



TABLE — OF —

AN OKLAHOMA GUIDE TO AGRITOURISM











ENJOY LOCALLY GROWN HARVESTABLES THAT YOU PICK YOURSELF.



SMALL FRUIT CULTIVAR SELECTION



CLIMATE ADAPTATION

- + The cultivars you select must be adapted to the climatic conditions for your geographic location.
- + Pay attention to the hardiness zones given by USDA. Oklahoma has 5 hardiness zones. (Garcia, M., & Clark, J. n.d.)

BLOOM/HARVEST

+ You can select early, mid, and late season cultivars to extend or concentrate the season to match your time constraints and specific market demands.

(Garcia, M., & Clark, J. n.d.)

PEST RESISTANCE

+ Buy cultivars which have low susceptibility to pests prevalent in your area. (Garcia, M., & Clark, J. n.d.)

FERTILIZATION & MAINTENANCE



- + Improving soil tilth, adjusting pH and addressing fertility needs prior to planting will result in stronger plant growth and production. Nutrients such as phosphorus and potassium do not move through the soil readily and are best managed prior to planting.
- + Clay soils are more difficult to amend than sandy soils.
- + Apply fertilizers uniformly around the drip line of the plant and one foot outward, but never near the base of the plant. Be careful to ensure fertilizer does not come in contact with the trunk or branches as this will damage the plant. If the fertilizer does come in contact with leaves brush it away immediately. Gently work fertilizer into the soil with a rake, taking care to avoid plant roots.
- + Blood meal, cottonseed meal, and manure are used as organic fertilizers. (Holmes, Hillock, Wallace, 2017)



IT'S IMPORTANT TO TREAT EACH CROP INDIVIDUALLY.

WEED MANAGEMENT



LAND PREP

+ Land preparation, cover crops, mulches and other management practices can be used to control many weeds. (Carroll, 2020)

MULCH

 Mulches used for weed control include straw, sawdust, wood or bark chips, plastic sheeting, woven plastic and other materials. (Carroll, 2020)

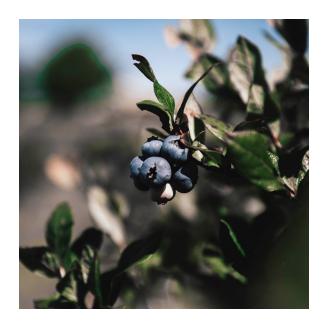
HERBICIDE PRINCIPLES

- + Identify the weed before choosing the herbicide.
- Read the label for registration approval, precautions, limitations and directions for use.
- + If the herbicide is new, try it on a small area the first time. (Carroll, 2020)

HERBICIDE

- + Federal and state laws and regulations: always check on the status of label clearances for herbicides before use.
- + Rotate herbicides with different mode of action numbers to help prevent developing resistances.
- Preemergence herbicides are applied to the soil surface and must be activated by rainfall.
- + Postemergence herbicides are effective after the weeds have germinated and started to grow.
- + Two basic types of post emergent herbicides systemic and contact.
- Systemic herbicides are applied to weed foliage and are translocated throughout the plant.
- + Contact herbicides work best when applied at relatively high temperatures and in large gallonage per acre so that good coverage of the weeds is obtained.

SEE RESEARCH FOR RECOMMENDED HERIBCIDES (Carroll, 2020)





MANAGEMENT **SCHEDULES**

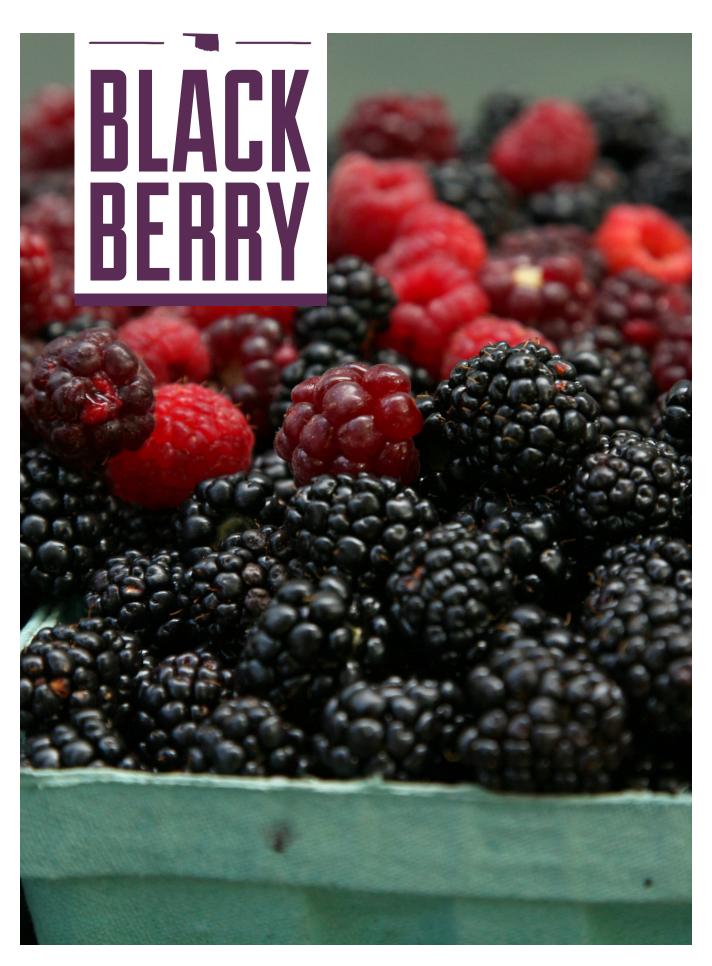
+ Research proper management schedules for growth stages, pests, and weed control for varieties planted.

INSECT/DISEASE CONTROL

Commercial growers should calibrate their sprayers by spraying a measured area. Measure the amount of water needed to refill the tank. Divide this amount by the fraction of an acre sprayed to get the gallons applied per acre. (Lee, Mulder, & Smith 2015)

CULTURAL CONTROL METHODS

- + Disease and insects may be controlled using cultural methods.
- + The methods:
 - + Site selection
 - + Maintaining good soil conditions
 - + Sanitation
 - + Healthy, resistant varieties
- + A well-chosen site includes good air drainage to reduce spring frost damage, circulation, and adequate soil water drainage. Sites with these qualities improve plant growth and decrease plant susceptibility to insects and disease. Orienting rows for good sun exposure and natural air movement will dry leaves and fruit quickly.
- + Raised beds improve soil drainage and reduce infections by root diseases. Proper site selection to decrease plant stresses, such as cold injury and buffeting by winds, can reduce attack by insects and diseases.
- + Destroying native plant species in the immediate area harbor harmful insects or diseases can reduce pest problems.
- + Plant adapted, healthy, disease and insect resistant varieties.
- + Variety selection should be based on adaptation to the area, such as cold hardiness, heat tolerance, adaptation to soils, and ability to produce acceptable yields of high quality fruit.
- + Pruning equipment should be disinfected before, during and after use to avoid transmitting disease during pruning. A solution of 10% chlorine bleach and 90% water is a good disinfectant.
 - (Lee, Mulder, & Smith 2015)







SITE SELECTION

- + Cultivated blackberries do best on sandy loam soils with organic matter. They will tolerate a wider range of soil types than most other fruits.
- + Good soil drainage and 2.5-3 feet of unrestricted rooting area are necessary for best plant performance. A site with a slight north-facing slope is preferred. This helps prevent spring frost injury and protects plants from southwest winds in summer. (Carroll, 2017)

SITE PREPARATION

- + A soil test is necessary to determine the need for fertilizer and lime.
- + The beds should be from 6 to 10 inches high and 2 to 3 feet wide. Optimal pH for blackberries is around 6.5.

WEED Management

MULCHING

+ Mulching is not required, but it will help control weeds, conserve soil moisture, and prevent cold injury to crowns. (Carroll, 2017)

FERTILIZING

+ Very little commercial fertilizer is needed during the first year of blackberry establishment. In subsequent years, apply fertilizer to the blackberry plants at bloom time to stimulate plant growth, increase berry size, and boost total production. (Carroll, 2017)





GROWING TIPS

VARIETIES

+ Apache, Arapaho, Chickasaw, Kiowa, Natchez, Navaho, Ouchita, Prime-Jan, Prime-Jim, Shawnee. (Carroll, 2017)

PROPAGATION & PLANTING

- + All University developed varieties mentioned are patented, and may not be legally propagated for sale or for personal use.
- + During the first year, the canes grow to their full height ("primocane"). The second season, these canes bear fruit and die ("floricane"). (Carroll, 2017)







UPKEEP

PRUNING

+ First-year plants are allowed to produce as much growth as possible without pruning or training to a trellis. Established plants grow new canes while the old canes are fruiting. During the summer, prune off the last few inches of new canes, leaving them 3 to 3.5 feet tall. (Carroll, 2017)

TRAINING TRAILING VARIETIES

+ A trellis can aid in the ease of harvest, for example: double curtain, or "T" trellis, and the 2-wire vertical trellis. (Carroll, 2017)

IRRIGATION

+ Irrigation during the fruit development and maturation period is very important when rainfall is lacking. Water the blackberries whenever the soil under the mulch feels dry, or if plants appear to be wilting. (Carroll, 2017)

PEST CONTROL

- + Spraying for insect, disease, and weed control may be necessary.
- + Research for specific herbicides and pesticides. (Carroll, 2017)

Properly maintained, irrigated plantings of good varieties may produce crops for 10 years or more. Blackberry fruit has a range of distinctive flavors varying from sweet to tart. Well-established plants can produce up to 20,000 pounds per acre. (Carroll, 2017)



GETTING STARTED

SITE SELECTION

- + Blueberries require a site free of Bermudagrass and Johnsongrass with good air drainage to prevent cold injury and frost damage. Blueberries need a site in full sun.
- + Blueberries should be planted on a raised bed on most soil types to improved water drainage.
- + The desired pH of soils artificially acidified for cultivated blueberries is in the range of 5.0 to 5.2. (Carroll, 2017)

SITE PREPARATION

- + Take representative soil samples before planting, and add the necessary soil amendments during land preparation.
- + Complete any smoothing, terracing, or soil moving procedures before planting blueberries.
- + Leguminous crops such as clover can add nitrogen and organic matter to the soil. (Carroll, 2017)

NEW PLANTS & PLANTING

- + Blueberries can be planted in the fall or spring; however, spring is the preferred time with 2-year-old container grown plants.
- + Place plants 5 feet apart within the row and have a spacing between rows of 8 to 10 feet. (Carroll, 2017)





DID YOU KNOW?

WHEN THE BERRIES APPEAR RIPE, A "TASTE TEST" IS THE BEST INDICATOR OF WHEN TO PICK

GROWING CONDITIONS

IRRIGATION

+ Blueberries require irrigation for plant survival, optimum growth, and fruit production. (Carroll, 2017)

FERTILIZING & MULCHING

- + To prevent damage to the root system. blueberries should not receive fertilizer at planting or after planting until growth has started.
- + For small plantings, almost any mulching material can be used except leguminous materials such as alfalfa hay.

PRUNING

- + Pruning of blueberries is essential to produce large, early berries and vigorous plants.
- + Remove weak fruiting, twiggy growth as it develops. (Carroll, 2017)

VARIETY

- + It is possible to harvest fresh fruit from the end of May until late July by using more than one variety. Each variety should be harvested at least every seven days and preferably more often.
- + There are three types of blueberries to consider depending on where you live in the state. The "northern highbush" is better adapted to the northern part of the state, requiring cooler nights during maturation to produce a flavorful fruit. In southern Oklahoma, "southern highbush" or "rabbiteye" varieties should be grown.

NORTHERN HIGHBUSH

Northern & Central Oklahoma + Duke, Collins, Blueray, Bluecrop, Elliot

SOUTHERN HIGHBUSH Southern & Central Oklahoma + Legacy, Summit, Ozarkblue

RABBITEYE







PREPARING FOR HARVEST

- + Blueberries should not be allowed to bear fruit until the third year of growth.
- + Plants allowed to bear fruit too early may set many fruit, but grow few leaves to support them.
- + Maturing blueberry fruit enlarge, develop a deep blueblack color and soften slightly. When the berries appear ripe, a "taste test" is the best indicator of when to pick.
- + Harvesting of fruit should be done during the coolest part of the day, preferably morning. (Carroll, 2017)

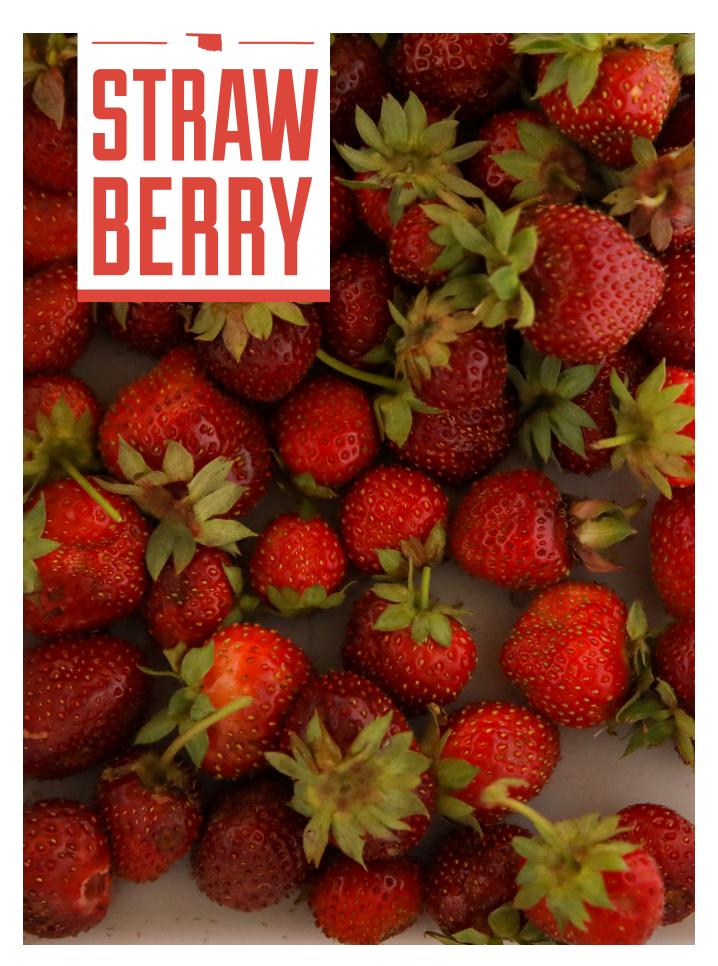
BIRDS

- + Birds can be a serious pest of blueberries.
- + Some methods of preventing birds: noise making devices producing loud, variable noises, netting to cover the blueberry plans, or reflective objects placed in the field. (Carroll, 2017)

DISEASES & INSECT PESTS

+ Blueberries can be grown on a small scale with little or no use of fungicides and insecticides. (Carroll, 2017)







GETTING STARTED

Strawberries can be grown throughout Oklahoma. They are a versatile, highly nutritious fruit. (Whitworth, 2016)

PROPOGATION & PLANTING

- + Strawberries are propagated by removing rooted runners from the mother plants and placing them in a new strawberry bed.
- + February 1 to March 20 is the recommended time for planting strawberries in Oklahoma. In the southeastern third of the state, plants may be set in the fall (October to mid-November).
- + Plant the strawberries 1.5 to 2.5 feet apart, maintain a row width of 18 to 24 inches. (Whitworth, 2016)

SITE SELECTION

- + The most successful strawberry planting receives full sun most of the day.
- + Strawberries do best when grown in soil with a pH range of 6.0 to 6.5.
- + The site should not have been used for any kind of berries, tomatoes, potatoes, or peppers prior to planting new strawberries.

 (Whitworth, 2016)

PLANT SELECTION

- + Select varieties adapted to your region.
- + Accept only healthy-looking, certified virus-free plants.
- + The fruiting season can be extended by planting varieties ripening at different times.
- + Choose varieties to bloom when you want them to. Junebearing varieties are the most successful in Oklahoma. (Whitworth, 2016)

Early-season varieties ripen in early May to mid-June.

Mid-season varieties ripen in mid-May to mid-June. Late-season varieties ripen in late May to mid-June.

DID YOU KNOW?

ONE CUP OF FRESH BERRIES SUPPLIES MORE THAN THE RECOMMENDED ADULT REQUIREMENT FOR VITAMIN C!

GROWING CONDITIONS

MULCHING

- + Strawberry plants may benefit from a winter covering of straw or similar mulch over the row.
- + The proper time to apply mulch is between middle and late December.
- + The mulch must be removed when the earliest strawberry plant growth begins in the spring (usually March). (Whitworth, 2016)

IRRIGATION

- + Plants stressed by drought have more disease problems and a lower yield than strawberries receiving adequate water. Irrigation water should be available to help the plants survive dry periods throughout the year.
- + Recommended irrigation systems: leaky pipe or other drip irrigation. (Whitworth, 2016)

SOIL PREP

- + Have the soil tested several months before planting strawberries.
- + Till the soil to provide a weed-free planting area.
- + Keep in mind beds should be narrow enough for easy picking, usually not more than three feet wide. (Whitworth, 2016)





PREPARING FOR **HARVEST**



PEST CONTROL

- + Strawberries are susceptible to many diseases and insects. The most notable pests are aphids, spider mites, white (root) grubs, strawberry leafrollers, slugs, pillbugs, and nematodes.
- + Diseases of strawberries include bacterial and fungal leaf spots, powdery mildew, leaf scorch fungus, leaf blight, gray mold and other fruit rots, red stele root rot, verticillium wilt, various viruses, and nematode-caused diseases. Planting resistant varieties is the easiest method of disease control.
- + There are few instances in Oklahoma when chemicals are required to control either insects or diseases on strawberries. (Whitworth, 2016)

HARVESTING

- + Some are pink when ripe, while others are red or dark red. Tasting the berries is the best way to tell when to pick them.
- + For best storage life (3-10 days in the refrigerator, depending on handling and variety), pick the fruit in the cool part of the day. Leave the caps on until you use the fruit.
- + You should be able to harvest at least a quart of berries per five feet of row. (Whitworth, 2016)





GETTING STARTED

- + Of all the tree fruit crops grown in Oklahoma, a fresh tree-ripened peach is hard to beat.
- + With the proper site, peaches can be reasonably regular producers and are favored by Oklahoma consumers. (Carroll, 2016)
- + A peach orchard can be a profitable enterprise or a financial failure, depending to a large extent on how well the grower has planned ahead in choosing the site and varities. From February until late August, the grower will be involved regularly, and often intensively, with the orchard. (Whitworth, 2016)

VARIETIES

+ The current recommended rootstocks for peach trees in Oklahoma are either 'Lovell,' 'Halford' or 'Guardian' seedlings. Peach trees should be planted at the same depth as they were in the nursery.

WHITE

+ Erly-Red-Fre, Summer Pearl, Nectar, White Hale

YELLOW

+ Candor, Garnet Beauty, Sweethaven, Earliglo, Rubired, Sentinel, Redhaven, Clayton, Cullinan, Newhaven, Ranger, Glohaven, Bounty, Jayhaven, Loring, Cresthaven, Biscoe, Jefferson, Autumnglo, Ouachita Gold, Stark Encore, Parade, Flameprince, Fairtime. (Carroll, 2017)



LAND PREPARATION

+ Orchard sites will benefit from cover cropping with warm season species such as hybrid sudan grass, buckwheat, or cowpea, and cool season crops such as wheat, annual ryegrass, crimson clover or tillage radish. (Carroll, 2017)

SITE SELECTION

- + The single most important aspect to growing peaches successfully is site selection.
- + Having the best site on the highest elevation possible will allow easiest flow of cold air out of orchard site. Very steep slopes should be avoided because of the erosion hazard and difficulty in machine operations.
- + There should be easy access to roads and close proximity of markets.
- + The availability of water for supplemental irrigation is important in getting the largest sized fruits. (Carroll, 2017)



DID YOU KNOW?

THERE IS A LIMIT TO THE NUMBER OF PEACHES THE TREE CAN MATURE TO PERFECTION.

TREE CARE



PLANTING

- Nursery trees should be grown on fumigated soils and be certified disease and nematode free. Trees are normally planted in February to early March.
- + Within-row spacings can be as close as 12 feet, though 18 feet leaves plenty of room for growth. (Carroll, 2017)



IRRIGATION

- + Because of the long, hot, and dry summer season in Oklahoma, irrigation of peach orchards has proven beneficial using 'drip' or 'trickle' systems.
- + Young, developing orchards should be irrigated separately from older, bearing orchards because of differing water use rates.
- + The trees will need about 1 inch of rain per week to satisfy their needs early in the growing season, increasing to two inches of rain per week during July and August.
- + Do not wait until all the soil is dry before you begin irrigating. (Carroll, 2017)



SOIL

- + Start with the soil survey map. Check the soil depth at several places in the field using a soil auger or post-hole digger.
- + Check the soil drainage by performing a percolation test. (Carroll, 2017)

PREPARING FOR HARVEST



TRAINING/PRUNING

+ Proper training of the young tree to establish strong branch structure and proper annual pruning of the established tree are required for early and continued productivity of the orchard. (Carroll, 2017)

THINNING FRUITS

- + There is a limit to the number of peaches the tree can mature to perfection. The leaves on a peach tree can only produce so many carbohydrates (sugars) to go into the developing fruits.
- + The proper crop load for a peach tree have the fruits average a minimum of six inches apart on the branches throughout the tree.
- + Thinning peaches is one of the most time-consuming chores in the orchard, but it is absolutely necessary for the production of good quality fruit. You should thin when the fruits are the size of a quarter, removing them by hand. (Carroll, 2017)

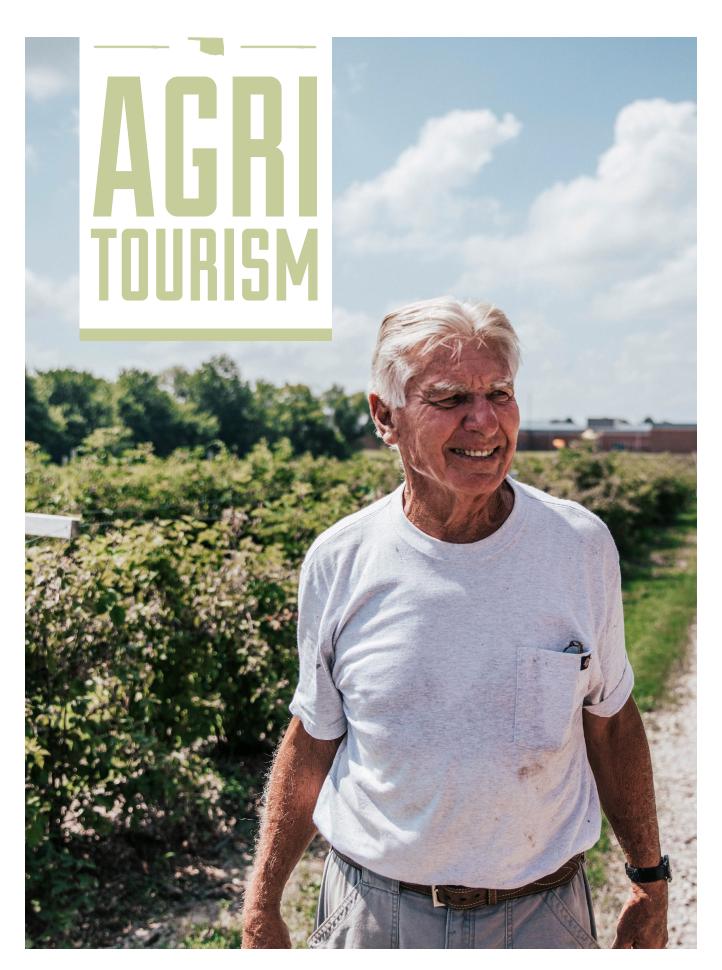


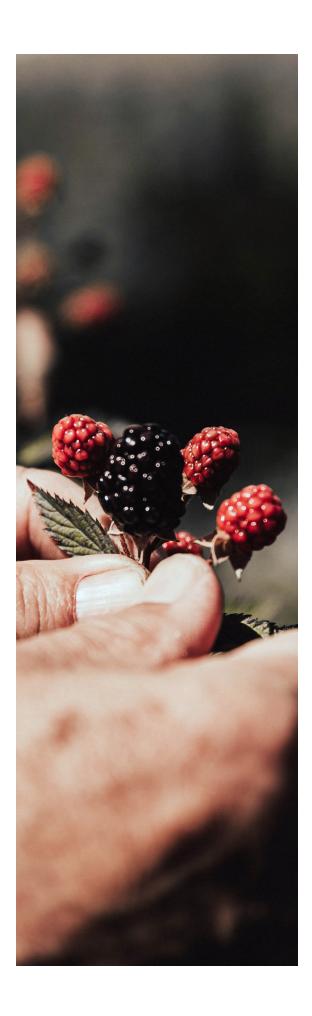
PESTS

+ Weeds compete with the young tree for water and nutrients and should be kept three to four feet from the trunk with herbicides or mowing. (Carroll, 2017)

HARVEST & HANDLING

- + All peach cultivars will require two or three pickings to harvest all the fruit at the optimum maturity.
- + Peaches are easily bruised, especially as they approach tree-ripeness, and should be picked and handled with care.
- + Peaches should be cooled as rapidly as possible and kept as close to 33°F as possible (without freezing the fruit) for maximum storage life. Under the best of conditions, storage life is only a couple of weeks. (Carroll, 2017)





GENERAL TIPS

PARKING

- + Use signage to direct customer to parking areas.
- + The parking lot should be as smooth and level as possible. Fill any holes so guests will not trip or fall.

CHECK-IN/CHECK-OUT

- + Have a cash register as point-of-sale equipment.
- + To sell items by weight, a legal-fortrade scale is recommended. Here are tips for chosing a good scale:
 - Scales certified by ODAFF.
 - Scale needs to be NTEP approved.
 - You can verify that a scale is NTEP approved at the following website: https:// www.ncwm.net/ntep/cert_search.
 - Your scale can be tested once a year for free by ODAFF.
 - You will receive a sticker certification.
 - Contact Consumer Protection Services at ODAFF 405-522-5968.

CONTAINERS

+ Customers should be provided clean picking containers. Don't let customers bring their own. You can use reusable, plastic containers - they should be cleaned and disinfected after each use.

SIGNS, ROPES, & FENCES

Directional

- + Signs leading to property
- + Front gate sign
- + Different locations on farm

Informational

- + Rules
- + Season Availability
- + Varieties
- + Prices
- + Farm History

RISK Management



Use these tips to minimize risk at your agritourism attraction:

- + Prioritize the safety of your visitors and employees.
- + Identify the risks involved with every activity you offer. Establish rules for planned activities, and, if necessary, modify the activity or equipment to make it safer.
- Establish an appropriate business structure.
 For example, partner with a corporation that will help protect your personal assets.
- + Obtain proper insurance coverage. Speak to your insurance agent to be sure. If you are already in business and are considering a new activity, notify your insurance agent first to find out if the activity is insurable and at what cost. Ask your agent how you can make the activity safer.
- + If you are producing and selling a product (ex: jam, pecans, bread), obtain the proper liability insurance as well as certification from the Oklahoma State Department of Health.
- + Visit with other operators to ask how they handle liability issues and what insurance agent they use.
- + Familiarize yourself with current state liability legislation.

- + Develop a safety plan specific to your agritourism operation.
- + Train employees and ensure your activity has a proper guest-to-employee ratio.
- + If you are offering a physical activity, you may want your guests to sign a rules and regulations form and/ or participant release and assumption of risk forms.
- + Certify yourself and your staff in CPR.
- + Address animal health issues promptly and effectively.
- + Document and assess the cause of incidents. Keeping a good record of incidents is a great way to monitor your safety history and make safety improvements.
- + Implement procedures to make sure incidents don't happen again.
- + Give a copy of your safety plan to your insurance agent and ask if there are additional measures you should consider.
- + Although it may be impossible to eliminate all potential hazards, maintaining a proactive safety strategy and providing your insurer with documents proving your safety efforts may protect you legally in the long run. Make sure you spend the time necessary with your insurance agent to fully understand the provisions of your insurance policy.



RECOMMENDATIONS



LIABILITY

+ Enacted in 2014, the Oklahoma Agritourism Activities Liability Limitations Law offers protection for agritourism destinations. Agritourism destinations are only covered by the law after a state inspection by a state agritourism coordinator. Signs for your farm are provided by Oklahoma Agritourism at no cost to you.

VIEW YOUR FARM FROM THE CUSTOMERS' PERSPECTIVE

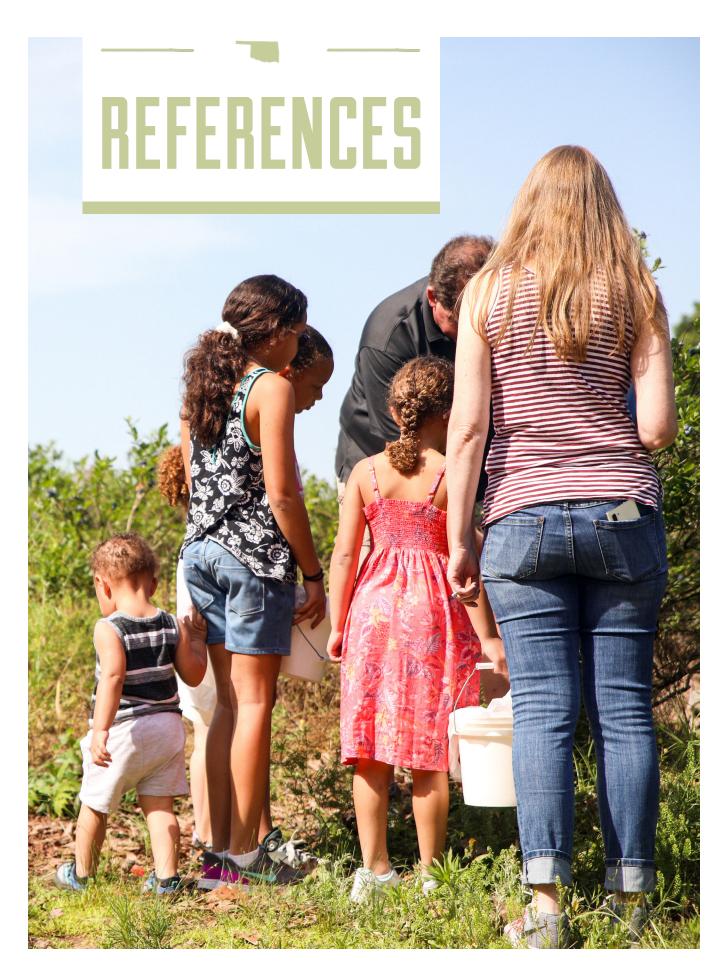
- + Create ways for visitors TO BE
- + Create things for visitors TO DO
- + Create opportunities for visitors TO LEARN
- + Create opportunities for visitors TO HAVE FUN
- + Show your personality, and make your farm unique.

COMMUNICATION

- + Social media
- + Advertisements
- + Website
- + Radio
- + Voicemail recordings

EXPENSES

- + Picking containers and product packing materials check-in area (tent, pavilion, shed, building, table, etc.)
- + Specialty equipment
- + Cash register (point-of-sale equipment)
- + Legal-for-trade scale for weighing items sold by weight
- + Marketing (signage, brand development, website design, social media management, business cards, print marketing materials)
- + Tables or shelves for product display or storage
- + Coolers/freezers for product storage
- + Grounds maintenance equipment
- + Gravel for driveway or parking lot
- + Fencing materials
- + Wagons or sleds to transport product
- + Benches and/or picnic tables
- + Portable toilet rental and maintenance fees
- + Hand washing stations
- + Toilet paper, paper towels, hand soap
- + Trash cans, bags, trash and recycling services
- + Insurance
- + Professional fees (legal, accounting)
- + Utilities (water, sewer, electrical, gas)



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