



AGRICULTURAL ALTERNATIVES

Peach Production

Peaches may be grown in many of the more temperate climates of the United States and lend themselves well to part-time farming operations. The start-up costs for peaches can be high depending on the production method chosen, land preparation, and initial investment in the trees. A commercial orchard is expected to be productive for at least 15 to 20 years, so this investment is spread over a longer period of time than that of many crops. Depending on the amount of land devoted to the orchard, production method, and tree size, equipment costs may be held to a minimum. If the orchard is a part of an existing agricultural operation, you may already have much of the needed equipment.

Peach production will require many hours of labor, depending on the size of the orchard. Land preparation and planting will require at least two people. During the summer months, the orchard will require mowing, multiple pesticide applications, and fruit thinning. Depending on the mix of varieties and orchard size, additional labor may be required at harvest time. Although you may be able to accomplish these tasks with family members and local part-time labor, use of hired labor may also be necessary.



According to the United States Department of Agriculture (USDA) National Agricultural Statistics Service (NASS), peaches are grown on more than 2,600 farms with over 14,500 acres in the northeastern United States. Pennsylvania generally produces around 40 million pounds of peaches with an annual value of approximately \$20 million. Pennsylvania currently has about 4,000 acres of land devoted to peach production, but this is a decrease of around 40 percent from the late 1990s due to the removal of trees because of plum pox virus (PPV). PPV was first discovered in Pennsylvania in 1999, but through the joint efforts of growers, Penn State, the Pennsylvania Department of Agriculture (PDA), and USDA, it has been eradicated from the Commonwealth. Peach acreage is slowly increasing, especially in the southcentral section of Pennsylvania.

Marketing

Depending on the peach varieties produced (commonly referred to as “cultivars”), peaches may be marketed from late July through mid-September. Peaches can be sold directly to consumers through farmers markets and roadside stands or wholesaled to packers. There is also the potential to sell peaches for processing, but this is generally a totally different market that involves the growing of cling-type (rather than freestone) peaches.

Peaches sold through farmers markets or roadside stands need to be of the highest quality. This will ensure repeat customers from year to year. Direct marketers need a wide variety of cultivars so the marketing season is not interrupted. These types of markets can be very time consuming but also very financially rewarding. Peaches marketed wholesale are usually sold to fruit packers, who typically grade and pack peaches for the fresh market. Explore your marketing options prior to ordering the trees from the nursery so you order the cultivars that best fit expected demand. For more on marketing, refer to “Agricultural Alternatives: Fruit and Vegetable Marketing for Small-scale and Part-time Growers” and “Agricultural Alternatives: Developing a Roadside Farm Market.”

Site Selection

The success of any orchard is directly related to planning and preparation. The ideal site for an orchard consists of rolling or sloping land to enhance air drainage during periods of spring frosts. The best site is south facing with a slope of between 4 and 8 percent because operating equipment on steeper slopes may be difficult. Sites with deep, well-drained soils are preferred because shallow, poorly drained soils will cause problems for root systems. Consult a county soil map prior to site selection. Soil maps may be obtained from your Penn State Extension county office or USDA’s Farm Service Agency.

For the production of peaches, special attention must be given to minimum winter temperatures. Any area having temperatures of -10°F or below should not be considered for producing peaches. Because peaches

typically bloom earlier than apples, special care should be given to the selection of the planting site. Any location subject to frosts after mid-April should not be used for peaches.

Another consideration when choosing a planting site is irrigation. Regardless of the type of irrigation system used, locating the orchard close to a water source will simplify setting up the system and reduce operating expenses. For more information on overhead and trickle irrigation for tree fruit production, consult “Agricultural Alternatives: Irrigation for Fruit and Vegetable Production” and “Agricultural Alternatives: Drip Irrigation for Vegetable Production.”

Land Preparation

The land should be prepared as if planting a traditional field crop. The soil should be plowed and leveled with a disk and harrow. Starting with an even orchard floor will reduce the possibility of standing water and make fruit harvesting and transportation easier. Establishing an orchard in well-prepared soil rather than established sod will also aid in keeping the tree rows and row middles free of broadleaf weeds. The elimination of any broadleaf weeds or plants is crucial prior to planting peaches. Broadleaf field crops such as soybeans or alfalfa should not be grown prior to planting peaches. These plants may harbor a virus responsible for Prunus stem pitting, a serious disease in peaches.

Prior to planting trees, a soil fertility test and nematode survey are recommended. Penn State provides a soil testing service through the Agricultural Analytical Services Laboratory for a fee. You can contact the lab through its website (agsci.psu.edu/aasl) or by calling 814-863-0841. You will want to request a complete nutrient analysis plus organic matter. Nematode testing services are available from the University of Delaware Plant Diagnostic Clinic (go to extension.udel.edu/ag/plant-diseases/ud-plant-diagnostic-clinic or call 302-831-1390) or the Virginia Tech Nematode Assay Laboratory (go to <https://www.ppws.vt.edu/extension/nematode-laboratory/index.html> or call 540-231-4650). The two tests may be taken at the same time, but the soil samples must be handled differently. Consult the instructions on both kits to ensure accurate results.

The results from the soil test provide recommendations for any soil amendments such as lime and/or fertilizer needed prior to orchard establishment. The best way to add soil amendments for an orchard is to incorporate them into the soil prior to planting trees. The nematode survey is critical before planting peaches to determine if any treatments are needed to eliminate harmful nematodes. Left untreated, nematodes may damage the root system of the trees and can stunt or kill them before they bear fruit. This will result in uneven tree growth and delayed or decreased production.

Ordering Trees

Trees should be purchased from a reputable nursery to ensure they are true to variety and free of disease. Most nurseries also provide a guarantee of survivability; check for this guarantee before ordering trees. The nursery can also offer advice concerning tree and row spacing. Trees generally need to be ordered at least one year prior to orchard establishment.

A problem in Pennsylvania orchards is the presence of a virus called Prunus stem pitting, which causes early death in peach trees. In response to this problem, the PDA Bureau of Plant Industry has established a virus-free certification program in cooperation with Pennsylvania nurseries. The program seeks to provide and maintain virus-free sources of budwood for state nurseries and growers. Pennsylvania nurseries can therefore offer two grades of trees: Penn Standard and Penn Premium. Penn Standard trees are certified for virus-free budwood but not virus-free rootstocks. Penn Premium trees are certified for both virus-free budwood and rootstocks. Surrounding states may also have certified virus-free trees. Growers are encouraged to take advantage of these programs. Before ordering trees, ask the nursery if it belongs to the virus-free-certification program.

Tree caliper is an important measure of nursery tree quality. Trees of a larger caliper—greater than $\frac{5}{8}$ inch in diameter—are not best suited for today's orchards. The larger a tree's diameter, the less choice you will have in selecting scaffold limbs. Thicker trees tend to be taller, and forcing branches low to the ground may

be difficult. In addition, after a larger-caliper tree is headed back, Cytospora canker may infect the large wound area, eventually resulting in the tree's death. Small-caliper trees—less than $\frac{1}{2}$ inch—are easier to train for certain production systems, such as the central leader, but they need extra care the year of planting to prevent competition.

Choosing cultivars for your orchard is largely dependent on when the fruit matures. Except for white-fleshed and flat (doughnut-shaped) cultivars, most consumers cannot distinguish between different yellow-fleshed peach cultivars as they can apples and pears. The earliest ripening cultivars tend to be clingstone types, while the later maturing cultivars are freestones. The difference between the two is that with the former the pit adheres to the flesh, and in the latter the flesh of the peach easily separates from the pit. Clingstone cultivars also tend to produce smaller fruit than freestone cultivars and are usually used for processing. Peaches may be harvested from mid-July through early September depending on the cultivars selected. Planting several cultivars will help ensure an adequate supply throughout the season.

Due to the lack of recognition between different peach cultivars by consumers, cultivars change continuously as new ones are released to the nurseries. Often the best information on which cultivars to plant can be obtained by visiting local growers and seeing what they have planted. The most popular peach cultivar currently planted in Pennsylvania is Redhaven. This high-quality freestone cultivar matures in late July to early August depending on location. Other common cultivars grown in Pennsylvania include Autumn-glo, Beekman, Bounty, Cresthaven, Desiree, Encore, Ernie's Choice, Gloria, John Boy, Messina, Salem, Sentry, and Topaz. Newer cultivars available are the Flamin-Fury and "Star" series developed in Michigan that have very good red color and increased firmness. Another recent trend has been the planting of white-fleshed peaches. Plantings of cultivars such as Lady Nancy, Scarlet Pearl, Sugar Lady, Summer Pearl, and White Lady are being expanded. Many new peach and nectarine cultivars are being released every few years; consult your county extension office and/or fruit tree nursery for the latest recommendations. Nectarines

are another popular option with growers and consumers. A nectarine is simply a fuzzless peach. Their one drawback is their susceptibility to brown rot. While peaches are also susceptible to this disease, nectarines are even more susceptible. If you are planting in the eastern part of Pennsylvania, you also need to consider a cultivar's susceptibility to bacterial spot—cultivars susceptible to this disease should not be planted. A wide range of nectarine cultivars are available that mature over the summer.

Doughnut peaches are the latest entry to distinctive peach types. They are flat or saucer shaped rather than globose or ovate like traditional peaches. Common cultivars are BuenOs™, Saturn, and TangOs®.

Layout and Planting

Regardless of whether you are laying out an orchard on level or sloping land, care should be taken to make the rows as evenly spaced as possible. The distance between

the rows should be the same throughout the orchard. Placing stakes in the rows prior to planting will help to ensure that the distance between the rows is the same throughout. This should be strived for whether planting in straight rows or on a contour. One of the most common tree spacings in peach orchards is 14 feet by 22 feet, or approximately 141 trees per acre. Many growers are experimenting with higher density and novel training systems. The number of trees required per acre for various tree spacings can be found in Table 1.

When planning the orchard, early blooming cultivars that are most susceptible to frost should be placed in areas with the best air drainage. Later blooming cultivars can be placed lower on hillsides or in areas more prone to frost. When possible, orchard rows should be laid out so they run in a north-to-south orientation to increase light reception for better color and ripening. If this is not possible due to slope consideration, position the rows on the contour to facilitate safe spraying and machinery operation.

Table 1. Number of trees per acre at various tree spacings.

		SPACING (IN FEET) BETWEEN TREES															
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SPACING (IN FEET) BETWEEN ROWS	8	1,089	908	778	681												
	9	968	807	691	605	538											
	10	871	726	622	545	484	436										
	11	792	660	566	495	440	396	360									
	12	726	605	519	454	403	363	330	303								
	13	670	558	479	419	372	335	305	279	258							
	14	622	519	444	389	346	311	283	259	239	222						
	15	581	484	415	363	323	290	264	242	223	207	194					
	16	545	454	389	340	303	272	248	227	209	194	182	170				
	17	512	427	366	320	285	256	233	214	197	183	171	160	151			
	18	484	403	346	303	269	242	220	202	186	173	161	151	142	134		
	19	459	382	328	287	255	229	208	191	176	164	153	143	135	127	121	
	20	436	363	311	272	242	218	198	182	168	156	145	136	128	121	115	109
	21	415	346	296	259	230	207	189	173	160	148	138	130	122	115	109	104
	22	396	330	283	248	220	198	180	165	152	141	132	124	116	110	104	99
	23	379	316	271	237	210	189	172	158	146	135	126	118	111	105	100	95
24	363	303	259	227	202	182	165	151	140	130	121	113	107	101	96	91	
25	348	290	249	218	194	174	158	145	134	124	116	109	102	97	92	87	

Production Considerations

In the United States, anyone desiring to purchase restricted-use pesticides is required to have a pesticide applicators license. Even some materials used in organic production now require a license. In Pennsylvania, the licensing procedure is handled by PDA. Check with your state regarding these requirements.

Because of the complexity of fruit production and the large number of pests affecting peaches and nectarines, this publication cannot cover all necessary production practices and procedures. For more information on the diseases and conditions affecting peaches, consult the *Penn State Tree Fruit Production Guide*, which may be purchased at your county Penn State Extension office. This valuable guide describes appropriate cultural and chemical treatments for the control of insects, diseases, and weeds. More information, including fact sheets and a fruit production newsletter, can be found online at extension.psu.edu/plants/tree-fruit.

Pollination

Peaches and nectarines are self-fruitful, so there is no need for trees or cultivars used specifically as pollenizers (like many other fruit crops). This allows cultivars to be planted together in solid blocks to make harvesting easier. Honey bee hives are usually brought into the orchard to ensure good pollination. If you do not have your own honey bees, you will need to contact a beekeeper to provide hives. Care must be taken with insecticides applied at flowering because they can adversely affect pollinating insect populations, especially honey bees. Honey production may provide an additional diversification opportunity for orchardists. More information on bees and honey production can be found in “Agricultural Alternatives: Beekeeping.”

In recent years many different insects have been recognized for their role as pollinators. For more information on solitary bees and wild pollinators, go to the Mid-Atlantic Apiculture Research and Extension Consortium website (agdev.anr.udel.edu/maarec).

Thinning

To produce large peaches and nectarines with good color, thinning the number of flowers and/or small, immature fruit is necessary. Because of a lack of good chemical thinners for peaches, they must be hand or mechanically thinned. Mechanical thinning can be accomplished by using a Darwin String Thinner, which is mounted on a tractor and used during bloom. While use of the machine does not preclude the need for follow-up hand thinning of fruit, it can result in greater fruit size and uses substantially less labor. Hand thinning is still the surest and most common method of thinning used today. Unlike mechanical thinning, hand thinning begins in early June and continues until the process is finished. Peaches and nectarines should be thinned to approximately 8 to 10 inches between each fruit. This spacing should be increased if larger fruit are desired or when the crop is drought stressed.

Fertilization

Nutritional requirements for peach trees vary through their lifetimes and are influenced by such factors as rootstock, crop load, soil type, and weather conditions. In addition to nitrogen, phosphorus, and potassium, peach trees need adequate levels of calcium, boron, copper, and zinc to maintain the health of the tree and produce quality fruit. After planting, soil tests and leaf analyses are recommended at least once every three years. A leaf analysis is the most accurate way to determine if applied soil amendments are being used by the tree. Leaf analysis test kits can be purchased at your county extension office or ordered online at agsci.psu.edu/aasl.

Pruning and Training

Peaches must be pruned each year. The best time to prune peaches in Pennsylvania is from late March to early May. Pruning earlier may expose the trees to winter cold injury; pruning too late may reduce fruit size. Some cultivars benefit from summer pruning done two

to three weeks before harvest. Summer pruning consists of removing the dense rank of growth in the center of the tree to allow more light into the tree and improves final fruit color.

Most peaches in Pennsylvania and the eastern United States are pruned to either the open-center or perpendicular v system. The open-center system consists of establishing three to five major scaffold limbs close to the ground. A bowl-like tree shape is desired where the limbs are pruned to force growth to the outside of the tree while the middle of the tree is maintained more open. Tree height is normally kept low by pruning so the trees can be harvested from the ground or with very short ladders. The perpendicular-V system is a higher density system in which only two major limbs oriented perpendicular to the tree row are allowed to develop. The advantage of this system is that trees can be planted closer in the row to increase the number of trees per acre. The disadvantage to this system is that tree height is greater than with the open-center system, making harvest somewhat more difficult, and it has an increased potential for limb breakage.

Harvest and Storage

Peaches do not mature all at once, and normally it will be necessary to harvest a tree two to four times. Length between harvests is dictated by the weather as well as location of the fruit within the tree. Most peaches are harvested based on firmness and color. Harvest will vary depending on how you will be marketing your fruit. Fruit destined for the wholesale market is picked at a less mature stage so the fruit can better withstand the rigors of shipping. Fruit that you intend to sell locally can be left on the tree slightly longer to mature and soften. These “tree-ripe” peaches usually command a somewhat higher market price.

Extreme care must be taken not to bruise or damage peaches and nectarines during the harvesting process. Bruising and any damage will lead to early spoilage and a large reduction in the returns realized from the sale of the fruit. Traditionally, peaches destined for the wholesale market are shipped to the packer as soon

as they are harvested. If you are selling directly to the consumer, they can be stored for a short time. At a temperature of 31 to 32°F and humidity of 90 to 95 percent, peaches may be stored for up to two to four weeks.

Even if some family labor is used for harvest, outside labor may be necessary to harvest the crop in a timely manner. If you use hired labor, you are required to follow all laws and regulations concerning hired labor. More information concerning hired labor can be found in the *Penn State Tree Fruit Production Guide*, “Agricultural Alternatives: Starting or Diversifying an Agricultural Business,” and “Agricultural Alternatives: Agricultural Business Insurance.”

Environmental Impacts

In the normal course of operations, farmers handle pesticides and other chemicals, may have manure to collect and spread, and use equipment to prepare fields and harvest crops. Any of these routine on-farm activities can be a potential source of surface water or ground-water pollution. Because of this possibility, you must understand the regulations to follow concerning the proper handling and application of chemicals and the disposal and transport of waste. Depending on the watershed where your farm is located, there may be additional environmental regulations regarding erosion control, pesticide leaching, and nutrient runoff. Contact your soil and water conservation district, extension office, zoning board, state departments of agriculture and environmental protection, and local governing authorities to determine what regulations may pertain to your operation.

Good Agricultural Practices and Good Handling Practices

Good Agricultural Practices (GAP) and Good Handling Practices (GHP) are voluntary programs that you may wish to consider for your operation. The idea behind these programs is to ensure a safer food system by reducing the chances for foodborne illnesses resulting from contaminated products reaching consumers. Also,

several major food distribution chains are beginning to require GAP- and GHP-certified products from their producers. These programs set standards for worker hygiene, use of manure, and water supply quality.

These practices require an inspection from a designated third party, and there are fees associated with the inspection. Prior to an inspection, you will need to develop and implement a food safety plan and designate someone in your operation to oversee this plan. You will need to have any water supply used by your workers or for crop irrigation and pesticide application checked at least twice each year. A checklist of the questions to be asked during the inspection can be found at www.ams.usda.gov/fv/gapghp.htm. For more information about GAP and GHP, contact your local extension office or your state's department of agriculture.

Risk Management

You should carefully consider how to manage risk on your farm. First, you should insure your facilities and equipment. This may be accomplished by consulting your insurance agent or broker. It is especially important to have adequate levels of property, vehicle, and liability insurance. You will also need workers compensation insurance if you have any employees. You may also want to consider your needs for life and health insurance and whether or not you need coverage for business interruption or employee dishonesty. For more on agricultural business insurance, see "Agricultural Alternatives: Agricultural Business Insurance."

Second, check to see if there are multi-peril crop insurance programs available for your farm enterprises. There are crop insurance programs designed to help farmers manage both yield risk and revenue shortfalls. Peach production involves large initial investments and can be very risky; weather-related crop losses are common and crop prices can be highly variable. Individual crop insurance policies for peaches (if available in your county) or a Whole Farm Revenue Protection policy can help you reduce these risks. Coverage for peaches is based on the actual production history (APH) of your operation; you can select between 50 and 75 percent of your APH yield to protect and you can insure your crop

as either fresh market or processing. You may also want to consider the use of a separate hail insurance policy to better protect against this type of often very localized damage. Whole Farm Revenue Protection (WFRP) provides a risk management safety net for all commodities on your farm under one insurance policy. You can buy WFRP alone or with other buy-up level (additional) federal crop insurance policies. Coverage levels range from 50 to 85 percent of your expected revenue or whole farm historic average revenue (based on your 1040-F information), whichever is lower. For more information concerning crop insurance, contact a crop insurance agent or check the Pennsylvania Crop Insurance Education Website at extension.psu.edu/crop-insurance.

Finally, the USDA Farm Service Agency has a program called the Non-Insured Assistance Program (NAP) that is designed to provide a minimal level of yield risk protection for producers of commercial agricultural products that don't have multi-peril crop insurance coverage. NAP is designed to reduce financial losses when natural disasters cause catastrophic reduction in production. NAP coverage is available through your local USDA Farm Service Agency office. The application fee for this program may be waived for eligible limited-resource farmers.

Sample Budget

Included in this publication are two sample fresh-market peach budgets: one for land preparation and planting, and one for mature production. The budgets summarize the receipts, costs, and net returns of a small-scale peach enterprise. This sample budget should help ensure that all costs and receipts are included in your calculations. Costs and returns are often difficult to estimate in budget preparation because they are numerous and variable. Therefore, you should think of this budget as an approximation and make appropriate adjustments in the "Your Estimate" column to reflect your specific production and resource situation. More information on the use of crop budgets can be found in "Agricultural Alternatives: Budgeting for Agricultural Decision Making."

Sample Peach Budget: Land Preparation and Planting

Per-acre costs for land preparation and establishment based on 194 trees per acre.

ITEM	LAND PREPARATION	YOUR COSTS	PLANTING	YOUR COSTS	TOTAL	YOUR ESTIMATE
Variable Costs						
Custom operations						
Spreading lime	\$6.50					
Moldboard plowing	\$22.60					
Disking	\$37.80					
Harrowing	\$6.50					
Spread fertilizer	\$8.50					
Grass seeding	\$12.50					
Lime	\$40.00				\$40.00	
Fertilizer	\$86.75		\$4.42		\$91.17	
Grass seed	\$84.00				\$84.00	
Trees*			\$1,396.80		\$1,396.80	
Herbicides			\$93.96		\$93.96	
Insecticides			\$10.27		\$10.27	
Fungicides			\$73.98		\$73.98	
Drip tape			\$339.77		\$339.77	
Bar soap/deer repellent			\$145.50		\$145.50	
Tree guards			\$145.50		\$145.50	
Rodenticide			\$10.00		\$10.00	
Labor	\$300.00		\$220.00		\$520.00	
Operator labor	\$15.80		\$68.64		\$88.44	
Diesel fuel	\$9.42		\$145.01		\$154.43	
Repairs and maintenance						
Tractors	\$2.85		\$31.09		\$33.94	
Equipment**	\$2.79		\$101.25		\$104.04	
Interest on operating capital	\$27.63		\$97.10		\$124.73	
<i>Total Variable Costs</i>	<i>\$663.64</i>		<i>\$2,883.29</i>		<i>\$3,546.93</i>	
Fixed Costs						
Tractors	\$5.97		\$61.16		\$67.13	
Implements**	\$3.51		\$235.72		\$239.23	
Land charge	\$200.00		\$200.00		\$400.00	
<i>Total Fixed Costs</i>	<i>\$209.48</i>		<i>\$496.88</i>		<i>\$706.36</i>	
Total Costs	\$873.12		\$3,380.17		\$4,253.29	

*Tree cost based on standard cultivars for quantities over 500 trees. Royalties are charged on many of the newer cultivars of up to \$2.25 or more per tree.

**Includes irrigation system.

You should monitor local markets and contact suppliers to determine current prices for all items contained in this sample budget.

Sample Peach Budget: Mature Production

Per-acre costs for a mature planting based on 194 trees per acre.

ITEM	QUANTITY	YOUR QUANTITY	UNIT	PRICE	YOUR PRICE	TOTAL	YOUR ESTIMATE
Variable Costs							
Custom operations							
Pest scouting	1		acre	\$40.00		\$40.00	
Bee rental	1		acre	\$100.00		\$100.00	
Lime plus spreading	0.5		ton	\$26.50		\$13.25	
Fertilizer	1		acre	\$28.00		\$28.00	
Herbicides	1		acre	\$54.26		\$54.26	
Fungicides	1		acre	\$336.87		\$346.87	
Insecticides	1		acre	\$286.32		\$470.23	
Rodenticide	10		pound	\$1.00		\$10.00	
Hand thinning	1		acre	\$77.60		\$77.60	
Insect traps	1		acre	\$38.00		\$38.00	
Labor							
Seasonal	13		hours	\$18.00		\$234.00	
Operator	1		acre	\$94.53		\$94.53	
Pruning	1		acre	\$194.00		\$194.00	
Harvesting	1		acre	\$662.50		\$662.50	
Marketing expense	10%		total sales	\$4,200.00		\$420.00	
Diesel fuel	29		acre	\$2.80		\$81.20	
Repairs and maintenance							
Tractors	1		acre	\$15.80		\$15.80	
Equipment*	1		acre	\$59.50		\$59.50	
Crop insurance							
Fresh-market peach (50% coverage)	1		acre	\$84.00		\$84.00	
Fresh-market peach (SCO)	1		acre	\$79.00		\$79.00	
Interest on operating capital	1		acre	\$62.66		\$62.66	
<i>Total Variable Costs</i>						\$3,165.40	
Fixed Costs							
Tractors	1		acre	33.10		\$33.10	
Implements*	1		acre	\$115.75		\$115.75	
Land charge	1		acre	\$200.00		\$200.00	
Additional inputs	1		acre				
<i>Total Fixed Costs</i>						\$348.85	
Total Costs						\$3,514.25	

*Includes irrigation system.

You should monitor local markets and contact suppliers to determine current prices for all items contained in this sample budget.

Net returns for five different yields and prices.

PRICES PER BUSHEL	PEACH YIELD (BUSHEL PER ACRE)				
	100	200	300	400	500
\$10.00	\$(1,792.58)	\$650.08	\$1,649.75	\$2,649.42	\$3,649.08
\$12.00	\$(1,592.58)	\$1,050.08	\$2,249.75	\$3,449.42	\$3,566.58
\$14.00	\$(1,392.58)	\$1,450.08	\$2,849.75	\$4,249.42	\$4,566.58
\$16.00	\$(1,192.58)	\$1,850.08	\$3,449.75	\$5,049.42	\$5,566.58
\$18.00	\$(992.58)	\$2,250.08	\$4,049.75	\$5,849.42	\$6,566.58

Initial Resource Requirements

- Land: 1 acre
- Labor
 - Land preparation: 27 hours
 - Planting: 26 hours
 - Production labor (scouting, thinning, pruning, spraying, and mowing harvest labor): 48 hours
- Capital
 - Equipment: \$20,000 to \$30,000
 - Land preparation and planting: \$2,500 to \$3,000 per acre
 - Production years: \$2,600 to \$3,500 per acre
- Equipment
 - Tractor (minimum 45 horsepower)
 - Airblast orchard sprayer
 - Herbicide sprayer
 - Rotary mower
 - Tillage equipment
 - Containers (bulk bins, bushel crates, boxes)
 - Pruning equipment

For More Information

Publications

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Associations

Many states have horticultural societies or fruit growers associations. Many of these may be found through the following sources.

American Society for Horticultural Science
1018 Duke Street
Alexandria, VA 22314
703-836-4606
www.ahs.org

North American Fruit Explorers
1716 Apples Road
Chapin, IL 62628
www.nafex.org

State Horticultural Association of Pennsylvania
697 Mountain Road
Orrtanna, PA 17353
www.shonline.org/index.html

Websites

Fruit Production for the Home Gardener
extension.psu.edu/plants/gardening/fphg

Growing Peaches in North Carolina
www.ces.ncsu.edu/depts/hort/hil/ag30.html

Guide to Farming in Pennsylvania
extension.psu.edu/business/farm/guide

Ohio State University Organic Apple Disease Spray Guide
www.caf.wvu.edu/kearneysville/organic-apple.html

Organic and Low-Spray Peach Production
attra.ncat.org/attra-pub/peach.html

Virginia Stone Fruits
www.virginiafruit.ento.vt.edu/peach-hort.html

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Penn State College of Agricultural Sciences research and extension programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

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Produced by Ag Communications and Marketing

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Code UA429 02/16pod