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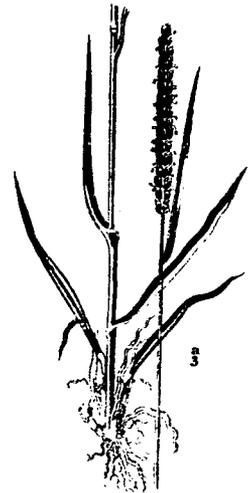
IN
STORAGE

A Design for Oxon Hill Farm

Summary Statement



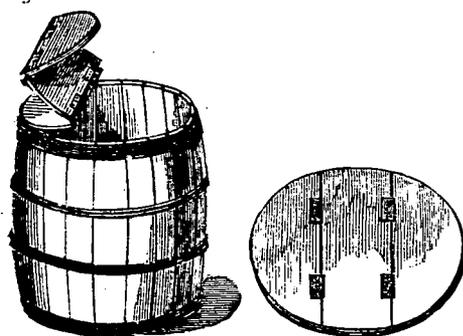
Prepared for:
The National Park Service



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Contents

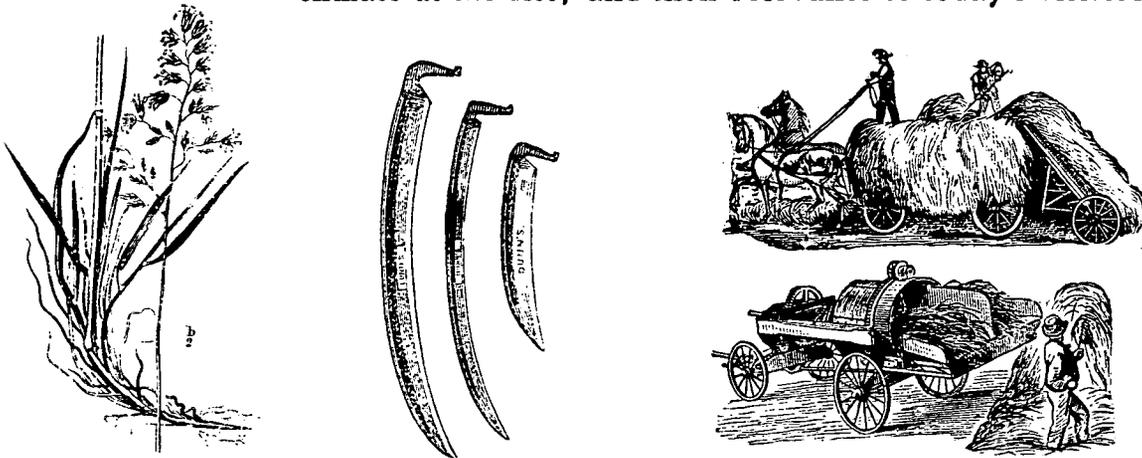
Design Theme.....	4
Part 1. Croplands.....	6
Part 2. Livestock.....	13
Part 3. Farmstead.....	26
Guidelines.....	40

There must be new contact between men and the earth, the earth must be newly seen and heard and felt and smelled and tasted...."
Wendell Berry, A Continuous Harmony

This report describes the crops, livestock and farmstead on a typical family farm, ca.1900, appropriate for the Oxon Hill, Maryland site operated by the National Park Service.

The report specifies practices to follow in (1) cropping the land with period equipment and horsepower, (2) housing, breeding, pasturing, and feeding livestock, and (3) maintaining a yard, kitchen garden and orchard.

Recommendations on farm ingredients and practices are commented on in terms of their place in the evolution of farm life, how they fit the soil and climate at the site, and their relevance to today's visitors.

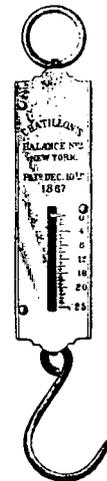
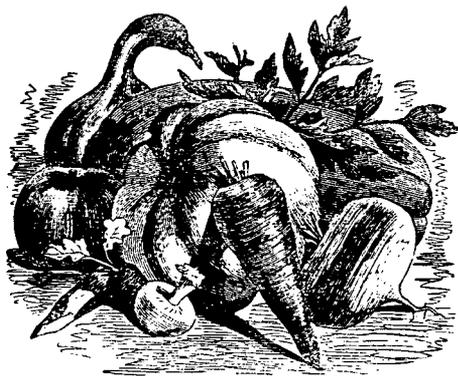


The recommendations are intended to be practical. They build on existing resources, and take the carrying capacity of the site into account. There is an emphasis on simple changes that are easy to make, e.g., exhibiting the period tools and equipment scattered around the farm in an orderly way and culling ahistorcial elements such as plastic containers, nylon feed bags, and wayside picnic tables to sharpen the period farm image.

There is an emphasis on continuous farming: on the daily use of period equipment and horsepower to farm the land. Processing crops -- threshing, separating, grinding, chopping and pressing -- is also stressed.

Something should be going on in the fields and on the farmstead every day. This shows farming as a series of connected activities following a seasonal cycle.

The report emphasizes getting farm products out in front for visitors to see. The Visitor Center could exhibit cartons of berries, bushels of wheat, tomatoes, and apples, smoked hams, fresh-cut alfalfa and chopped green corn. The displays could link farm products with their unit values and show price fluctuations in the commodities markets.



The recommendations address ways to maintain and expand existing levels of visitor participation -- letting people gather eggs, feed animals, husk corn, do garden work and pick fruits and vegetables.

New interpretive areas are recommended:

- (1) Establish a crop demonstration center showing a corn-wheat-hay rotation, with variations, and the growing of truck crops.
- (2) Make the Visitor Center into a display area for the products of orchard, garden, croplands and livestock.
- (3) Use the Hay Barn to exhibit tools and parts of larger machinery, grouped by function, along with engravings and photographs showing the equipment at work.
- (4) Establish a new Farm Operations Center at the head of the trail leading to the croplands. Do seasonal exhibits of equipment being used in the fields. Bring seeds, growing and harvested crops up from the fields. Show fertilizers and pesticides.
- (5) Consider developing the Dairy Barn and Silo to demonstrate a milking operation.

There is a related emphasis on creating new visitor flows, to add variety, bring people closer to farming operations and the land, and relieve congestion at the center of the farmstead.

A new walking trail could loop along the north end of the main pasture area, overlook a defined cropping area and the river beyond, then come back to the house through the orchard and kitchen garden. A spur could lead to the new Farm Operations Center. Paths could be opened between pastures where animals forage, and between fields in the crop demonstration area.



The period design and activities at Oxon Hill need to be communicated in a way that draws adult visitors to the site. The enhancements recommended here should be supported by new promotional materials -- a new brochure for starters, that shows the current farmstead layout, and links it to the croplands. The recorded message that plays when people call could reflect the increased level of farming activities by talking about what is going on that day, and over the next week. Now the same message plays for a month. At the end of the message, callers could request more information on a short menu of subjects, and be automatically connected with a second recorded message concerning changes in the livestock population, what is being planted and harvested in the garden, or field work in progress.

Getting local groups involved in the making recommended enhancements is a way for the Park Service to share costs and build community ties. This has been done in the past with the Boy Scouts, senior citizens who garden at Oxon Hill and other groups. It could be extended to other parties, e.g., the



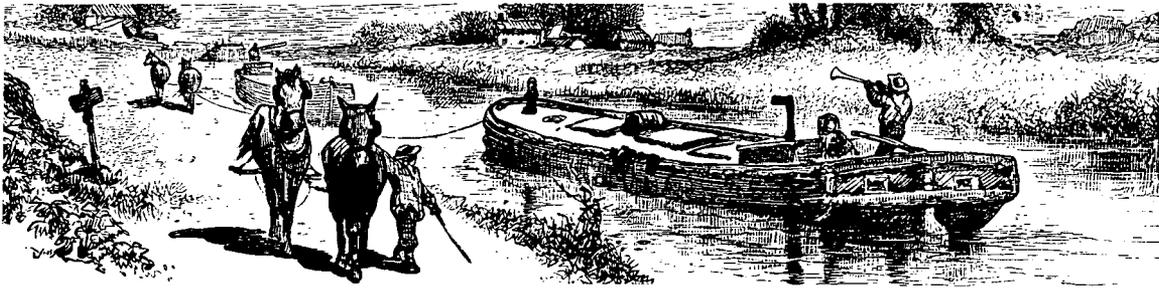
Maryland Dairyman's Association might help develop a new dairy demonstration area. Involvement of this kind needs to be managed to insure that participants understand how their efforts give expression to the period farm design, and the related need to use materials, tools, and practices that fit.



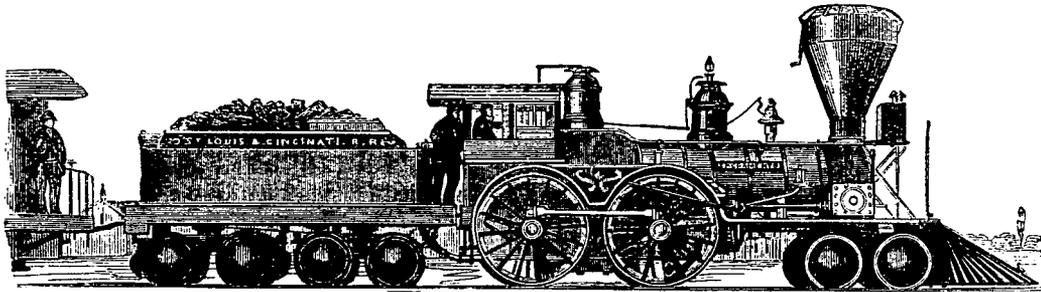
Design Theme

The farm should represent a mixed farming operation ca. 1900, adapted to the soils and climate of Southern Maryland, and the resources at the site.

During the 19th century the canals, railroad and steam ship had drawn farmers into a international production and distribution system. They bought and sold in a market place where they had no control over prices.



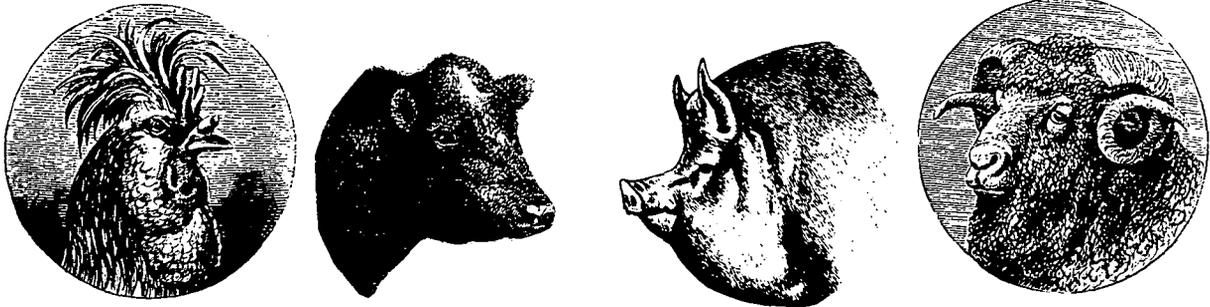
(Grain boat on the Erie Canal; St. Louis and Cincinnati R.R. engine and cars)



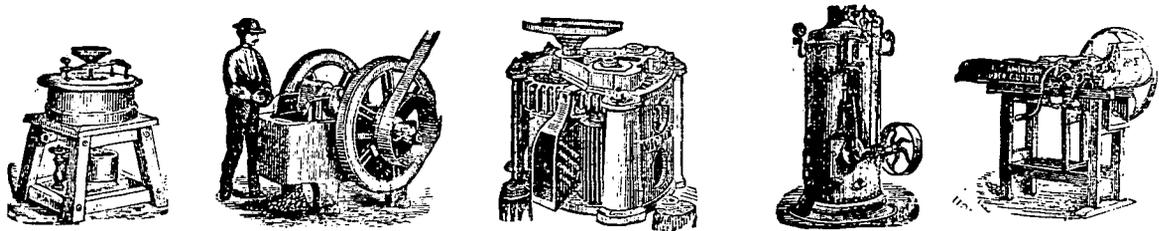
Some farmers responded to this situation by concentrating on producing those things they needed in order to support themselves first. Farm families took pride in taking care of themselves, making the most of what they had, and needing little from outside sources they could not control.

Mixed farming seeks security and stability in diversity, in having a lot of different things coming all the time. If your wheat crop fails or your pigs get sick and die, you have other crops and herds to fall back on. It provides managers flexibility in marketing, giving them several things to sell and more control over when to market their products. If the price of corn is down at harvest time, you can store it and wait. Or you can feed it to livestock, converting it to milk, meat, and manure. This allows the manager to play the commodities markets over a 4-5 month period.

Managers practicing mixed farming tried to increase productivity by finding better ways to combine resources on the farm. They were always looking



for better crops and crop rotations, the best combination of fertilizers, or the right mix of grasses and legumes in their hay fields and pastures. They were interested in more productive animal breeds and crosses, and in the best mix of pasture, grain, and hay to feed each animal, given its stage of maturity and uses. There was also an emphasis on processing raw materials on the farm. It was an age of small hand-operated machines, supported by larger, horse- and steam-powered equipment.



Mixed farming in 1900 was practiced in a dynamic environment. It carried elements of subsistence farming -- the desire to be self-contained and independent by producing and processing the essentials on the farm. It joined the 18th and 19th century natural philosophers in believing that everything exists for a reason, and has its place in the order of things. Mixed farming had the enthusiasm of the new yankee pragmatism of William James for the rich diversity of nature, and James's conviction that a pluralistic world is a more interesting and more secure place to live.

Mixed farming was not a nostalgic movement, and it was not utopian. It was hard-headed and practical in outlook. It used the best plants and animals available, and the best tools and machinery to grow and process crops. It took advantage of the new information on breeding, feeding, and tillage practices. It adapted quickly to change. The alert farmer was always experimenting with new equipment and growing methods, new plants and animals, new mixes and new markets.

Part 1. Croplands

"Cropping plans are the basis of farm organization." Cyclopedia of American Agriculture, 1917

Use fencing and natural boundaries to define a single crop demonstration area on the flat west of the house.

The cropland boundaries and cropping pattern are now amorphous and not interpreted. The area is seldom seen by visitors. A clearly bounded demonstration area would help visitors read the cropping scheme, seen from the hilltop terraces, or closeup, while walking the fields. Roadways and paths should be used to segment the area into fields where crops are grown.

Devote three fields in the demonstration area to a corn-wheat-hay rotation; use period equipment and horsepower to farm the land.

Consider a second area for crop rotation at the bottom of the path leading down from the farmstead. Use the sloping terrain to demonstrate conservation methods for hillside farming.

Rotation -- growing a succession of plants for regular periods on alternative fields -- is a key idea in mixed farming schemes. A four year corn-wheat-hay rotation was common in Maryland from the 1850s to 1900. Planting and harvesting these crops are major seasonal demonstration events at the farm.



Opening up a second area divided into three segments allows the demonstration of variations on the rotation theme. The bonus here is that the sloping terrain lends itself to demonstrating conservation practices -- contour plowing, strip farming, terracing and sod waterways.

* * * * *

The market price for corn and wheat continued to drop from the peak years just after the Civil War to 1894. Grains were increasingly fed to livestock. But the rotation continued to be less and less profitable. Farmers were under pressure to find new crops.

Replace wheat with barley in the rotation.

Barley was less expensive to grow, often outproduced wheat, and usually brought a higher price. Barley grown in Southern Maryland usually sold in the Baltimore markets; brewers were the primary buyers. Switching to barley did not disrupt the basic rotation, since it could be used like wheat as a livestock feed, and as a nurse crop for new hay. Oats are a second possible substitution here.

Grow and plow down a green manure crop.

Green manure crops played a significant role in returning nutrients to the soil and maintaining tilth. The idea is to use the time between crops to grow something that will catch easily, cover the soil with green leaves that collect the diffused flow of solar energy, and grow well in late autumn and early spring. These crops protect the soil while they are growing. When plowed down in the spring, they put more back into the ground than they have taken out. These nutrients are available for the next crop in succession. Most green manure crops are nitrogen-fixing plants that take this critical plant food out of the air and leave it in the soil. Crimson Clover (right) was the most popular green manure crop. Cow peas and rye were also commonly used for this purpose.



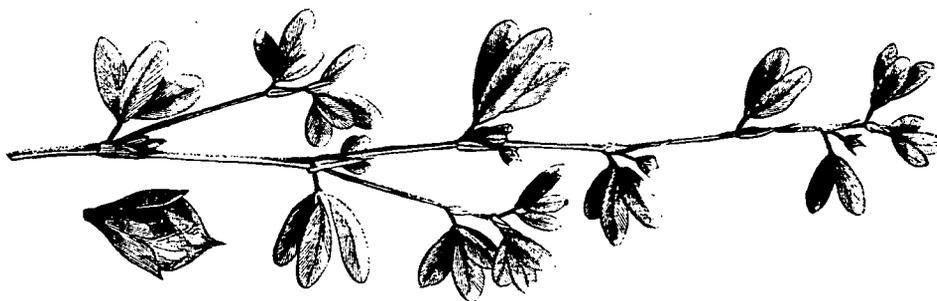
Demonstrate use of a legume soiling crop.

In 1900, farmers in Southern Maryland saw alfalfa as a promising new crop. It withstood heat and droughts, out-produced the other legumes, and it was persistent, providing good yields for 5-6 years. It provided rich long forage, particularly high in protein.

However, it was often too rich for pasture, causing bloating, and the crowns which produced new stems were often injured by the hoofs of grazing animals.

Alfalfa's particular strengths and limitations led farmers to use it as a soiling crop -- cut fresh with a mower, carried to pens and pastures, and fed green to livestock. This practice would demonstrate mowing, handling and transporting the crop on a regular basis using period equipment and horsepower. Alfalfa could be fed to nearly all the livestock on the farm. As another source of green forage, it would take the burden off existing pastures.

Lespedeza (below) is a second legume adapted to hot weather that was being tried on the silt-loam soils of Southern Maryland, and in many other Southern states, at the time. It can be used like alfalfa as a soiling crop.



Demonstrate double cropping by growing corn with beans and with pumpkins.

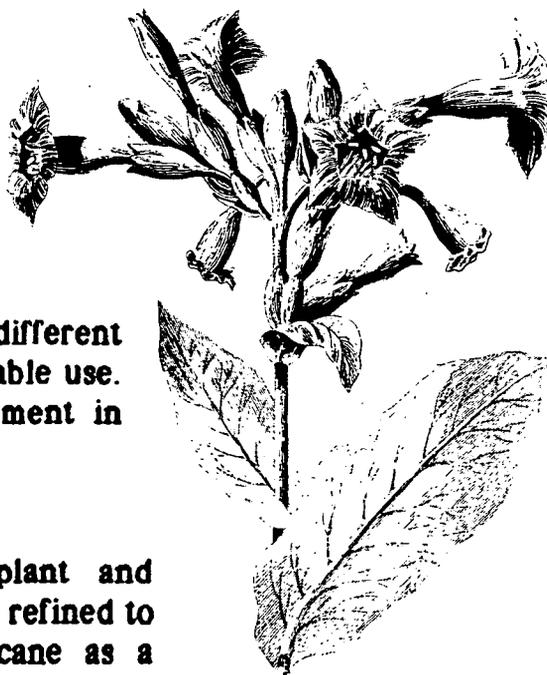
A small area in the corn field could be used to demonstrate this practice, followed by the Indians, by growers in 1900, and some gardeners today. Pumpkins, squash and gourds do well under corn; their broad leaves pick up the scattered sunlight that penetrates the leaves of the taller corn stalks. The stalks provide support for the pole beans.



Grow patches of tobacco and sorghum.

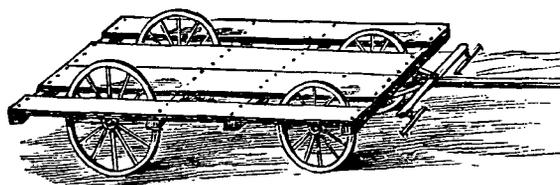
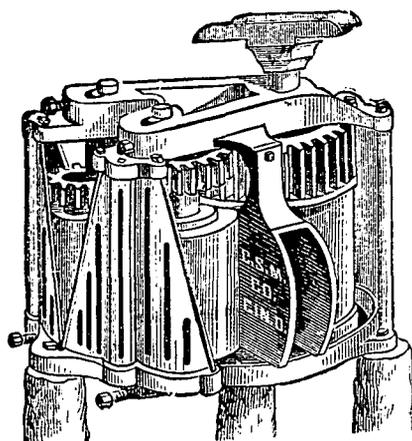
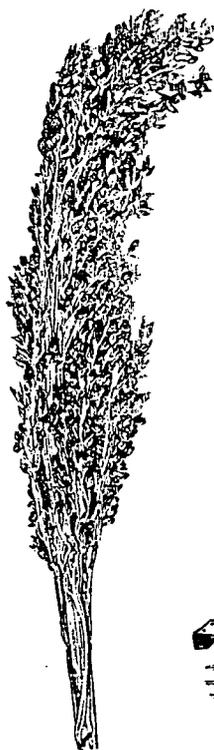
Tobacco planting and making sorghum syrup are major demonstration activities on the farm.

The acreage devoted to tobacco declined from the 1850s to 1900. But it continued to be a major cash crop in Southern Maryland.



Farmers were growing sorghum for different reasons. It was a source of syrup for table use. The syrup was also used as a supplement in animal feeds.

Northern farmers hoped that the plant and methods for distilling its juices could be refined to the point where sorghum replaced cane as a source of white table sugar.



The plant was also cut green and used as a soiling crop.

Cutting sorghum, stripping the stalks, hand-feeding them into a sweep-driven grinder, and then boiling down the juices is the kind of demonstration that should be on-going at Oxon Hill.

Demonstrate four truck crops in the field beside the tobacco and sorghum plots.

"...farmers can no longer expect to succeed unless they closely watch the markets and adapt their crops to the requirements of the markets." Maryland Agricultural Bulletin No. 21, 1893

"The production of early vegetables and fruits on the light sandy soils of Southern Maryland...has grown enormously as the markets have been extended by improved transportation facilities." Ibid.

The light, silt-loams of Southern Maryland are fast soils. They warm early and drain well. This, a moderate climate, and nearby big cities gave Southern Maryland farmers a natural advantage in growing truck crops for the early market. Production of vegetables and fruits grew rapidly during the late 19th century as new acreage was converted to this use. The value of Maryland's vegetable crop in 1900 was \$4,354,000.

Here, the railroad and new refrigeration technology worked for the Maryland farmer, allowing him to sell his product fresh in Western cities. New canning technology helped too. For the first time, fruits and vegetables were available to consumers year-around, and this increased consumption. This recommendation is in keeping with St. Elizabeths' use of the croplands after it took over in 1891. Records show a substantial amount of truck produce was grown at Oxon Hill to feed the hospital population.

* * * * *

Visitors could harvest these crops. Or the produce could be sold in green markets in Alexandria and Washington. Both approaches demonstrate direct marketing -- producer to consumer sales. A produce grower at Oxon Hill in 1900 would probably have tried to get retail prices by carrying his product to Alexandria by ferry, and selling directly to consumers in the green markets or neighborhoods. The revival of urban green markets as a mechanism for direct sales is critical to the success of most small growers today. Since they do not produce in volume, they need to sell at retail prices to make a profit.

Grow tomatoes for market.

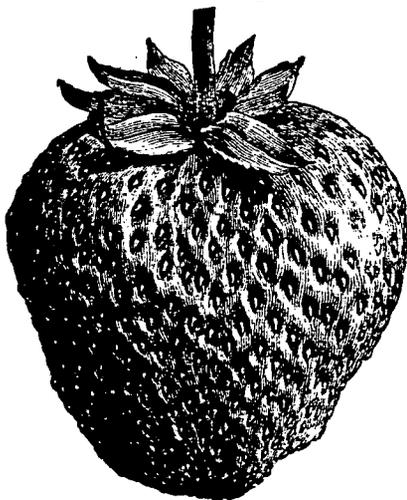
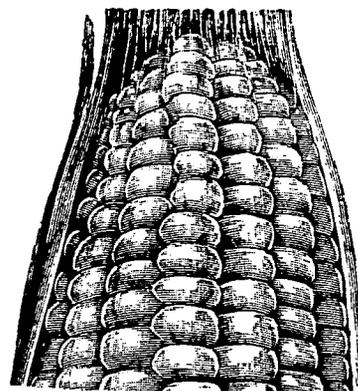


In 1900, Maryland was the leading source of canning tomatoes. Consumption of this crop was up. Plant breeders were improving the tomato. Some varieties were producing 20 tons of produce per acre in a good year. The crop was not hard on the soil.

When plowed down, it returned potash and other nutrients to the ground.

Grow sweet corn for market.

In 1900, Maryland ranked fourth in the production of canning corn; 17,000 acres were planted in canning corn, and 1,000,000 cases were packed. Plant breeders were improving the crop, developing earlier varieties, and plants with larger ears, deeper kernels and a higher sugar content.

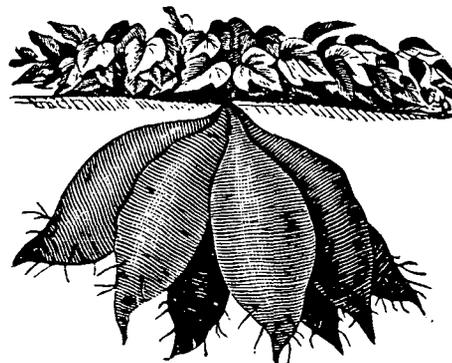


Grow strawberries for market.

Strawberries were recognized in 1900 as a coming commercial crop in Southern Maryland. Breeders were responding to the growing demand with new varieties that had bigger, brighter berries with a higher sugar content. There were also new early and late crop varieties.

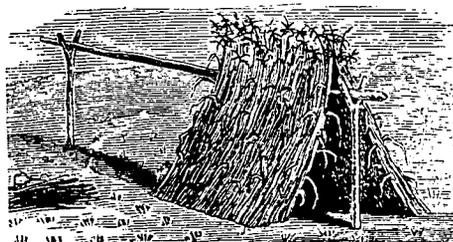
Grow sweet potatoes for market.

The sweet potato crop in Maryland increased from 408,000 bushels in 1890 to over two million bushels in 1900. The plant was very productive, yielding up to 100 bushels per acre. Like the tomato, it did not exhaust the soil. This root crop was also often used to feed farm animals.



Demonstrate the storage and processing of crops grown in the fields; use period equipment and horsepower.

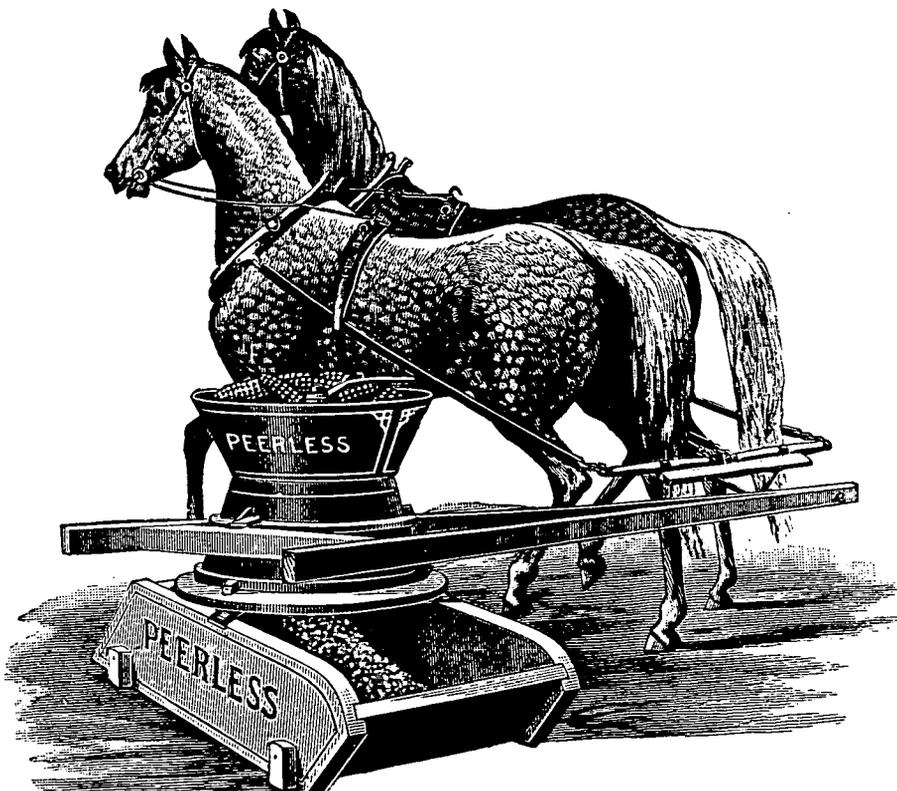
Consider stacking hay and shocking corn on the flat to demonstrate storage in the field. This add visual interest and new interpretive possibilities.



The flow of the products of the fields -- into granary, haybarn and silo, through threshers, separators, cutters and grinders -- should be demonstrated on a daily basis. This flow links the elements on the farm. Corn seeds become plants which set ears that are picked and ground into corn meal and fed to milk cows. The cows produce

milk and manure. The farmer drinks or sells the milk, makes butter, and turns the manure back to the soil.

Tread-mills (above) and sweeps (right), and the threshing, winnowing, grinding and chopping machines they drove, should be operated on a regular basis to demonstrate on-farm processing.



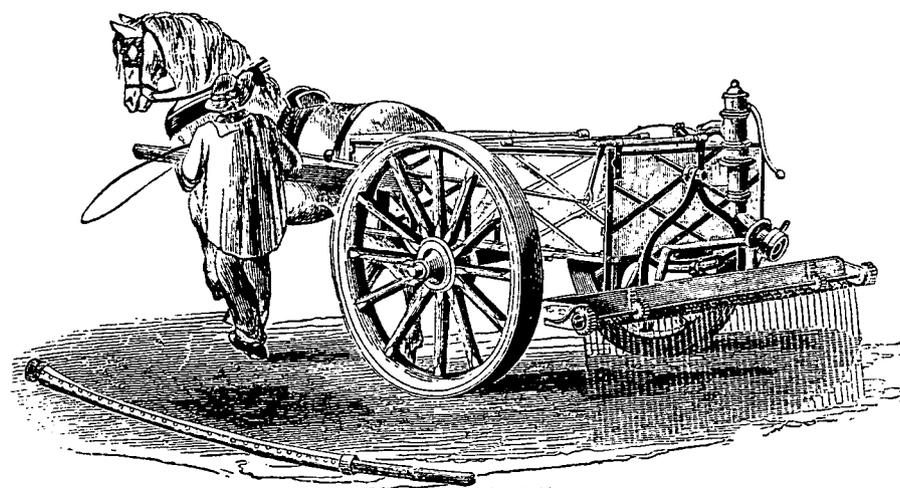
Part 2. Livestock

"Corn makes cattle, and cattle make corn." Maryland Agricultural Bulletin, 1897.

Feed livestock crops grown on the farm.

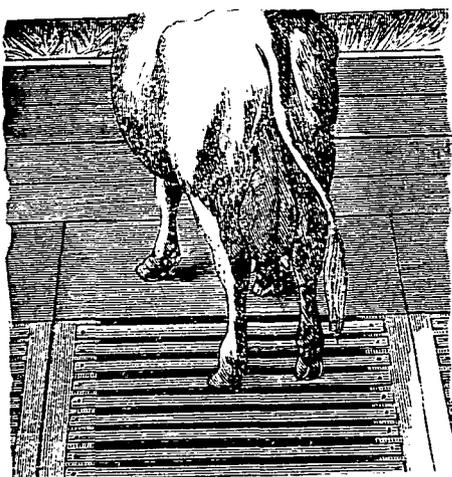
Capture animal wastes and return these to the fields.

Since the days of Jefferson, progressive farmers have taken steps to design animal shelters and pens to capture animal wastes and return these to the soil. This recycling of nutrients back to their source is a key to sustainable



farming. It takes advantage of a free by product of livestock raising to renew the soil. And it reduces dependence on commercial fertilizers.

Grade and harden holding pens and feeding areas where animals congregate, and provide bedding.



The cattle holding pen, horse-feeding area, both pig pens, and the area around the duck pond are bare and eroding. They reflect poor soil conservation, manure management, and hygiene practices. Where grass cannot be established, pens should be graded and hardened -- using gravel, crusher run, wooden boards or cement. Flat, hardened surfaces and good bedding practices should provide animals clean, dry areas to lie down and make it easy for staff to keep pens clean.

Demonstrate period breeding and marketing practices. Show crosses that combine traits to create a better animal.

Babies -- calves, lambs, baby chicks and baby pigs, goslings and kids -- are a major draw at Oxon Hill. Breeding should be managed to maintain the genetic identity of the herds at the site and coordinated with marketing to keep herd sizes within established limits. Use cross-



es to demonstrate practices of period breeders and farmers who were trying to combine traits in parent stock in order to correct weaknesses and increase the usefulness of the offspring.

Renew pastures. Use moveable fences to control access and increase the productivity of pasture land.

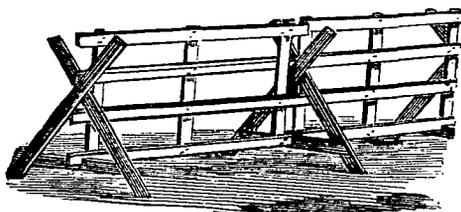
Pasture land is limited at Oxon Hill. The over-grazing of sloping ground, excessive shading in some areas, and dry weather have created weak, weedy, erosion-prone pastures. The pastures must be plowed down and reestablished. The Maryland Soil Conservation Service recommends a combination of orchard grass, timothy, red clover and ladino clover. These grasses and legumes were being grown in 1900.

In 1900, most livestock were put out in fenced pastures where they foraged for themselves during the growing season. For many animals, this represents a transitional stage between the colonial period, when farm

animals usually ran free and the crops and kitchen garden were fenced, and modern practices of confined feeding.

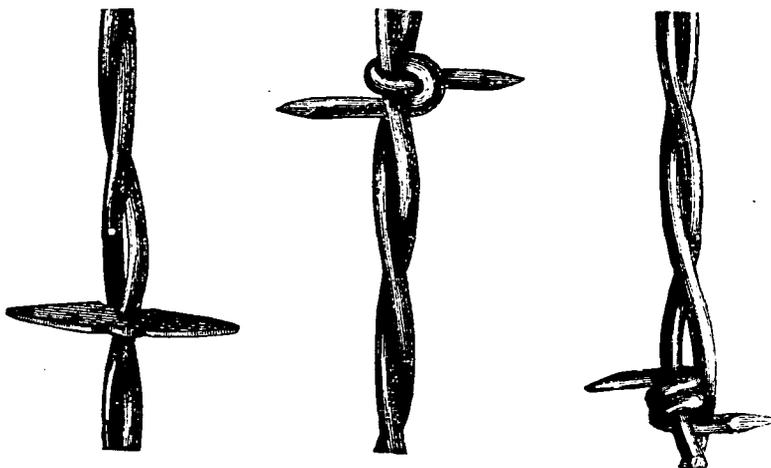


Oxon Hill is not showing chickens, pigs, ducks, geese, and sheep foraging in grassy pastures. Unstead, they are mainly confined in bare pens and fed commercial feeds. The cows and horses are sometimes seen grazing, but the pastures cannot support them, and their daily diet is heavily supplemented with commercial feeds



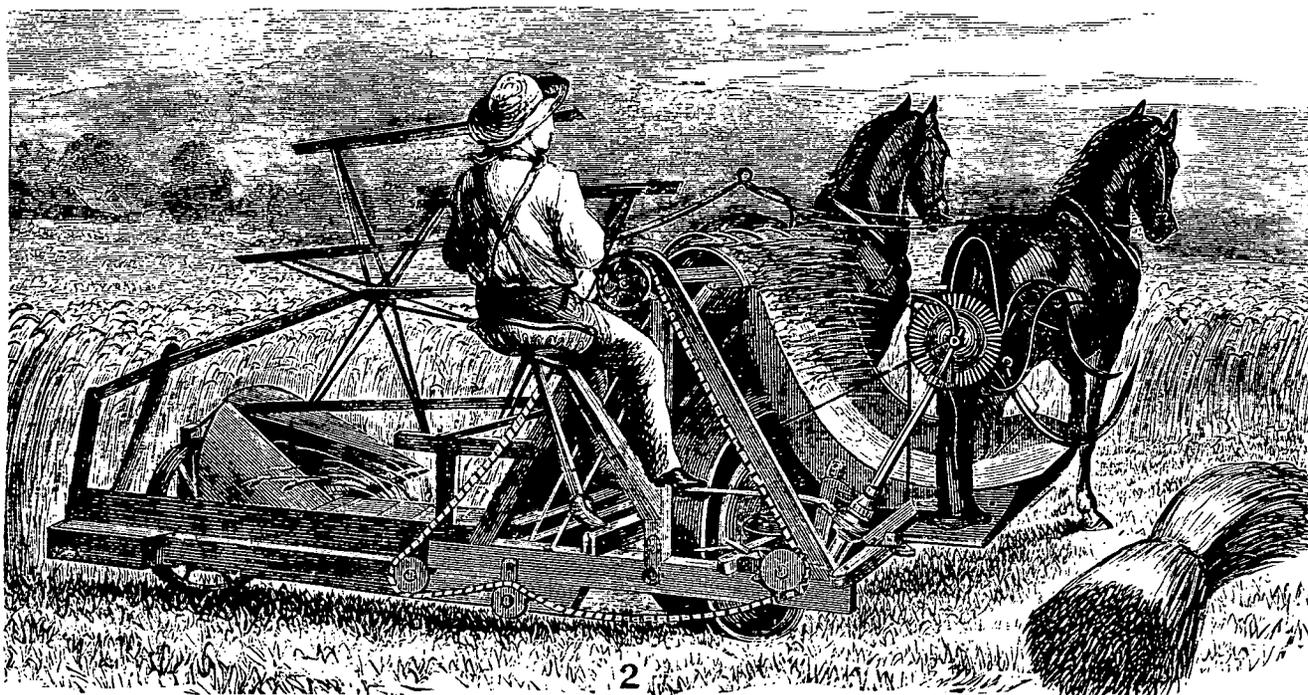
Several steps can be taken to improve the situation. The pastures must be renewed, turned under and replanted in grasses and legumes. Some trees should be thinned, especially in the sheep pasture. Moveable fencing should be used to give animals access to small sections of the

pasture at a time. The livestock should be rotated from section to section to prevent over-grazing and allow the grasses time to come back. Soiling crops can be brought up from the fields to provide additional green forage. The size of herds needs to be reduced in some cases (see the following sections). The space allotted to some animals -- pigs chickens and ducks -- needs to be increased.

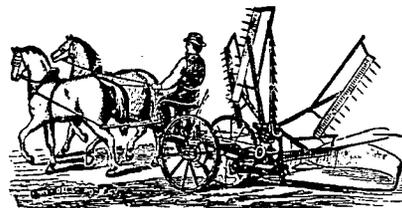
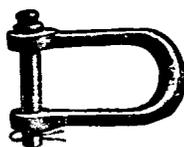
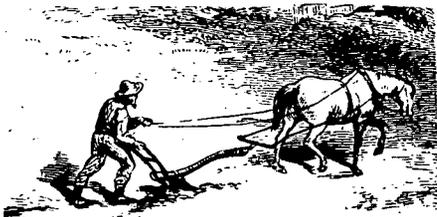


Use the horses to farm with period equipment.

Oxon Hill represents the horse-farming era. The Belgium and Percheron teams on the farm are seen working mainly during special demonstrations which are often months apart.

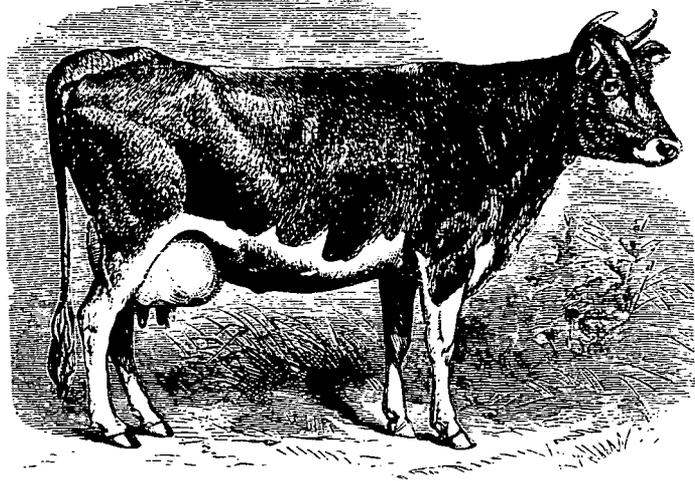


The horses should work in the fields on a regular basis, pulling plows, planters, reapers, rakes and hay loaders. They should be seen working around the farmstead, driving treadmills and sweeps to grind feed, cut wood, and make silage. This would transform Oxon Hill into a working farm.



Maintain the existing specimen herd of five dairy and two beef cattle. Consider adding a Short-horn.

The breeds represented -- Ayrshire, Jersey (top), Guernsey, Brown Swiss and Holstein -- were the major dairy breeds in 1900.

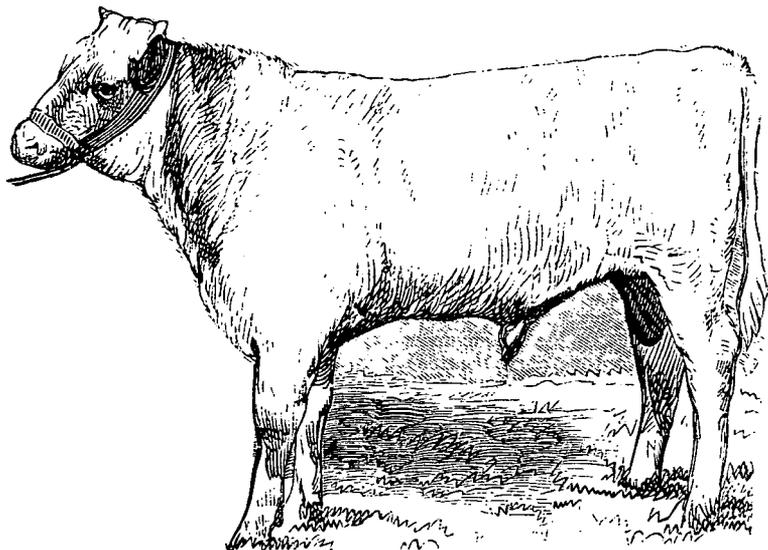


Two -- Hereford (middle) and Black Angus -- were major beef breeds. They represent more than a century of systematic efforts by European and American breeders to produce better milk and beef cattle.



The contrast between the milk cow and beef body types shows the molding for specialized uses

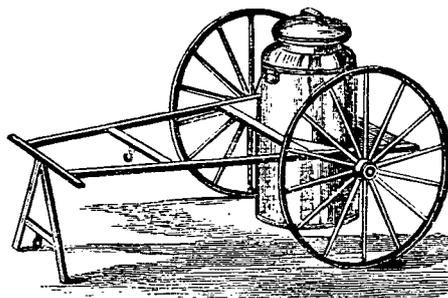
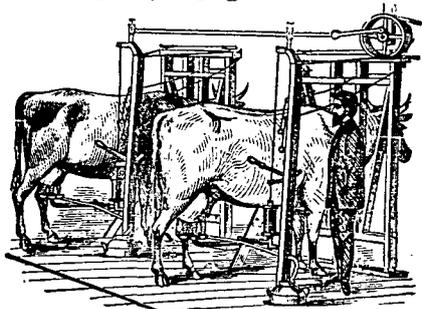
The Short-horn (bottom) was the leading multi-purpose animal of the 19th century -- used for draft, milk and meat. It sets up the interpretation of the rest of the herd, showing the most popular multi-purpose animal before specialized milk and beef cattle appeared, and the horse replaced the ox for draft purposes.



Develop the Dairy Barn and Silo. Demonstrate dairy operations.

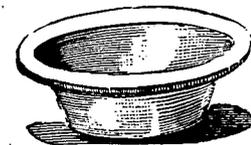
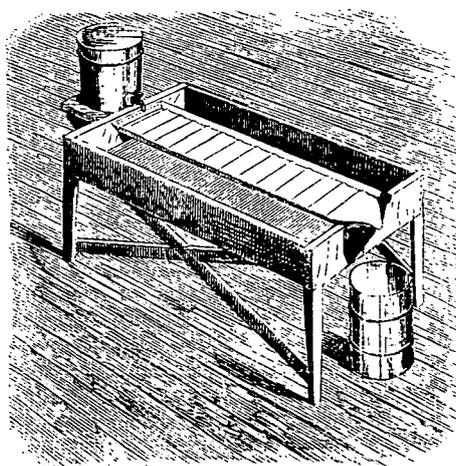
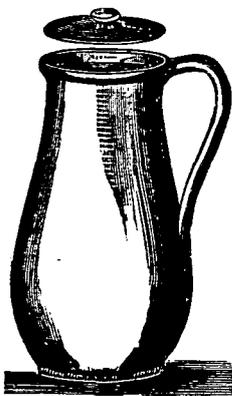
This would make use of a resource already in place to open a new interpretive area near the parking lot. The location and size of the building would allow it to demonstrate dairying, and to serve as a new visitor reception area, gift shop, and exhibit area. It could be approached from the parking lot by the existing wagon road.

A dairy fits the period and location. The number of milk cows in Maryland increased from 86,856 to 142,198 between 1850 and 1890. In 1900, 21,397,875 gallons of milk were sold off Maryland farms.



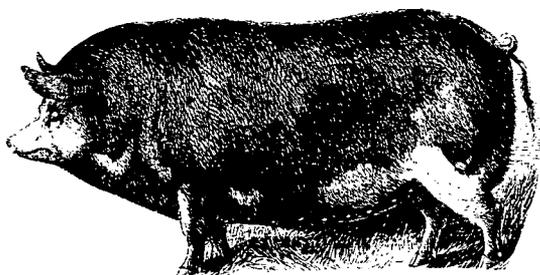
The development of the dairy barn would bring another asset, the silo, into the farm operation. The first silo in the United States was built in 1875; a year later, Francis Morris built the first one in Maryland. Interest in silos for storage grew with the use of chopped green corn (silage) and soiling crops to feed milk cows. The early 20th century tile silo on the farm links the corn from the fields to the milk and manure produced in the dairy barn. Filling it could demonstrate the use of a period chopper and elevator.

The proper cooling of milk, and the use of clean containers, were important in keeping the product free from contamination .

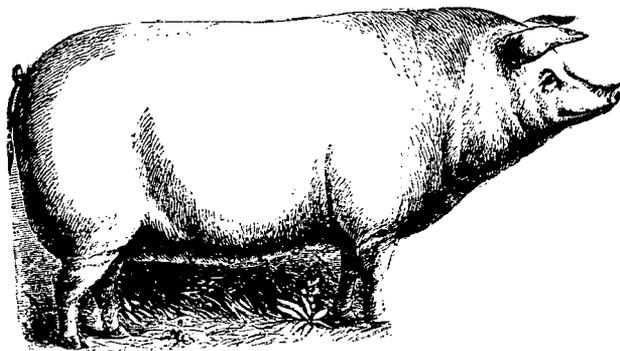


Reestablish the pig operation at a new location with a boar and two sows.

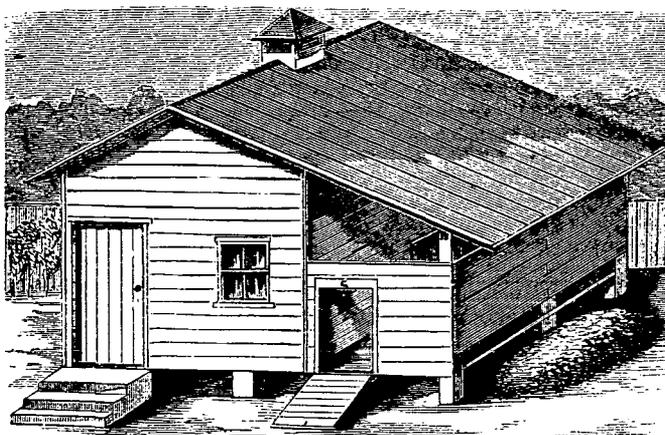
The problems of bare, eroding pens, over-population and manure run off have been most severe with the pigs. This has led to a disease problem. The site manager is planning to shut down the operation this fall and reestablish it at a new location in the spring.



Relocate the pig operation in the old horse pasture near the new Farm Operations Center. Consider a good 1900 pig house design that separates animals from their wastes and captures manure and urine for use as fertilizer. Consider a plan that allows good visitor access and has feeding and loafing areas inside.



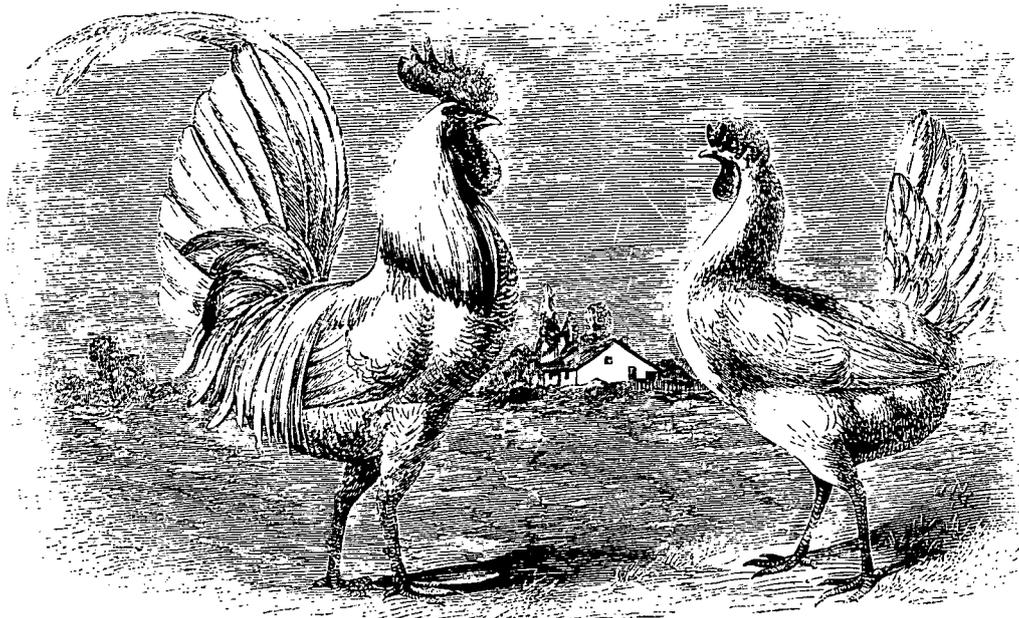
If pigs continue to be fed and watered in a pen outside, grade and use concrete or wooden flooring to harden the pen area. Establish an acre or more of pasture to demonstrate that pigs generally foraged for themselves during the summer months in 1900. Control access to maintain the pasture.



Duroc-Jerseys, Yorkshires, Berkshires, Poland Chinas and Chester Whites are representative of the period. Consider crossing a smaller, bacon-type boar such as the Berkshire (top) on a Poland China or Chester White (bottom) sow -- a bigger animal with a faster growth rate -- to demonstrate period breeding.

**Establish a flock of 12 Leghorn chickens.
Consider demonstrating confined feeding.**

A set of Leghorns (below) demonstrates the emergence of the "one best breed" among laying hens. A flock of Plymouth Rocks would do the same for the dual-purpose type.



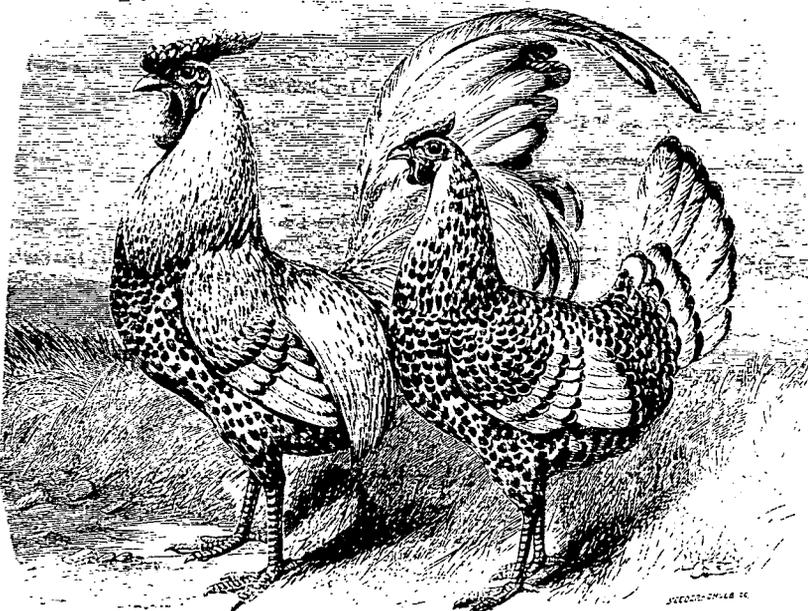
In the 1840s, Eastern farmers near city markets began to import new breeds in an effort to improve their flocks. They wanted bigger, faster growing birds and better layers. By 1900, the Leghorn was considered the most efficient layer, and the Plymouth Rock was the most popular dual-purpose breed. When St. Elizabeths operated the farm, they kept a flock of 2,000 Leghorns for eggs.

Consider keeping this flock in one of the three sections of the chicken house to demonstrate new confinement practices. This would reduce the burden on the chicken yard, and contrast with the earlier practices of allowing the animal to forage outside in a large yard, or to run free. Consider expanding the windows on the lane side of the chicken house to make it easier for visitors to see the laying boxes and roosts. Install a wooden board under the roost to make it easier to clean out manure.

Establish a 15 bird specimen flock of breeds which show the genetic roots for the Leghorn and Plymouth Rock.

This flock would demonstrate the evolution of chicken breeding in the 19th century, and show the movement from diversity towards the "one best breed."

The Leghorn evolved from Black Spanish, Minorca, Hamburgh (right), Poland and Dorking genetic material -- from the Mediterranean breeds. The leading dual-purpose birds (Plymouth Rocks, Wyandottes and Rhode Island Reds) evolved from crossing large birds from South and Southeast Asia -- especially Brahmas and Cochins -- on domestic hens.



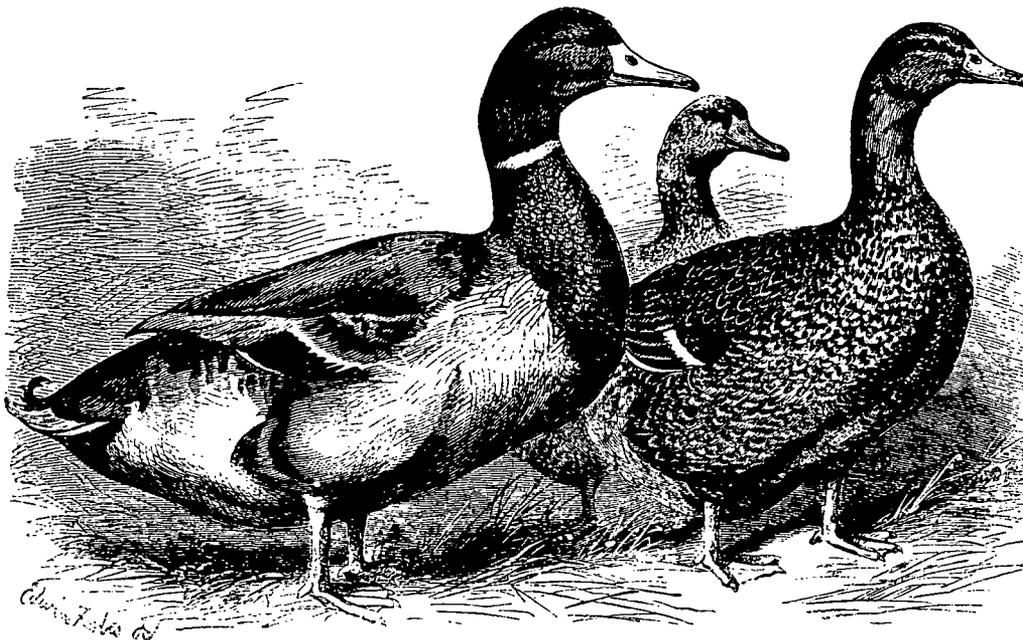
A specimen flock of these early breeds would show differences in size and form, striking colors and feather patterns. A Leghorn and Plymouth Rock should be included to show what emerged out of this diversity. Again, consider expanding windows to allow easy viewing of the chicken house interior.

Take steps to show chickens foraging in a grassy yard. If the Leghorn flock is confined, and the number of chickens in the specimen flock kept down, it should be possible to convert the existing yard to grass. Consider expanding the yard space into the area now occupied by the Equipment Shed.

Consider allowing 3-4 fancy chickens to run free on the farm.

Many farmers in 1900 kept fancy chickens -- Bantams, game birds, and Houdons. Allowing a few of these birds to run free would add color and interest. It also demonstrates the persistence of the early 19th century practice of allowing chickens to forage freely on the farm.

Reduce the number of ducks to 12. Grow Pekins and Kacki Campbells; consider keeping Roens (below).

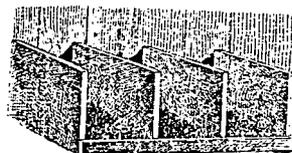


Expand the forage area available to the ducks and convert the current pen area to grass.

The objective is to reduce the population and to increase the foraging area so the bare, eroding area around the pond can be grassed in, and the ducks are exhibited as a foraging animal. Pekins were the most popular meat bird of the period. Roens were still common as meat birds. The Kacki Campbells were the best layers.

Consider converting the moveable pig house beside the duck pond into a duck breeding house.

If the dairy barn is developed, consider relocating the duck operation out there.



Providing ducks with a breeding house fits period practices (nests, left). The proposed building would be free if a new pig house were built. There is a natural depression just east of the dairy barn that could be made into a pond. If the barn and silo become an interpretive area, adding a pond and ducks here would enhance interest and relieve the congestion down at the farmstead.

Reduce the goose population to 2-3 birds that are allowed to forage in the barnyard area.

The Agriculture Census shows only 533 geese raised on farms in Prince George's County in 1900. The culture and feeding of geese is different from that of ducks. Raising these birds together is not consistent with historical practice. Removing the geese from the pond area would reduce the load and make returning this area to grass easier. Allowing 2-3 birds to forage in the barnyard area keeps the geese in view and demonstrates the survival of an older livestock management practice.

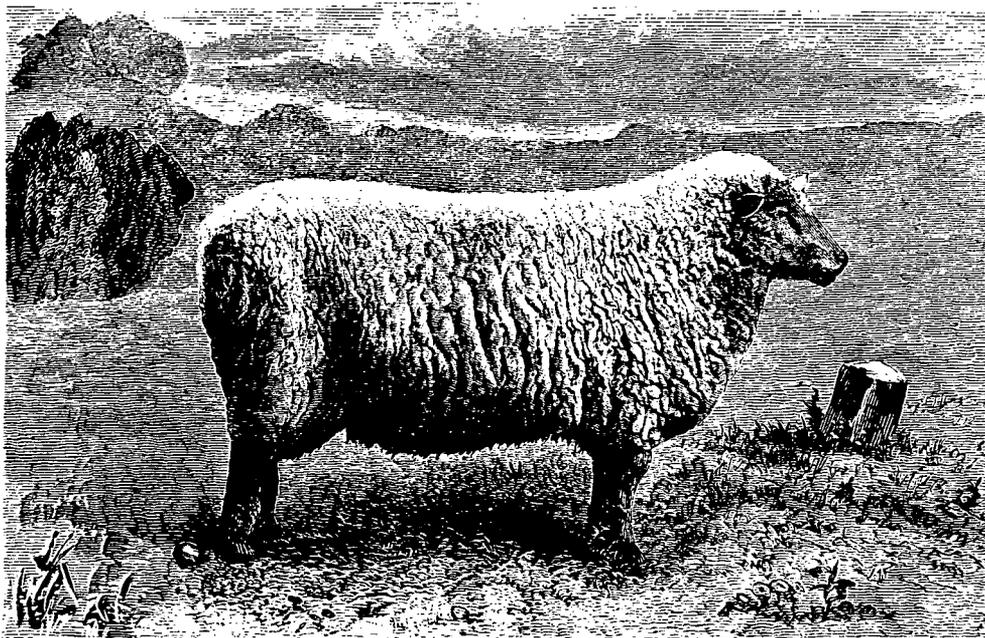
Consider relocating the turkeys in the Pig House near the Farm House.

This area is being abandoned as a location for pigs because of persistent diseases in the soil. The building can be taken down, or adapted to another use.

Turkey raising was a significant industry in Prince George's County in 1900; 5,396 birds were raised for market. The building would have to be reworked, but it could be used for turkeys. These birds are not hard on grasses. If the numbers are kept down to two pairs, this use should allow the bare pig pen area to be converted to grass.

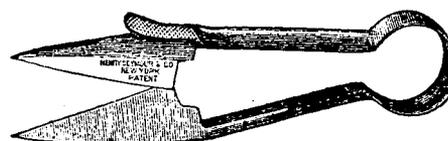


**Maintain the sheep herd of six ewes.
Upgrade shed, feed racks and watering devices.**



Sheep and lambs are a nice addition to any farm. Sheep sheering is a major demonstration activity.

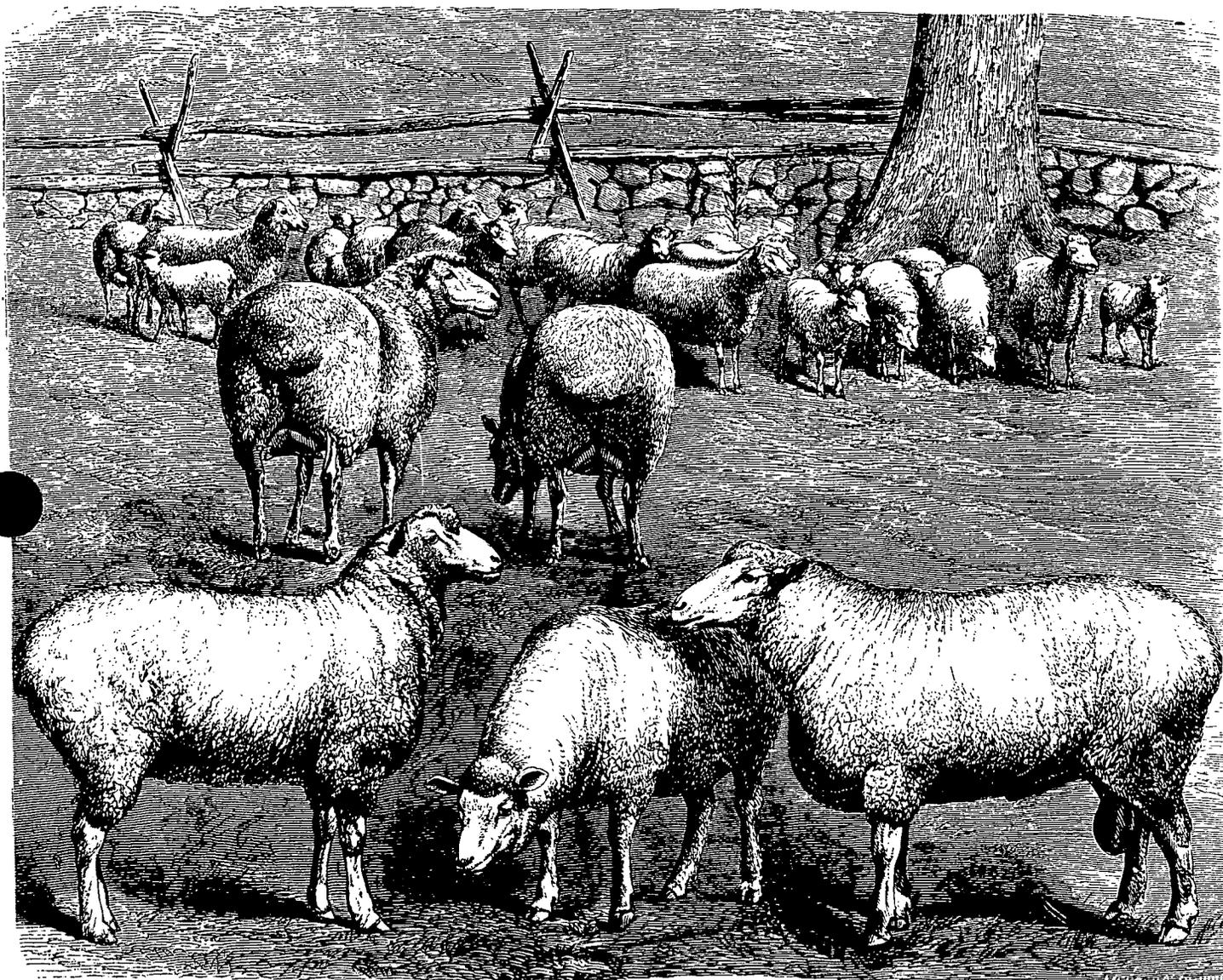
The sheep population in Maryland declined from 177,902 in 1850 to 132,329 in 1890. But sheep were still well-represented on area farms; 6,318 sheep were raised in Prince George's County in 1900.



If the pasture area east of the sheep shed is renovated, and the trees thinned, and moveable fence is used to control access to pastures, the site should be able to carry a herd of this size. The woods area west of the sheep shed should not be used as pasture.

Consider new sheep breeds better adapted to the area.

Hampshires, the breed now at the site, were raised in Maryland in 1900. But the favored breeds were Liecesters, Shropshires, Cotswolds and Southdowns -- all primarily mutton sheep. A Liecester or Shropshire cross on the Hampshire ewes at the site is acceptable. A Cotswold (below) on Southdown (top, p. 24) cross, or a Southdown on grade Merino ewe cross would be more typical for the period.



Control, and consider phasing out the goat population.

In 1900 only 21 goats were raised on farms in Prince George's County. Little use is made of these animals in demonstrations. They contribute significantly to the pasture problems along the south side of the lane.

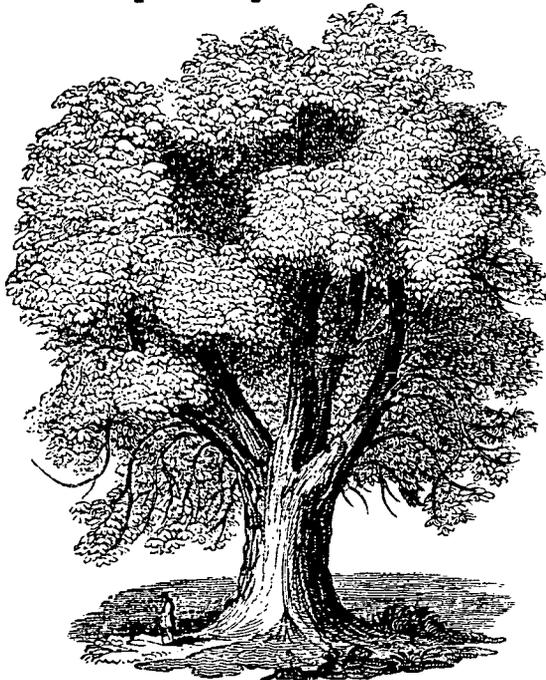
Part 3. Farmstead

The house and outbuilding fit the turn-of-the-century family farm design theme. The core brick structures (house and stable) date from 1800-1830, and demonstrate the permanence associated with brick construction. They look and feel like the anchors of a small, self-contained farmstead that would be passed on from generation to generation.

The wooden frame outbuildings, mainly added around 1900, blend with the core brick structures. The farmstead looks like a family farm site established in the early nineteenth century and added on to over the next 100 years. The size and current uses of the structures generally fit the requirements of a mixed farming operation.

House and Grounds

Develop interpretive materials on the house



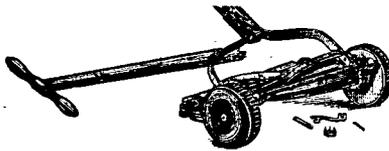
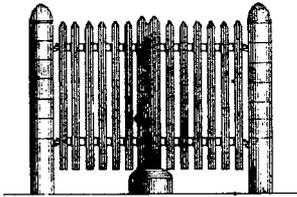
The house dates to ca. 1800. It is located on a prominent hilltop site across from Alexandria. Its fine Flemish bond brick work, four interior chimneys and paneled doorway represent the federal architectural style of the early 19th century applied to an open-hall, Georgian plan. The house was substantially reworked after the Civil War. The gabled roof was replaced by a shed roof. This, the porches, scrollwork brackets and corbelled brick cornices are elements of a suburban townhouse style popular at the end of the century.

Remove the screens and open the back porch as a place to sit and take in the view.

The porch offers views of the river, Alexandria, and the Washington and Jefferson monuments up-river. Add benches for sitting.

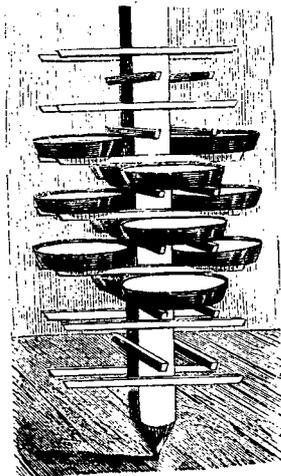
Use a picket fence and hedges to delineate a yard around the house and add period plantings -- trees shrubs, and flower beds.

Presently there is no yard -- nothing to separate the house and grounds from outbuildings and work areas. A typical family living in the house at Ozon Hill in 1900 would certainly have maintained a yard. The yard was valued as a place of repose, a retreat from the world. The shapes, colors and fragrances of period plantings work on the senses to draw people to the time and place: a farmstead 80 years ago, like the ones our grandparents grew up on.



The yard design should have elements of the mid-century romantic style -- soft flowing curves, the mingling of round-shaped and pointed trees and shrubs, and arabesque borders. These could be overlaid with elements representing the Victorian taste -- massed beds, bright colors, and layered planting in geometric shapes.

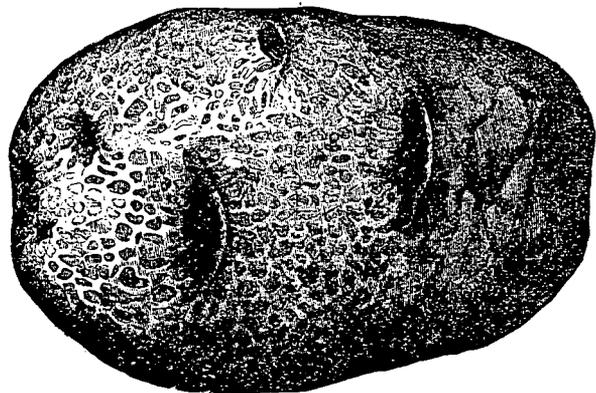
Open the Hexagon house and demonstrate a milk house use.



The most educated guess to date (Orlando Ridout, Maryland Historical Trust) is that this building was used as a milk house; an office is considered a second possibility. The building is now closed and used as a storage shed. The space would gain interpretive value if it were used to demonstrate milk cooling shelves, separators, churns and containers. Developing the appropriate account books, numbers, and accessories, and opening the space as office of the man who managed the farm -- showing what the business of farming looked like on paper-- would be even better.

Use the building now labelled Ice House as a root cellar.

This building is now locked, and plays no role in site interpretation. By simply adding shelving and opening the door, it could be used to demonstrate a root cellar function.



**Add a few orchard trees, small
fruits and a grape arbor in the yard.**

Comment. Russet apples and Damson plums were often planted in yards. Currants, gooseberries (right) and strawberries were used as borders. These additions would show the integration of useful plants into the formal pattern of the grounds. If the lawn is extended beyond the boxwoods, down the sloping hillside towards the Visitor Center, space would be created for these additions.



A grape arbor with an overhead wooden trellis would provide a cool, shaded spot, and might be grown along the east end of the yard.

Kitchen Garden

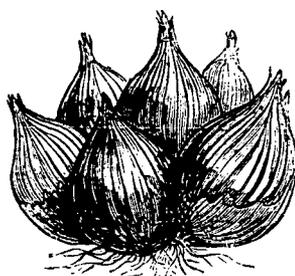
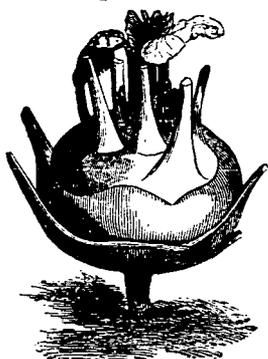
"A good garden will supply half the family's living." USDA Bulletin, 1916

Grow a kitchen garden using period seeds, equipment, and gardening practices.

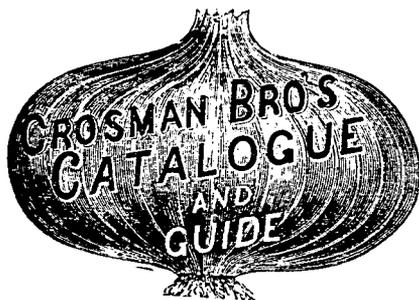
Display garden products at the Visitor Center.

Allow visitors to work in the garden and pick vegetables.

From the time of first settlement, kitchen gardens were a primary source of food for most Americans. On both plantations and family farms, they were the most protected area outside the house, surrounded by high, tight fencing.



In the second half of the 19th century, seed dealers began advertising new, hybrid plants that had higher germination rates, better yields, or sweeter fruits than the older, open-pollinated vegetable varieties. With other plants, there was little progress in breeding, and seeds from the older varieties continued to be saved and used.



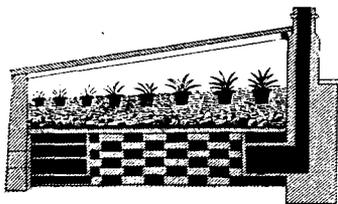
Varieties from the period often look different -- their shape and coloring are more irregular. They provide a basis for seeing how the fruits of some plants have become more uniform in shape and color. There is preference for greater compactness in the shift from pole beans to bush varieties. Some new squash were also of the bush type. New varieties in 1900 also tended to have a higher sugar content.

The use of period varieties would show that plants, too, have histories, with a lot of different looks, different sources, and uses -- and a logical development which reflects the preference of growers, marketers and consumer for certain traits.

Relocate the garden in the area west of the house.

This would move the garden off the slope leading up to the house, freeing that area for the more typical use as a front yard (see Grounds). It puts the garden, with its practical, utilitarian associations, in a less conspicuous location, closer to the kitchen. There is sufficient space here for a 40' x 100' garden, designed for a family of four.

Use flats, a hotbed and cold frame to start plants.



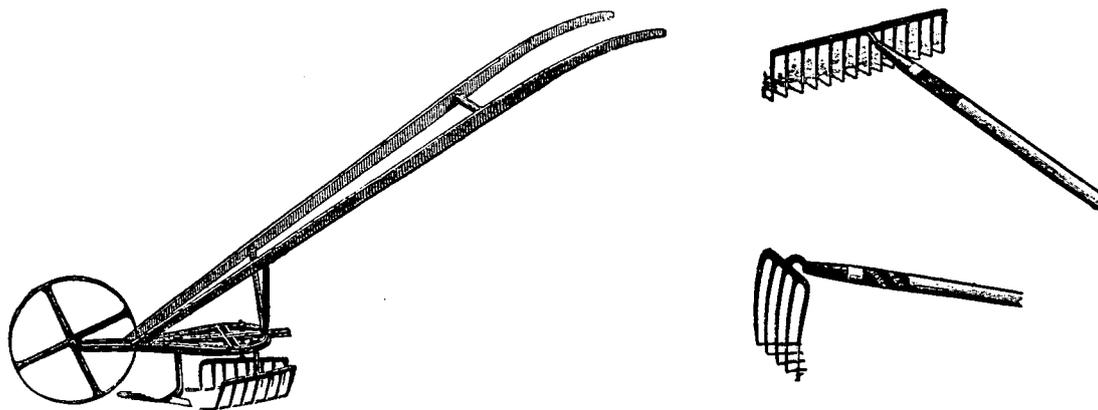
This shows a period practice, and it is necessary in some cases if old varieties are to be used, since sets are not available and the plants will have to be grown from seed.

Demonstrate double digging, succession planting and crop rotation.

Double digging is a period practice used to break up hard pans and loosen the soil. It is recommended in modern intensive gardening books. Succession planting enables the gardener to get two or three crops off the same ground. Rotations help avoid pest buildups, and utilize differences in plant needs to avoid depleting the soil. All three practices echo field practices -- subsoiling, intertilling, and rotation.

Use period garden tools.

These tools are inexpensive, easy to find, and simple to use. Emphasize wheel hoes, with attachments, and wheel planters. They have a certain look, make for good demonstrations, and get the work done.



Demonstrate period storage and preservation practices.

A root cellar is available (see Ice House). Only the addition of simple shelving is needed to demonstrate this means of preservation. Canning is already an on-going demonstration activity. Consider drying, salting and pickling.

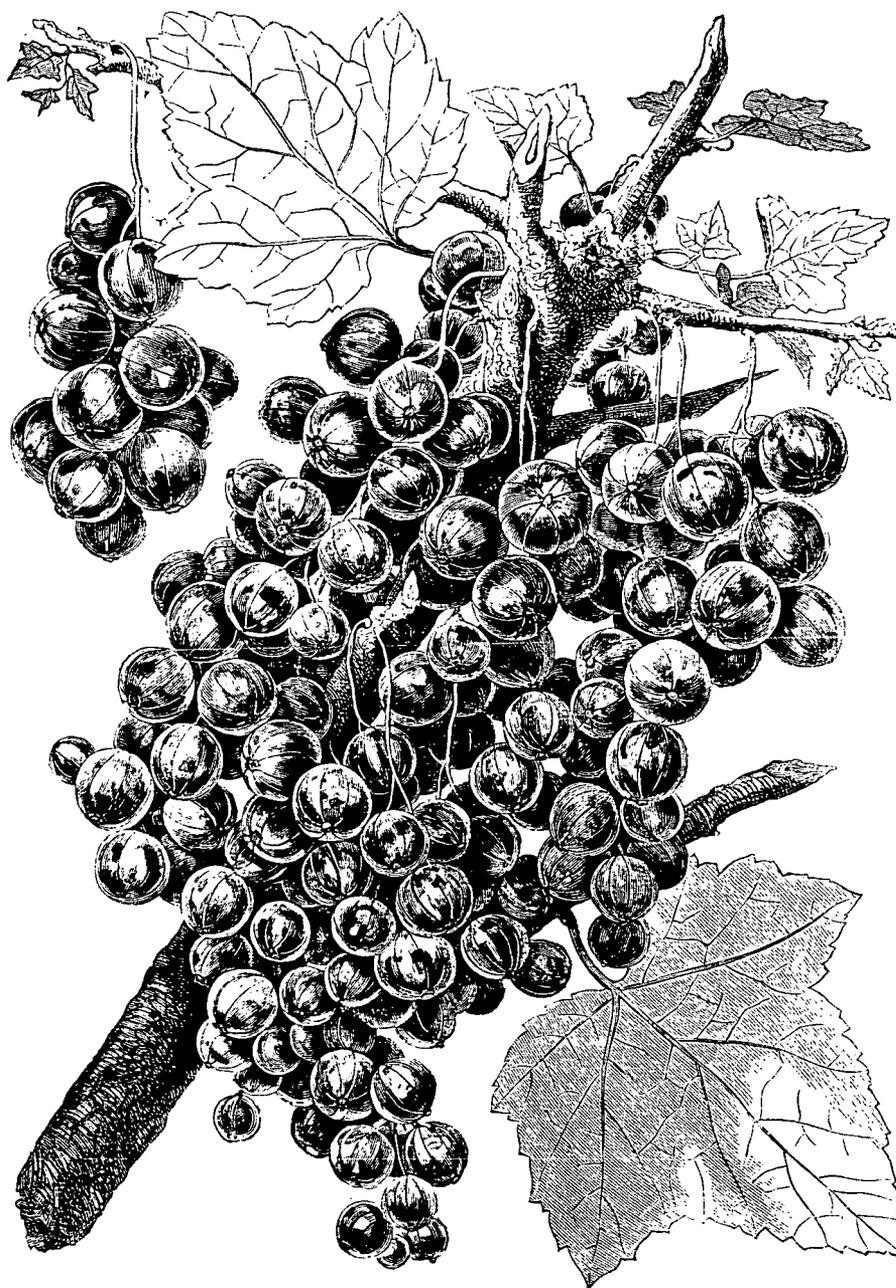
Involve Senior Citizens in the new period garden.

Involvement of local groups should be encouraged and expanded. But the Oxon Hill site manager and staff must communicate the period theme to participants up front, so they identify with the idea of working within a turn-of-the-century design. Materials and procedures should be explained so people see how these particulars fill out the design. If this is done, you can have local involvement and run a period farm. If it is not -- witness the current garden situation -- participation will mean loss of any period significance.

Small Fruits

Grow small fruits found on period farmsteads -- red and black raspberries, blackberries, currants (below) and gooseberries.

Small fruits are easy to grow and do not require much space. They contribute to the rich variety of life on the farm site. They also play a part in the effort to have something coming all the time - providing produce for display in the Farm Operations Center or Visitor Center. Visitors can participate in the picking of these fruits.



Orchard



An orchard...readily connects itself with matters of the heart. The trees possess a domestic character. They have lost the wild nature of their forest kindred, and have grown humanized by receiving the care of man as well as contributing to his wants.
 Hawthorne, Mosses from an Old Manse, 1846

Revitalize the orchard west of the house. Plant period apple, peach, pear, cherry, plum and quince trees.

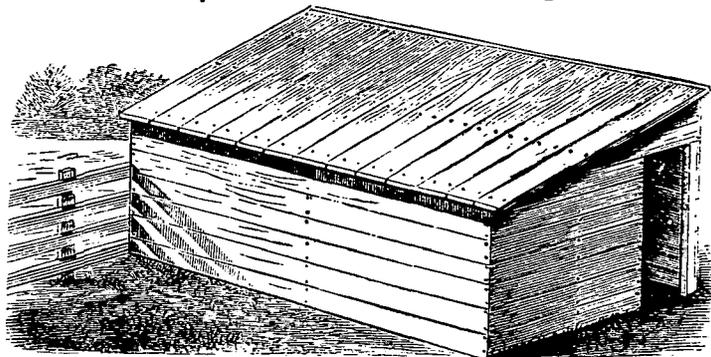
From the colonial period to the 20th century, farmers cultivated fruit-bearing trees in orchards near the house. These orchards contributed to the family food supply, and provided cider and other beverages.

Consider establishing terraces on the slope facing west.

This would increase the space available for new plantings. It demonstrates a period practice for using marginal land while conserving the soil. Use Kentucky Blue Grass or other binder grasses to hold the soil.

Outbuildings

A major concern here is that the outbuildings and livestock are too concentrated. A more diffused visitor flow is needed, with new paths, views and exhibits that put visitors in touch with farm resources and activities and show how they fit in to the farm design.



The concentration of animals on this hilltop location, with limited space and steep sloping terrain has led to erosion problems, and to the run off of animal wastes which pollute the surface water.

Limited space, over-grazing, and the sloping terrain combine to leave pastures weak in grass, with bare and eroding areas.

These issues are treated in the Livestock Section. The following recommendations should be read in conjunction with what is said there.

Create a water diversion in the barn area; consider a cistern system for catching and storing water from shed roofs.

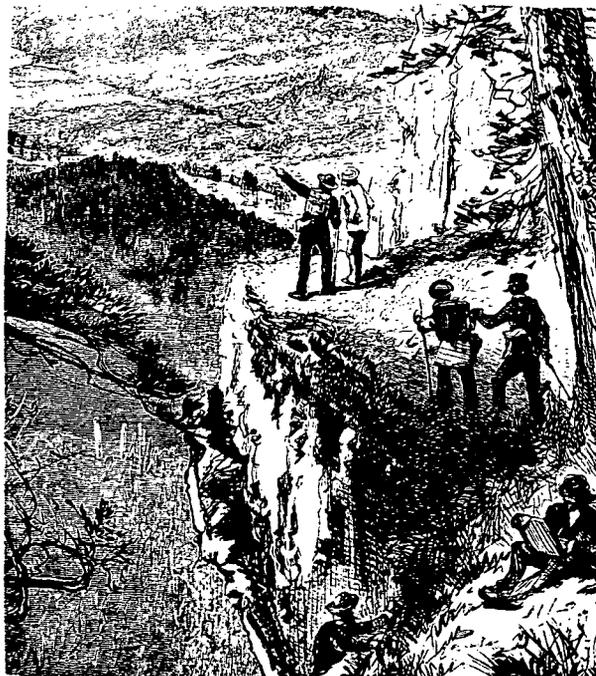
The objective here is to divert the water flowing down the hill and off the roofs of outbuildings that is now eroding the soil and washing it and animal wastes down into the nearby ravines.

Remove the Implement Shed.

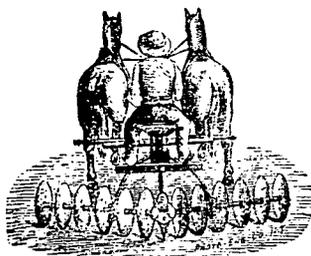
This shed's flat, modern roofline and steel girder construction does not fit with the other outbuildings. The shed occupies space at the most congested point on the farm. It obstructs the view of the outbuilding layout. The area under the roof is always dim, and the equipment is neither ordered according to any logic nor described and used in the daily interpretive program.

Develop a walking trail that loops along the north end of the main pastures, provides views of the crops on the flat, and returns through the orchard and kitchen garden to the house and grounds.

The trail would allow viewing foraging animals from a cool, shaded path. The path should have a spur connection with the Farm Operations Center. It could continue along the terraces west of the house, overlooking the river and providing views of crops and of the cove, river and city scapes on the horizon. One of the overlooks could have a shaded deck, benches, and an audio program on crop layout, current farming demonstrations, and market prices. The audio program could also discuss other points of interest -- the cove and river, the Alexandria skyline, and the view up the Potomac to the Capitol. It could link Oxon Hill with the other plantations and period farms in the area -- e.g., the Godiah Spray Plantation, the National Colonial Farm, Mt. Vernon, Gunston Hall, and the Claude Moore Farm.



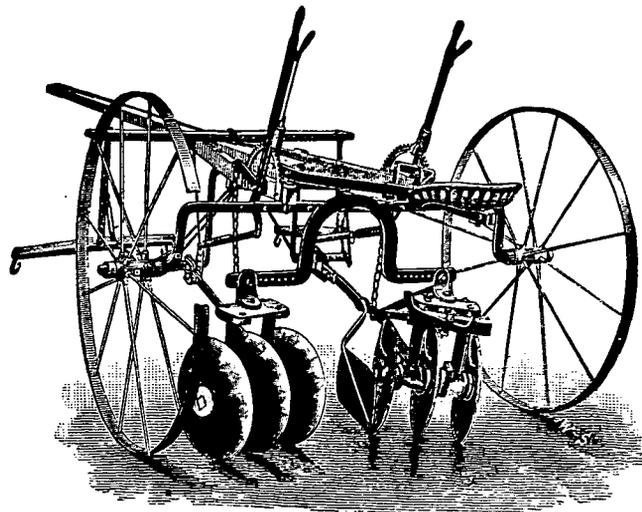
Establish a Farm Operations Center where period equipment is exhibited on a seasonal basis.



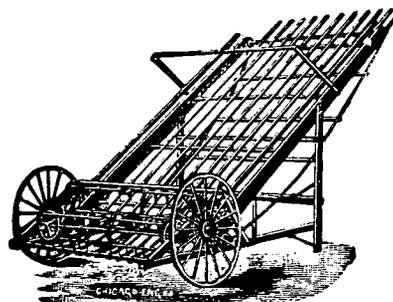
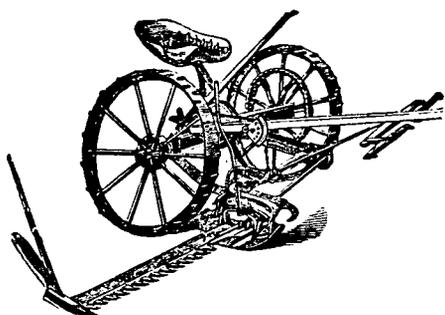
The recommended location (see the Revised Building Layout Map) is a flat semi-circle north of the house now used for staff parking. A gas pump is at the center of the area. Period and modern farm equipment and pale green park service vehicles are scattered along the edges.

The location fits the new use. It is at the end of the farmstead tour, and at the head of the road leading to the croplands.

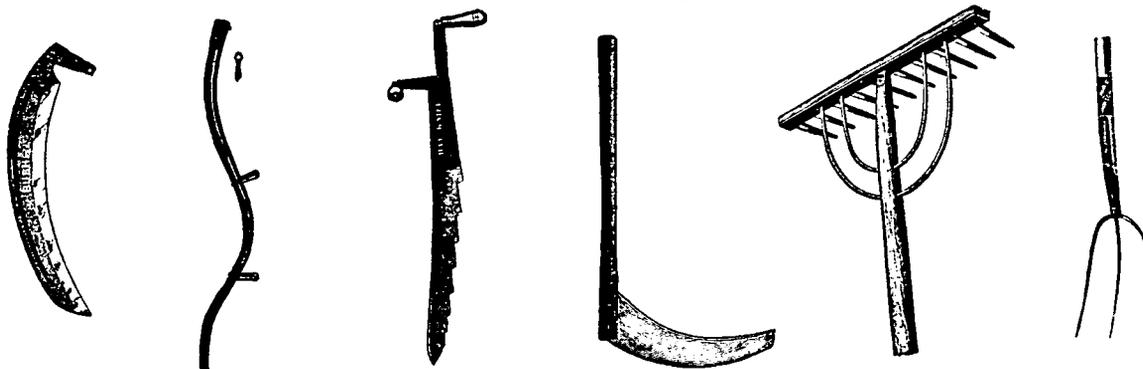
Exhibits should be built around farm operations that are in season at the time. Farm



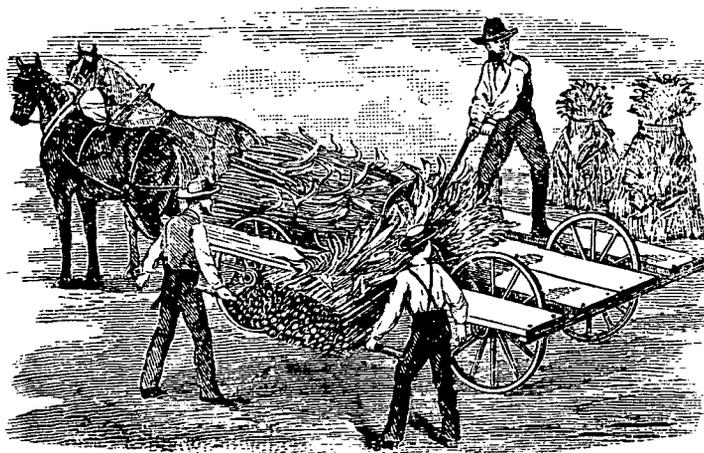
equipment pictured, exhibited, and interpreted should also be in use in the crop demonstration area. For example, show mowers, hay rakes, hayloaders and balers during haying season.



Also exhibit hand tools used to perform the same functions before the new machinery demonstrated in the fields became available in the 19th century. This shows how tools that remained the same since Biblical times continued to be used into the 19th century, often went through one stage of improvement, and then suddenly became obsolete, over a period of two or three decades due to the revolution in farm equipment.



Bring the crops being worked on up from the fields



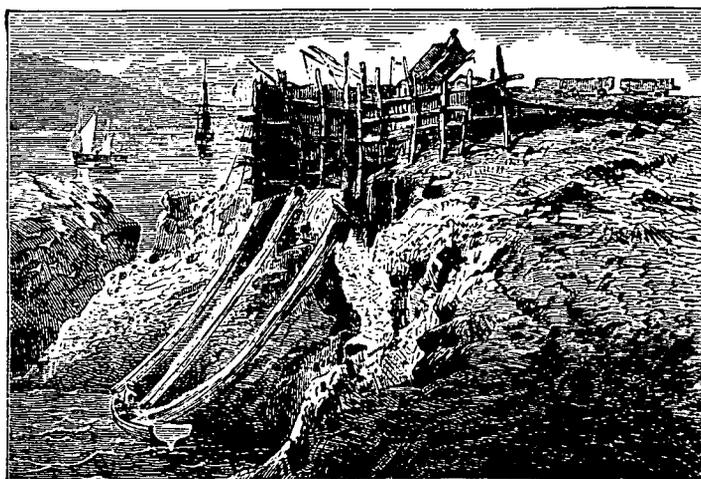
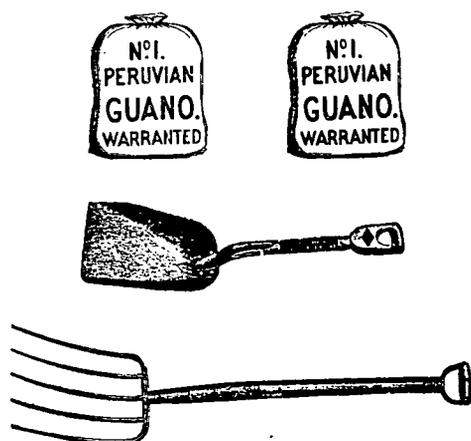
Display seeds during the planting season, growing plants competing with weeds when crops are cultivated, ripening grains, soiling crops, green manure crops, and hay bales, corn shocks, and wheat sheaves during the harvest season.

Exhibit products of the fields in period containers along with a running account of their market value.

This shows the value of farm products in the market place. A running account of price changes in the major commodities markets, and green markets, for 1900 and today, could be maintained.

Demonstrate the use of period fertilizers.

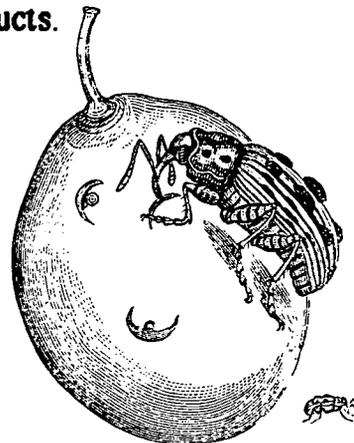
Farmers in 1900 used animal manures, green manure crops, and commercial fertilizers to return nutrients and humus to the soil. Collecting and spreading animal manure, growing and plowing down green manure crops, and the application of commercial fertilizers available in 1900 should be demonstrated using period equipment.



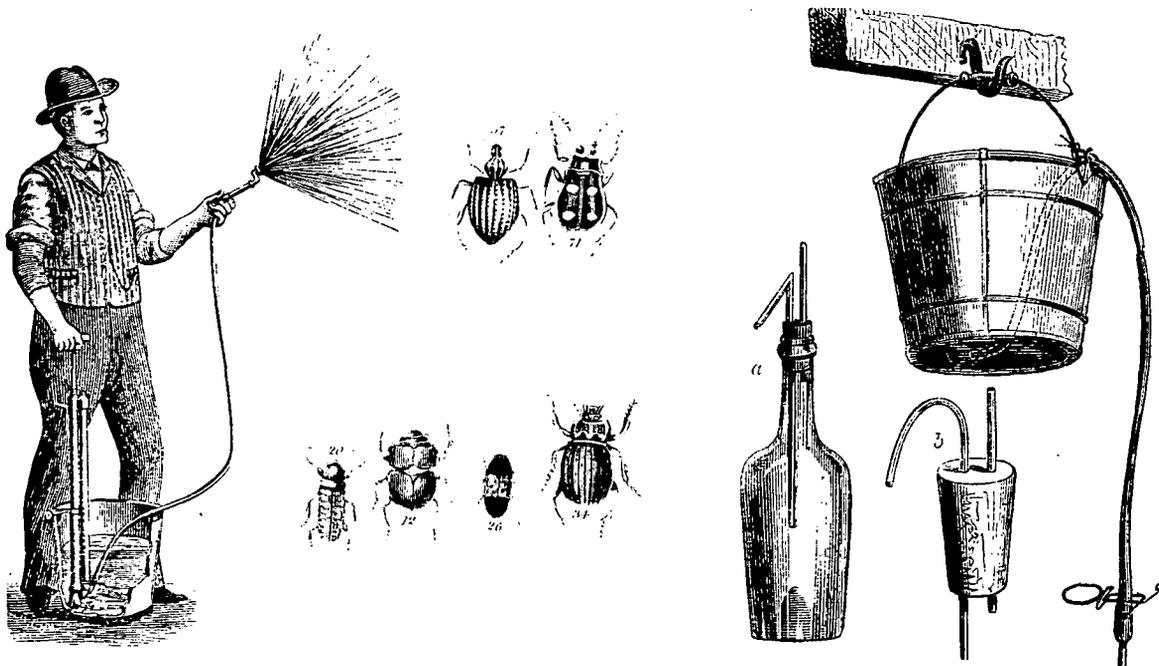
The array of materials used to supply nitrogen, phosphate and potash in 1900 should be exhibited, e.g., nitrogen came from nitrate of soda, guano, dried blood, wool waste and cotton seed meal. The use of naturally occurring, organic materials with high concentrations of key plant foods can be contrasted with modern granulated fertilizers to show the evolution of sources -- from organic to inorganic to synthetic. It also shows the increasing uniformity in processing in modern products.

Demonstrate period pesticides.

The use of pesticides increased with the shift to truck gardening and orchard crops. Products most often used in 1900 fall into three categories; (1) solutions intended to stop rusts, blights and fungi such as Bord-



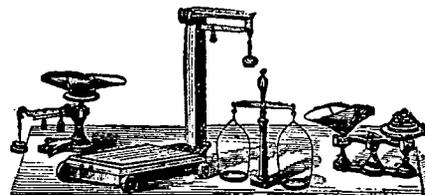
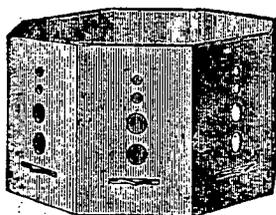
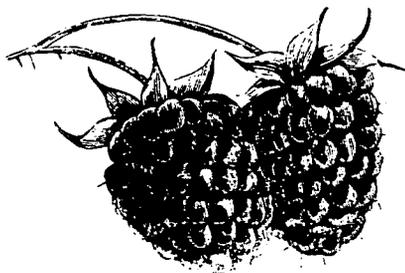
eaux mix, a copper sulfate and quick lime solution, (2) poisons for insects that eat plant leaves, such as lead arsenate which was usually applied



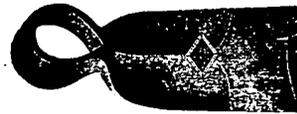
as a powder, and (3) emulsions such as kerosene, soap, and whale oil which were used against sucking insects. The ingredients can be exhibited along with the equipment used to apply them. This provides a basis for discussing changes in plant pest and disease problems, and changes in the pesticides used to solve them. Substances can be looked at in terms of the target, the diffusion and persistence of toxic elements, and their effects on workers, consumers, water quality, and other life forms.

Use the Visitor Center to exhibit farm products

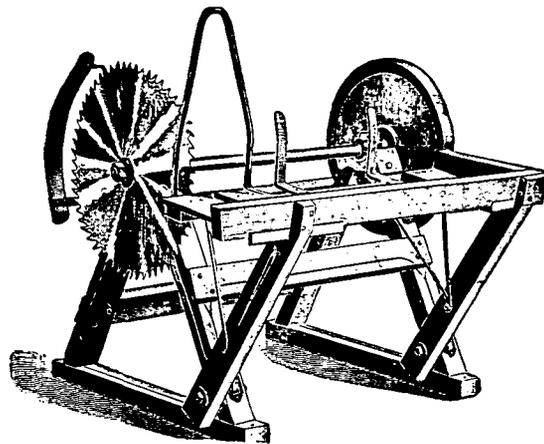
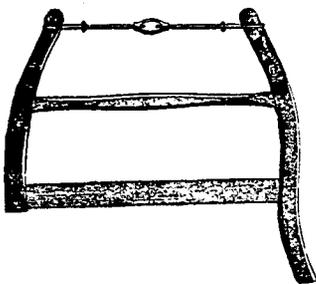
This building, a recent addition, is empty, dim and unused except for special events. Consider developing some of the seasonal exhibits proposed for the new Farm Operations Center here. Lighting should be added to show off the exhibits. The exhibits should be moveable, so the area can be cleared for special events.



Use the Hay Barn as a major demonstration center.



This large area at the center of the farmstead gets almost no use on a daily basis. Environmental Living groups sleep in the east side area and a few bales of hay are stored on the west side. Consider turning the east side into an exhibit area, using 4' x 8' display boards to mount tools, elements of equipment, engraving and photos. Design displays so they can be drawn up out of the way on occasions when Environmental Living groups use the area. Use track lighting to show off displays.



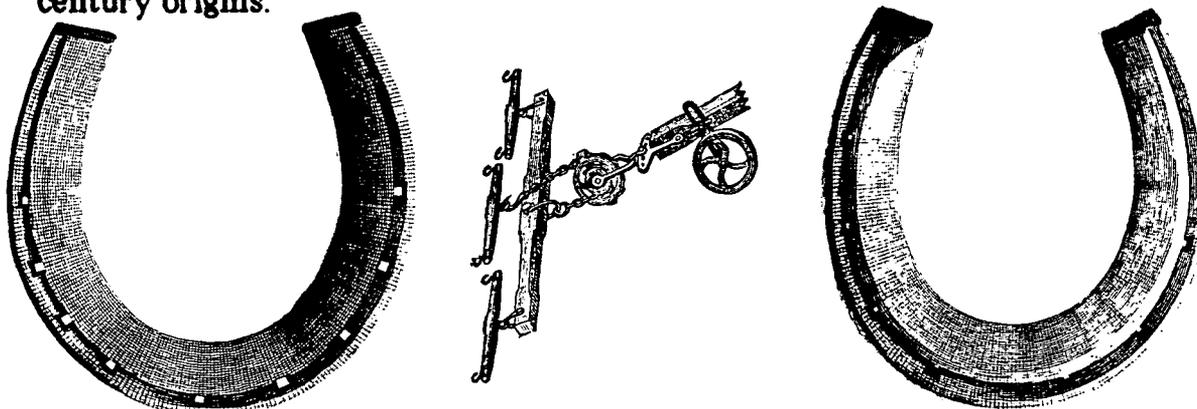
Evaluate the structural soundness of the Pony Barn and take steps to preserve the building.

This wooden frame building dates to the 1890s. It has some nice architectural detail -- lintels above the first and second floor doors, returns at the eaves in the country Greek Revival fashion, and beaded battens. These touches, in an old wooden building echo the combination of functional lines and decorative accent found in the brick stable.

The foundation of this building is crumbling. The wood is badly deteriorated along the foundation in front.

Interpret the Stable.

This structure dates to ca. 1830. It is one of a small number of pre-Civil War brick outbuildings still standing on Tidewater Maryland farms. It, and the brick house, are the core of the farmstead, documenting its early 19th century origins.



Simple, functional lines are complemented by subdued decorative accents -- the three course American bond brickwork, glazed headers, dentils along the cornice, jack arches above the windows, and decorative ventilation openings.

There has been significant reworking of the structure. The current horse stalls are recent additions.

There is reason to believe that this was originally a multi-purpose barn housing horses, cattle and equipment. The two filled-in doorways in the front wall, and the arrangement of the original, narrow head-in stalls on the east and northwest sides of the building support this idea of past use. The early date also suggests multiple use.

The historic and stylistic attributes of the building justify the research necessary to interpret the original and adaptive uses of the structure to visitors.

Use the open bays of the tool shed to display period equipment.

The first three bays of the shed are usually occupied by modern four-wheel tractors. The fourth has an older 1939 John Deere tractor. This highly visible area needs to be occupied by period equipment. Exhibit boards could be added on the back wall, using photos, engravings and mounted objects to interpret the equipment.

Eliminate the plywood utility shed west of the Tool Shed.

Guidelines

Radically reduce the visibility and role of modern four wheel tractors on the farm.

These tractors, with their scoop attachments and rotary mowers dominate the farmstead and the fields. They are always in sight, pulling modern, rubber-tired wagons, parked in the open bays of the tool shed, or doing field work.

The tractors and their attachments are a major impediment to demonstrating a period farm. One might remain for practical reasons, and purposes of contrast. But most of their functions need to be taken over by early tractors (such as the John Deere), steam or horse power.

For example, consider giving wagon rides using one modern tractor, the old John Deere and a horse team. Then people could see three modes of power representing three different farming eras, hear and feel the differences on the rides, and learn something from the contrasts.

Radically reduce the on-site truck and car traffic.

Little effort is made to keep modern vehicles out of the demonstration area when visitors are present. Concern for historical authenticity gives way to convenience, and what is convenient becomes habitual. Underlying the problem is a lack of conscious identification with any historical design theme on the part of management, maintenance and interpretive staff. This is traceable to the origins of Oxon Hill as a Children's Farm. If the site is to become a demonstration farm, representing farming in 1900, modern trucks and cars need to be kept out of sight.

Eliminate objects made of modern synthetic materials that clash with the design period.

Examples are nylon feed bags, plastic containers and styrofoam materials. Plywood partitions inside buildings should be replaced with boards. The trash cans along the lane are modern in design and should be replaced.

Replace modern picnic tables with period benches and tables.

The modern picnic table is another pervasive, out-of-period element found in the Visitor Center, in the picnic area across from the stable, and scattered in front of the house. It has associations with public parks, school yards, etc. that nullify the attempt to create the sense of a distinctive time and place at Oxon Hill.

Paint the aluminum storm windows on the house white.

When repairing buildings and fences, and adding new elements, consult period sources on design and materials.

Review and enhance feeding and watering devices.

The feeding and watering devices used at Oxon Hill need to be reviewed for consistency with the period, efficiency, and health considerations. The good period feeding and watering devices were easy to fill and clean, and designed to prevent (or discourage) contamination and waste resulting from animals putting their feet in the troughs.

Watering devices should provide water on demand. Period devices were often designed to shut off automatically, and not allow stagnate water to stand around and provide a milieu to spawn insects and bacteria. The porcelain bath tub watering troughs should be eliminated.