

**MECHANICS AND FUNCTIONS
OF A SMOKE HOUSE**

**A preparatory report for running the
John Dickinson Smoke House**

by Judith Quinn

The Dickinson Plantation Project currently in progress involves the resurrection of the farm as it stood in the seventeenth and early-eighteenth centuries under the meticulous supervision of proprietor John Dickinson. The project intends to provide the public with an accurate interpretation of agricultural life on a successful Delaware plantation during the Federal Period. In addition to agricultural concerns; crops, means of production, livestock, and storage, it is hoped that an understanding of the lives (habits, routines, dependencies), of the plantation's tenants and laborers will be realized. In addition to corncribs, stables, barns, granary, well house, and cider press, the reconstructed outbuildings include a sawn plank smoke house. The smoke house provides an opportunity to explore significant aspects of the plantation's owner, tenants, and laborers relationships to their environment in its reflection of dietary practices and preferences. The adage suggesting that the way to a man's heart is through his stomach can be transformed in this case to say; a good way to learn the nature of a culture is through its stomach. Foodways are a revealing conduit for broader trends and habits. For instance, the existence of a smoke house on the property suggests immediately that there was meat smoked at some time on the farm for either consumption or barter. The process involved in preparing meat to smoke is a demanding, cyclic, and ritualized activity. The smoke house informs the modern interpreter that an annual event on the Dickinson Plantation was the slaughter and preservation of meat supplies. Having discerned the above, questions arise. Among the questions are; How was the meat prepared and preserved? Who ate the meat? What type of meat

would have hung in the Dickinson Smoke House? What role did the smoke house play on the farm? Each of these inquiries has direct bearing upon the interpretation of domestic and agricultural life on the Dickinson Plantation in the eighteenth and early nineteenth centuries. In this report I will address such questions, as well as introduce observations and material of a general nature which will be helpful in putting the Dickinson Smoke House in working order.

We find numerous references to the plantation's smoke house in John Dickinson's papers, the earliest being a note written by John Killen in 1777, concerning its condition, which states that "the smoke house canot Be Repaired because the hole is Rotten at bottom". He further advises "you had better bild a smoke house with hand (*hard?*) Logs and dovetailed up".¹ From accounts, it seems that the smoke house was under constant repair but undoubtedly in use. In 1777, the same year that the building was "beyond repair", Dickinson specifically includes the use of the smoke house in a tenant contract with Robert Johnson² and three years later the Land and Business entries of Dickinson list items being stored in the smoke house. The items include vessels used in the meat curing process.³ References to the smoke house in 1797 again specify repairs, calling in December for "Crib and Smoke House hewn logs to be dovetailed",⁴ and in February for the "heuing of 160 feet of [rafters] for smook house".⁵ The upkeep of the building was evidently a concern, and is indicative of the role it played on the farm. It is quite true that Dickinson took great care to keep all of the farm's buildings in good repair and thus the smoke house was not receiving preferential treatment. But, he was also an astute business man and would

not have poured money into a vacant or unused building. We may therefore assume that the smoke house was a necessary element of the farm, and that it was in Dickinson's interest to keep it in working order. Indeed in 1798, an agreement between Mr. Dickinson and Daniel Walker concerning various repairs on the property include the building of a new smoke house 14 feet by 14 feet.⁶ Whether this contract was fulfilled we do not know, though a note to Dickinson from Joseph Rash the following month (May 1798) indicates that he had taken down the smoke house.⁷ (In preparation for erecting a new one?) A receipt dated April 7, 1802 for "2 logs for the Smokhouse got and put in"⁸ acknowledges that four years after the contract to build a new smoke house was written there was a smoke house. Of Daniel Walker's hand or some other's is a mystery.

However, it is the detailed contract between John Dickinson and William Dickinson of June 17, 1806 which provided the material specifications necessary to the reconstruction of the building.⁹ (See Appendix A) It is hypothesized that the smoke house mentioned in previous accounts burned when the mansion caught fire in 1805. If the smoke house was located behind the house, as it logically would have been, (though no archeological evidence has been discovered), it would have been in the path of the fire blown west by the wind.¹⁰ Furthermore, 1806 is the year in which repairs to the fire damaged mansion were begun and though the 1806 agreement is reportedly "for repairing the smoke house", the itemized list of material used in the repair amount to a new building from top (700 shingles), to bottom (4 logs twelve long). The current reconstruction is based therefore on the John Dickinson/William Dickinson agreement, and on

an extant plank and log smoke house of similar description in Little Creek Hundred, Kent County built circa 1820-1830.

Smoke houses were a rather common outbuilding in rural areas during the eighteenth and early nineteenth centuries. Reflective of the frequency are the Kent County Orphans' Court Returns (1767-1812) and the Dover Hundred, Kent County tax assessments (1773-1800). Of 420 people listed in the returns of the Orphans Court (with buildings) 252 had smokehouses and 19 had meat houses. In essence, 65% of the people with buildings had a smoke house. Dover Hundred (location of the Dickinson Plantation) tax assessments reveal that the smoke house was the third most frequent outbuilding in the area comprising 13% of the total taxable structures and falling behind only houses (31%), and corn cribs (17%). It is interesting that the Dickinson SmokeHouse falls neatly into the unconsciously standardized pattern of materials and dimensions as well. According to Orphans' Court Returns with smoke house descriptions 26% were 12 feet x 12 feet, 80% were of log (scalped, hewed, sawed, or slip), and 81% had oak shingle roofs.¹¹ The 12 feet x 12 feet Dickinson Smoke House is likewise log, roofed with oak shingles.

The prevalence of smoke houses was not restricted to Kent County, or to Delaware. In many areas the dependence of the American diet upon meat led to the common practice of a structure specifically related to the preservation and storage of curing meats. The widespread use of the smoke house is attested to by surveyor and explorer St. John de Crevecoeur, who traveled throughout the thirteen colonies and beyond (1770-1790). He exclaims in his published journal:

"I had almost forgot to mention our smoke-houses; with out them we could not live. Each family smokes fully one-half their meat, fish, eels; in short everything we intend to preserve. For, besides the advantage of preservation it greatly adds to the flavour of our food; it saves it, besides from the flies."¹²

He does admit though, that the greatest quantities of smoked meat were consumed in Virginia and the southern colonies. An important distinction, as all meat was not smoked. Smoking meat was a final, (and optional), step in the lengthy process of preservation. Smoking the meat was an added precaution against spoiling, as the hard brown crust formed in smoking added flavor and kept flies and insects out of the meat.¹³

The origins of smoking meat are undetermined. Waverly Root and Richard de Rochemont credit the Powhatan Indians with the device. After fattening their pigs on peanuts, the Powhatens "smoked their rear legs over hickory fires, thus presenting man with the technique which would later produce the Smithfield hams".¹⁴ Dorothy Hartley makes no claims, but informs the reader that meat was smoked in England as early as the fifteenth and sixteenth centuries. "Smoking, originally done out-of-doors over a smudge fire of wood and trash, was later done in the chimney...A seperate smoke-house was very common, and is still used in some districts today."¹⁵ Germany also contributed to the history of smoked meat with its Westphalian hams, already renknowned in the eighteenth century, and prepared in warehouse-like smoke houses. It is likely that all above sources influenced the Americans in meat preparation, and certainly it is to english and german example that we owe the introduction of a seperate structure for

smoking. I contend however, that the widespread use of the smoke house is an american phenomenon. In the many primary sources examined on the subject, of those published in England, only one made any mention of using a smoke house. The common english advice was to smoke meat in a chimney. The concept of a smoke house, and even its structural form may well have emigrated from Europe, but the realization of the smoke house as an integral element of the kitchen yard (both rural and urban) was a purely american adaptation.

There is no specific size for a smoke house despite a natural pattern of standardization. Kent County Orphan Court returns reflect the most popular sizes in that county (in order); 12 feet x 12 feet, 10 feet x 10 feet, and 10 feet x 12 feet. They also include the less frequent measures of 8 feet x 10 feet, 30 feet x 16 feet, 11 feet x 9 feet, and 20 feet x 12 feet.¹⁶ The size of the building was generally determined by the amount of meat to be smoked. The size accorded to the family's needs.

Certain requisites were acknowledged for the successful functioning of a smoke house. William Youatt put forth a set of requisites in 1856.

"The requisites of a smoke-house are, that it should be perfectly dry; not warmed by the fire that makes the smoke; so far from the fire that any vapor thrown off in the smoke may be condensed before reaching the meat; so close as to exclude all mice, flies, etc., and yet capable of ventilation admitting the escape of smoke."¹⁷

The advice is at least 120 years old but is applicable to the process regardless of age. The concern with vermin infiltration remains a problem in modern smoke houses. A solution of one smoke house owner was to dig a trench six inches deep under the sill and cement it in, thus creating a solid

barrier which discouraged rats, etc., from burrowing under the sill for access.¹⁸

The fire in a smoke house must always be a slow smouldering fire, no blazes. It may be contained in a number of ways. Amos Long describes four commonly encountered methods employed in building smoke house fires: 1) small fireplace, 2) two or three foot fire pit, 3) rocks in a circular or rectangular arrangement covered with a sheet of metal, 4) fire box to rear of building with flue leading into meat chamber (this is a very Pennsylvania German practice).¹⁹ As in the case of size and building materials, the manner in which a fire was built or contained within the smoke house was a matter of personal preference undoubtedly acquired through one's own, or one's ancestors experience of trial and error.

It is impossible to discuss the smoke house or smoking at length without first taking a thorough look at the process of meat preservation as practiced during the late-eighteenth and early-nineteenth centuries. As mentioned before, smoking meat was a final and optional step in that process. I should further point out that in both curing, and smoking, the abundance and variety of recipes (and instructions) encountered, clearly illustrate that there was no set method. A few basic precepts remain consistent through out the multitude of "receipts", however, ingredients, measures, aging times, utensils, and storage practices all vary widely.

In order to address the essential question of what type of meats may have been smoked in the John Dickinson Smoke House, one must look at the available materials on Delaware foodways. The dietary habits of the early Delawareans have not yet been explored, though travelers' observations,

inventories, court and personal papers do provide some indication of foods consumed in the state during the Federal Period. James Tilton, writing an account of Delaware in 1789 includes observations of the state's foodways. he remarks on the heavy consumption of meat.

"The inhabitants of Delaware use a great proportion of animal food: few men breakfast without a portion of meat; and it is universal practice to dine in the middle of the day, upon a full meal of meat, with bread and vegetables: the meanest slaves have this indulgence."

He further explains that: "Salted pork and Bacon are the meats most used in winter and spring; fresh killed mutton and other cattle, with poultry and fish, & etc. in the summer and fall of the year."²⁰ Tilton particularly emphasizes the "great variety in mutton as an article of food; that raised in Delaware is of the best quality". Pork, beef, and mutton were all meats which could be salted, pickled, and smoked. (Potting, or packing meat down in crocks of lard was popular as well, particularly for small cuts of meat such as pork chops.) Recipes for each are plentiful. Thirty years before Tilton wrote his account, a visiting preacher from Sweden, Israel Acrelius, noted a similar variety of meats found on the tables of the inhabitants of Wilmington, Newcastle, Dover, and Lewes. His list includes; "ham, beef, roast beef, beefsteak, tongue, roast mutton and mutton chops, veal and veal cutlets, fowl, turkey, goose, chicken pie, partridges, or lamb".²¹ Of course the above largesse was not available to all the inhabitants of Delaware. The association of class with certain foods is undeniably a determining factor in diet. The foods eaten by the John Dickinson family were different from those consumed by the tenants of the mansion, and the tenants' diet certainly

varied from the laborers' and slaves'. As William Woys Weaver (foodway specialist) explains, the slaughter of beef was considered an upper class activity while bacon and pork were frequently considered "poverty food". Fish and game were in many circumstances "poverty food" as well. Rivers, marshes, and forests were considered common land through the early nineteenth century and were depended upon by slaves, free blacks, and poor whites as a source of free food.²²

Inventories of tenants William White (1793) and James Kimmey (1803) reveal an interesting blend of upper and lower class provisions. William White placed enough value on his "meat", and "Dryed Beef" to include them in his inventory while James Kimmey included "1 fishing scaine, 1 cut veal, 17 geese, and 2 parcels salt pork".²³ Dickinson himself reports to his wife of meals imbibed while visiting the Jones Neck property: "Judge then how I must feast, having dined every day since I came into this County upon small Perch and Rock, and abounding in Indian Corn Bread,"²⁴ and "two (*dinners*) when I had Rock,...a fat partridge, and for Desert a fine Sweet Potato."²⁵ His wife also mentions food at Jones Neck in the winter of 1778. She is grateful not only for a warm house and plentiful butter and honey, but for "partridges, turkeys, fowls, rabbits."²⁶ Perch, rock, partridge, turkey, fowls, and rabbits were not preserved meats. They were fresh fare. One would not have found any of the above hanging in the Dickinson Smoke House. One would have found beef, pork, and bacon because although Dickinson was able to afford a wide variety of fresh and prepared meats, both his, and his tenants table was ultimately dependent upon the standard staples of dried beef, salted pork, and bacon. Despite the substantial consumption of fresh fish and game, these

staples were the core of the diet in the mid-atlantic and southern states. The cultivation of corn and the husbandry of swine was a principal sequence of rural Delaware life and economics. The dependence on swine is clearly illustrated in a series of petitions put before the state legislature protesting enforced fencing laws. A petition from St. Jones Hundred 1810 claims:

"That very great injury would be done to the poorer and middling class of people (who are the most numerous) by such a law, many of whom would be unable to raise a sufficient number Hogs to support their families unless the long established custom of supporting them on the range of the woods until the period of putting them up to fatten is allowed."²⁷

This petition had 52 signers, supporting the truth of the situation. (Interestingly signatures included James Kimmey, Thomas Candy, and William Dickinson, three men directly associated with the Jones Neck property). The pig was obviously an essential part of the eighteenth and nineteenth century diet in Delaware.

Before discussing the actual curing process certain details of the pig itself should be noted. Most noteworthy is the dramatic change in the size of pigs since the eighteenth century. Today hogs for slaughter can weigh up to 1100 pounds (though 500 to 600 pounds is more common). A fattened hog of the eighteenth or early nineteenth century weighed between 115 to 160 pounds. Papers from the 1780s show Dickinson calling for "10 good Hogs each weighing about 115 pounds well fattened with good sound Indian corn" from tenant William White. A decade later tenant J. Emory promises to deliver "ten hogs very well fattened with indian corn and weighing between

120 and 150 pounds" to Dickinson in Wilmington.²⁸ In fact, very fat hogs were undesirable. Upon reading of an 824 pound hog raised in Rhode Island (ca. 1800), J. Boardley of Philadelphia expresses the sentiment; "Where in is the advantage of having such a huge mass of coarse meat in one, more than in three or four hogs of a better meat."²⁹ Mary Randolph, in her receipt book The Virginia Housewife (1836), claims that "Hogs are in the highest perfection, from two and one half to four years old, and make the best bacon, when they do not weigh more than 150 to 160 at farthest."³⁰ We may assume then that the pigs of the eighteenth and nineteenth centuries were considerably smaller than modern swine. It may have taken as many as 10-12 hogs of this size to feed a family for a year.

An additional item of note is the distinction made between types of pigs. Pigs to be eaten as pork are different from those destined to be bacon and hams. The type of animal is different and the feeding is altered to suit the purpose for which the hog is required. Maria Eliza Rundell acknowledges the distinction in her cook book, A New System of Domestic Cookery, published first in Boston in 1807. She explains that Bacon-hogs "are kept to a larger size." "The sides of the hog are made into bacon, and the inside is cut out with very little meat to the bone. The bacon is the whole outside: and contains a fore-leg and a ham (hind-leg)." In contrast "Porkers are not so old as hogs; their flesh is whiter and less rich, but it is not so tender."³¹

Because of the primacy of pork products in the diet of the period, and my assumption that it was generally pork or bacon hanging in the Dickinson Smoke House, I will describe the curing and smoking process accordingly. The process is applicable to beef and mutton as well as pork, and thus to

recite beef, mutton, and pork curing techniques would simply be repetitive. (I have included preservation recipes for beef, mutton, and fish in Appendix B.) It was unquestionably the lack of refrigeration which necessitated the thorough curing practiced upon upon the meat of the period. Everyone was aware of the dangers in leaving fresh meat untended, and in failing to exact the correct measure of time, or salt, while curing. Despite the dire importance of correctly preserving one's meat, the trial and error basis of the culinary realm extended to the salting, drying, and pickling of meat. In 1792 cook Richard Briggs admits that "as many people have various ways in pickling pork, it is almost impossible to give directions for pickling it."³² Some of these various ways led to disasters, as a family's entire year supply of meat could be lost. The success rate of the preservation cycle is unknown. Maria Rundell (1807) does inform her readers that "In some families great loss is sustained by the spoiling of meat."³³ Extreme care and ceaseless vigilance was required to see a pride of pigs through the slaughter, curing, and smoking cycle successfully.

Slaughtering time was in November or December when one could rely on the freezing temperatures to keep the meat fresh while curing. Winter weather discouraged the growth of bacteria and disposed of flies and insects. The following procedure outlining the steps involved in slaughtering is that used by the Dulebohn family since the nineteenth century in Mercersburg, Pennsylvania.

Once the hog is shot or bludgeoned, its throat is cut to be bled. The hog is then scalded by dipping in boiling water or by hand with a pan of water. After scalding hair can be scraped from the skin. The hog is

generally strung up by the hind tendons, the head cut off, and the body cut open. The entrails are removed and the hog cut in half. The stomach (or maw) is removed and cleaned. The meat is then cut from the carcass. Fat is trimmed and cut in long strips and subsequently into small chunks. The chunks of fat are placed in a kettle to cook. They are removed and put in a lard press in order to press out excess liquid. The liquid resulting from boiling the fat is strained through cheese cloth and collected in lard cans which are then placed in a cool place to harden. (Lard was an essential element in the colonial kitchen both for cooking and storing food stuffs.) The nine principle parts of the pig after slaughter are; two hams, two shoulders, two middlings (bacon sides), the head, jowl and chine.³⁴

The steps following the slaughter are the "crucial hours", and it is here that there is a great diversification of opinion. Eighteenth and nineteenth century instructions are clear however on a few basic principles. A necessary caution in examining primary sources is to recognize the distinction between curing, pickling, and drying. Each term involves an individual process often related to other preservation methods but in practice quite distinct. One undisputed fact is the essential role played by salt. Salt was the main agent used to preserve meat. (It is not until the 1920s that the Morton Salt Company introduced a cure based on sugar which has all but replaced the old salt cure method.³⁵) There are two manners in which salt was applied; through a wet cure, and through a dry cure. The wet cure involves the making of a brine or pickle in which to soak meat. The dry cure involves packing the meat in plain salt or a salt mixture.

In 1879 Marion Tyree set detailed instructions for a dry cure. She

instructed the housewife to; 1) rub meat with salt petre before salting, 2) rub meat with salt (using a shoe-sole or leather glove), 3) pack meat down in chest or something for four to six weeks, 4) remove, shake off salt, wipe with hickory ashes, 5) repack it for two weeks, and 6) hang up with joint side down for smoking.³⁶ This is a rather elaborate and concise set of instructions.

The following five step outline of curing with a water based brine or pickle is based upon the recipe of a Mrs. Loudon (1845). 1) Boil your pickle (usually made of spring water, salt, salt petre, sugar and molasses), 2) take scum off, 3) let stand till cold, 4) pour brine over meat in trough/tub/barrel, 5) cover tightly.³⁷

A third alternative was a cure not wet or dry, but rather a combination of both in which a pickle formed from the application of salt, molasses, sugar, and a number of other ingredients. The salt acting with the meat provided liquid enough for a pickle. As Dr. Thomas Cooper (1824) explains;

"Mix and pound, four ounces of saltpetre, a pound of coarse sugar, an ounce of sal prunel, and a little common salt: sprinkle the pork with salt, and drain it 24 hours: then rub with the above; pack the pieces tight in a small deep tub, filling up spaces with common salt. Place large pebbles on the pork, to prevent it from swimming in the pickle which the salt will produce."³⁸

With both processes the meat was turned at regular intervals to assure an even saturation. I found that hams, shoulder, and other cuts of pork were cured more frequently with the wet or self-producing cure, while bacon generally cured dry. One explanation is that the size of bacon "flitches" or middlings was prohibitive to its storage in the tubs and casks generally

employed in pickling. Troughs, on the other hand could accommodate a bacon side and were used with both the dry, and self-producing cures.

The entire process may be simplified to a much abbreviated sequence: 1) newly slaughtered meat is cleansed and rubbed with loose salt or let drain a day or so, 2) meat is placed in brine/pickle or packed in salt, 3) meat removed from cure and wiped with a dry cloth, 4) meat hung to dry or to smoke, 5) meat stored in a cool dark place with an even temperature.³⁹ Personal preference is a determining factor. For a more comprehensive listing of recipes see Appendix C.

Meat, once treated remained in brine or in salt until thoroughly saturated. The appropriated length of time for saturation varied widely. I have encountered recommendation ranging from three weeks to seven weeks, though one month seems to be the average. Thus if slaughtered in December, meat was ready at the end of January. The most favorable temperature for curing meat is between 34 and 40 degrees fahrenheit. Frozen meat will not cure because it will not take the salt. If the meat freezes, it will take that additional time to be suitable for eating. It is not inconceivable that curing meat lengthened into February or March.⁴⁰

The major ingredients in the preservation of meat were; salt, sugar, molasses, and salt petre. (For a complete list of ingredients encountered see Appendix D). The primary objective was to work in sufficient salt to preserve the meat while extracting enough moisture to ensure that a dry surface was presented on which slime-producing organisms could not grow. Sugar products, pepper, and other seasonings were added for flavor. Salt however, was what "made it work". Salt of the eighteenth and nineteenth

centuries was expensive and quite different from the refined grains we are accustomed to today. One cook book published in Philadelphia in 1810 informs that; "Salt is so greatly increased in price, from the heavy duties as to require additional care, and the brine ought not to be thrown away."⁴¹

There were two types of salt - bay-salt, and common or blown salt. J. B. Boardley dedicates an entire chapter to "Family Salt" in a book entitled Essays and Notes on Husbandry and Rural Affairs published in Philadelphia in 1801. In the chapter, he describes the different salts, their manufacture, and their inherent qualities. Boardley is of the opinion that bay-salt (especially Dutch bay-salt) is preferable to blown, or common salt.

"The method by *sun* and *wind* is *slow* and *regular*, which produces *bay-salt*, (on the sides of bays and ponds) and the *spirit* of the salt is preserved in a high degree. That by *fire* is *quick*, and gives *blown-salt*; which loses much of its spirit by a rapid evaporation in boiling the sea water."

The spirit which Boardley speaks of seems to hold the key to superior salt.

"The *Spirit* of the salt is essential for keeping provisions; and when extracted and applied to pickle, gives an agreeable flavor: so that *bay-salt*, both as it has less of the *bad* substances, and more of the *spirit* of the salt, which is an essential of it, is preferable in its qualities to *blown* or boiled salt; besides its greater weight by the bushel."⁴²

Mrs. Loudon's cook book (1845) is in agreement. She claims; "What is called bay-salt (that is salt made by evaporating sea-water) gives a finer flavor than common salt..."⁴³ In addition to the "spirit" of salt, the refining of salt contributed to the quality of the product. If not properly refined, elements in the salt could "*foul*, make *rancid*, *corrode*, and *corrupt* meat." Boardley sings

high praise to Dutch-salt, whose method of refining was a secret "among themselves" and who produced "beautifully clean and well flavored" salt. Spain, Portugal, and England likewise produced acceptable salt, however according to Boardley, american salt was nearly unfit. He goes as far as to say that "In America, as far as I know, we make no attempt to cleanse or refine salt we use: and our meat and fish are rather dirty, and apt to become rancid and damaged."⁴⁴ The possibility of the curing agent itself damaging the meat must have added a further element of chance to the process. The need for caution and vigilance included a heightened awareness to potential danger within the process itself.

There was no absolute or magic measure of salt in mixing dry and wet cures. Receipts from contemporary cook books reflect a wide variance in ingredient proportion. Measures of salt ranged from "a little", and "a handful", to ten pounds. More specific measures are found in the instructions of Elizabeth Raffald (1818); "1 ounce salt petre, 1/2 ounce salt prunella, one pound common salt to every ham", Benjamin Biggs (1855); "for 24 hams, 6 pounds of fine Salt", Amelia Simmons (1796); "to each ham- one pint bay Salt", and Sarah Harrison (1738); "for one ham-one quarter of a pound of Bay-Salt, three handfuls of common Salt".⁴⁵ Twentieth century advice includes that in the Foxfire series which recommends 8-10 pounds of salt per 100 pounds of meat.⁴⁶

Sugar (and sugar products) were also a major ingredient and dearer perhaps than salt. White processed sugar was particularly valued and generally saved for special occasions. I have not seen any recipes which called for the use of fine, white sugar in curing meats. If specified, the

sugar is described as brown, coarse, coarsest, or muscavado. A list of sugars available in Philadelphia in 1807 gives a fair indication of the variety at hand. The list is Hopes Philadelphia Price-current October 5, 1807.

"Clayed Havanna White
Havanna brown (like Brasilian Demarara
Muscavado first quality
Muscavado second quality
Muscavado ordinary
West India Clayed White
West India Clayed brown
Calcutta White
Batavia White"⁴⁷

Clayed Havanna White was the most expensive selection, and Muscavado ordinary the cheapest. I would surmise that the brown and coarse sugar specified in certain recipes refers to Muscavado ordinary.

Because the price was often prohibitive, the sweetener used in meat curing was more often the much cheaper sugar product, molasses, or cheaper still, treacle. Sugar cane was mashed and its juices boiled down to extract sugar. The syrup remaining after the sugar had crystallized was molasses. This brown syrup was then thinned with water and boiled again (to extract additional sugar). The residue from the second boiling was second molasses. Blackstrap molasses was the final syrup after four or more boilings, and though lowest in sugar, it was highest in nutrients. Molasses was a cheap substitute for sugar and used by virtually every American as a prime ingredient in all manner of foods. Molasses is the main sweetener used in curing meat. A second sugar by-product used (less frequently) was treacle. Treacle was the liquid that drained (trickled) from the refined sugar drying molds. Sometimes called sugar house molasses, it was cheaper than

blackstrap.⁴⁸ Sugar (and molasses) were included in the cure for flavor but also because it made the meat tender retarding the hardening qualities of the salt, while giving the meat a mellowness and richness. Mrs. Loudon (1845) cautions however that "the quantity used should never be more than a quarter of the quantity of the salt or it will make the meat taste insipid."⁴⁹

After curing anywhere from one to seven weeks, meat was ready to be dried or smoked as the cook preferred. (I emphasize once again that smoking was not necessary for further preservation.) After curing, meat could be wiped dry and clean, wrapped in cloth, hung in a dry place of moderate temperature and remain perfectly edible for up to a year. It does seem that many cooks, particularly american cooks, chose to smoke their meats. As in curing, instructions vary widely.

Smoking commenced immediately after curing, which was generally complete by February. Advice is quite in agreement that the proper time to smoke was in the cooler months in order to prohibit bacteria growth. Boardley (1801) is diplomatic as always, and reports that "It is advisable to smoke hams *early*, that they may be cured before the approach of the spring: the same of bacon."⁵⁰ Sarah Harrison (1738) is more direct. "The proper time to do it is in cold weather, lest it should be tainted."⁵¹ If meat remained in the smokehouse during the warmer months (i.e. April) special precautions were required. The fire was to be lit only every second or third day and the meat taken down occasionally and examined before being rehung.⁵² The bottom line was that the meat should not freeze, nor become too hot. To avoid possible disasters the temperature in the smoke house was not to exceed 90 degrees fahrenheit.

The meat was removed from brine or dry cure and wiped clean and dry with a cloth. Before smoking, some cooks hung it in a dry, moderate climate for a few days. Others smoked it immediately. Though darkness was often considered a sufficient fly preventive, meat was frequently covered in substances before hanging to prevent damage by flies, insects, and mold. Popular coverings included coarse wrappings (hessings), bran, meat paint, quick lime and water, hickory ashes, and black pepper. Each had proven its ability to protect meat from damaging elements. Bran created a tough, brown crust valuable for its flavor as well as its ability to deter spoiling. Meat paint was a mixture of warm water and ash of a paint consistency, applied and hung while moist.⁵³ Quick lime and water resembled meat paint in practice and consistency. Hickory ashes and black pepper are found frequently as preventive measures. Elizabeth Lea of Wilmington includes the use of both in her cook book of collected family recipes (1820s). She says hickory ashes "are an effectual remedy against the fly or the skipper," and that "black pepper, about a pound to a hogshead, sprinkled on the meat before it is hung up to smoke, is valuable as a preventive where flies are troublesome."⁵⁴

Meats were hung no closer than three feet to the fire and out of the direct path of heat. The farther from the fire, the less dangerous tars and residues attacked the smoking meat. Only two methods of actual hanging practices were found. The first was the use of strong twine, and the second a strong piece of wood laid across two of the interior beams having meat tied to the piece (of wood). William Youatt (1856) employed the second method in a smoke house which he constructed sometime in the 1830s. The

method is well suited to the Dickinson Smoke House.

"About twenty years ago, I contrived a small smoke-house of a very simple construction. It is about twelve feet square, and the walls about seven feet high. One of these huts requires six joists across, one close to each wall, the other four laid asunder at proper distances. To receive five rows of flitches (*bacon sides*) they must be laid on the top of the wall. A piece of wood strong enough to bear the weight of one flitch of bacon, must be fixed across the belly end of the flitch by two strings, as the neck end must hang downwards. The piece of wood must be longer than the flitch is wide, so that each end may rest upon a beam. They may be put so near each other as not to touch. The width of it will hold 24 flitches in a row, and there will be five rows..."⁵⁵

This description is not only valuable in its detail of hanging techniques, but in the immediately recognized resemblance of the Youatt and Dickinson smoke houses, both in construction and proportion. Through Youatt's description, the arrangement of meats and storage capacity of the Dickinson Smoke House may be reconstructed.

Though I found no specific references to meat hooks, S-hooks, etc. in the instructions examined, it is certain that these utensils were used to hang meat from the joists, and ceilings in smoke houses. Hooks never pierced the meat. A secondary implement; twine, wire, or cloth, would have connected directly with the hook.

When the meat was insulated/wrapped and hung, the smoke house was cleared of any stored items. Cracks were plugged with rags or covered, and a slow burning fire was built and lit in the fire pit, kettle, fire place etc. The fire could not blaze. Ideally, it was a smouldering fire producing smoke, but

little heat. Recommended fuels for the fire include; green hickory, hickory bark, oak, apple, cherry, and maple woods, sassafras, corn cobs, sawdust (preferably oak) and juniper berries, tanner's bark, and "horselitter" (straw). Recipes advised against using ash, locust, and pine wood, as well as paper. The most popular fuel by far was hickory wood (in chips or kindling form). Sawdust and straw were more often suggested in english recipes where smoking took place in chimneys, not in a smoke house.⁵⁶ Each fire was built according to the taste of the cook and his/her conviction of having found the "sweetest smoke". The fire was closely tended (three or four times a day), and did not burn through the night.

The length of time meat was smoked was again a matter of personal preference. References ranged from the mysterious "as usual till enough" to "10-12 hours per day for 6 weeks."⁵⁷ The shortest length of time recommended in primary sources for ham was 6 or 8 hours (1924) and the longest for ham 3-4 weeks (1807). Smoking times for bacon ranged from 10 days (1807) to 6 weeks (1879). Modern recommendations consist of much shorter lengths of time. Perhaps as we now know that the smoking leg of the curing process does little in actual preservation, and because we are sensitive towards carcinogenic edibles it is considered sufficient to smoke meat for only a few hours. A complete list of smoking times encountered may be found in Appendix E.

After smoking, meats were taken down and tightly wrapped in linen bags, or packed in hickory, coal, well-slaked pine, or some other green wood ash for storage "where they will remain all summer without danger of bugs interfering with them."⁵⁸ Smoked meats must be stored in a uniform

temperature such as a cool dry cellar or attic.

Cautionary advice for curing and smoking meat:

34-40 degrees fahrenheit is the most favorable temperature for curing.
Never salt meat in hot weather and never expose curing meat to the sun.
Always store curing meat in the coolest, dry place to be found.
Always hang hams and shoulders hocks down to preserve juice.
Never allow your fire to blaze.
Do not over smoke making meat hard and dry.
Do not use untried woods which may give a bad flavor to the meat.
Do not get the meat too hot causing the fat to become oily or to melt. Oily fat will go rancid.⁵⁹

I include here, two sets of recipes which may reflect the preservation process selected at the Dickinson Plantation. Both recipes are from nineteenth century Delaware. The first is from the Wilmington Quaker Elizabeth Lea (1845), and the second from Benjamin Biggs of Pencader Hundred, Newcastle Hundred (1855).

"To Cure Hams and Shoulders:

...take fifteen quarts of common salt, one pound and a half of saltpetre rolled fine, one half pound of red pepper pods chopped fine, and four quarts of molasses; mix them all together and rub the meat well; pack it down; cover it close, and let it remain six weeks; then hang it up and smoke it with green hickory wood for three weeks."⁶⁰

***Receipt to Cure Hams-**

For 24 hams, take 6 pounds of fine salt, two pints of molasses, and 1 pint of salt petre pounded fine; mix all these, together, rub every ham with the mixture, and pack them down in your cask, let them remain five or six days, then unpack them and put those at the bottom, which were at the top,

and sprinkle a little salt over them, let them remain so for five or six days, and then make a pickle which will bear an egg, and pour it over them. Let the whole remain for one month, and they will be fit to smoke..⁶¹

The question of the contents of a smoke house is difficult to determine as no itemized description or inventory has yet been found. Some assumptions may be made on the basis of general inventories, receipts, and accounts. At the Dickinson Smoke House contents/furnishings are certain only on one particular date-October 1780. In that month, according to Dickinson's Land and Business accounts "In the smoke House 6 Philada. powdering tubs upstairs 3 case bottles of Madiera Wine & in 2 cases 20 case Bottles" were located.⁶² Powdering tubs are a logical item to find as it is in them that curing meat is stored. Powdering tubs are mentioned in recipes as well as in period inventories from Kent County. They were one of the local vessels used to cure meats. (Indeed in 1793, Dickinson orders three new powdering tubs and three meat tubs.) The wine and bottles mentioned suggest that the smoke house was, for part of the year, a place of storage. This dual use is not surprising. The smoke house was in fact a smoke house for only a small percentage of the year. As documented smoking times illustrate, the smoking process could be as short as one day or as lengthy as six weeks. In either case the smoke house was essentially unused (as a smoke house) for nearly ten months of the year. Even today, a building, regardless of its function, would not remain vacant, and surely not on an eighteenth or nineteenth century farm where buildings were at a premium. Meat, once smoked, was often stored in the smoke house as long as a temperate climate could be assured. The storage of meat however, did not

require the exclusive consideration demanded by a working (smoking) smoke house.

In examining a random selection of 46 inventories of Kent County (1773-1800), I discovered one which specifically points to the use of the smoke house as store house. Bedwell Maxwell, 1798, lists "Tub with Hogs fat, flax, and Lumber in the smoke house".⁶³ (Lumber was a general term applied to unwanted furniture, scraps, old equipment...) The inventory was made in October before the slaughter and curing season began. Clearly storage was a function of the smoke house when not in use. One reference in forty six represents unimpressive odds, however, it is rare to find allocations of space to function in inventories at all.

If one closely examines constellations of objects in inventories, and if one may assume the juxtaposition of objects as indicative of proximity, interesting relationships may be derived. The theory is purely hypothetical, as there is no standard system in the detailing of inventories discovered yet, and we rarely are informed as to which room, or building contains the objects listed. In determining the contents of the Dickinson Smoke House I had only the wonderfully revealing 1780 entry listing powdering tubs, wine, and bottles. I turned to the 46 Kent County inventories, and it soon became clear that certain objects, (related and unrelated to meat), were frequently grouped together with the property's meat and bacon. These constellations may or may not reflect the contents of smoke houses, but the repeating instances of objects in association with meat are not easily dismissed. The majority of items surrounding a listing of bacon (for example) consist of "old" objects. Old axes, old iron, old tubs, old casks, old bags, old barrels,

and old scythes are selected examples. Combined with the undisputed proof provided in the Dickinson and Maxwell entries concerning the store house capacity of the smoke house in the off season, the repeating combinations are highly provocative. (A selection of constellations from Kent County inventories are provided in Appendix F).⁶⁴

If one were to furnish a smoke house according to its original status, one would need to include, (during the summer and fall months), items such as are described in the inventories. If one were to furnish a smoke house according strictly to its use as a smoke house it would be proper to include some of the utensils used in the curing process. In reading numerous eighteenth and nineteenth century recipes, a long list of utensils employed emerged. Appropriate utensils include; powdering tubs, harness tubs, tight barrels, earthen, slate, lead, or wooden troughs (for salting), large pans, pickling tubs (like powdering tubs), casks, and molasses hogs heads cut in two.⁶⁵

When in season the Dickinson Smoke House was active. Accounts, receipts, contracts, and agreements left by Dickinson suggest that it was a hub of activity. Among his papers one finds receipts for goods supplied by tenants of the plantation. The goods invariably include pork, beef, or bacon. For example in 1775, he pays tenant Robert Johnson for 127 pounds of pork and 77 pounds of beef. In 1777, Johnson again supplies salt pork and hog's fat. Tenant Joseph Wheeler, in February of 1781, "pays" Dickinson 33 1/2 pounds of pork, 36 1/2 pounds of Ditto, and 30 pounds of Bacon per their agreement. 1793 sees tenant John Emory providing 92 1/2 pounds of bacon and 1 barrel of Herrings to Mr. Dickinson. Besides the meat produced for the

proprietor, the tenants and servants required meat, and in two tenant inventories unspecified quantities of meat, pork, and dried beef are noted. If smoked, they too must have come through the property's smoke house. William White (1793); meat and Dried Beef noted. Joseph Kimmey (1803); 1 cut veal, and 2 parcels of salted pork noted.⁶⁶

Further evidence of meat preservation is found with Dickinson's 1793 purchase of three new powdering tubs and three meat tubs. Made by cooper George More, the vessels were expressly intended for male negro servants Pompey, Toby, and Gustus.⁶⁷ It is interesting to note that the ingredients, without which the tubs were useless, were provided by Dickinson to the negro women servants. Two entries in Dickinson's account book specify the destination of essential curing ingredients, salt and molasses. In October, 1790, two bushels of salt were given each to Dinah, Priscilla, and Peggy. In November 1792 Priscilla received 1 gallon of molasses, Peggy 1/2 gallon, and Dinah 1 gallon. Other entries are more general, such as in December 1795 where three bushels of salt were listed for "negro women in Joneses".⁶⁸ The months of the transactions (October, November, and December), suggest their use in curing as opposed to general cooking application. The new powdering and meat tubs were purchased in 1793, (therefore not directly coinciding with the distribution of ingredients), but it is not unreasonable to assume that the responsibility of the meat curing vessels belonged to the black males prior to the purchase as well. The division of necessary elements between the men and women servants was an unconscious (or conscious?) means for Dickinson to enforce a mutuality of need and purpose on the often loose and fragmented relationships between men and women in the

slave community. It has been determined (by James Stewart of the Bureau of Museums) that Pompey and Priscilla were an established couple on the plantation. Both Dinah and Peggy were apparently unmarried with at least three children.⁶⁹ Perhaps they were associated with Toby and Augustus. It does seem that Dickinson was attempting to create a "conventional" image of marital relationships through the allocation of responsibility in the production of essential foods.

Accounts reflecting the purchase of meat by Dickinson illustrate that he was not dependent upon the beef, pork, and bacon produced on the Jone's Neck plantation. Between the years 1775 and 1800 he purchased bacon and beef from local merchants as well as from his tenants.⁷⁰ The letters to his wife in Philadelphia cited above, inform us that a fair portion of his diet while at John's Neck was fresh fare. He writes of "feasting" on fish and fowl but would he have written of "feasting" on bacon, dried beef, or pork? They were rather ordinary victuals compared to perch or partridge.

Besides listing meat purchases, Mr. Dickinson's accounts contain continuous purchases of molasses, salt, and sugar. These three items comprise the majority of entries. All were needed for general cooking as well as for curing. Perhaps in order to combat the expense of imported salt Dickinson decided to produce his own. Between the years 1779-1782 he created a small bartering business based solely upon the production of salt. Four receipts of promise between Curtis Crumpton of Mispillion Hundred and John Dickinson outline the transactions. Curtis Crumpton agreed "to pay and deliver to John Dickinson of Dover Hundred, for the use of his pan and four kettles which he bought for making Salt, to the 20th day of next December,

10 bush. of good clean dried and perfectly well made Salt - 2 to him in Dover, 8 to the house in Jone's Neck" (1779). In the three following years the quantity provided by Crumpton increased to 20 bushels for 1780, and 30 bushels for both 1781 and 1782.⁷¹ The salt was always to be delivered by November (presumably in time for curing). References to the salt kettles disappear after 1782. Whether he sold them or passed them on is unknown. It is certain, that between 1779 and 1782 the majority of salt used at the plantation was common or blown salt from Curtis Crumpton's hand, and Dickinson's equipment.

The actual functioning of the Dickinson Smoke House remains a mystery. Slaughter and curing on the property are not detailed for the modern historian. In firing the Dickinson Smoke House, one must therefore rely on sources contemporary with the smoke house, which provide the necessary instructions and practices involved in nineteenth-century meat preservation. To this purpose I have included herein, curing and smoking processes, recipes and cautions. The information provided in this report should be sufficient to put the reconstructed Dickinson Smoke House in working order, and to recreate an accurate interpretation of this highly regarded outbuilding.

APPENDIX A

Document File 27/4
Agreement for smokehouse
Repairs @ Kimmeys (JDM)*
1806, June 17
transcribed M. Hite 11/16/84

"I agree with John Dickinson to do all the work within mentioned for repairing the smoke House near the Mansion House in the occupation of Elizabeth Kimmey and her son James Kimmey - and I declare and agree that I will not cut down any Tree whatever for making the said Repairs, but will use only such wood as is at this Time lying ont he Ground in his Woods - This work to be completed by the Middle of the next eighth Month Witness my Hand this 17th of the sixth Month 1806"

William Dickinson
(signature)

"Received this 16th of the third Month 1807 of John Dickinson full satisfaction for the work within mentioned and of/ all Demands - and I will be discountable be accountable to him for the Balance that will be due to him after paying for the new material I have Bought - "

William Dickinson
(signature)

A Bill of work" on reverse side of document:

To hewing and putting under 4 logs 12 feet long	0''18''9
To riving & shaving 200 claboards	''19''0
To githing (lath?)	7''6
To riving & shering 700 shingles	2'' 8''9
To putting on Cabbords	11''3
To putting on shingles	15''0
To hewing 168 feet of rafters @ 2 ^d pr. ft. 3 inches at one end 4 do at the other	1'' 8''0
To Cupling rafters	11''3
	<hr/>
	7''15''6

APPENDIX B

Recipes for curing, pickling, and smoking meat

To Salt Hams of Bacon:

Take a peck of Bay-salt, and four Ounces of Salt-petre rock'd double refin'd, and five pounds of brown Sugar; put all these into as much Springwater as will make the pickle so strong that it will bear an Egg; the pickle must not be boil'd: put in your Hams, and let them lie in it three Weeks; then take them out of the pickle and dry them in a cloth, and rub them with fresh salt, and send them to Dry.

To Make a Ham:

Let your Ham be fat and good; hang it up four and twenty Hours, then beat it with a Rolling-pin; rub in one Ounce of Salt-Peter, and let it be four and twenty Hours; then make your Stew-pan very clean, then take one Ounce of Salt-peter, one pound of coarse Sugar, a quarter of a pound of Bay-salt, three handfuls of common Salt; mix it well, and make it hot, but don't melt it, then rub it well, and turn it every Day, and baste it with the Brine. Let it be there three Weeks then send it to be dry'd.

Sarah Harrison, Dublin, 1738

To Make the best Bacon:

To each ham put one ounce saltpetre, one pint bay salt, one pint molasses, shake together six or eight weeks, or when a large quantity is together, bast them with the liquor every day; when taken out to dry, smoke three weeks with cobs or malt fumes.

*Amelia Simmons, New England,
1796*

Pocock's Pickle for beef, port, or mutton:

Water 4 gallons; Muscavado sugar (or melasses) 1 1/2 lb. Salt petre 2 ounces; Salt, the bay or large sort, 6lbs. Boil all together in an iron pot or kettle, and skim it repeatedly as long as any scum rises; then take off the pot to stand till the liquor is cold. The meat being placed in the vessel meant to hold it, pour the cold pickle on the meat till it is all covered, and in that state keep it for family use....If the meat is to be preserved a considerable time, the pickle must be boiled once in two months; skimming off all that rises, and throwing in during the boiling 2 ounces of sugar, and half a pound of common Salt: thus the same pickle will hold good for 12 months.

Fish, cured in the sun:

Soon as possible, after caught, split down the back, spread them open and flat-gut and wash out the blood-drain them hanging by the tails, in the cool of the evening or in a cool place -strew salt on the bottom of the tub-sprinkle them well with clean, fine salt-place them belly to belly in the tub, to lay there 12 hour-then wash off the salt, in the pickle-again hang by the tails, to drain 1/2 hour, lay them to dry, on stones or sweet wood, inclining to the sun, never leave them out when the sun is off, nor lay them out in the morning till hte dew is off and the sun shines, a week of fine weatehr or less, cures them.

Freshening Salt Provisions:

In my passages on the Chesapeak, I observed my skipper would sometimes slice salted barrel pork, and in a few minutes freshen the slices in a frying pan; and then boil them for his dinner. The pork slices were put in fresh, cold water, in a frying pan, and held over a fire till the water began to simmer (never suffering it to boil in the least). This water was then thrown away, and other cold fresh water was put in a pot together with the slices of pork. They were then boiled till enough.-This was applied, in my family, to freshening salt fish.

To Pickle Pork:

Bone your pork, cut it into pieces of a size fit to be in the tub you design it to be in, rub your pieces well with salt petre, then take two parts of common salt, and two of bay salt, and rub every piece well; put a layer of common salt in the bottom of your vessel, cover every piece over with common salts, As your salt melts on the top, strew more; lay a coarse cloth over the vessel, a board over that, and a weight on the board to keep it down. Keep it close covered; it will, thus ordered, keep the whole year. Put a pound of salt petre and two pounds of bay salt to a hog.

A Pickle for Pork which is to be eat soon:

You must take two gallons of pump water, one pound of bay-salt, one pound of coarse sugar, six ounces of salt-petre; boil it all together, and skim it when cold. Cut the pork in what pieces you please, lay it down close, and pour the liquor over it. Lay a weight on it to keep it close, and cover it close from the air, and it will be fit to use in a week.

*Hannah Glasse, (english)
Alexandria VA, 1805*

Excellent Bacon:

Salt the bacon 6 days; then drain it from the first pickle. Mix as much salt as you judge proper, with 8 ounces of bay salt, 4 ounces of salt petre, and 1 pound of coarse sugar, to each hog, the hams being cut off first. Rub the salts well in, and turn it every day for a month, Drain, and smoke a few days; or dry without, by hanging in the kitchen, not near the fire.

The Manner of Curing Wiltshire Bacon:

Sprinkle each fitch with salt; and let the blood drain off for 24 hours; then mix 1 1/2 pounds of coarse sugar, ditto of bay salt, not quite so much as a 1/2 pound salt petre, and a pound of common salt, and rub it well on the bacon. Turning it every day for a month; then hang it to dry, and afterwards smoke it 10 days.

To make a pickle for Hams, Tongues, of Beef:

To 2 gallons of spring water put 2 pounds of coarse sugar, 2 pounds of bay, and 2 1/2 pounds of common salt, 1/2 pound salt petre, in a deep earthen glazed pan, that will hold 4 gallons, and has a cover that will fit close. Keep the beef or hams as long as they will bear, before you put them into the pickle, and sprinkle them with coarse sugar in a pan, from which they must drain. Rub the hams etc well with the pickle, and pack them in close, putting as much as the pan will hold, so that the pickle may cover them. The pickle is not to be boiled at first. A small ham may be 14 days; a large one 3 weeks. They will eat well out of the pickle without drying. If drying-drip over a pan thoroughly, dry it with a sponge, 6 or 8 hours will smoke them; and there should only be a little sawdust and wet straw burnt to smoke them.

To Cure Hams:

Hang the ham and sprinkle with salt as above, then rub it daily with the following fine powder: 1/2 pound salt, 1/2 pound bay salt, 2 ounces saltpetre, 2 ounces black pepper, mixed with 1 1/2 pounds treacle. Turn it twice a day in the pickle for 3 weeks. Lay it in a pail of water for one night, wipe it quite dry, and smoke it 2 or 3 weeks.

To Cure Hams:

1 quart strong beer, 1/2 pound treacle, 1 ounce coriander seeds, 2 ounces juniperberries, 1 ounce pepper, 1 ounce pimento, 1 head of shalot, cut fine and boiled, pour over ham, rub and turn it every day for a fortnight, rub in bran, sew up in a thin linen bag and smoke for 3 weeks.

*Maria Rundell, (english), Boston
1807, Philadelphia 1810*

To Smoke Hams:

When you take your hams out of the pickle, and have rubbed them dry with a coarse cloth, hang them in a chimney, and make a fire of oak shavings, and lay over it horse litter, and one pound juniper berries, keep the fire smothered down for two or three days, and then hang them up to dry.

*Elizabeth Raffald, (english)
Philadelphia, 1818*

To Pickle Pork:

Mix and pound four ounces of saltpetre, a pound of coarse sugar, an ounce of sal prunel, and a little common salt: sprinkle the pork with salt, and drain it 24 hours: then rub with the above; pack the pieces tight in a small deep tub, filling up spaces with common salt. Place large pebbles on the pork, to prevent it from swimming in the pickle which the salt will produce.

To Cure Hams:

...if large put to it a pound of bay-salt, three ounces of salt petre, a pound of the coarsest sugar, and a handful of common salt, all in a fine powder, and rub it thoroughly. Lay the rind undermost and cover fleshy parts with the salts. Baste it as often as you can, the more the better with the pickle. Keep it a month, turning it every day. Drain it and throw bran over; then hang it in a chimney where wood is burnt, and turn it sometimes for ten days.

*Dr. Thomas Cooper, England,
1824*

Mutton Hams:

Take a hind quarter of mutton, cut it like a ham, and rub it well with an ounce of saltpetre, a pound of coarse sugar, and a pound of common salt, mixed well together. Lay it in a deepish tray with the skin downward, and baste it with the pickle every day for a fortnight. Then roll it in sawdust, and hang it in a woodsmoke for a fortnight. Then boil it, and hang it up in a dry place. You may dress it whole, or cut slices off, and broil them, which will eat well, and have an excellent flavour.

Beef Hams:

Cut the leg of a fat Scotch or Welch ox as nearly in the shape of a ham as you can. Take an ounce of bay-salt, an ounce of salt petre, a pound of coarse sugar, which will be sufficient quantity for about fourteen or fifteen pounds of beef; and if a greater or less quantity of meat, mix your ingredients in proportion. Pound these ingredients, mix them well together, rub your meat with it, turn it every day, and at the same time baste it well with the pickle. Let it lie in this state for a month, then take it out, roll it in bran or sawdust, and hang it in a woodsmoke for a month. Then take it down and hang it in a dry place, and keep it for use.

Dr. Hughson, England, 1857

Dried Beef:

Have the rounds divided, leaving a piece of the sinew to hang up by; lay the pieces in a tub of cold water for an hour; then rub each piece of beef that will weigh fifteen or twenty pounds, with a handful of brown sugar and a table-spoonful of saltpetre, pulverized, and a pint of fine salt; sprinkle fine salt in the bottom of a clean tight barrel, and lay two days; then make the brine in a clean tub, with cold water and ground alum salt-stir it well; it must be strong enough to bear an egg half up; put in half a pound of best brown sugar and a table-spoonful of saltpetre to each gallon of the salt and water; pour it over the beef; put a clean large stone on the top of the meat to keep it under the pickle, (Which is very important;) put a cover on the barrel; examine it occasionally to see that the pickle does not leak; let it stand six weeks, when hang it up in the smoke-house, and after it has drained, smoke it moderately for ten days; it should then hang in a dry place; before cooking, let it soak for twenty four hours: a piece that weighs fifteen or twenty pounds should boil two hours. Beef cured in this way will make a nice relish, when thinly sliced and eaten cold, for breakfast or tea, or put between slices of bread and butter for lunch; it will keep for several weeks.

Elizabeth Ellicott Lea, Delaware, 1845

APPENDIX C

Ingredients Encountered

All Spice

Beer - old or strong, used for flavoring the pickle/cure.

Bran - for coating preserved meat while smoking.

Coriander Seeds - The Apiaceous Herb, its aromatic seeds are used in medicines as a stomachic and carminative (something relieving colic or producing flatulence).

Corn Meal - used with flour and water to coat ham bahs before smoking

Juniper Berries (bruised or whole) - The blue, berry like fruits of common juniper have a warm, pungent taste and are used to flavor gin.

Molasses

Pepper - black and red

Salt Prunel - not the same as salt petre but a form of it, it starts the working of the salting process more rapidly.

Salt - two types; 1) bay or fine salt, and 2) common, coarse, or blown salt. 1 bushel of bay salt= 84 lbs. 1 bushel of blown salt=56 lbs.

Salt Petre - rock salt, gives a fine red color, but is apt to make the meat hard; whenever it is used, there should be at least an equal quantity of sugar to counteract.

Shalot - an onion like plant, producing small clustered bulbs, used like garlic.

Sugar - brown, coarse, or muscavado.

Treacle - liquid drained from sugar refining molds, also called sugarhouse molasses.

Definitions borrowed from Webster's New International Dictionary of English Language - 1930.

APPENDIX D

FUELS FOR THE SMOKE HOUSE FIRE

CORN COBS:

Corn cobs (*Long, 20th century*)

Corn cobs (*Simmons, 1796*)

Corn cobs (*Foxfire, 20th century*)

HICKORY:

Green hickory, smothered with a due portion of saw-dust or tanner's bark, makes the sweetest smoke" (*Boardley, 1801, p. 406*)

Hickory wood (*Elizabeth Lea, 1845*)

Green hickory chips (*Tyree, 1879, p. 125*)

Green hickory chips or pieces of hickory bark (*Foxfire, 20th century*)

SAWDUST:

Sawdust, oak (*Heath, 20th century*)

Sawdust, oak with a good finish of pine smoke for a dark resinous cover (*Hartley, 20th century*)

Sawdust, with 3 or 4 handfuls of juniper berries (*Briggs, 1792*)

Sawdust and wet straw (*Cooper, 1824*)

STRAW:

Horse litter (*Hughson, 1857*)

Horse litter with oak shavings and juniper berries (*Raffald, 1818*)

OTHER FUELS:

Apple, Maple, Oak, and Cherry woods
Sassafras

APPENDIX E

Recommended Times for Smoking Meat

smoked as usual till enough (Boardley, 1801)

smoke them well (Youatt, hams, 1856)

6 or 8 hours (Cooper, hams, 1824)

24-36 hours with steady fire, no more than a week (Long, meat, 20th cen.)

a day or two (Hughson, hams, 1857)

2 or 3 days or until desired color obtained (Heath, 20th cen.)

2-6 days (Foxfire, 20th cen.)

10 days (Rundell, hams, 1807)

10 days (Cooper, hams, 1824)

10 days (Simmons, hams, 1796)

2 or 3 weeks (Rundell, hams, 1807)

3 weeks (Simmons, bacon, 1796)

3 to 4 weeks as you approve (Rundell, westphalian hams, 1807)

6 weeks (Tyree, 1879)

10-12 hours per day for 6 weeks (Tyree, 1879)

2 weeks, and afterwards 2 or 3 times a week for a month (Lea, 1845)

APPENDIX F

Inventory Constellations-Kent County, 1773-1800

Ayers, Simon, April 3, 1795

...sundry old books
Four old axes and sundry farming utensils
old iron and two tight casks old tubs
306 lbs Bacon at 9 pence per pound
80 lbs hog lard at 9 pence per lb yoak oxen and cart...

Blackiston, George, November 9, 1778

...Negro bedding
275 wt. old Bacon
70 wt. lard
3 fat pots
Old Safe (?)
2 lbs. Beas Wax 97 lbs Soal Leather...

Burrows, James, June 22, 1705

...1 old sadle carpenter's planer old iron
12 old bags 213 lbs bacon a trunk
cart colters and bridels cart and sadel
some old carpenter's tools...

Cummins, David 1788

...one hogshead and some lime
one collar and two Bridles
566 1/2 lbs of Salt Pork
90 lbs of Salt Beef
one old Sycthe and Cradle
one iron Pot Rack
one meal Bag 4 old Barrells...

Cutter, Thomas, June 10, 1783

...1 sm parcel of salt a parcel of wool
2 bushels 1/2 of wheat 1 bushel of buck wheat
1 non bed tick 3 old wheels
1 pot rack and hook 1 pr tongues
1 hoggshead and sum feathers 1 old fan
88 wt of bacon 1 old bucket
a parcel of old iron a parcel of corn
1 old cart...

Durham, John May 16, 1788

...horsecart
288 lb. of bacon hung to Dry
old iron
5 old casks
Barrel and small quantity of tar
4 old hoes
bridle
2 old sleds...

Duborrow, Daniel (Date ?)

...old casks 7(?) 1 hoggshead
1 meal chest and soap tub parcel of flax and tow
5 narrow axes and broad ax 2 iron wedges and old saw
3 weeding and 3 grubbing hoes 2 spades and 2 old shovels
7 old sickles 1 scythe 1 gun
300 lb of Bacon 10 old planes...

Emory, Thomas, 1789

...old knives and forks 72 lbs of bacon
4 lbs hogs fat sm. meat tub
old Carp's tools 1 small tub and some
1 bushel of Timothy seed some old cyder casks...

Marin, Charles November 20, 1781

(not in order but suggestive of items to be stored in smoke house)

salt tub
9 old barrels
2 tubs
1 fishing sane
1 set of hooks
1 old cask
9 bushels of salt
2 midlings of bacon and shoulder
1 barrel and some vinegar
2 old casks
some beef

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NOTES

1. John Dickinson Papers, File #17/1, 1777, Bureau of Museums, Dover Delaware.
2. Ibid., File #44/27, 1777: "...and also in common with the said Johnson this family shall have use of the stables granary smokehouse kitchen for cooking and water."
3. Ibid., File #3/4 & 5, 1780: "In the Smoke House 6 Philada. powdering tubs upstairs 3 case bottles of Maderia Wine - & in 2 cases 20 case bottles."
4. Ibid., File #17/1, December 1, 1797.
5. Ibid., File #17/2, February 7, 1797.
6. Ibid., File #18/4, April 14, 1798.
7. Ibid., File #18/3, May 23, 1798: "...in taking Down the Smokehouse and Chimneys the Brick is so indiforent that have maid use of all we have done..."
8. Ibid., File #22/2, April 7, 1802.
9. Ibid., File #27/4, June 17, 1806. (See Appendix A for complete copy of contract.)
10. Madeline Hite puts forth the hypothesis that if the smoke house was located north west of the mansion as it now is, at approximately the present distance, it is quite possible that sparks from the fire, blown west by the wind that day, landed on the smoke house roof and burned it as well.
11. Kent County Orphans' Court Returns, 1767-1812, Bureau of Museums, Dover, Delaware.
12. St. John de Crevecoeur, Sketches of Eighteenth Century America (New Haven: Yale University Press, 1925), p. 144.
13. Eliot Wigginton, ed., The Foxfire Book (Garden City, NY: Doubleday, 1972), p. 201.
14. Waverly Root and Richard de Rochemont, Eating in America: A History (New York: William Morrow and Company, Inc., 1976), p. 66.

15. Dorothy Hartley, Food in England (London: MacDonalds and Jane's, 1954), p. 324.
16. Kent County Orphans' Court Returns, 1767-1812, Bureau of Museums, Dover, Delaware.
17. William Youatt, The Hog (New York: C. M. Saxton, 1856), p. 216.
18. Wigginton, Eliot, Ed. Foxfire 3 (Garden City, NY: Anchor Press, 1975), p. 358.
19. Amos Long, "Smokehouses in the Lebanon Valley," Pennsylvania Folklife 13:1:25, 1962, p. 26.
20. James Tilton, "Answers to QUERIES on the present State of Husbandry and Agriculture in the DELAWARE STATE," Columbia Magazine March, 1798, p. 220.
21. Israel Acrelius, "A History of New Sweden," Memoirs of the Historical Society of Pennsylvania, vol. 11, Philadelphia, (1874), p. 69.
22. Interview with foodways specialist William Woys Weaver, Paoli, PA, January 1987.
23. Inventory-Joseph Kimmey, January 19, 1793. (Dickinson Papers, Bureau of Museums, Dover, Delaware.)
24. John Dickinson Papers, File # 44/6, March 30, 1799.
25. Ibid., File #44/7, November 25, 1797.
26. Ibid., File #unknown, December 26, 1778.
27. Petition, 1810, Inhabitants of St. Jones Hundred to the State Legislature (Public Archives, Dover, Delaware.)
28. John Dickinson Papers, File #66/1, 1780s.
29. J. B. Boardley, Essays and Notes on Husbandry and Rural Affairs (Philadelphia: Printed by Budd and Bartram for Thomas Dobson, 1801), p. 186.

30. Mary Randolph, The Virginia Housewife (Baltimore: John Plaskitt, 1836), p. 49.
31. Maria Eliza Rundell, A new System of Domestic Cookery formed upon Principles of Economy and Adapted to the Use of Private Families, Third Edition (Philadelphia: Benjamin C. Buzby, 1810), p. 79.
32. Richard Briggs, The New Art of Cookery, according to the present practice (London: 1792), p. 496.
33. Rundell, p. xvi.
34. Tammy Dulebohn, "Traditional Butchering," The Mercersburg Journal Vol. 141, number 50, (Wednesday December 17, 1986.)
35. Howard Wight Marshall, "Meat Preservation on the Farm in Missouri's "Little Dixie", " Journal of American Folklore vol. 92, 1979, p.402.
36. Marion Cabell Tyree, ed. Housekeeping in Old Virginia (Louisville, KY: John P. Morton and Company, 1879), p. 117.
37. Mrs. Loudon, The Lady's Country Companion (London: Printed for Longman, Brown, Green, and Longmans, 1845), p. 101.
38. Thomas Cooper, M.D., A Treatise of Domestic Medicine to which is added a Practical System of Domestic Cookery (Reading: George Getz, 1824), p. 52.
39. Ambrose Heath, Pig Curing and Cooking (London: Faber and Faber, 1952), p. 168-169.
40. Long, "Smokehouses in the Lebanon Valley," p. 27.
41. Rundell, p. xvi.
42. Boardley, p. 260-261.
43. Loudon, p. 100.
44. Boardley, p. 260-261.

45. Elizabeth Raffald, The Experienced English Housekeeper, for the use and ease of Ladies, Housekeeper, Cooks, &c written purely from practice. A new edition (Philadelphia: Printed for James Webster, 1818).

Benjamin Biggs, Account Book, 1855, (University of Delaware, Morris Library, Special Collections.)

Amelia Simmons, American Cookery: or, the art of dressing viands, fish, poultry, and vegetables, and the best modes of making pastes, puffs, pies, tarts, puddings, custards, and preserves (Hartford, Hudson, and Goodwin, 1796).

Sarah Harrison, The House-keepers pocket-book: and compleat family cook: containing about seven hundred curious and uncommon receipts... (Dublin: E. Exshaw, 1738).

46. Wigginton, p. 200.

47. William Woys Weaver, Sauerkraut Yankees: Pennsylvania German Food and Foodways (Philadelphia: University of Pennsylvania Press, 1982), p. 154-155.

48. Sally Smith Booth, Hung, Strung, and Potted: A History of Eating Habits in Colonial America (New York: Clarkson N. Potter, 1971), p. 54.

49. Loudon, p. 100.

50. Boardley, p. 406.

51. Harrison, p. 75.

52. Randolph, p. 49.

53. Youatt, p. 219.

54. William Woys Weaver, ed., A Quaker Woman's Cookbook. The Domestic Cookery of Elizabeth Ellicott Lea, (Philadelphia: University of Pennsylvania Press, 1983), p. 167.

55. Youatt, p. 216.

56. The types of wood used in smoke house fires was determined from a number of sources with particular emphasis on Amos Long's article, "Smoke Houses in the Lebanon Valley."
57. Tyree, p. 126.
58. Ibid., p. 118.
59. Heath, p. 171-172.
60. Weaver, ed. A Quaker Woman's Cookbook, p. 168.
61. Benjamin Biggs, Account Book, 1855.
62. John Dickinson Papers, File #3/4 & 5, 1780.
63. Inventory, Bedwell Maxwell, October 22, 1798 from a random selection of Kent County Inventories 1773-1800, transcribed by Lynn Peterson at the Bureau of Museums, Dover, Delaware.
64. Kent County Inventories 1773-1800, Random selection, Bureau of Museums, Dover, Delaware.
65. Curing utensils encountered in research, specific citations unnecessary.
66. From Bureau of Museums collection of transcribed John Dickinson Papers including Files #44/24,26,27,28, & #47/13.
67. John Dickinson Papers, File #29/45, 1793.
68. John Dickinson Accounts, October 8, 1790-November 15, 1792, File #40/7,8,30, (Bureau of Museums, Dover, Delaware).
69. The history of the black population at the Dickinson Mansion as researched and compiled by James Stewart, Bureau of Museums, Dover, Delaware.
70. John Dickinson Accounts, March 4 1775-October 1800 (Bureau of Museums, Dover, Delaware).
71. John Dickinson Papers, File #49/7, 1779-1782.

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