants which were harmful to horses. One such plant was the stagger weed or American wolfsbane (Actnitum uncinatum).[27] However, the benefits of natural fodder apparently outweighed the risks in most planters' minds.

For horses, and other livestock as well, salt was usually deficient in their diets. Contemporary observers noted that horses would lick off the sweat of animals that had become lathered. They also would lick the ground where "pot liquor" had been dumped for the salt.[28]

The practice of turning horses loose to forage for themselves caused as many problems as it solved. The frequent legislative concern over wild horses is indicative of the problems caused by "free" horses. Throughout the eighteenth century, the Maryland General Assembly

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[26]Ibid., p. 98; Peter Kalm, The America of 1750. Peter Kalm's Travels in North America, The English Version of 1770, ed. and trans. Adolph B. Benson (2 vols.; New York: Wilson-Erickson Inc., 1937), I, pp. 105-06.

[27]Barton, "Journal of a Visit to Virginia," p. 98.

[28]Thomas Anburey, Travels through the Interior Parts of America (2 vols.; Boston: Houghton Mifflin Co., 1923 [1789]), pp. 189-90; Nicholas Cresswell, The Journal of Nicholas Cresswell: 1774-1777 (Port Washington, N.Y.: Kennikat Press, Inc., 1968 [1924]), p. 174.

attempted to ameliorate the damage done by roaming horses. In 1699 the General Assembly by authority of the Queen required all fields to be enclosed with a fence at least five feet high. This act also provided for damages to be paid to owners of fields so fenced. On a third trespass, a horse breaking through a fence and damaging crops could be shot.[29] Five years later, not only were crops required to be enclosed, but owners of horses were to provide enclosures for their animals. The 1704 act also continued the provisions of the 1699 legislation requiring fencing of crops and providing damages for livestock intrusions into fields so fenced.[30] This act was renewed periodically during the eighteenth century with minor revisions.[31]

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[29]An Act Concerning the Height of Fences and to punish Burners thereof and also to restreine the Multiplicity of horses and Mares &c., Assembly Proceedings, June 29--July 22, 1699, Archives of Maryland, XXII, pp. 477-78.

[30]An Act ascertaining the Heighth of ffences to prevent the Evill occasion'd by the Multitude of Horses and restraining Horse Rangers within this Province, Assembly Proceedings, September 5--October 3, 1704, ibid., XXVI, pp. 309-12.

[31]An Act Reviving an Act of Assembly of this Province Entituled an Act Ascertaining the height of Fences to prvent the Evill occasioned by the Multitude of Horses and Restraining Horse Rangers within this Province, Assembly Proceedings, 1694-1728, Acts, ibid., XXXVIII, p. 166; An Act Ascertaining the height of ffences to prevent the Evill Occasioned by the Multitude of horses and restraining horse rangers within this Province and to redress the great Evill Accrueing to this Province by the Multiplicity of useless horses Mares and Colts that run in the woods, Assembly Proceedings, April 26--June 3, 1715, Acts, ibid., XXX, pp. 293-97; A Supplementary Act to the Act entituled, An Act ascertaining the Height of Fences . . . , Assembly Proceedings, May 8--June 2, 1750, Acts, ibid., XLVI, pp. 483-85; An Act continuing an Act entituled A Supplementary Act to the Act ascertaining the Height of Fences . . . , Assembly Proceedings, April 8--May 9, 1757, Acts, ibid., LV, pp. 130-31.

In their efforts to keep their horses within bounds, the colonial planters resorted to a number of devices. Yokes were attached around the horses' necks. These yokes had a hook on the bottom which would catch on the fence rails should a horse attempt to escape by leaping the fence. A second method was to use hobbles. A piece of wood was fastened between the fore and hind legs of the horse which prevented the animal from galloping or leaping. Peter Kalm surmised that both methods probably caused a number of injuries to horses.[32]

During the last part of the seventeenth century and the early part of the eighteenth century, the Maryland General Assembly attempted to ban the importation of horses. These acts were aimed primarily at the proprietary of Pennsylvania with whom Maryland was fighting over borders. These acts were also attempts to restrict the already large numbers of horses, both wild and domesticated, within Maryland. Horses illegally imported were subject to seizure.[33]

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[32]Kalm, Travels in North America, I, p. 115.

[33]An Act prohibiting the Importacon of all Horses geldings mares or Colts into this Province, Assembly Proceedings, March--April, 1671, Archives of Maryland, II, p. 281; An Act Reviving a Certain Act of Assembly of this Province Intituled An Act prohibiting the Importation of bread beer flower wheat or other English or Indian grain or Meale horses or Mares Colts or filley's from Pensilvania and the territorys thereto belonging, Assembly Proceedings, March 26--April 15, 1707, ibid., XXVII, pp. 172-73; An Act Reviveing an Act Entituled an Act prohibiting the Importation of . . . Horses, Mares, Colts, or ffilleys, . . . , Assembly Proceedings, October 24--November 4, 1710, ibid., XXVII, pp. 574-75; An Act Reviving an Act of Assembly of this province Entituled an Act prohibting the importation of . . . Horses, mares, Colts or fillys . . . , Assembly Proceedings, 1694-1728, Acts, ibid., XXXVIII, p. 182; An Act prohibiting the Importation of . . . Horses Mares Colts or ffileys . . . , Assembly Proceedings, April 26--June 3, 1715, Acts, ibid., XXX, pp. 226-27.

During periods of grain shortages (a part of these acts), the provisions of the acts were suspended.[34] However, when the shortages ended, the act's provisions were reinstated. The prohibitions on the importation of horses and grains were repealed in 1728.[35] In 1745 a duty of forty shillings was placed on every imported horse.[36] This act was mainly an attempt to raise money for the proprietary rather than attempting to restrict the number of horses within the colony.

The small stature of Maryland horses as well as their great numbers was of concern to the Assembly. In 1692 a law was enacted requiring the castration of stallions under fourteen hands high. This law also allowed individuals to destroy wild stallions.[37] The act was renewed in 1695 to run for three years.[38] These

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[34]An Act to Prohibit the Exportation of Indian Corne for the Time therein Limited to Suspend the Execution of An Act Entituled an Act Prohibiting the Importation of Bread Beer Flower Malt Wheat or Other Indian or English Grain or Meal. Horses Mares Colts or Filleys from Pensilvania and the Territories thereunto belonging, Assembly Proceedings, 1694-1728, Acts, ibid., XXXVIII, pp. 336-38.

[35]An Act to repeal an Act, entituled, An Act prohibiting the Importation of Bread, Beer, Flour, Malt, Wheat or other Indian or English Grain, or Meal; Horses, Mares, Colts, or Fillies; from Pensilvania, and the Territories thereto belonging, Assembly Proceedings, October 3--November 2, 1728, ibid., XXVI, p. 275.

[36]Assembly Proceedings, August 5--September 28, 1745, The Lower House, ibid., XLIV, pp. 106-07.

[37]An Act for the restraining of the unreasonable encrease of Horses in this Province, Assembly Proceedings, May 10--June 9, 1692, ibid., XIII, pp. 549-50.

[38]An Act to prevent the greate Evill occasioned by the multiplicity of horses within this Province, Assembly Proceedings, 1694-1728, Acts, ibid., XXXVIII, pp. 11-13.

acts led to widespread "taking up wild horses, hogs, or Cattle." Therefore, in 1695 the Council ordered the sheriff of each county to investigate the capturing and killing of wild livestock. They were ordered to put a halt to the rounding up of livestock which were not the property of the men participating in the roundups.[39] The problems of controlling wild livestock while protecting the owned or claimed livestock continued. The system of wood rangers, who were charged with the control of wild livestock, led to rustling of owned livestock. In 1702 the Assembly required stricter qualifications for those holding wood ranger commissions and forbade the deputizing of unauthorized individuals to act for those holding the commissions.[40] In spite of the Assembly's efforts the problem of wild horses continued to plague the Maryland colonists. In 1712 the General Assembly again declared open war on free stallions. They passed an act which authorized the killing of any stallion over a year of age found roaming in the woods. Even if someone claimed ownership of the stallion, no damages could be collected from the person killing a "free" stallion in the woods.[41]

Although there were a great number of wild horses, there were men who did not trouble themselves to capture and break wild horses but preferred to obtain horses already broken. In 1744 the Assembly passed an act to

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[39]Proceedings of the Council of Maryland, 1694-1697, ibid., XX, p. 294.

[40]An Act Prohibiting the Abuses Committed by Wood Rangers, Acts Passed at the Session, March 16, 1701/2--March 25, 1702, ibid., XXIV, pp. 280-81.

[41]An Act to redress the great Evill Accrueing to this Province by the Multiplicity of Useless Horses Mares and Colts that run in the Woods, Assembly Proceedings, 1694-1728, ibid., XXXVIII, pp. 149-50.

punish horse stealers. This act was periodically renewed throughout the colonial period.[42]

For those settlers without horses or who wished to add to their herds, there were three ways of obtaining mounts legally--purchase, capture of a wild horse, and breeding. Horses were readily available to anyone taking the trouble to capture or buy one. A serviceable horse could be purchased for one to five pounds sterling or 500 to 2500 pounds of tobacco.[43] If a man did not have the money or tobacco to spare, he could always try to catch one of the unbranded horses roaming the woods--although such an animal would extract a price in catching and breaking it to the saddle.

The capture of wild horses was done in the early spring. After a winter on scant forage, the wild horses were usually weak. The wild horses thus famished tended to eat their fill of early grasses. Their gluttony made them less active. The planters mounted on their best mounts drove the herds of wild horses until they could run no longer. Tamed horses were then placed with the wild ones to calm them. Then the process of breaking the wild horses could begin. Another method used for capturing wild horses was to locate their watering hole and dig a deep pit in their path to water. When the wild horses went for water, they fell into the pit. They were then roped and dragged from the pit. This method

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[42]An Act continuing an Act, entituled, An Act for Punishment of Horse-Stealers, and other Offenders, Assembly Proceedings, May 16--July 11, 1747, Acts, ibid., XLIV, p. 645; An Act continuing an Act entituled, An Act for Punishment of Horse-stealers and other Offenders, Assembly Proceedings, May 15--June 8, 1751, Acts, ibid., XLVI, p. 610; An Act continuing an Act, entituled, An Act for Punishment of Horse-Stealers, and other Offenders, Assembly Proceedings, September 28--December 16, 1757, Acts, ibid., LV, p. 396.

[43]Clayton, The Reverend John Clayton, p. 105; Robert R. Walcott, "Husbandry in Colonial New England," New England Quarterly, IX (June, 1936), p. 245.

killed and injured a number of animals. In addition, the pit method lacked the excitement of the chase. The chase method, however, required a number of skilled horsemen and a supply of good horses for the chase.[44]

Horses under careful management were probably bred in the spring. The most influential writer on horses in the colonial period was Gervase Markham.[45] His book, The Compleat Horseman, published in the seventeenth century, suggested that the stallion be put with the mares in the middle of March. This would result in colts being dropped in the following March. He reasoned that colts born at that time of the year would be hardier than those born at other times. One month's time was considered sufficient time for the stallion to cover the mares.[46]

Horses in the wild were subject to danger from predators, lack of food, and natural hazards, but they were also free from the veterinary practices of the period. Horses were often worked too long and hard, left to the elements, and when sick, barbarously treated. Fortunately, the colonies were relatively free from infectious diseases. The widely dispersed population made transmittal of animal plagues difficult and the long voyage to the colonies of imported animals killed off sick stock before they reached shore.[47] In general,

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[44]Michel, "Report of a Journey to Virginia," p. 42.

[45]Howard, The Horse in America, p. 22.

[46]Gervase Markham, The Compleat Horseman, ed. Dan Lucid (Boston: Houghton-Mifflin Co., 1975 [1614?]), pp. 57-58.

[47]J. F. Smithcors, The American Veterinary Profession: Its Background and Development (Ames: Iowa State University Press, 1963), p. 11.

when a horse became sick the treatment fell into one of four general types of remedy: purging, sweating, bleeding, and vomiting. These same paneceas were used as prophalactics to keep the horse healthy.[48]

More horses suffered from the effects of abuse, over work, or negligence than disease. One example of abuse was "poll-evil." Poll evil was an abscess on the head behind the ears which was caused by repeated blows with a whip butt or other hard object.[49]

The major ailments of horses in colonial America were bots, glanders, yellow water, and staggers. Of these contemporaries most frequently mentioned bots as the most common affliction of horses. Bots, sometimes called horse bees (Gastrophilus intestinalis), were brought over to the colonies with the horses imported from Europe. The symptoms of bots were well known. The horse made uneasy motions, laid down, and rolled often, and exhibited a general weakness.[50] This intestinal parasite passes through four stages: egg, larva (the bot), pupa, and adult. Eggs are laid on the hairs of the horse's legs. When the horse bites to relieve the irritation caused by the eggs, they are ingested and the larva or bot develops in the intestines. In the intestine the larva sucks blood from the horse. Finally, the bot is passed through the horse's bowels and is deposited on the ground. A pupa develops and matures into a fly. The fly then lays

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[48] J. F. Smithcors, Evolution of the Veterinary Art: A Narrative Account to 1850 (Kansas City: Veterinary Publishing Co., 1957), p. 198.

[49] Stevenson Whitcomb Fletcher, Pennsylvania Agriculture and Country Life: 1640-1840 (Harrisburg: Pennsylvania Historical and Museum Commission, 1950), p. 172.

[50] Paul Jewett, The New England Farrier or, a Compendium of Farriery, In Four Parts . . . Intended for those of, Private Gentlemen and Farmers (Hudson, Mass.: Stoddard, 1806), p. 30.

eggs on the leg hairs of the horse and thus the cycle is repeated.[51]

Colonial writers suggested various remedies for "curing" the bots. A number of these remedies did little other than add to the misery of the horse and a few even hastened the animal's demise. Bleeding, various purges, vomits, and poisons were tried with varying degrees of success, or more aptly failure.[52] Even incantations were used to eliminate the bots. John Hohman in 1819 gives the following prescription for the cure of bots:[53]

> You must stroke the horse down with the hand three times, and lead it about three times holding its head toward the sun, saying: "The Holy One saith: Joseph passed over a field and there he found three small worms; the one being black, another being brown, and the third being red; thus shalt thou die and be dead."

No doubt, this incantation and others like it produced more dead horses than dead flies.

The second most common ailment of horses, which contemporaries noted, was "the yellows" or "yellow water disease." This ailment was a form of jaundice, probably caused by overwork or abuse. The "yellows" often caused

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[51]F. C. Bishop and Benjamin Schwartz, "Horse Bots and Their Control," Keeping Livestock Healthy: Yearbook of Agriculture: 1942 (Washington: United States Department of Agriculture, 1942), pp. 486-88.

[52]Rowland Green, "Natural History of the Horse-Bee, with a Variety of Experiments and Observations on Bots, very interesting; communicated in a Letter from the Rev. Rowland Green, jun. dated Mansfield, February 20, 1806," The Medical and Agricultural Register, for the Years 1806 and 1807, I, pp. 53-59; "Remedy for Bots in Horses," ibid., I, p. 157; Rowland Green, "Of Bots and the Proper Treatment of Horses Affected by them," ibid., II, pp. 235-38; Smithcors, American Veterinary Profession, p. 37.

[53]Ibid., p. 30.

significant losses of horses.[54] As with most other ailments, bleeding was the recommended cure.[55]

Other ailments of horses in the colonial period included: frenzy or staggers, strangury, glanders, distemper, fevers, and stumbling.[56] Bleeding was given as the cure for glanders, staggers, and fever.[57] One cure for stumbling was to cut the cords of the horse's legs.[58] Dung, urine, brandy, shavings of a sea lion's tooth, live toads, and bacon fat were among the cures used to treat various horse ailments.[59] By in large the state of veterinary medicine was such that horses survived in spite of treatment rather than because of it.

The hardiness of those horses along the Potomac River seemed to prove to the colonial planters that their care of their horses was not only adequate but seemingly beneficial. Although his horse was among his most valued possessions, his other livestock were also important. A horse provided his transportation, but his other livestock provided a part of his diet.

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[54]Theophilus Cazenove, Cazenove Journal 1794: A Record of the Journey of Theophilus Cazenove Through New Jersey and Pennsylvania, ed. Rayner Wickersham Kelsey, Haverford College Studies, No. 13 (Haverford, Pa.: The Pennsylvania History Press, 1922), p. 9; Jewett, New England Farrier, p. 18.

[55]Smithcors, Evolution of the Veterinary Art, p. 200; Jewitt, New England Farrier, pp. 17-37. Jewitt, however, says: "this is a resource which skilful men fly to on every failure of their horse, without considering the nature of the disease, or state of the horse's body." p. 32.

[56]Ibid., pp. 17-21; Smithcors, American Veterinary Profession, p. 37.

[57]Jewitt, New England Farrier, pp. 17-21.

[58]Smithcors, Evolution of the Veterinary Art, p. 196.

[59]Ibid., p. 192; Howard, The Horse in America, pp. 22-23.

CATTLE

As the colonial planter neared the edge of a clearing in the forest, he reined his horse. He was aware that his sudden appearance might spook his herd of semi-feral cattle which were grazing nearby. Under the watchful eye of the bull, some score of cows, steers, and calves browsed on the wild grasses and tender bushes.[60]

His cattle were the product of the various kinds of European cattle imported by the early settlers of North America.[61] He generally called them "black cattle."[62] This was not a description of color, but of the kind of livestock. They were in fact a variety of colors: black, brown, red, brindled, or pied.[63]

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[60]Leonard Stoneburner to the Society, Germantown, March 4, 1788, Memoirs of the Philadelphia Society for Promoting Agriculture, VI, p. 139; Charles County Court Proceedings, 1658-1662, Archives of Maryland, LIII, p. 267; Entry for December, 1772, Wilson Account Book, MS 915, Maryland Historical Society; Wesley Newton Laing, Cattle in Virginia, Unpubl. Ph.D. dissertation, The University of Virginia, 1952, p. 138.

[61]Kalm, Travels in North America, I, p. 55; Laing, Cattle in Virginia, p. 13.

[62]Dixon Ryan Fox, "The Old Farm," New York History, XIX(January, 1938), p. 21; Charles Wayland Towne and Edward Norris Wentworth, Cattle & Men (Norman: The University of Oklahoma Press, 1955), p. 102n. The term black cattle was used to designate cattle in general and not to denote color. This term differentiates the bovine from the ovine (Sheep) which in Old English were referred to as white cattle.

[63]Charles County Court Proceedings, 1658-1662, Archives of Maryland, LIII, pp. 57, 71, 95, 122, 266; Charles County Court Proceedings, 1662-1666, ibid., LIII, pp. 295,442, 450, 477-78, 514; Charles County Court Proceedings, 1668-1670, ibid., LX, pp. 190-91, 206; Charles County Court Proceedings, 1671-1674, ibid., LX, pp. 312-13, 405, 530-31, 540, 566.

There were no native American cattle. Early immigrants brought cattle typical of their homelands. The Spaniards brought their long-horned, small, black cattle from the llaños of Spain. These cattle spread over the Southwest and throughout the West Indies from which the English settlers brought them to their colonies.[64] The English brought red cattle from Devonshire, Somerset, and Gloucester; black-colored cattle from Yorkshire, Derbyshire, Lancashire, and Straffordshire; brown cattle from Hereforeshire; and brown and white cattle from the Channel Islands.[65] The favorite choice among the Englishmen were the cattle from Devonshire.[66] The Danes contributed their large yellow cattle.[67] The Dutch settlers of New York brought over the progenitors of the Holstein-Friesan breed which were usually black and white.[68] The cattle from Devonshire were the most

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[64]John E. Rouse, Cattle of North America (Norman: The University of Oklahoma Press, 1973), pp. 359-60.

[65]Charles Sumner Plumb, Types and Breeds of Farm Animals (Revised Edition; Boston: Ginn & Co., 1920), p. 475; John Mills, A Treatise on Cattle; Showing the Most Approved Methods of Breeding, Rearing, and Fitting for Use, Asses, Mules, Horned Cattle, Sheep, Goats, and Swine (Boston: William Spotswood, 1795), p. 27; Towne and Wentworth, Cattle & Men, pp. 102-03; Darrett B. Rutman, Husbandmen of Plymouth: Farms and Villages in the Old Colony, 1620-1692 (Boston: Plimouth Plantation, Inc., 1967), p. 47; Les Stephen and Ward Sullivan, Cattle Breeds Index (Hays, Ks.: Research Communications Inc., 1976), p. 121.

[66]Smithcors, American Veterinary Profession, p. 15.

[67]James Westfall Thompson, A History of Livestock Raising in the United States, 1607-1800, Agricultural History Series No. 5 (Washington: U. S. D. A., 1942), p. 2; Rudolf Alexander Clemen, The American Livestock and Meat Industry (New York: Ronald Press Co., 1923), p. 22.

[68]David Roberts, Cattle, Breeds and Origin (Waukesha, Wisc.: D. Roberts, 1916), p. 60; Plumb, Types and Breeds of Farm Animals, p. 358; Paul C. Heinlein, Cattle Kingdom in the Ohio Valley, 1783-1860 (Lexington: University of Kentucky Press, 1959), p. 21.

popular type in New England; these "Devons" were the progenitors of the Devon breed which was designated as a distinct breed in the 1760s.[69] The definition of cattle breeds did not occur until the late eighteenth century when English farmers began to improve their cattle herds. In the colonies, some farmers imported these improved cattle by importing North Devons, Norfolks, suffolks, Red Polls, Alderneys, and Lancashires among other breeds.[70] The effect of these importations was not apparent, however, in the so-called "Native" cattle--the cattle of the middle-class planters.[71] The cattle importations which were the foundation stock for the "native" or "common" cattle almost all took place before the middle of the seventeenth century.[72]

The colonial Potomac planter had a herd of semi-wild cattle of a non-descript breed. These cattle were probably black, red, or brown in color.[73] They only

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[69]George F. Lemmer, "The Spread of Improved Cattle Through the Eastern United States to 1850," Agricultural History, XXI (April, 1947), pp. 31-32; Fletcher, Pennsylvania Agriculture, p. 176.

[70]Rodney C. Loehr, "The Influence of English Agriculture on American Agriculture, 1775-1825," Agricultural History, XI (January, 1937), pp. 6, 11; Lemmer, "The Spread of Improved Cattle," p. 30; Briggs, Modern Breeds of Livestock, p. 202; Plumb, Types and Breeds of Farm Animals, pp. 452-53; Richard Maris, "Alderney Cow," Memoirs of the Philadelphia Society for Promoting Agriculture, IV, p. 155.

[71]R. O. Bausman and J. A. Munroe, eds. "James Tilton's Notes on the Agriculture of Delaware, in 1788," Agricultural History, XX (July, 1946), pp. 185-86.

[72]Rouse, Cattle of North America, p. 360.

[73]Based on 84 cattle for which there are descriptions (see Note 63), 22 were described as being black or predominantly so, the same number red, and 16 brown. The remaining 24 were brindled, pied, mixed colors, or the color was not mentioned.

rarely exceeded 900 pounds live weight and probably averaged about 750 pounds.[74] He raised these beeves for meat rather than milk.[75] The common cattle were not milkers as were the Dutch breeds which often gave as much as two gallons at a milking.[76] The common cows, however, usually only gave a quart or two a day and the milk was of poor quality because of the poor provender.[77] These common cattle took from five to seven years to mature. Because of their large bones and the "large proportion of offal to flesh," mature cattle did not provide great quantities of meat per animal.[78]

The leanness and poor quality of the meat as well as the small quantity of milk produced by these common cattle was due to the poor management practices of the colonial planters.[79] As their English forefathers had done, the planters of Southern Maryland let their cattle forage for themselves.[80] When Maryland was first settled, there was adequate forage in the forests for livestock,

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[74]Max George Schumacher, The Northern Farmer and His Markets During the Late Colonial Period (New York: Arno Press, 1975), p. 19.

[75]Fletcher, Pennsylvania Agriculture, p. 178.

[76]Lewis Cecil Gray, History of Agriculture in the Southern United States to 1860 (New York: Peter Smith, 1941), p. 55.

[77]Homer L. Kerr, "Introduction of Forage Plants into Ante-Bellum United States," Agricultural History, XXXVIII (April, 1964), p. 87.

[78]Lewis F. Allen, American Cattle: Their History, Breeding, and Management (New York: Orange Judd and Co., 1868), p. 38.

[79]Haworth, George Washington, Farmer, pp. 56-57.

[80]Albert H. Sanford, The Story of Agriculture in the United States (Boston: D. C. Heath and Co., Publ., 1916), pp. 32-33.

and thus the practice of turning animals loose to fend for themselves was a practical move. The increase in population, however, put a severe strain on the amount of wild forage available to livestock. In spite of the paucity of fodder, Southern Maryland planters seldom cultivated forage crops. Because planting a crop for forage would have taken away time from the propagation of tobacco, most planters did not believe that forage cultivation was a useful expenditure of time and labor. Secondly, until the late eighteenth century, most available grasses were annuals which would have required yearly planting in order to maintain a proper pasturage. In addition, most of these grasses did not fare well in the Southern Maryland climate or soils.[81]

The production of hay was generally done in the Northern colonies where the amount of natural forage was less and the growing season shorter. During the colonial period hay was cut in late June or early July and a second cutting in late August or early September. A man could cut approximately an acre per day. The produce of an acre of hay was about a ton. At a rate of forty pounds of hay per cow per day, the colonial planter, who fed his cattle hay, would have needed about two tons of hay for each animal to carry it through the winter. The maintenance of a small herd of ten cattle would have required some twenty acres of hay, which

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[81] J. Thomas Sharf, History of Maryland: From the Earliest Period to the Present Day (3 vols.; Hatboro, Pa.: Tradition Press, 1967 [1879]), II, p. 60; Kalm, Travels in North America, I, pp. 180-81; Jared Eliot, Essays Upon Field Husbandry in New England and Other Papers: 1748-1762, ed. Harry J. Carman and Rexford G. Tugwell (New York: Columbia University Press, 1934), p. 17; William Douglass, A Summary, Historical and Political of the First Planting, Progressive Improvements, and Present State of the British Settlements in North America (2 vols.; London: R. and J. Dodsley, 1770), II, p. 209n.

would have been beyond the capability of most middle-class tobacco planters.[82]

The practical alternative for the Potomac planter was to let his cattle forage in the woods for themselves. One estimate for the amount of range necessary for a cow in colonial Georgia was twenty-five acres.[83] This estimate is probably high for the amount of land necessary to support a range cow in Maryland. As in other colonies, the Maryland planters probably burned the underbrush on the forest floor and the dry reeds in the marshes to make fresh spring grasses available to foraging livestock.[84]

Spring was a critical time for cattle and cattle raisers. Weak from a winter of limited forage, cows heavy with calves, and the dangers from wet, marshy ground combined to cause losses which were often substantial.[85] As March approached, the cattle were rounded up. New calves were branded and the bulls were castrated. Planters were required to brand their cattle and register

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[82]Rutman, Husbandmen of Plymouth, p. 51; Johann David Schoef, Travels in the Confederation: 1783-1784, trans. and ed. Alfred J. Morrison (2 vols.; New York: Burt Franklin, 1968 [1911]), p. 128; Fletcher, Pennsylvania Agriculture, p. 103; Jefferson, Farm Book, p. 73.

[83]James C. Bonner, "The Open Range Livestock Industry in Colonial Georgia," Georgia Review (Spring, 1963), p. 86.

[84]St. John de Crevecouer, Sketches of Eighteenth Century America: More "Letters" from an American Farmer," ed. Henri L. Bourdin, Ralph H. Gabriel, and Stanley T. Williams (New Haven: Yale University Press, 1925), p. 130; William Stephens, The Journal of William Stephens, 1741-1745, ed. E. Merton Coulter, Wormsloe Foundation Publications 2 and 3 (Athens: University of Georgia Press, 1958-1959), II, p. 175; Schoef, Travels in the Confederation, I, p. 160.

[85]Laing, Cattle in Virginia, pp. 146-47 quoting "Extracts of Letters from an Officer in One of the Regiments," The Expedition of Major General Braddock to Virginia (London, 1755), pp. 10-12; Clayton, The Reverend John Clayton, p. 79.

their brands with the County Court as early as 1649 in Maryland.[86] Usually this mark or brand was simply the initials of the owner burned into the hide with a hot iron, which in later times would be known as a running iron. For example, George Washington marked his cattle with the brand GW.[87] The bulls, steers, and oxen were then separated from the cows and calves. The latter were then kept near the plantation house for fresh milk.[88] In these spring roundups any cattle without a brand became the property of those catching them and branding them.[89]

The cattle fed on wild forage until autumn. In November the cattle which were to be slaughtered were driven to the planter's homestead. Fattened from a summer's grazing and, perhaps, finished with corn, the planter selected his best cattle for slaughter. The traditional date for slaughter was Martinsmas, November 11th. By that time the weather was usually sufficiently cool enough to prevent the rapid putrefication of the meat, yet it was still warm enough to allow proper aging. Aging was important to tenderize the tough, stringy beef produced by these animals. By Christmas the planters and their families could enjoy the

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[86] An Act touching Hoggs & marking of Cattell, Assembly Proceedings, April 2-21, 1649, Archives of Maryland, I, p. 251; An Order for Recording the marks of Cattel & Hoggs, Assembly Proceedings, April, 1650, ibid., I, p. 295; Gray, Agriculture in the Southern United States, I, pp. 144-45.

[87] Entry for November 1, 1765, George Washington, The Diaries of George Washington: 1748-1799, ed. John C. Fitzpatrick (4 vols.; Boston: Houghton Mifflin Co., 1925), I, p. 216.

[88] Michel, "Report of a Journey to Virginia," p. 124; Walcot, "Husbandry in Colonial New England," pp. 240-41.

[89] Anburey, Travel Through Parts of America, II, p. 190.

traditional Christmas dish of roast beef.[90]

Although autumn was the desired time for slaughtering cattle, any animal which died or had to be killed because of disease or injury was butchered.[91] However, cattle butchered at times other than in the fall were usually consumed immediately with any surplus beef distributed among the planter's neighbours.[92]

Using an average live weight of 750 pounds, a planter could obtain a carcass of about 450 pounds. From the carcass he would be able to obtain about 270 pounds of usable meat.[93] The rest was bone, tallow, and offal. In addition to the meat, the planter obtained other usable products from a cow--hide for leather, cow-horns for containers, hooves for glue, tallow for candles and soap, and intestines for sausage casings. The slaughtered cow also provided gelatin and felt.[94]

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[90]John Lawson, A New Voyage to Carolina: Containing the Exact Description and Natural History of that Country: Together with the Present State thereof. and a Journal of a Thousand Miles, Travel'd thro' several Nations of Indians. Giving a Particular Account of their Customs, Manners, &c. (London, 1709), pp. 80-81; Johann Martin Bolzius, "Johann Martin Bolzius Answers a Questionnaire on Carolina and Georgia," trans. and ed. Klaus G. Loewald, Beverly Starika, and Paul S. Taylor, William and Mary Quarterly, 3rd Ser., XV (April, 1958), p. 229; Howard, The Horse in America, p. 31.

[91]Smithcors, American Veterinary Profession, p. 8.

[92]John Hammond, "Leah and Rachel, or the Two Fruitfull Sisters Virginia and Mary-Land," in Clayton Colman Hall, ed., Narratives of Early Maryland: 1633-1684 (New York: Barnes & Noble, Inc., 1910), p. 298; Brissot, New Travels in the United States, p. 254.

[93]James T. Lemon, "Household Consumption in Eighteenth-Century America and Its Relationship to Production and Trade: The Situation Among Farmers in Southeastern Pennsylvania," Agricultural History, XLI (January, 1967), pp. 61, 63; Robert D. Mitchell, "Agricultural Change and the American Revolution: A Virginia Case Study," ibid., XLVII (April, 1973), p. 124.

[94]Howard, The Horse in America, pp. 31-32.

The butchering and preserving of beef was a major task in which all hands would be used. After butchering the carcass, some of the meat was hung in an attic or shed to age. Beef which was to be preserved for later use was either pickled (salted), dried, or smoked. Fresh beef which was to be pickled was first rubbed with salt and then packed in a barrel for ten days. Then the salt was brushed off and the pieces of meat were placed in a brine of saltpeter, salt, and water. Sometimes sugar was added to the brine mixture. After curing for another ten days, the beef was red in color and was ready for consumption when needed. Meat could be preserved by pickling for up to ten weeks.[95] Such cured beef could then be dried, if longer term storage was required. The pieces of beef were cut into thin strips and hung in the sun to dry.[96] Dried beef was "so compact" that pieces could be shaved off in "thin, transparent peelings."[97]

The fresh veal and beef from the Potomac region was described as being fat and sweet tasting.[98] Fresh beef was usually only available for a short period after the cattle were butchered. The length of time that fresh meat was available depended on the weather. For most of the year, the planter's family had to make do with salted or dried beef.[99] Pickled or dried beef was usually boiled for several hours in several changes of water to prepare

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[95]Laing, Cattle in Early Virginia, pp. 161-62; "Pocock's Pickle for Meat," Medical and Agricultural Register, II (August, 1807), p. 317.

[96]Schumacher, The Northern Farmer, p. 73.

[97]Crevecouer, Sketches of Eighteenth Century America, p. 124.

[98]Jones, Present State of Virginia, p. 79.

[99]Mittelberger, Journey to Pennsylvania, p. 49.

it for serving.

Although most beef was used for domestic purposes, some excess salted beef was shipped to the West Indies or used for victualling the tobacco fleet.[100] However, a trade in meat, dairy products, and livestock never developed into a significant branch of commerce in colonial Maryland. Legislation may have had an effect on this trade. In the late seventeenth and early eighteenth centuries, the Maryland General Assembly discouraged the export of hides and meats. In 1681 and 1692 hide exports were restricted to encourage domestic tanning and shoemaking.[101] When a shortage of beef occurred in 1695 and again in 1704 due to severe winter kills, the Assembly levied an export tax on beef.[102] These acts while designed to meet specific problems, no doubt, discouraged the development of an export meat industry in the colony. In fact, less than 500 barrels of both beef and pork were

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[100] Sanford, Agriculture in the United States, p. 58; A Perfect Description of Virginia (London, 1649), p. 4 in Peter Force, ed., Tracts and Other Papers Relating Principally to the Origin, Settlement, and Progress of the Colonies in North America From the Discovery of the Country to the Year 1776 (4 vols.; Washington, D.C.: Peter Force, 1836-1846), II.

[101] An Act for restraining the exportacon of Leather & Raw Hides Deare & Elke Skins out of this province for the encouragemt of Tanners & Shoemakes, Assembly Proceedings, August--September 1681, Archives of Maryland, VII, pp. 206-07; An Act restraining the Exportation of Leather and Raw Hydes, Deer and Elk skins out of this Province for the encouragement of Tannrs and shoemakers, Assembly Proceedings, May 10--June 9, 1692, ibid., XIII, pp. 496-98.

[102] An Act for laying an Imposition on Severall Commoditys Exported out of this Province, Assembly Proceedings, October 3-19, 1695, ibid., XIX, pp. 276-79; An Act for laying an Imposition on Severall Commoditys export out of this Province, Assembly Proceedings, September 5--October 3, 1704, ibid., XXVI, pp. 275-78.

exported in most years from Maryland with the average amount being only 83 barrels per year.[103] A barrel of beef averaged 220 pounds and was valued in 1746 at 2 d. per pound or 1 £. 16 s. 8 d. per barrel.[104] In terms of tobacco--the common currency--a barrel of pickled beef could be purchased for about 500 pounds of tobacco.

Whether a visitor to a colonial plantation would find milk or not depended upon the season and the herd of cattle there.[105] The planters let their calves run with the cows the year round, while at the same time milking the cows.[106] Milking a range cow was in itself a challenge. One common method was to fence an area near the watering place. When the cows and their calves came to drink, the calves were separated from the cows and the cows were milked. To accomplish this separation, a small gate was made in the fence which was large enough for the cow's head to pass through but not large enough for the cow's body. As the cow strained to get

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[103]Answers to Queries of Council of Trade and Plantations, June 8, 1697, Assembly Proceedings, May 26--June 11, 1697, ibid., XIX, p. 540; Schumacher, The Northern Farmer, p. 165 quoting figures from Customs 16, Vol. I.

[104]Laing, Cattle in Early Virginia, p. 249 quoting Frederic Morton, The Story of Winchester in Virginia (Strasberg, Va., 1925), pp. 56-58; Assembly Proceedings, November 6-12, 1746, The Lower House, Archives of Maryland, XLIV, p. 441.

[105]Hammond, "Leah and Rachel," p. 292; Edward Eggleston, "Husbandry in Colony Times," Century Magazine, XXVII (January, 1884), p. 443; Lawson, New Voyage to Carolina, p. 81; Stephens, Journal, 1741-43, p. 214.

[106]John Bartram and William Bartram, John and William Bartram's America: Selections from the Writings of the Philadelphia Naturalists, ed. Helen Gere Cruickshank (New York: The Devin-Adair Co., 1957), p. 125.

through the gate to her calf, she was milked. After milking, the cow was turned loose to her calf by opening the gate or removing a post stuck in the ground. The calf then stripped the cow's remaining milk.[107] In the Southern colonies the average production per cow was much lower than in New England. Seldom did the common cow give much more than two quarts of milk a day and often it was much less. This compares to nineteen to twenty quarts a day on well-managed dairies in New Jersey.[108] One writer noted that it would take three cows to produce adequate milk for a family of ten people most of whom were children.[109] Some farmers attempted to increase the amount of milk available for their own use by substituting "formulas" for calves. One such substitute was ground corn mixed with water.[110]

Butter was another important product derived from colonial cows. The amount of butter from each cow in the Southern colonies was small, probably fifty pounds or less per year.[111] This was due to the poor feed which produced milk low in butterfat content. Very

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[107] Ibid., pp. 125-26; Laing, Cattle in Early Virginia, p. 147 quoting "Extracts of Letters from an Officer in One of the Regiments," The Expedition of Major General Braddock to Virginia (London, 1755), p. 12.

[108] Gray, Agriculture in the Southern United States, pp. 204-05; Schumacher, The Northern Farmer, pp. 19-20; Lemon, "Household Consumption in Eighteenth-Century America," p. 63.

[109] Algernon Roberts, "Expenses and Profits of a Dairy," Memoirs of the Philadelphia Society for Promoting Agriculture, I, p. 96.

[110] "Milk," Agricultural Museum, I, p. 224.

[111] Lemon, "Household Consumption in Eighteenth-Century America," p. 63; Schumacher, The Northern Farmer, p. 20; Fox, "The Old Farm," p. 28.

little butter was exported.[112] In the Southern colonies the climate and the lack of cold, fast-flowing streams in the Tidewater made the keeping of butter difficult. The storage of butter was particularly difficult in the summer months when the greatest amounts of milk were available for butter making.

When enough milk with a high butterfat content was available, butter was made. Most farm wives recognized the importance of clean utensils in making butter. Contemporary recipes for butter emphasize the need for washing churns and butter receptacles with hot water.[113] To make butter, milk was allowed to stand in a cool place. After 24 to 48 hours, depending on the outside temperature, the cream would rise to the top. The cream was carefully skimmed from the surface. The butter churn, usually a pump churn, was carefully washed. If the churn was made of oak, the inside was rubbed with salt before using. Earthenware churns did not require rubbing down with salt. After cleaning, the cream was poured into the churn and pumped with even steady strokes until the butter was made. The butter was then washed several times with clean water. Salt was mixed with the butter to taste. Most recipes recommended one part of salt to sixteen of butter. If the butter was pale in color, carrot juice might be added to turn the butter yellow. The butter was then pressed into containers and covered with a linen cloth until it had cured. The butter was ready for use after about a month of curing. Although these recipes for butter were simple, the making of tasty, pleasant appearing butter was difficult to do.

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[112] Schumacher, The Northern Farmer, p. 165 quoting Customs 16, Vol. I.

[113] Joseph Hazard, "On Making Butter and Cheese," Agricultural Museum, II, pp. 169-70.

Indeed, many butter recipes were followed by recipes for restoring bad butter or freshening butter.[114]

For the middle-class family, cheese was probably more frequently available than butter for the table. Fresh milk cheese was the most commonly made cheese. To make fresh milk cheese, milk was poured into a clean tub which was lined with a cheese cloth. When the milk had cooled to room temperature, a spoonful of rennent was added for each gallon or two of milk. Rennent was usually obtained from the contents of a calf's stomach. A calf which was still suckling when slaughtered was the preferred source of rennent. Occasionally, the rennent was sweetened by adding herbs such as saffron, cloves, or mace. After the rennent was added, the milk was allowed to stand undisturbed until the curd formed. The cheese cloth was then removed from the vat thus separating the curd from the whey. The curd was broken up and mashed. The cheese was pressed into a shallow pan or mold and the whey carefully wiped off. The cheese was covered with cheese cloth and taken to a cheese press. The cheese was pressed and remained in the press for a half hour or more. Then it was taken out, covered with a clean cloth and pressed again. After several pressings, the cheese was rubbed with salt. For the next several days the salting was repeated to insure the dryness of the cheese. When the cheese maker was satisfied that the cheese had been thoroughly dried, it was stored in a cheese cellar or spring house. The cheese was left

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[114] Ibid., pp. 170-75; "To Make Butter in the Winter," Agricultural Museum, I, pp. 223-24; Laing, Cattle in Early Virginia, p. 427 quoting The New Family Receipt Book Containing Eight Hundred Truly Valuable Receipts in Various Branches of Domestic Economy (Philadelphia: Collins and Croft, 1818), pp. 134-35; J. Anderson, "Rules and Directions for Putting Down Butter," The Medical and Agricultural Register, pp. 89-90.

to age for several years before being ready for use.[115] During the aging process, the cheese would become covered with mold and during warm periods, fluid would ooze out. This did not affect the cheese. To prevent the cheese from taking on a rancid taste, women were advised to put a tablespoon of salt with each gallon of milk set out to make cheese.[116]

Both butter and cheese were stored in spring houses. The spring house was usually built over a fast-flowing stream. The temperature of the water and the evaporation kept the spring house interior cool.[117] The lack of swiftly flowing streams in the tidewater area of Southern Maryland, particularly during the hottest months of the year, made the storage of dairy products difficult. Cheese, of course, did not require the cool temperatures that butter did for storage, but it did for proper aging.

For several reasons, the middle colonies imported large quantities of cheese from abroad and from the Northern colonies.[118] The poor quality of feed meant

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[115]Hazard, "On Making Butter and Cheese," pp. 176-78; G. E. Fussell, The English Dairy Farmer: 1500-1900 (London: Frank Cass & Co., Ltd., 1966), pp. 224-25.

[116]"To Dairy Women," Medical and Agricultural Register, II (June, 1807), p. 287.

[117]Ferdinand-M. Bayard, Travels of a Frenchman in Maryland and Virginia with a Description of Philadelphia and Baltimore in 1791 or Travels in the Interior of the United States, to Bath, Winchester, in the Valley of the Shenandoah, etc., etc., during the Summer of 1791, trans. and ed. Ben C. McCary (Williamsburg, Va.: Ben C. McCary, 1950 [1798?]), p. 12.

[118]Schumacher, The Northern Farmer, p. 130; William Nelson to Mr. John Norton, Yorktown, February 27, 1768, Frances Norton Mason, ed., John Norton and Sons: Merchants of London and Virginia: Being the Papers from their Counting House for the Years 1750 to 1795 (Richmond: The Dietz Press, 1937), p. 38; Paul H. Giddens, "Trade and Industry in Colonial Maryland, 1753-1769," Journal of Economic and Business History, IV (May, 1932), pp. 526-27.

low butterfat content in the milk. In addition, cheese and butter require time to make--time which could be better used in the fields. Finally, the greatest production of milk occurred during the summer months, which were a poor time for making butter and cheese because of the temperatures.[119]

Whether the colonial planter in Maryland fed his livestock depended upon how much unimproved land he had and the severity of the weather. Those planters with access to unimproved and uncultivated forest lands tended to turn their cattle out to forage for themselves. As the population increased and the amount of forest declined because of the needs for firewood, lumber, and cleared lands for crops, planters were forced to provide provender for their cattle.[120]

Of all the possible forage plants, Indian corn or maize was the most readily available and popular. Planters frequently topped their corn after the ears had fully formed.[121] The portion of the stalk above the topmost ear together with the leaves was cut and put into stacks until it was needed for winter feeding. Corn stalks were

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[119]Sanford, Agriculture in the United States, pp. 51-52.

[120]Nathaniel Shrigley, A True Relation of Virginia and Mary-Land: With the Commodities therein, which in part the Author saw; the rest he had from knowing and Credible persons in the Moneths of February, March, April and May (London, 1669), in Force, Tracts and Other Papers, III, No. 7, p. 5; "Narrative of a Voyage to Maryland," p. 329; Mittelberger, Journey to Pennsylvania, pp. 51-52; Jones, Present State of Virginia, p. 78; Schoepf, Travels in the Confederation, I, p. 165.

[121]Entry for September 19, 1774, John Harrower, The Journal of John Harrower: An Indentured Servant in the Colony of Virginia, 1773-1776, ed. Edward Miles Riley (Williamsburg: Colonial Williamsburg, Inc., 1963), p. 64.

the first forage fed to cattle in the winter.[122] The stalks were either fed whole or chopped up with a hatchet.[123] Other winter fodders included pumpkins, carrots, and turnips. Of course, carrots and particularly turnips could be left in the ground until they were needed for feeding.[124]

The path of settlement might well be traced through the planting of pastures. As the open range and uncultivated forest clearings declined through settlement and use, more and more farmers and planters were forced to improve their cattle ranges. Beginning in New England, farmers cultivated two native grasses--timothy or herd grass and fowl or foul meadow grass, and a variety of imported English grasses.[125] By the middle of

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[122]John Winthrop, Jr., "John Winthrop, Jr., on Indian Corn," ed. Fulmer Mood, New England Quarterly, X (March, 1937), p. 129; Jones, Present State of Virginia, p. 40; Kalm, Travels in North America, I, p. 84; William Dana Emerson, History and Incidents of Indian Corn, and Its Culture (Cincinnati: Wrightson & Co., Printers, 1878), p. 419; John Lorain, Nature and Reason Harmonized in the Practice of Husbandry (Philadelphia: H. C. Carey & I. Lea, 1825), pp. 217, 258-59; Adam Beatty, Southern Agriculture, Being Essays on the Cultivation of Corn, Hemp, Tobacco, Wheat, etc. and the Best Method of Renovating the Soil (New York: C. M. Saxton, 1843), pp. 92-93.

[123]Entries for December 16, 1776 and February 21, 1776, Wilson Account Books; Thomas Jefferson to Charles Wilson Peale, Monticello, March 16, 1817, Jefferson, Farm Book, p. 237.

[124]Ibid., p. 111; Thomas Jones to Mrs. Jones in England, September 30, 1728, Virginia Magazine of History and Biography, XXV (April, 1918), p. 173; Thomas Jefferson to Tristran Dalton, Monticello, May 2, 1817, Thomas Jefferson, Thomas Jefferson's Garden Book 1766-1824 with Relevant Extracts from his Other Writings, ed. Edwin Morris Betts (Philadelphia: American Philosophical Society, 1944), p. 570.

[125]Phillips, Horse Raising in New England, p. 890; Sanford, Agriculture in the United States, p. 92; Eliot, Upon Field Husbandry, pp. 61-62.

the eighteenth century, planters along the Potomac began to improve their pasturage by planting grasses.[126] In spite of the demonstrated value of better pasturage, the practice of planting improved grasses did not apparently extend to the lesser planters.[127] By the beginning of the nineteenth century, over twenty types of forage grasses were being cultivated in the Chesapeake area.[128]

As livestock raisers had done for centuries, the colonial planter stacked his hay or placed it in long ricks.[129] The most common method was a round haystack with a post or pole through the center. The vertical post or pole provided ventilation for the stack and thus prevented spontaneous combustion of the hay. One estimate of the amount of hay needed for winter feeding was two tons of hay per cow.[130]

Cattle, in addition to their forage, needed salt for their well-being. Salt was imported and was often

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[126]Kerr, "Introduction of Forage Plants," pp. 88-89; Entry for March 24, 1760, Washington, Diaries, I, pp. 141-42; Entry for April 16, 1760, ibid., I, p. 155; George Washington to Robert Cary & Co., York River, October 24, 1760, George Washington, The Writings of George Washington: From the Original Manuscript Sources, ed. John C. Fitzpatrick (39 vols.; Washington: U. S. Government Printing Office, 1931-1944), III, p. 354; Entry for September 8, 1761, Washington, Diaries, I, p. 178; George Washington to Robert Cary & Co., Mount Vernon, September 23, 1761, Washington, Writings, III, p. 367; Entry for October 15, 1761, Washington, Diaries, I, p. 178.

[127]Dr. David Stuart to George Washington, November 18, 1791, Gertrude R. B. Richards, ed., "Dr. David Stuart's Report ot President Washington on Agricultural Conditions in Northern Virginia," Virginia Magazine of History and Biography, LXI (July, 1953), p. 267.

[128]Jefferson, Farm Book, p. 246.

[129]Bausman and Munroe, "Tilton's Notes on Agriculture," p. 183.

[130]Jefferson, Farm Book, p. 73.

in short supply.[131] In trade, a bushel of salt could be obtained for a bushel of corn.[132] In addition to keeping livestock fit, the salting several times a week kept the livestock near the plantation. One common means of giving salt to livestock was to bore holes in a log and fill the holes with salt.[133]

During the winter months, when cattle often had to be fed, wise farmers practiced stock penning. By placing their cattle in a confined area, the ground could be fertilized with their manure. Since there was an objectionable taste in tobacco grown on penned lands, the practice of penning was restricted to corn or wheat lands.[134] This practice was far from universal and accumulations of manure were frequently considered a nuisance rather than as a means of restoring soil fertility.[135]

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[131]Address to the Proprietary by the Upper and Lower Houses of Assembly, April 3, 1736, Assembly Proceedings, April 3, 1736, The Upper House, Archives of Maryland, XXXIX, p. 345; Report of the Committee of Laws, May 24, 1748, Assembly Proceedings, May 10--June 11, 1748, The Lower House, ibid., XLVI, pp. 80-81; Assembly Proceedings, October 2--November 17, 1753, ibid., L, pp. 266-68.

[132]Entry for May 3, 1775, Harrower, Journal, p. 95.

[133]Michel Guillaume St. Jean de Crevecouer, Crevecoeur's Eighteenth-Century Travels in Pennsylvania & New York, trans. and ed. Percy G. Adams (Louisville: University of Kentucky Press, 1961 [1801]), p. 148; Crevecoeur, Sketches of Eighteenth Century America, pp. 112-13; Schoepf, Travels in the Confederation, II, pp. 139-40.

[134]Durand, A Huguenot Exile in Virginia, pp. 117-18; Clayton, The Reverend John Clayton, pp. 79-80; Eggleston, "Husbandry in Colony Times," p. 477; Jefferson, Farm Book, p. 111.

[135]Schoepf, Travels in the Confederation, II, pp. 32, 48; Fox, "The Old Farm," p. 22.

In spite of the benefits which could be obtained from penning cattle for manure, most planters let their stock roam in the woods as much as possible. Almost from the date of settlement, planters were forced by law, if not by practicality, to fence their corn fields to prevent the depredations of wandering cattle. Although fenced, cattle did break through to eat the corn, thus the law provided that damages could be recovered from the owners of cattle which strayed into grain fields.[136] Fences were usually five feet or higher. Before the middle of the eighteenth century almost all fences in the Chesapeake colonies were snake fences. As wood for fencing became scarcer, post and rail fences replaced snake fencing. If possible, a planter used red cedar for his fences. Chestnut and oak were also used for fencing because of their durability.[137] The construction of a worm or snake fence was such that it was a fairly effective obstacle to cattle and horses. To construct a snake fence five to six ten foot-rails were stacked in an intersecting manner with the next section. At the intersections a short pole was leaned on each side against the topmost rail. The two poles crossed forming a notch. A heavy rail, called a rider, was placed into these notches locking the rails in place.[138]

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[136] An Act for Fencing of Ground, Assembly Proceedings, October 1640, Archives of Maryland, I, p. 96; An Act concerning the height of Fences, Assembly Proceedings, May 10--June 9, 1692, ibid., XIII, pp. 472-73; An Act for Reviveing a Certaine Act of Assembly of this province ascertaining the height of ffences to prevent the Evill Ocationed by multitue of horses and Restraining horse Rangers within the Province, Assembly Proceedings, November 29--December 17, 1708, ibid., XXVII, p. 373; Assembly Proceedings, October 2--November 17, 1753, Acts, ibid., L, pp. 282-83.

[137] Kalm, Travels in North America, I, pp. 50, 77.

[138] William Tatham, An Historical and Practical Essay on the Culture and Commerce of Tobacco (London: T. Bensley, 1800), p. 10n.

As transplanted Englishmen, colonial planters exerted little effort caring for their livestock.[139] This lack of care led to starvation, or at best, debility. Animals so neglected were easy prey for preators and disease. Severe winters, such as that of 1694-1695, caused widespread stock losses.[140] Those cattle which survived the winter were weakened and became easy prey for wolves and bears. Calves born in the spring were particularly susceptible to becoming a wolf's or bear's dinner.[141]

In order to control the wolf population, bounties were offered in Maryland for the killing of wolves. An act of 1728 authorized a bounty of two hundred pounds of tobacco for each wolf's head presented to a Justice

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[139]John Clayton, A Letter from Mr. John Clayton . . . to the Royal Society, May 12, 1688, in Force, Tracts and Other Papers, III, No. 12, pp. 25-26; Jones, Present State of Virginia, p. 138; Anburey, Travels through Parts of America, II, pp. 260-61; John Peter Purry et al., A Description of the Province of South Carolina, Drawn up at Charles Town, in September 1731, in Force, Tracts and Other Papers, II, p. 8; "Journal of a French Traveller in the Colonies, 1765, I," American Historical Review, XXVI (July, 1921), p. 739; E. Fussell, The English Dairy Farmer: 1500-1900 (London: Frank Cass & Co., Ltd., 1966), p. 57.

[140]May 22, 1695, Proceedings of the Council of Maryland, 1694-1697, Archives of Maryland, XX, p. 242; July 29, 1663, Charles County Court Proceedings, 1662-1666, ibid., LIII, p. 375.

[141]Schoepf, Travels in the Confederation, I, p. 291.

of the Peace.[142] By the middle of the eighteenth century, the plantations along the lower Potomac were probably nearly rid of the threat of wolves. The problem, however, continued to plague the more recently settled areas in the western part of the colony. In 1749 the bounty for wolves' heads was removed in Frederick County, but because of livestock losses, it was reinstated two years later.[143]

The lack of care and its effects on cattle made them susceptible to diseases. In 1674 half of the cattle in Virginia were killed by "a plague."[144] Fortunately, livestock in colonial America were not threatened by as

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[142]Charles County Court Proceedings, 1662-1666, Archives of Maryland, LIII, pp. 274, 523, 619; Charles County Court Proceedings, 1668-1674, ibid., LX, pp. 229, 348, 431, 586; An Act for Killing of Wolves, Assembly Proceedings, June 29--July 22, 1699, ibid., XXII, p. 479; An Act Reviveing an Act Entituled an Act for Killing Wolves and Crows, Assembly Proceedings, October 24--November 4, 1710, ibid., XXVII, p. 576; The Act for repealing the several Acts of Assembly now in force in this Province that give Allowance for killing Wolves, Crows, and Squirrels only, Assembly Proceedings, October 26, 1723, The Upper House, ibid., XXXIV, p. 504; An Act to to encourage the destroying of Wolves, Crows, and Squirrels, Assembly Proceedings, October 3--November 2, 1728, Acts, ibid., XXXVI, pp. 278-81; An Act Repealing Part of an Act Entituled, An Act to encourage the destroying of Wolves, Crows, and Squirrels, Assembly Proceedings, May 24--June 24, 1749, Acts, ibid., XLVI, pp. 306-07.

[143]An Act to take off the Allowance for killing Wolves in Frederick County, Assembly Proceedings, May 24--June 24, 1749, Acts, ibid., XLVI, pp. 312-13; An Act for Destroying Wolves in Frederick County, Assembly Proceedings, May 15--June 8, 1751, Acts, ibid., XLVI, pp. 608-09.

[144]Louis D. Rubin, Jr., Virginia: A Bicentennial History (New York: W. W. Norton & Co., Inc., 1977) p. 20.

many diseases as cattle in Europe.[145] This lack of cattle diseases was due to: the relative isolation of one herd from the another making the transmission of infectious diseases difficult; the action of predators, which culled weak and diseased animals from a herd; and the relative scarcity of harmful microorganisms in new lands. An American verterinary advisor listed the following diseases of cattle in the early nineteenth century: fever, murrain, cough, wind cholic, scab or scurf, bladders, taint or garget, blains, worms, horn ail, overflowing of the gall, loose teeth, barbs in the mouth, vomiting, loss of cud, wens, broken horns, broken legs, sours, and tail sick.[146] Obviously, some of these "diseases" are the result of nutritional deficiencies or accidents. In many cases, his names of diseases are descriptions of symptoms.

Perhaps, the most widespread and serious disease of cattle in colonial America was the bloody murrain or as it is now known, cattle tick fever. From its introduction by the Spanish to the Southern colonies, this disease spread as far north as the Mason-Dixon line and occasionally crossed it. Cattle herds were decimated when an outbreak occurred. The disease is only transmitted by the cattle fever tick (Boophilus annulatus). Colonial planters were baffled as to the cause and the cure for this often fatal disease of cattle.[147]

Another disease of cattle prevalent in colonial

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[145] Crevecceur, Eighteenth Century America, p. 137.

[146] Jewett, The New England Farrier, pp. 47ff.

[147] Stephens, Journal, 1741-1743, pp. 77, 93, 222; Benjamin Harrison to Dr. James Mease, January 21, 1825, Memoirs of the Philadelphia Society for Promoting Agriculture, V, p. 92; W. M. MacKellar, "Cattle Tick Fever," Keeping Livestock Healthy: Yearbook of Agriculture, 1942 (Washington: U. S. Government Printing Office, 1942), p. 573.

America was called the "blind" or "Spanish" staggers. This disease may have been anaplasmosis, an infectious disease of the red blood cells. One of the symptoms of this disease was a brain disturbance which caused the cattle to stagger about. The number of cattle which died from the blind staggers varied with the herd. As a result a number of home nostrums were concocted and were considered efficacious in herds with low numbers of fatalities. In fact, the animals which recovered did so in spite of the treatment rather than because of it.[148]

As with other livestock, bleeding was considered a spring tonic. At least one "authority" recommended that the spring bleeding take place on the increase of the moon for the best effect.[149] Another spring tonic useful for cattle weakened by the winter was a dogwood bough tied around the cow's neck--at least this remedy did not harm the cow.[150]

Although woefully neglected when well and treated with nostrums with occasionally fatal "curing" properties when ill, colonial cattle provided the Potomac planter with a welcome change from his diet of corn and pork. Beef from these bony, tough, range animals was a rare treat which the whole neighborhood enjoyed during the winter months.

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[148]Crevecouer, Eighteenth Century America, p. 137; Entry for April 18, 1770, Landon Carter, The Diary of Colonel Landon Carter of Sabine Hall, 1752-1778, ed. Jack P. Greene (2 vols.; Charlottesville: The University Press of Virginia, 1965), I, p. 390; George W. Stiles, "Anaplasmosis: A Disease of Cattle," Keeping Livestock Healthy, p. 579.

[149]Jewett, The New England Farrier, p. 59.

[150]Eggleston, "Husbandry in Colony Times," p. 443.

SWINE

The planter might love his horse, admire his cattle, but he respected his hogs. Of all colonial livestock, perhaps, none was more remarkable or valuable than the common woods hog. Without swine many of the early settlers would have probably perished and certainly they would have had a poorer diet.

The hog quickly adapted to the New World and took over the woods as his domain. As the most prolific of livestock, the hog became the most frequently consumed meat in the colonial planter's diet. In addition to their rapid increase, hogs had the virtue of maturing rapidly. Although the colonial hog would be easily recognizable to a twentieth century observer, he was not an animal of great beauty--he was, however, very suitable for the rough and ready life in the forest which spread from the northern reaches of Massachusetts to the swamps of Florida.

Nearly every group of settlers brought swine with them to the New World. In addition, live hogs were frequently carried aboard ships for the use of the crew.[151] Thus the progenitors of what became known as the "common American hog were from Europe, Africa, and the East Indies. In America, the hog quickly became the first of many animals to mix in the melting pot.

Long-legged, slab-sided, long-snouted, long-bristled, fierce, and self-reliant are words use to

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[151]Colonel Norwood, A Voyage to Virginia, in Force, Tracts and Other Papers, III, No. 10, p. 7; B. R. Evans, The Story of Durocs: The Truly American Breed of Swine (Peoria, Ill.: United Duroc Association, 1946), p. 11; Mittelberger, Journey to Pennsylvania, p. 101.

describe the new "American"--the common woods hog.[152] These common hogs were of various colors and markings from pure white to black. They were spotted, belted, or solid in color.[153] One Maryland planter had black, white, red, blue, sandy, and spotted hogs.[154]

Not until the end of the eighteenth century did men begin to differentiate between breeds of swine. Most hogs were identified by the place of origin. For example, there were "Calcutta" hogs, Berkshire hogs, East Indian hogs, Byfield hogs, Russian hogs, and Guinea hogs.[155] The most popular "breed" in England in the eighteenth century was the Old English Berkshire. This "breed" was a large, reddish-brown, coarse-bristled

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[152]Fletcher, Pennsylvania Agriculture, p. 187; S/ilas/ M. Shepard, The Hog in America: Past and Present with Suggestions upon Farm, Pens, Breeds, Breeding, Pedigreeing, Standard of Excellence, Selection of Animals, Management of Swine, Selling and Other Subjects of Importance to Swine Breeders (Indianapolis: Swine Breeder's Journal, 1896), p. 20; Merrill K. Bennett, "Aspects of the Pig," Agricultural History, XLIV (April, 1970), pp. 233-34; Jones, Present State of Virginia, p. 201n.; William Youatt and W. C. L. Martin, The Hog: A Treatise on the Breeds, Management, Feeding and Medical Treatment of Swine with Directions for Salting Pork and Curing Bacon and Hams (New York: C. M. Saxton and Co., 1856), p. 60.

[153]Shepard, The Hog in America, p. 262.

[154]Entry for October 8, 1767, Wilson Account Book.

[155]From Edmund Bacon's Reminiscences, Jefferson, Farm Book, p. 147; Robert Henderson, A Treatise on the Breeding of Swine, and Curing of Bacon: With Hints on Agricultural Subjects (Leith, 1811), pp. 13-14; Roger Atkinson to Samuel Pleasants, Mansfield, October 1, 1744, "Letters of Roger Atkinson," ed. A. J. Morrison, Virginia Magazine of History and Biography, XV (April, 1908), p. 354; Charles Wayland Towne and Edward Norris Wentworth, Pigs: From Cave to Corn Belt (Norman: University of Oklahoma Press, 1950), p. 174; Thomas Jefferson to Joel Yancey, Monticello, November 16, 1816, Jefferson, Farm Book, p. 145; Haworth, George Washington, Farmer, p. 147.

hog.[156] From Africa, the colonists obtained the red Guinea hog. Ships engaged in the slave trade deposited the Guinea hog at nearly every location that they touched.[157] Another popular "breed" in England was the "Black breed." This breed was described as short-necked, deep-sided, short-snouted, with low bellies and short legs.[158] Not surprisingly, some Americans shunned "the Black colored" hogs, which were considered "sickly."[159] The black breed would have been physically at a disadvantage for foraging in the woods with his low belly, short snout, and short legs. By the middle of the eighteenth century, some of the large white hogs from Pennsylvania and Delaware made their way down the Chesapeake Bay to Maryland and Virginia. These white hogs probably originated in the Netherlands or Sweden. Because of their size, they were a welcome addition to the breeding stock of the colonial Maryland planters.[160] Thus out of many sources the American common hog developed. It was a beast well-suited to conditions in this new land.

While cattle and horses received little care, hogs received even less.[161] Few, indeed, very few, planters did anything more than "harvest" pork. The abundance of

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[156] Evans, The Story of Durocs, p. 11; Towne and Wentworth, Pigs, pp. 171-72.

[157] Ibid., pp. 170-71; Haworth, George Washington, Farmer, p. 147.

[158] G. E. Fussell, "Animal Husbandry in Eighteenth Century England: Part 2," Agricultural History, XI (July, 1937), p. 208.

[159] Rutman, Husbandmen of Plymouth, p. 48.

[160] Towne and Wentworth, Pigs, p. 168; Schmidt, Agriculture in New Jersey, pp. 44-45.

[161] Haworth, George Washington, Farmer, p. 57.

roots and mast made the feeding of hogs unnecessary and wasteful. There were chestnuts, acorns, walnuts, herbs, and roots as well as fungi. These wild foods provided a diet which quickly put weight on hogs.[162] Towards the end of the eighteenth century, however, hogs were finished with corn.[163]

The colonial hogs were better able to take care of themselves in the woods than other livestock. The tough skins of colonial hogs gave them protection from the strikes of rattlesnakes, which were often consumed by the hogs.[164] In New England, hogs were the only range livestock which could fight off a pack of wolves.[165]

One practical reason for allowing hogs to roam at will was the nearly impossible task of keeping them enclosed by fences. Whether stone or wooden fences were used, the aggressive and intelligent hog would find a way of going over, under, or through the fence to the succulent crops on the other side. In order to keep them out of their crops, the colonial planters attempted various means of hampering the hog's ability to intrude. To prevent a hog from going through a rail fence, a yoke or "poke" was placed about its neck with a hook on the lower end of the yoke. When the hog attempted to go through or over a fence, the hook would catch on the rail and thus prevent the hog from getting to the other

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[162] Purry, A Description of South Carolina, p. 9; Fox, "The Old Farm," p. 21; "Journal of a French Traveller in the Colonies, 1765, I," American Historical Review, XXVI (July, 1921), p. 736; "A Relation of Maryland," Hall, ed., Narratives of Early Maryland, p. 79; Cresswell, Journal, p. 199.

[163] Towne and Wentworth, Pigs, pp. 85-86.

[164] Schoepf, Travels in the Confederation, I, p. 317.

[165] Clemen, American Livestock and Meat Industry, p. 24.

side of the fence.[166] Since yokes tended to retard the hog's growth, some planters used other methods such as cutting the hog's snout to prevent rooting, blinding it with a red hot needle, or placing a hobble on its hind legs to prevent it from clambering over the fence.[167]

In order to identify their hogs and to deter hog stealers, hogs were marked. The usual method of marking hogs was to clip out parts of their ears. These hog marks were registered with the County Justices of the Peace or Sheriff.[168]

While most planters let their hogs roam the woods, some farmers did house their swine for at least part of the year.[169] This was done in the period just before the swine were slaughtered. Housing the hogs to fatten them with corn was most prevalent during the late colonial period when the amount of mast was scarcer.

The tastiness of pork from the Chesapeake region was widely known even in the colonial period. Every farmer knows that the flavor of pork is dependent upon what the pig eats.[170] The mast-fed hogs of colonial

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[166] Crevecouer, Eighteenth Century America, p. 82; Esther Louise Larsen, ed. and trans., "Pehr Kalm's Observations on the Fences of North America," Agricultural History, XXI (April, 1947), p. 76; Shepard, The Hog in America, p. 5.

[167] Crevecouer, Eighteenth Century America, p. 82; Entry for December 16, 1774, Carter, Diary, II, pp. 897-98.

[168] An Act touching Hoggs & marking of Cattell, Assembly Proceedings, April 2-21, 1649, Archives of Maryland, I, p. 251; An Order for Recording the marks of Cattel & Hoggs, Assembly Proceedings, April 2-21, 1649, ibid., I, p. 295; An Act against Hogstealers and marking of Hoggs, Assembly Proceedings, May 10--June 9, 1692, ibid., XIII, pp. 477-78; Towne and Wentworth, Pigs, pp. 85-86.

[169] Charles County Court Proceedings, 1671-1674, Archives of Maryland, LX, pp. 253-54.

[170] Towne and Wentworth, Pigs, pp. 163-64.

Virginia and Maryland produced a sweet, oily pork. The flavor of mast-fed hogs was distinctly different from corn-fed hogs. In part this difference is due to the difference in the melting point of mast-fed hog's lard. The lard of mast-fed hogs melted at about ten degrees lower than the lard of corn-fed hogs.[171] The Chesapeake region was admirably suited for fattening hogs on mast: the virgin forest was filled with acorns, chestnuts, and walnuts. With the settlement of the region, apples, cherries, quinces, pears, and most of all peaches were added to the mast.[172] The problem with mast-fed hogs was that their pork was not suitable for storage. The very oiliness that gave this pork its unique flavor also made it difficult to smoke or dry because the pork lost so much of its volume.[173]

One advantage of raising hogs is their willingness to eat a wide variety of feeds. When there was a shortage of mast or when a firmer type of pork and lard was desired, hogs were fed a variety of fodders. On Maryland's Eastern Shore hogs were fed fish, particularly yellow perch.[174] In the late eighteenth century

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[171]Lyman Carrier, Agriculture in Virginia, 1607-1699 (Charlottesville: The University Press of Virginia, 1957), p. 29; Clayton, The Reverend John Clayton, pp. 106-07; Lawson, New Voyage to Carolina, p. 81.

[172]Schmidt, Agriculture in New Jersey, p. 85; Shrigley, A True Relation of Virginia and Mary-Land, p. 5; "Narrative of a Voyage to Maryland," p. 329; Gray, Agriculture in the Southern United States, p. 190; Sanford, Agriculture in the United States, p. 60.

[173]Towne and Wentworth, Pigs, p. 164; Clemen, American Livestock and Meat Industry, p. 54.

[174]Arthur Pierce Middleton, Tobacco Coast: A Maritime History of Chesapeake Bay in the Colonial Era (Newport News, Va.: The Mariner's Museum, 1953), p. 415.

when corn was being made into whisky, the spent mash was fed to pigs.[175] Corn or maize had long been recognized as a good feed for fattening hogs and making a sweet tasting pork. The problem for colonial planters along the Potomac was that it took a barrel (five bushels) of corn to fatten one hog.[176] In a tobacco economy, hogs raised on corn alone would have put a severe drain on the time available for the production of the cash crop, tobacco.

Whether the hogs were slaughtered directly out of the woods or penned and fed corn for several weeks, the colonial planter slaughtered his swine late in the fall or in early winter.[177] Usually all hogs over nine months of age, except breeding stock, were slaughtered.[178] Hogs were stunned by a blow from an axe head and their throats slit to bleed to death. After being bled and eviscerated, the hog was scalded in a barrel of water. The bristles being loosened, the hog was removed from the boiling water and the hide scraped. The carcass was then hung by the hind legs until the following morning.

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[175]George Divers to Thomas Jefferson, Albemarle County, January 1, 1793, Jefferson, Farm Book, p. 415.

[176]Douglass, Present State of British Settlements, II, p. 207; J. P. DeGruchy, "On Diseases of Swine," Memoirs of the Philadelphia Society for Promoting Agriculture, II, pp. 32-33; Ezra L'Hommedieu, "On the Feeding of Hogs to Advantage," Medical and Agricultural Register, I (September, 1806), pp. 138-40; Jefferson, Farm Book, p. 75.

[177]John Tayloe, "On Virginia Husbandry," Memoirs of the Philadelphia Society for Promoting Agriculture, II, p. 101; Entry for December 14, 1774, Harrower, Journal, p. 78.

[178]John Taylor, Arator: Being a Series of Agricultural Essays, Practical and Political: in Sixty-Four Numbers (Petersburg, Va.: John M. Carter, 1818), p. 147.

The cool night air firmed the meat and made the subsequent butchering easier.[179] The shoulders and hams were cut from the carcass. The head, feet, and ears were used to make souse. The brain, liver, and kidneys were eaten soon after the slaughter. The intestines were cleaned with hot water and stuffed for sausages. The sausages were made from trimmings from the shoulders and hams mixed with herbs and salt. After the casing was stuffed the sausages were hung in the smoke house to cure. Jowls were also hung in the smoke house and usually were kept until the spring when the other cuts had already been consumed. The remainder of the trimmings and fat were rendered for lard.[180]

The backs and sides of pork were often barreled. Mess pork was the most common type of barreled pork. The sides and backs with the shoulders and hams removed were cut into strips. The strips were then laid between layers of salt in a barrel. After the barrel was full, brine was poured in to cover the meat and the barrel head was put on.[181] Pickled or mess pork lost about one-quarter of its weight in comparison to "green" pork.[182]

The hams and shoulders were preserved by rubbing them down with brown sugar or molasses to draw out the water. Then they were rubbed with salt and placed in a box. The hams and shoulders were covered with salt and left for ten days to two weeks. After being removed from the salt they were rubbed with saltpeter or

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[179] Towne and Wentworth, Pigs, p. 130; Schmidt, Agriculture in New Jersey, p. 85.

[180] Towne and Wentworth, Pigs, p. 131.

[181] Ibid., p. 164n.

[182] Jefferson, Farm Book, p. 39; Entry for September 7, 1771, Jefferson, Garden Book, p. 83.

hickory ashes to preserve their color. They were then hung in a smoke house over a smoldering hickory fire for a month or two.[183]

Most colonial hogs dressed out at between 100 and 150 pounds of meat. This figure was an average weight since all but the breeding stock was slaughtered.[184] One colonial planter from Maryland slaughtered nineteen hogs and obtained "36 hams, 36 shoulders, 18 jowls, 2 midlings" (the portion of meat between the ham and the shoulder), and "92 Peace of Bacon."[185] The middle-class planter would have had between 200 and 300 pounds of dressed pork for each family member per year.

The first step in preparing pork was to wash it carefully. Washing cleaned off the excess salt from pickled pork and the mold and dried drippings from smoked pork. After washing the pork had to be soaked to remove some of the salt and to restore some of the volume lost in preservation. Then the pork was ready for cooking by boiling, frying, or roasting. Boiling was the preferred method as it required the least attention from the cook.[186]

Southern Maryland cooks became famous for their baked ham. Stuffed ham was a traditional English method

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[183]Entry for April 13, 1777, Cresswell, Journal, p. 199; "Receipt for Curing Hams," The Medical and Agricultural Register, I (October, 1806), p. 159.

[184]Entry for January 19, 1760, Washington, Diaries, I, p. 116; An Acct of Pork Kild Decb 17, 1771, Wilson Account Book, Entry for December 15, 1772, ibid.; Entry for December 10, 1772, ibid.; Lemon, "Household Consumption in Eighteenth Century America," p. 83.

[185]An Acct of Pork Kild Decb 17, 1771, Wilson Account Book.

[186]Susannah Carter, The Frugal Colonial Housewife: A Cook's Book wherein The Art of Dressing All Sorts of Vivands with Cleanliness, Decency, and Elegance is explained, ed. Jean McKibben (Garden City, N. Y.: Dolphin Books, 1976 [1772]), pp. 22-23.

of preparing ham. As spring approached, the hams in the smoke house began to putrefy. In order to make these hams edible, slits were cut into the ham and spices, herbs, and greens were stuffed into the slots. The ham was then slowly roasted.[187] These methods of preparing pork were wise precautions against trichinosis.

The relative isolation of swine herds from one another even in the woods, kept infectious diseases from becoming epidemic. However, hogs were susceptible to measles, fever, swine pox, and catarrhs.[188]

Swine measles, which were often called "sore throat," was a common malady in colonial hogs. The causes of measles were as baffling to the colonial planter as were the cures. Measles were ascribed to bad feed and to dirty pens.[189] Death from measles varied with the herd, but sometimes losses were quite high. As with most other diseases in the colonial period, farmers bled their hogs to cure the measles.[190]

Another malady of swine was "the Staggers" which probably was a catchall term for any disease of the nervous system brought about by disease or nutritional deficiencies. Colonial planters were equally mystified by the causes of the staggers as they were about other livestock ailments.[191]

Two general rules for the care of swine in the

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[187] Frederick Tilp, This Was Potomac River (Alexandria, Va.: The Author, 1978), p. 284.

[188] Jewett, The New England Farrier, pp. 65ff.

[189] "To Prevent Measles in Swine," Medical and Agricultural Register, II (August, 1807), pp. 315-16.

[190] Ibid.; DeGruchy, "On Diseases of Swine," pp. 30-31.

[191] Ibid., pp. 29-30.

eighteenth century were apparently followed by many colonial farmers. First, when a hog showed any symptoms of ill-health and occasionally as a prophylactic, hogs were hung up by their forefeet and drenched. The idea of pourring a copicious quantity of purgative was that such a treatment would cleanse the hog's innards.[192] A second common practice was to separate hogs from cattle. It was believed that the offal of swine would transmit the murrain to cattle.[193]

As Englishmen are sometimes called "beefeaters," then the transplanted Englishmen in America might very aptly be called "porkeaters." Without this prolific, hardy, meat animal--the common hog--the settlement of the British colonies would have been very different. No other domestic animal was so aptly suited to the conditions the settlers found in the New World.

SHEEP

As a tobacco planter, the colonist along the Potomac river had little time or use for sheep. Most Americans had little taste for mutton and the wool from the American common sheep was decidedly inferior to that obtained from abroad. In fact, the wool from the American common sheep was suited only for coarse homespun.[194] The vast commerce between the Potomac plantations and the home country, Great Britain, brought cheap, good quality wool cloth to the planter's wharf or to a local factor. It was only when this trade was disrupted by war that sheep became valuable to the

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[192] Jewitt, New England Farrier, p. 66.

[193] Smithcors, American Veterinary Profession, p. 9.

[194] Lemon, "Household Consumption in Eighteenth Century America," p. 62; Frederick B. Tolles, "George Logan and the Agricultural Revolution," American Philosophical Society Proceedings, XCV (December, 1951), p. 592; Sanford, Agriculture in the United States, pp. 94-95.

average planter.[195]

Sheep had been raised since the earliest settlement of the area. Throughout the seventeenth century the sheep of Virginia and Maryland had the characteristics of Dorset Horns. However, sheep raising did not become a major branch of livestock husbandry until the next century.[196]

In addition to the lack of need for the wool and a preference for other types of meat, sheep raising was not easily accomplished until late in the eighteenth century and even then it was fraught with problems. Of all colonial livestock, sheep seemed to be the most susceptible to disease.[197] Secondly, mutton was a favorite meat for wolves and wild dogs.[198]

In spite of these obstacles to successful sheep raising, sheep began to appear more frequently on the farms and plantations along the Potomac river in the last half of the eighteenth century.[199] By this time the sheep in Maryland had evolved into one type called "rat-tailed" sheep. This variety was noted for its fine wool. These sheep were probably the descendants of crosses between English and West Indian varieties. A common

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[195]L. G. Connor, "A Brief History of the Sheep Industry in the United States," Annual Report of the American Historical Association for the Year 1918 (2 vols.; Washington: U. S. Government Printing Office, 1918), I, p. 93.

[196]Ibid., I, p. 97.

[197]Haworth, George Washington, Farmer, p. 55.

[198]Ibid., p. 55; Bayard, Travels in the Interior of the United States, p. 59; "Character of the Province of Maryland," Hall, ed., Narratives of Early Maryland, p. 347; Newton D. Mereness, Maryland as a Proprietary Province (New York: The Macmillan Co., 1901), p. 120; Richard Peters, "On Sheep Killing Dogs," Memoirs of the Philadelphia Society for Promoting Agriculture, II, p. 248.

[199]Clayton, The Reverend John Clayton, p. 106; Entry for May 31, 1774, Harrower, Journal, p. 44.

comment about the sheep of the Potomac region was that they resembled goats more than sheep. They tended to be thin, long-legged, black-faced, fine-wooled, small-fleeced animals. These sheep contrasted with the black, coarse-wooled sheep of New England.[200] The Wiltshire and Norfolk "breeds" which were the ancestors of the common sheep of New England could not be raised successfully in the tidewater of Maryland and Virginia because of their susceptibility to foot rot.[201] The other English "breeds" imported into colonial America included the Sussex or old Southdown, Dorset Horns, and the Leicester. Traces of all these "breeds" plus those of the West Indian types of sheep could be seen in the sheep of the Middle colonies.[202]

The colonial sheep along the Potomac seldom exceeded 80 pounds and most often weighed only about 60 pounds when mature. In spite of their relatively

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[200]Edward Norris Wentworth, America's Sheep Trails: History: Personalities (Ames: Iowa State University Press, 1948), p. 100; Fletcher, Pennsylvania Agriculture, p. 192; Henry S. Randall, Sheep Husbandry in the South: Comprising a Treatise on the Acclimation of Sheep in the Southern States, and an Account of the Different Breeds. Also, a Complete Manual of Breeding, Summer and Winter Management, and of the Treatment of Diseases (Philadelphia: J. S. Skinner & Son, 1848), p. 131; Arthur C. Lord, "The Pre-Revolutionary Agriculture of Lancaster County Pennsylvania," Lancaster County Historical Society Journal, LXX (1975), p. 31; Ezra Carman, H. A. Heath, and John Minto, Special Report on the History and Present Condition of the Sheep Industry of the United States (Washington: U. S. Government Printing Office, 1892), p. 24.

[201]Wentworth, America's Sheep Trails, pp. 448-49.

[202]Ibid., pp. 37, 39, 98; Randall, Sheep Industry, p. 130; Carman, Heath, and Minto, History of the Sheep Industry, pp. 44-45; Plumb, Types and Breeds of Farm Animals, pp. 540, 620; Robert R. Livingston, Essay on Sheep: Their Varieties--Account of the Merinoes of Spain, France, &c. Reflections on the Best Method of Treating Them, and Raising a Flock in the United States: Together with Miscellaneous Remarks on Sheep and Woolen Manufactures (New York: T. and J. Swords, 1809), p. 53.

small size, these sheep were valued because of their sweet mutton.[203] Since mutton could not be easily preserved, sheep were usually consumed soon after they were slaughtered.

The growth of the sheep industry was deterred by both colonial and imperial legislation. In 1672 an Act was passed by the Maryland General Assembly prohibiting the exportation of lambs or sheep out of the colony. The purpose of this act was to encourage the domestic manufacture of wool.[204] The provisions of this act were continued by subsequent acts in 1688 and 1692.[205] In order to protect its domestic sheep industry, Great Britain passed the Wool Act of 1699 which forbade the transportation of wool by any means out of the colonies.[206] Thus the domestic sheep industry in Maryland

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[203]Remarks and Observations, February, 1769, Washington, Diaries, I, p. 314; Bausman and Munroe, "Tilton's Notes on Agriculture," p. 186; "Summary of Facts, Relative to American Sheep, by a Farmer of Pennsylvania.--Transmitted to the English Board of Agriculture, by General Washington, in 1794," Agricultural Museum, I, p. 141.

[204]An Ordinance of his Excellency Charles Calvert . . . agst the transporting of Sheep or Lambs dead or alive out of this Province, Proceedings of the Council of Maryland, 1667-1675, Archives of Maryland, V, pp. 105-06.

[205]An Act against the Exportacon of wooll & old Iron, Assembly Proceedings, November 14--December 8, 1688, ibid., XIII, p. 223; An Act against the Exportation of Wooll and Old Iron, Assembly Proceedings, May 10--June 9, 1692, ibid., XIII, p. 496.

[206]The Woollen Act (4 May 1699) (10 and 11 William III, c. 10), English Historical Documents: American Colonial Documents to 1776, ed. Merrill Jensen (London: Eyre & Spottiswoode, 1964), pp. 414-15.

increased only as the population did.[207]

These rat-tailed sheep were suited to the care given them by Maryland planters. In the eighteenth century, planters began to herd their flocks rather than allowing them to run in the woods.[208] However, the practice was slow in becoming universal. Few planters housed their sheep and those that did usually did so only during the lambing period.[209] Penning sheep was considered by the Assembly in 1723 when the committee of aggrievances noted that there were no acts requiring that sheep be penned during the period from May to September when the sheep were liable to destroy tobacco plants.[210]

One ram was sufficient to breed a planter's flock of ewes. As with most planters, Potomac farmers tried to breed their ewes in October or early November. Thus the lambs would be dropped in March or early April when there was adequate forage for the ewes and the temperatures were warm enough to prevent the lambs from freezing.[211] Ewe lambs were kept for wool and breeding

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[207] Schoepf, Travels in the Confederation, I, p. 123; Wentworth, America's Sheep Trails, p. 100.

[208] Ibid., p. 97; W. Neil Franklin, "Agriculture in Colonial North Carolina," The North Carolina Historical Review, III (October, 1926), p. 566.

[209] Jefferson, Farm Book, p. 74; A Marylander, "Five Minutes Reflection on Sheep," Agricultural Museum, I, p. 19; "A Summary of Facts, Relative to American Sheep, p. 143.

[210] By the Committee of Aggrievance, October 4, 1723, Assembly Proceedings, September 23--October 26, 1723, Archives of Maryland, XXXIV, p. 624.

[211] Entry for August 26, 1771, Wilson Account Book; "Minutes, founded on experience, as to the means of husbanding the vigour of the Ram, and best enabling him to abundantly propagate his species," Agricultural Museum, II, p. 66.

purposes, while ram lambs were frequently kept for one to three months before being slaughtered for lamb.[212] If a ram lamb was to be kept for its wool or meat, it was castrated and the resulting wether was allowed to run with the flock.

The raising of sheep utilized fodders which would not have otherwise been consumed by other other animals. The winters, however, were severe enough in the Potomac region that sheep would have to be fed from December through March. Generally, sheep would be wintered on hay and corn meal with other crops such as turnips used to supplement their natural fodder.[213] Depending upon the weather and his feed supplies, a planter would feed a quarter bundle of hay to each sheep per day.[214] Salt was also given to sheep usually in a separate location from the other livestock because the larger animals would drive the sheep away from the salt. As with most colonial livestock salt was given to sheep sparingly.[215]

In March or April, the planter had to observe his ewes carefully, when the "bag" (udder) dropped, the ewe was near labor. Careful planters then penned the expectant ewe and stood by to assist in the birth, if necessary. Since ewes will disown their lambs on occasion, the planter had to make sure that the newly born lamb was being fed if it were to survive.[216] Very

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[212] Jefferson, Garden Book, p. 72.

[213] Jefferson, Farm Book, p. 80; Purry, A Description of Carolina, p. 9; "Summary of Facts, Relative to American Sheep," p. 142; A Marylander, "Five Minutes Reflection on Sheep," p. 18.

[214] Jefferson, Farm Book, p. 74.

[215] Crevecouer, Travels in Pennsylvania and New York, p. 148; A Marylander, "Five Minutes Reflection on Sheep," p. 18.

[216] Ibid., pp. 14-15.

few planters docked their lambs' tails. Experience showed that lambs often died after docking due to infection. The practice of docking was widespread in England at this time.[217] Castration of rams was not that common as ram lambs were frequently slaughtered as lambs. By lambing ewes in the early spring, the ewes could be safely sheared in May without endangering an unborn lamb.

As the warm weather approached, sheep were prepared for shearing. Corn was fed to them to strengthen the fleece.[218] Most American sheep were washed before shearing.[219] Towards the end of May or in early June when the weather and the work in the fields permitted, the sheep were brought to the tobacco barn or other shelter for shearing.[220] Grabbing a hind leg the sheep was thrown on its side and the wool clipped. Then the sheep was raised on its haunches and the back clipped. A skilfull shearer would be able to clip the fleece in one piece. The fleece was rolled like a blanket and tied. The fleece was then stored in a dry place away from mice until it was wanted for spinning.[221]

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[217]Joseph Capner, "On Sheep and their Diseases," Memoirs of the Philadelphia Society for Promoting Agriculture, I, p. 134; William Thornton to Thomas Jefferson, Washington, August 30, 1809, Jefferson, Farm Book, p. 121; Sir George McKenzie, "Observations upon Lambs," Agricultural Museum, II, p. 106.

[218]"Hints on the Management of Sheep," Medical and Agricultural Register, II (July, 1807), p. 300.

[219]Eliot, Upon Field Husbandry, p. 48.

[220]Entry for May 23, 1827, George Cooke, Manuscript Diary, National Agricultural Library; Entry for May 25, 1846, ibid.

[221]T. Hennell, Changes in the Farm (Cambridge: Cambridge University Press, 1934), p. 14.

Depending upon the care the sheep received and to some extent the weather, the fleeces weighed from two pounds to five or six. The most common weight was from two to three pounds.[222] The wool of the common sheep was usually no longer than about seven inches and in Virginia and Maryland the staple was considerably shorter.[223] Because of this short staple, the wool of Maryland's rat-tailed sheep was judged to be exceedingly fine. In spite of the fine wool, only the coarsest fabrics were made from it.[224]

The most common American wool fabric was homespun. In the Southern colonies, linsey-woolsey was also common. Linsey-woolsey was an uniquely American fabric which combined strength and coolness. It was a combination of a woof of wool and a warp of linen threads.[225] The use of homespun cloth for clothing tended to be restricted to winter wear in the Southern colonies. The climate was such that for much of the year wool clothing was uncomfortable to wear.[226] Worsted wools required

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[222]Haworth, George Washington, Farmer, p. 136; William Eddis to _____, Annapolis, February 20, 1773, William Eddis, Letters from America, ed. Aubrey C. Land (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1969), p. 74; Schoepf, Travels in the Confederation, I, p. 124; Robert Jennings, Sheep, Swine, and Poultry: Embracing the History and Varieties of Each; The Best Modes of Breeding; Their Feeding and Management; Together with the Diseases to Which They are Respectively Subject, and the Appropriate Remedies for Each (Philadelphia: John E. Potter and Co., 1864), p. 23; Randall, Sheep Husbandry, pp. 130-31.

[223]Fox, "The Old Farm," p. 21.

[224]Carman, Heath, and Minto, History of the Sheep Industry, p. 23; Jennings, Sheep, Swine, and Poultry, p. 23; Randall, Sheep Husbandry, pp. 130-31.

[225]Arthur Harrison Cole, The American Wool Manufacture (2 vols.; Cambridge, Mass.: Harvard University Press, 1926), I, pp. 27, 29.

[226]Wentworth, America's Sheep Trails, p. 98.

skilled workers and was not of great importance in the home manufacture of woolen cloth.[227]

Nearly every farm or plantation which had sheep produced some homespun cloth. After the fleece had been sheared, the wool was washed.[228] While most wool was not dyed, that which was would be dyed in the wool with natural materials such as indigo, berries, leaves, or bark. After dyeing the wool was oiled with lard and carded. Then using a wool wheel or drop spindle, the wool was spun into thread.[229] Most of the wool thread was used for knitting rather than weaving.[230] Looms were large pieces of equipment that were frequently too costly for a middle-class family.[231] In addition, the size of a loom would have made it difficult to house.

Except in times of great trade disruptions or economic difficulties, the colonists of Maryland and Virginia relied on English manufacturing for their supplies of cloth.[232] Even during times of crisis woolen cloth was more frequently imported than produced in the colonial home.

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[227]Cole, American Wool Manufacture, I, p. 17.

[228]Ibid., I, p. 7.

[229]Earle, Home Life in Colonial Days, pp. 193-201; Cole, American Wool Manufacture, I, pp. 7-9.

[230]William Fitzhugh to Thomas Mathews, August 24, 1681, William Fitzhugh, William Fitzhugh and his Chesapeake World: 1676-1701: The Fitzhugh Letters and Other Documents, ed. Richard Beale Davis (Chapel Hill: The University of North Carolina Press, 1963), p. 103.

[231]Cole, American Wool Manufacture, I, p. 10.

[232]Ibid., I, pp. 24-25; Mason, ed., John Norton and Sons, p. 170; Alexander Hamilton to James Brown and Co., Piscataway, October 31, 1774, Richard K. MacMaster and David Skaggs, eds., "The Letterbooks of Alexander Hamilton, Piscataway Factor; Part II, 1774-1775," Maryland Historical Magazine, LXI (December, 1966), p. 315.

Because of the difficulties in raising sheep in the South, people only kept sheep as a hedge against a scarcity of cloth from abroad and for the meat. As John Taylor noted, no other animal was "more liable to disease and death."[233]

The most prevalent disorder of sheep was the scab or mange (Psoroptes). This disease caused the wool to be rubbed off as the sheep sought relief from the itching. Colonial remedies included rubbing the affected areas with sulfur, turpentine, or tobacco juice.[234]

The scab was closely followed by internal worms. The three most important intestinal worm disorders were the stomach worm (Haemonchus contortus), the nodular worm (Oesophogostomum columbianum), and the small stomach worm (Trichostrongylus). The twisted stomach worm caused the most fatalities in colonial sheep.[235]

Another parasite, which caused few fatalities but was nevertheless troublesome to sheep, was the head worm or bot (Oestrusovis). These small worms lodged in the nasal passages of sheep which caused them to rub their noses on the ground and sneeze. Thus affected sheep did not feed well.[236]

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[233]Taylor, Arator, p. 140.

[234]Livingston, Essay on Sheep, p. 176; Wentworth, America's Sheep Trails, p. 451; "On the Scab in Sheep," Agricultural Museum, I, pp. 166-67; George Jefferson to Thomas Jefferson, Richmond, March 15, 1811, Jefferson, Farm Book, p. 136; Thomas Jefferson to George Jefferson, Monticello, March 11, 1811, ibid., p. 136; Thomas Jefferson to John H. Cooke, Monticello, July 28, 1811, ibid., p. 137.

[235]Wentworth, America's Sheep Trails, p. 463; Capner, "On Sheep and Their Diseases," p. 134.

[236]Ibid., pp. 133-34; Samuel L. Howell, "On Merino Sheep," Memoirs of the Philadelphia Society for Promoting Agriculture, V, p. 33.

Although sheep were a valuable part of agriculture in colonial New England, their susceptibility to diseases in the Southern colonies, the depredations of wolves and dogs, the lack of need for domestically produced woolen cloth, and the general distaste for mutton combined in the Southern and Middle colonies to make the raising of sheep a minor part of livestock husbandry in those areas.

CONCLUSION

Colonists along the Potomac river utilized livestock for transportation, some work, meat, dairy products, and occasionally for fiber. Livestock raising, however, was not a primary objective of their system of agriculture and thus their animals were given the minimal care necessary to insure a subsistence supply. Since the climate and vegetation of the Chesapeake colonies were such that most livestock could survive and even prosper if left alone, planters tended to accept what nature so bountifully provided. The types of livestock which evolved in the Chesapeake colonies were those types that were fitted to survival with little care. Improvements in livestock and their care would not occur until late in the eighteenth century when the demands for meat, dairy products, and fiber created nearby markets.

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