



Growing Small Fruits

Southwest Indiana Homesteading Conference

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Why Small Fruit?

- Great source of vitamins, nutrients and fiber
- High productivity relative to space required
- Multiple years of productivity
- Many different crops and varieties available that are adapted to the region
- Challenge: short shelf life – fresh consumption or preserved/processed for longer term use

SMALL FRUIT CROPS FOR INDIANA

- Strawberries
- Brambles (raspberry & blackberry)
- Blueberries
- Grapes
- Other berries
(Currant, gooseberry, currants, elderberry, Aronia, etc.)

PRODUCTION BASICS

- Fruit crops require considerable inputs
 - Pruning, training, pest management, weed management, nutrient management, irrigation, etc.
- Fruit crops require time
 - 1 year to production: Strawberries
 - 2-3 years to production: Brambles
 - 3+ years to production: Grapes, Blueberries
- Disease and insects can be difficult to manage
 - Regular spray programs may be needed, especially for grapes

POPULARITY AND EASE OF PRODUCTION

Easy

Strawberry,
Brambles

Come into production quickly, **don't** require a lot of space, many types, few problems.

Moderate*

Grapes

*Trellis, pruning and training, pest management, cold injury, frost damage, etc.

Difficult**

Blueberry

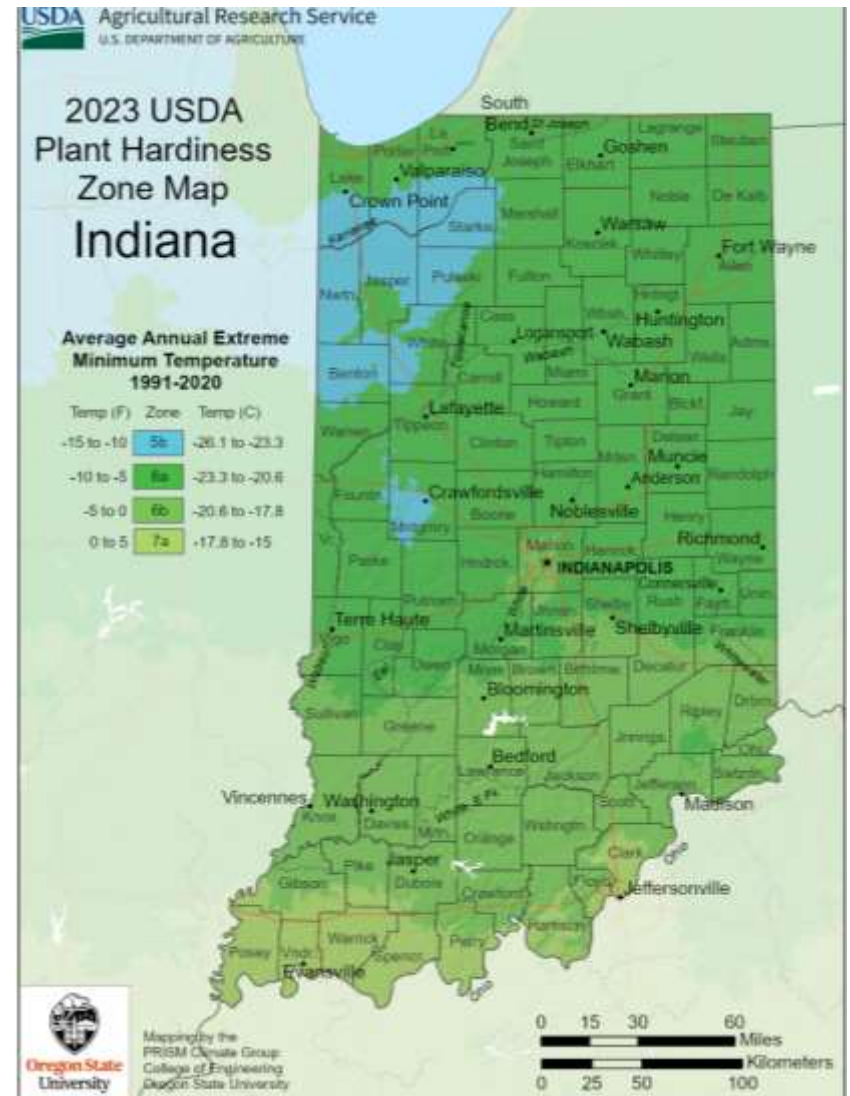
**Soil pH and calcium content, irrigation, water quality, bird netting, slow to establish

BASIC CONSIDERATIONS

- Site Selection
 - Cold hardiness of crops varies
 - Select crop to match location
- Variety Selection
 - Select varieties to match site
 - Cold hardiness
 - Adaptation to growing season, bud break, harvest, etc.
 - Time of harvest relative to weather, etc.
- Soils
 - Type, drainage, depth to seasonal water table
 - Organic matter content
 - pH (for blueberries)

Cold Hardiness and Adaptation

- Strawberries, blueberries throughout
- Blackberries (except PF types) are best in southern half of IN
- Raspberries best in cooler north
- Grapes select varieties hardy to your zone that will ripen in your climate



STRAWBERRIES



STRAWBERRIES

- Relatively quick to produce (1 year)
- Relatively short life span (3-4 year)
- Need to mulch for winter protection
- May need frost protection
 - Row covers
 - Overhead irrigation

STRAWBERRIES

- Production Systems
 - Matted row
 - Annual hill (plasticulture)
 - Containers of various kinds
- Varieties
 - June bearers
 - Day neutrals/Ever bearers



STRAWBERRY VARIETIES

June Bearers

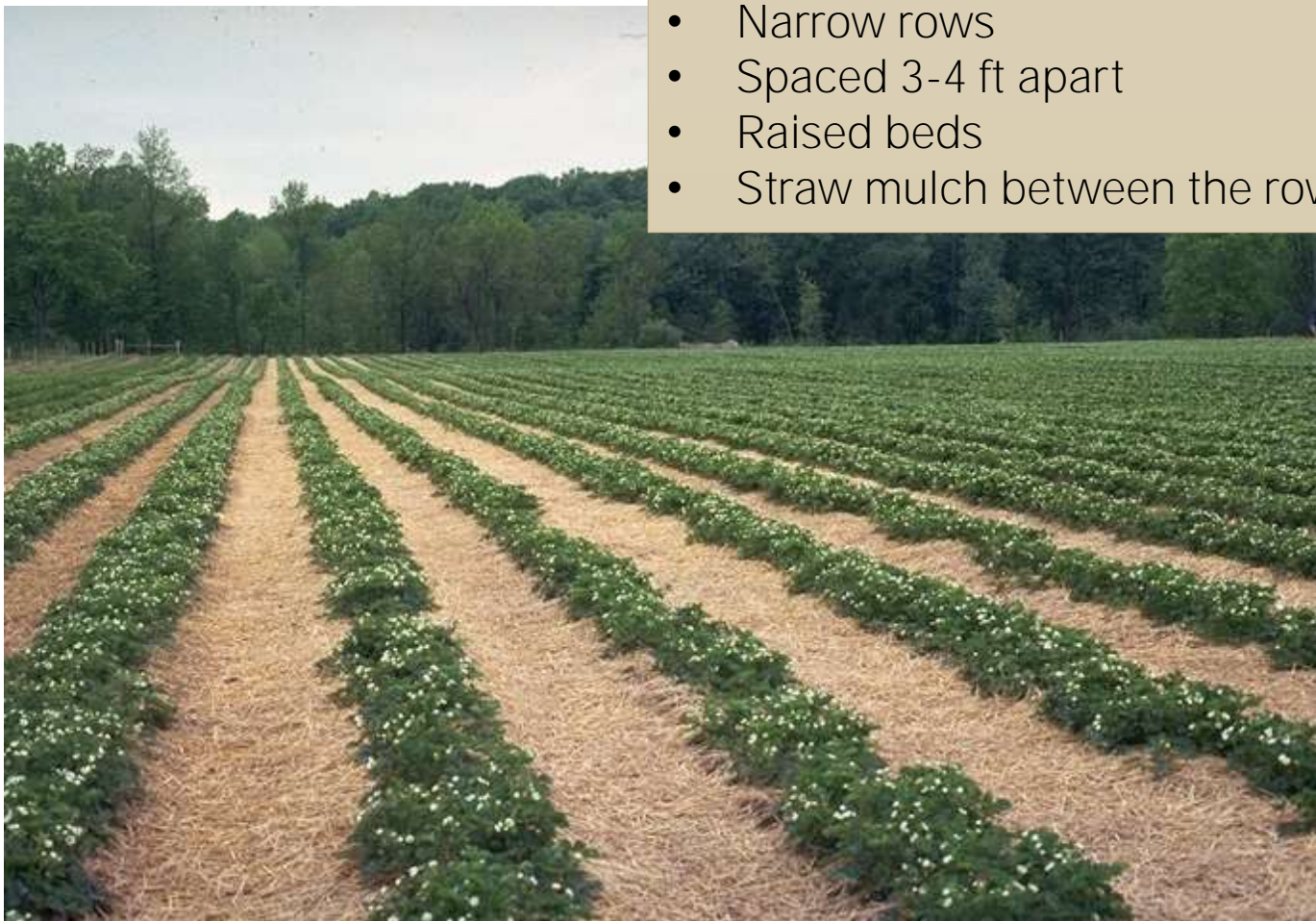
Earliglow
Galletta
Annapolis
Honeoye
Cavendish
Flavorfest
AC Valley Sunset
Jewel

Day Neutrals

Portola
Evie-2
Albion
Seascape
San Andreas

Plant early, mid and late season varieties to extend your harvest.

MATTED ROW PRODUCTION



- Narrow rows
- Spaced 3-4 ft apart
- Raised beds
- Straw mulch between the rows

DORMANT CROWNS PLANTED ON RAISED BEDS

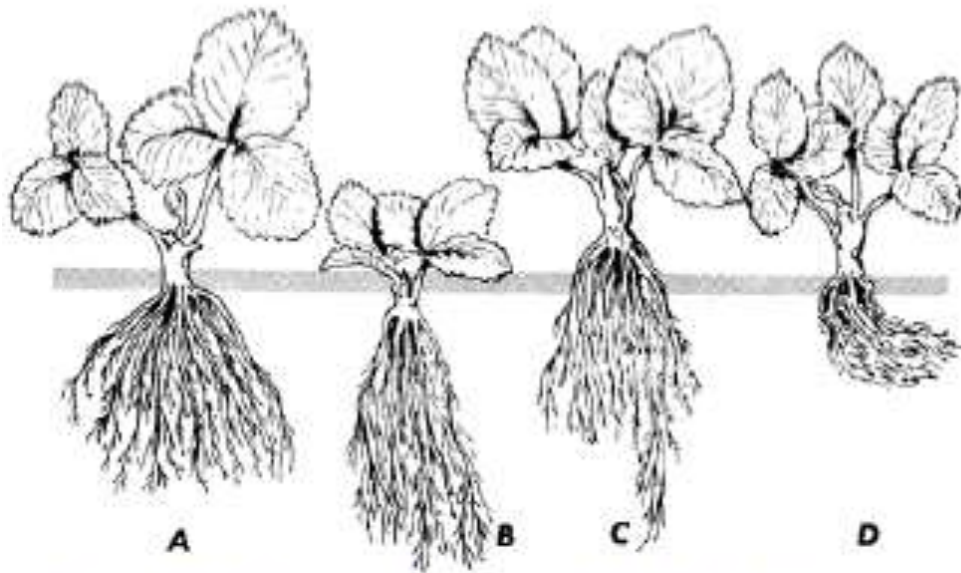


Figure 3-2. Proper planting method (A) and improper methods (B, C, D) for strawberry planting. At B the crown is too deep; at C the crown is too high; and at D the roots are bent and remain near the surface.



FROST PROTECTION



Mulch about 4 inches with CLEAN straw



SPRING OF 2ND YEAR

Rake straw mulch to centers next spring when 4 inch soil temperature reaches 40°F for a few days.



Figure 3-10-B. Remove mulch when soil temperature is above 40°F for two days.

ROW COVERS



RENOVATION OF MATTED ROW PLANTINGS

GOAL IS TO ESTABLISH A NEW CROP OF CROWNS FROM
RUNNER PLANTS

Start immediately after harvest

1. Mow off the old leaves
2. Narrow the rows with a tiller
3. Pull beds back up (1/2 inch of soil on top)
4. Water, fertilize, maintain healthy foliage
5. Keep rows narrow

RENOVATION



Mow leaves



Don't damage crowns

RENOVATION



Till several passes to incorporate straw, plant material.

NICELY RENOVATED ROW



RAISED BEDS



CONTAINER CULTURE

ESPECIALLY FOR DAY
NEUTRAL VARIETIES



PLANTERS: PALLET, TUBE, ETC.



LOW TUNNEL PRODUCTION





Department of Horticulture

Purdue University Cooperative Extension Service • West Lafayette, IN

Growing Strawberries

Bruce Barden

The strawberry is the most popular small fruit grown in the home garden. It is relatively easy to grow, produces large quantities of good-quality fruit without requiring extra equipment, and it can be grown in home gardens all over Indiana.

A planting originating from 25 plants can yield 25 to 50 quarts of berries ripening from mid-May to late June, depending upon the area of the state in which they are grown.

Cultivars

Three types of strawberries are available: Junebearers which fruit once each season, Dayneutrals that fruit several times each season, and Everbearers that, despite their name, fruit twice each season. Junebearers are the most widely adapted and recommended in Indiana. Dayneutrals may perform well in protected areas. Everbearers generally do not perform very well except as ground covers or novelty plants.

Cultivar recommendations are difficult with strawberries because they tend to be very site specific. A cultivar that may be outstanding in your garden may do poorly for your neighbor. Cultivars that have performed well across a range of sites are listed below.

Junebearers: Good early season cultivars are 'Earliglow,' 'Annapolis,' and 'Delmarvel.' 'Earliglow' has excellent flavor, but fruit size decreases after the first harvest. 'Redchief,' 'Honeyo,' 'Guardian,' and 'Suncrop' are suggested as mid-season cultivars. 'Redchief' and 'Suncrop' are reliable plant producers and will do well across a range of sites and conditions. 'Alstar,' 'Jewel,' and 'Sparkle' are suggested cultivars for late season. 'Alstar' is a consistent producer of large berries with orange-red color. 'Jewel' is an excellent quality berry but plantings don't renovate well.

There are a number of promising newer releases that have not been tested much in the region. Small trial plantings are recommended. For early season try 'North-easter.' For mid-season try 'Kent,' 'Moravia,' 'Primitivo,' or 'Cavendish.' For late season try 'Winona.'

Dayneutral cultivars: Good cultivars for cooler climates are 'Tribute' and 'Tribstar.' Dayneutrals generally do not do well during the heat of summer unless in a protected site.

Everbearing cultivars: 'Ozark Beauty' and 'Fort Laramie' appear to be the most promising cultivars. 'Quinault' is a new release that may have potential.

Disease-free plants are important to successful strawberry production. To insure disease-free plants, always buy healthy, virus-free plants from a reliable nursery rather than using plants from your own or a neighbor's planting.

Site

While strawberries will grow on most soil types found in Indiana, they will do best on well-drained sandy loam or loam soils. The best site is one which permits good soil drainage and good surface drainage so that water doesn't accumulate in the area of the planting. Where the only site available is on heavy soils with poor soil drainage, strawberries should be planted in a bed raised a minimum of 6 to 8 inches to encourage good internal soil drainage. A number of types of beds will accomplish this purpose. Raised beds which are surrounded by landscape timbers or strawberry pyramids can be used, or soil can simply be ridged up along a row to create the raised bed. Soil amendments should be used to improve the soil to provide for adequate productivity.

Areas that had been planted to strawberries, tomatoes, peppers, potatoes, or other crops susceptible to soil diseases, especially Verticillium wilt, should not be planted to strawberries within two or three years after those crops have been removed from the area.

Land Preparation

Where possible, a green manure crop should have been grown the previous year. Clovers, rye, or sudan grass are excellent green manure crops which could be plowed down before planting strawberries. Strawberries grow best on soils having high organic matter content and high

www.purdue.edu/hla/sites/yardandgarden/wp-content/uploads/sites/2/2016/10/HO-46.pdf

BRAMBLES



BRAMBLES

- Raspberries
 - Red (summer 'floricane'FF and fall 'primocane'PF fruiting types)
 - Gold (red mutants)
 - Purple (summer)
 - Black (summer and new PF)
- Blackberries
 - Thorny or thornless
 - Erect or semi-trailing
 - Primocane fruiting types (relatively new)

BRAMBLE BASICS

- Biennial cane growth
 - 1st year vegetative (primocane)
 - 2nd year reproductive (floricane)
 - Exception: Fall bearing (primocane fruiting (PF) types)
- Cold hardiness issues (esp. blackberries)
- Shallow root system-irrigation (esp. rasp.)
- Short post harvest shelf life
- Trellising sometimes required

BRAMBLE TIPS

- Blackberries only in warmer regions (southern 1/2) (exception: PF types)
- Raspberries best in cooler regions (northern 1/2 and/or cool site)
- Raspberries on well-drained soils, raised beds, irrigation
- Trellis vigorous types, e.g. ETB

Biggest problems: Cold injury(winter), anthracnose, Japanese beetles and Spotted Wing Drosophila

BRAMBLE PRODUCTION

Combination of primocanes and floricanes during the growing season.

Trellising can help separate the two for better quality fruit.

Floricanes tied to the trellis wire, primocanes grow up in the middle.



SUMMER BEARING "FLORICANE" TYPES



PRIMOCANE FRUITING RED RASPBERRIES AND BLACKBERRIES



FLORICANE FRUITING BLACK RASPBERRIES



FLORICANE FRUITING BLACKBERRIES



BRAMBLE TRELLIS

Trellis to keep canes from leaning over too close to the ground on weaker types, or to support canes in semi-erect types.



Simple temporary trellis for fall-only production



PRUNING BRAMBLES

- Red raspberries and primocane fruiting blackberries (non-branching primocanes)
 - Remove spent floricanes each year
 - Remove deadheads on PF types
 - Thin canes to 4-6 per foot of row and remove weak canes
 - **Shorten canes if necessary on FF types (no more than ¼)**
 - Tie canes to trellis wires

PRUNING BRAMBLES

- Black raspberries and floricanes fruiting blackberries (branching primocanes)
 - Tip primocanes during summer to encourage branching
 - Remove spent floricanes each year (spring or fall)
 - Shorten laterals back to pencil diameter*
 - Tie canes to trellis wires in vigorous types

*Thornless blackberries are much more vigorous than black raspberries and can handle much longer laterals

SUMMER TIPPING BLACKBERRIES AND BLACK RASPBERRIES



SUMMER TIPPING=BRANCHING
BRANCHING=MORE FRUIT



DORMANT PRUNING



*Remove spent floricanes.
Shorten laterals back to
pencil diameter*

ERECT

VS

SEMI-ERECT



Arkansas thornless cultivars



Eastern thornless cultivars
need support!

PF BLACKBERRIES



Produce fruit from
August to October

PF BLACKBERRIES IN OCTOBER

PF blackberries continue to produce fruit until a hard freeze.

Winter injury is not a concern since these can be mowed to the ground each spring for a “fall only” crop.



BRAMBLE VARIETIES

- Blackberries
 - Erect Thornless: Osage, Apache, Ouachita, Natchez, Arapaho Semi-erect
Thornless: Triple Crown, Chester
 - Thorny: Shawnee
 - PFs: PrimeArk 45, Black Magic, Freedom*, Traveler*
(*thornless)
- Black Raspberries
 - MacBlack, Jewel, Bristol, Niwot (PF)
- Red Raspberries
 - Summer: Nova, Titan, Prelude, many others
 - Fall: Heritage, Autumn Bliss, Caroline



Growing Blackberries & Raspberries in Kentucky

R. J. Bost and Bill Stegert

Demand for raspberries and blackberries (commonly called brambles) often exceeds supply in many parts of Kentucky, thus providing the opportunity to grow brambles for local markets and "pick-your-own" operations as well as for home use. Unfortunately, the general shortage of hand-picking labor frequently limits commercial production of blackberries and raspberries in Kentucky. Bramble fruits do not store or ship well, which limits the market area but increases the demand for local, high-quality fruit.

Brambles grow and yield well in most parts of Kentucky and begin to bear the second season after they are planted. They have biennial canes and perennial roots. The roots and crown live for a number of years and each spring produce a new crop of canes (primocanes) while the fruit is maturing on the canes (flora-canes) that grew the season before. These fruit-bearing canes die naturally after the summer harvest. With favorable growing conditions and preparation, a raspberry planting may produce for eight to 12 years. Planting results are poor unless receiving proper care may last only three to five years. Blackberry plants usually live longer than raspberries because they are better adapted to Kentucky's climate.

Site Selection and Preparation

Deep, fertile soil that is well drained, high in humus, and free from hard pans is best for brambles. However, almost any well-drained soil can be modified to grow brambles. The plants will not tolerate free-standing water in the winter. It may be possible to site some poorly drained sites to make them acceptable for brambles. If the site has a gully, subsoiling is beneficial and should be done during August or September of the year before you plant when the soil is dry. Planting all brambles on raised beds may help reduce root rot and prolong the life of the planting. Mulch irrigation and mulching will help ensure good plant growth and high yield.

When possible, plant brambles on a northern slope or where there is afternoon shade. Such soils are cooler and hold moisture better. Mulching or irrigating will

accomplish the same goal. Irrigation is necessary for commercial production. Sites with adequate air drainage reduce the possibility of winter injury and damage from late spring frosts. Avoid extremely windy sites for raspberries because canes are susceptible to wind snapping and breakage.

Select the site a year before planting. Blackberries and raspberries should not follow potatoes, tomatoes, peppers, eggplants, tobacco, strawberries, or other bramble crops for three to four years. These crops can build up the Verticillium wilt fungus (vascular level) in the soil. Plant infection by Verticillium causes leaf and, eventually, plant death. It is best to grow a green manure crop the year preceding the bramble crop to increase organic matter. A cultured non-host crop such as wheat or corn will reduce white grub and weed problems, particularly if the field has been in soil. Do not use a persistent herbicide such as atrazine that could damage your brambles.

Take a soil sample to your county Extension office for testing. Apply the recommended soil nutrients or soil amendments and plow these under. Mature (8 to 10 tons per acre) or a green manure crop can be incorporated at the same time. Before planting, either in the fall or early spring, plow the area to a depth of 6 to 9 inches. The soil should be thoroughly pulverized (disked) just before planting, and the plants or root cuttings planted as early as possible in the spring, typically in March. On sites subject to erosion, plow a 6- to 6-foot wide area for each row on the contour to prepare a planting bed. Establishing soil strips will help control erosion.

Cultivars

Remember to purchase certified, virus-free stock when possible.

Black Raspberries

Because of low yields and poor environmental adaptability and insect problems, there are few commercial black raspberry plantings in Kentucky.



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Raspberries

Bruce Bostwick

Growing raspberries is increasing in popularity. Well suited for hard packing, raspberries ripen soon after strawberries and just before blueberries. They yield a small crop of fruit the second year after planting and a full crop the third season. Plantings usually are productive for 5-8 years.

Cultivars

Red, black, purple, and yellow raspberries are all adapted to Indiana. The red raspberries are the most popular. Red raspberries occur in summer-bearing and winter-bearing, or primocane-bearing types. Primocane-bearing cultivars bear a crop in the summer on 2nd year canes (floricanes) like regular raspberries, and they also produce a crop in the late summer and fall on the 1st year canes (primocanes). Primocane-bearing cultivars are popular for home gardens because they produce fruit twice each year.

'Latham,' 'Clarix,' and 'Mara' are good summer-bearing cultivars. While 'Autumn Bliss' and 'Heritage' are among the best primocane-bearing types, 'Heritage' is widely adapted to sites across the region. 'Royalty' and 'Brandywine' are good purple cultivars. 'Brandywine,' with large, high quality fruit and heavy yields, may be the best. 'Estim' is a new purple berry that has promise for production in Indiana. 'Dixie' and 'Jewel' are currently recommended black raspberry cultivars for Indiana. 'MacBlack' is a new black raspberry that has promise.

Selection of virus-free planting stock is most important. Obtain new plants only from a reliable nursery, and request only certified virus-free stock. Raspberry plants should never be transplanted from an old patch since these plants are often virus-infected or have other disease problems.

Site

Air and soil drainage are important considerations in locating a raspberry planting. Frosts or late winter freezes are the most common cause of crop failure. While raspberries are fairly cold hardy, they often begin growth early in the spring, and are consequently subject to freezing temperatures and subsequent crop loss.

Locate plantings in an area with adequate air drainage so that cold air can move away from the area.

Soil drainage is important although raspberries require a good moisture supply. Soils from sandy loams to silt loams are satisfactory while both heavy clays and light sandy soils are undesirable. Heavy clay soils usually are poorly drained, and sandy soils are likely to be poorly drained. Poor soil drainage often results in plant losses from root rot. A good supply of organic matter in the topsoil and a deep, well-drained subsoil are both highly desirable.

Raspberries should not be grown in an area in which tomatoes, potatoes, eggplants, peppers, or other crops susceptible to Verticillium wilt have been grown in the past 3-4 years. The fungus causing Verticillium wilt will remain in the soil several years, and severe loss of plants may result. Also, it is a good precaution to grow red raspberries 300 feet from black or purple cultivars to minimize virus spread. Use of virus-free stock will also minimize this problem.

Site Preparation

Thorough preparation of the planting site is essential to minimize weed problems and to increase the organic matter content of the soil. Serious weeds, such as quackgrass, must be eliminated prior to planting. Chemical weed control may be required. Sites on which soil has been freshly broken should not be planted because of insect and weed problems; the site should be worked for a season before planting.

Green manure crops such as rye add organic matter and help reduce weed infestations. As the soil is worked the last time before planting, add 40 pounds per 1000 square feet (450 lbs/A) of 12-12-12 or similar analysis fertilizer to aid in decomposition of the cover crop.

Planting

Set the plants as early in the spring as the soil can be prepared. Be sure to keep the plants moist both before

www2.ca.uky.edu/agcomm/pubs/ho/ho15/ho15.pdf

www.purdue.edu/hla/sites/yardandgarden/wp-content/uploads/sites/2/2016/10/HO-44.pdf

BLUEBERRIES



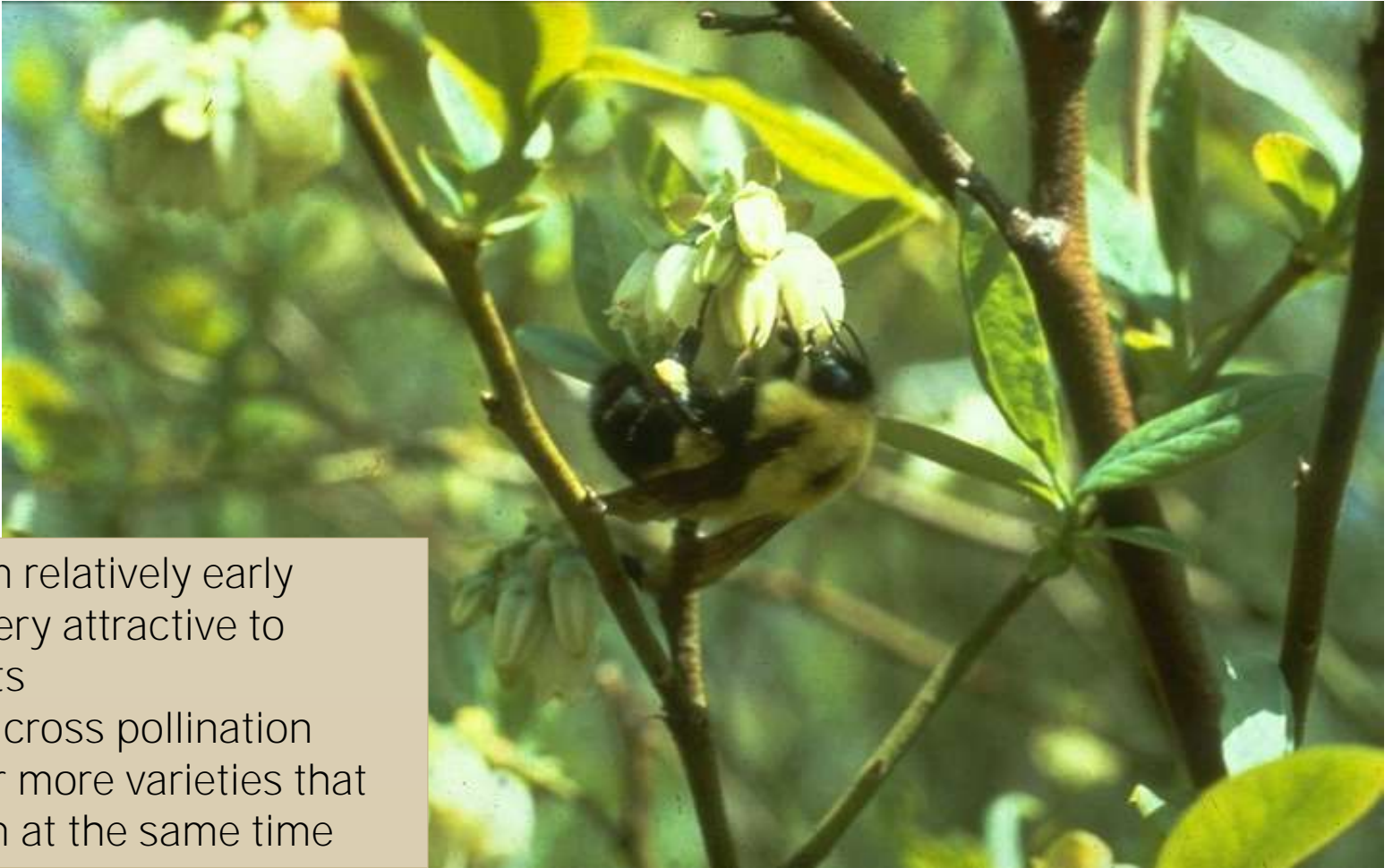
BLUEBERRIES

- Types
 - highbush, lowbush, rabbiteye, southern highbush, northern hybrids/half-high
- Long-lived woody shrub
- Shallow rooted, lack root hairs, need irrigation
- Require acidic soils high in organic matter, low in calcium
- Do best if cross pollinated

BLUEBERRY BASICS

- Require acidic soils (pH of 4.5-5.2, adjustment possible with sulfur), high organic matter content (incorporate peat moss in the hole at planting)
- Require trickle irrigation, hardwood bark mulch
- Annual pruning: renewal pruning
- More than one variety for best fruit set
- Few disease problems
- Insects and birds problematic

POLLINATION



- Bloom relatively early
- Not very attractive to insects
- Need cross pollination
 - 2 or more varieties that bloom at the same time

NON-SHOWY BLOOMS



GOOD POLLINATION



POOR POLLINATION



BLUEBERRY PRODUCTION



Raised beds, bark mulch, trickle irrigation

HOME PRODUCTION OF MULCHED PLANTS



PRUNING BLUEBERRIES

Before



PRUNING BLUEBERRIES

After



BIRD/VARMINT CONTROL



BLUEBERRY VARIETIES

- Duke
- Bluecrop
- Blueray
- Nelson
- Spartan
- Draper
- Patriot
- **Many others....**

*Plant early, mid and
late varieties*

GRAPES



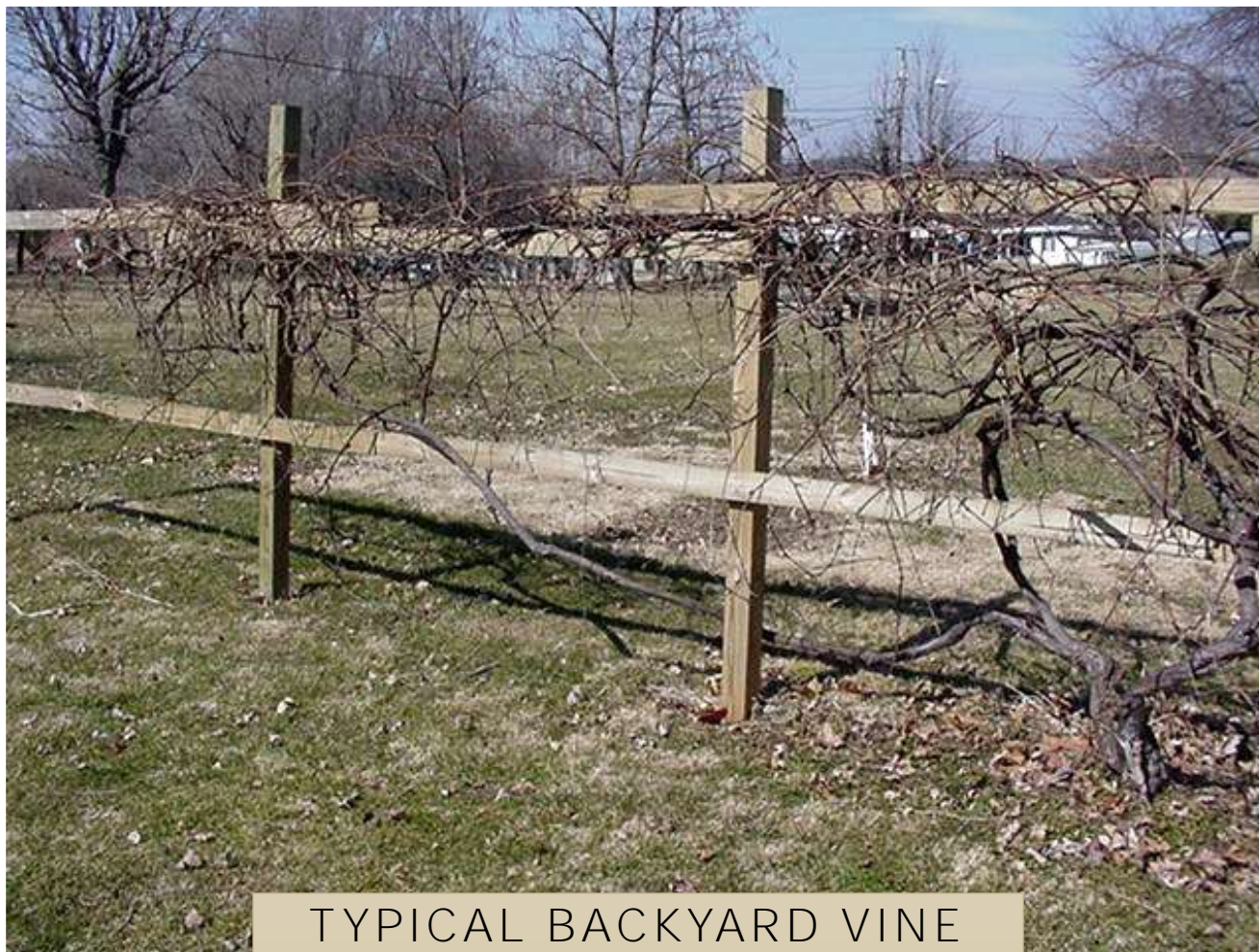
GRAPE BASICS

- Require trellis system and considerable effort to train vines
- High level of expertise and labor
 - Especially pruning, crop load mgmt, etc.
- Pest management a major concern
 - Regular spray program
 - Thorough knowledge of pests and controls
 - Major diseases: black rot, Phomopsis, powdery and downy mildew, anthracnose, bunch rots
 - Major insect pests: Japanese beetles, fruit flies

GRAPES

- Wine, table, juice types
 - Dozens of varieties to choose from
 - American (*Vitis labrusca*) are popular for juice, jam, etc. Concord, Steuben, etc.
 - Hybrids (*Vitis* spp.) are popular for wine
 - European (*Vitis vinifera*) are too cold tender
- Well adapted to region
 - Select for cold hardiness and date of ripening
- Susceptible to fungal diseases
 - Require a good spray program

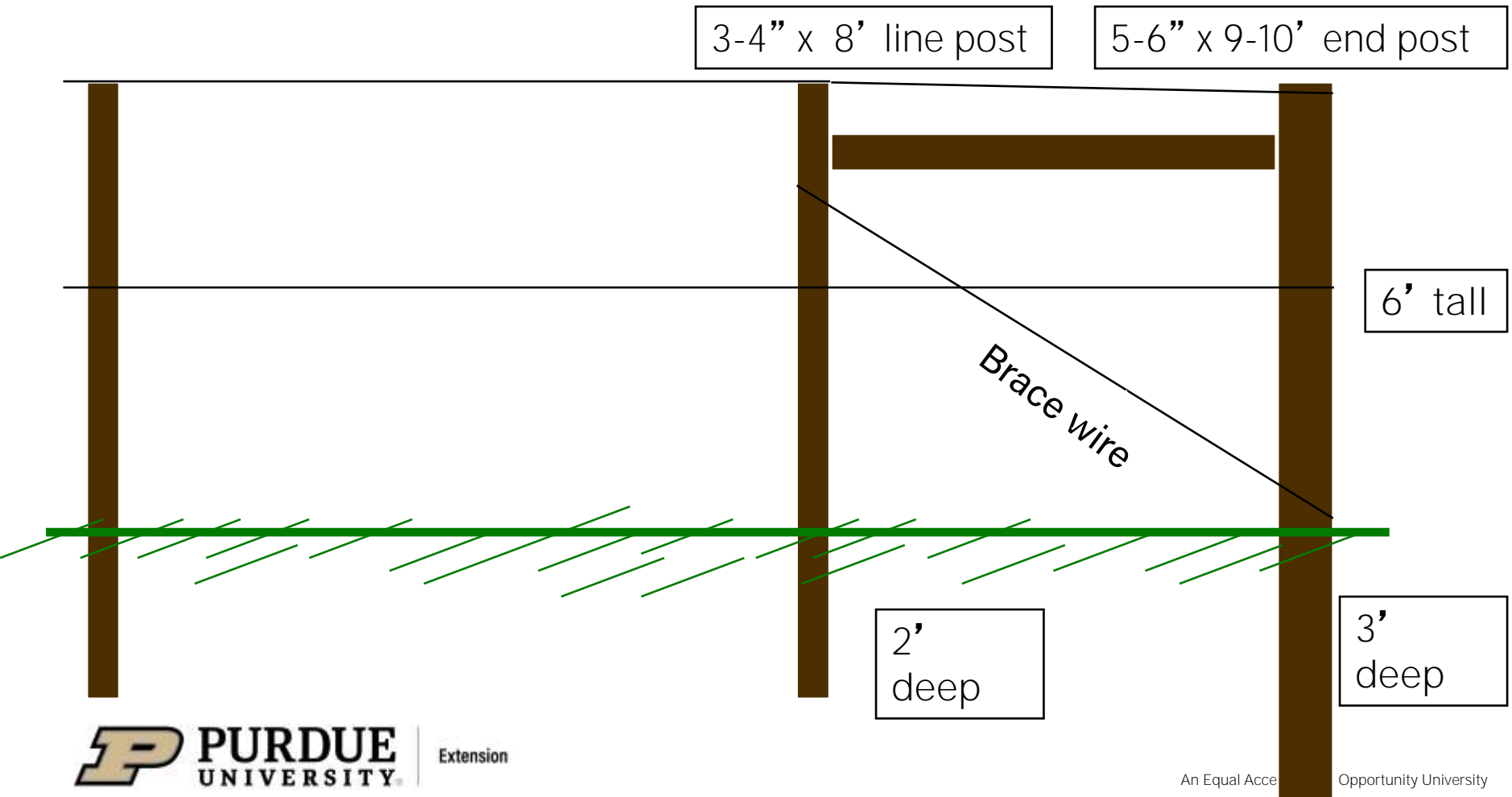
PRUNING AND TRAINING



TYPICAL BACKYARD VINE

TRELLIS SYSTEM

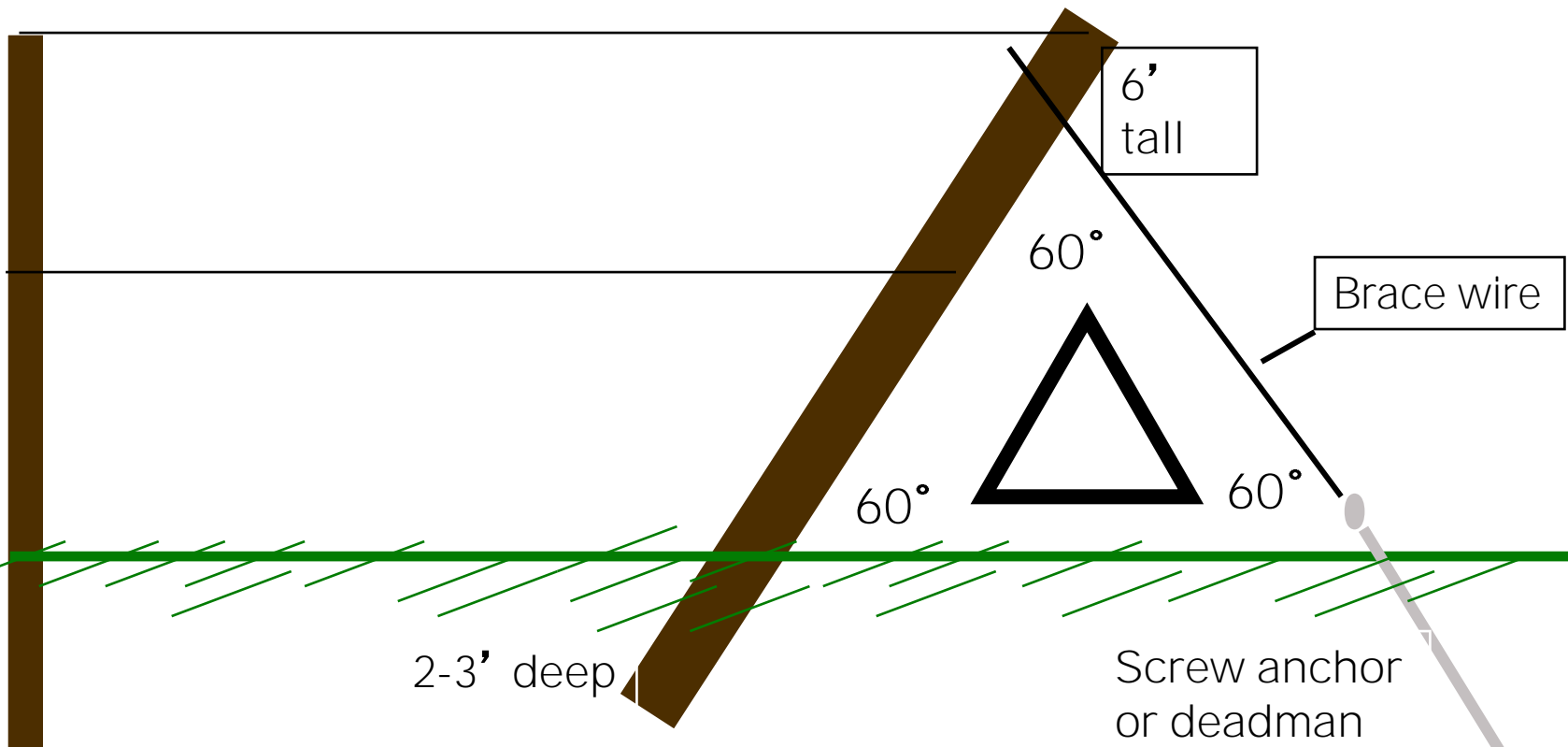
H-brace end post



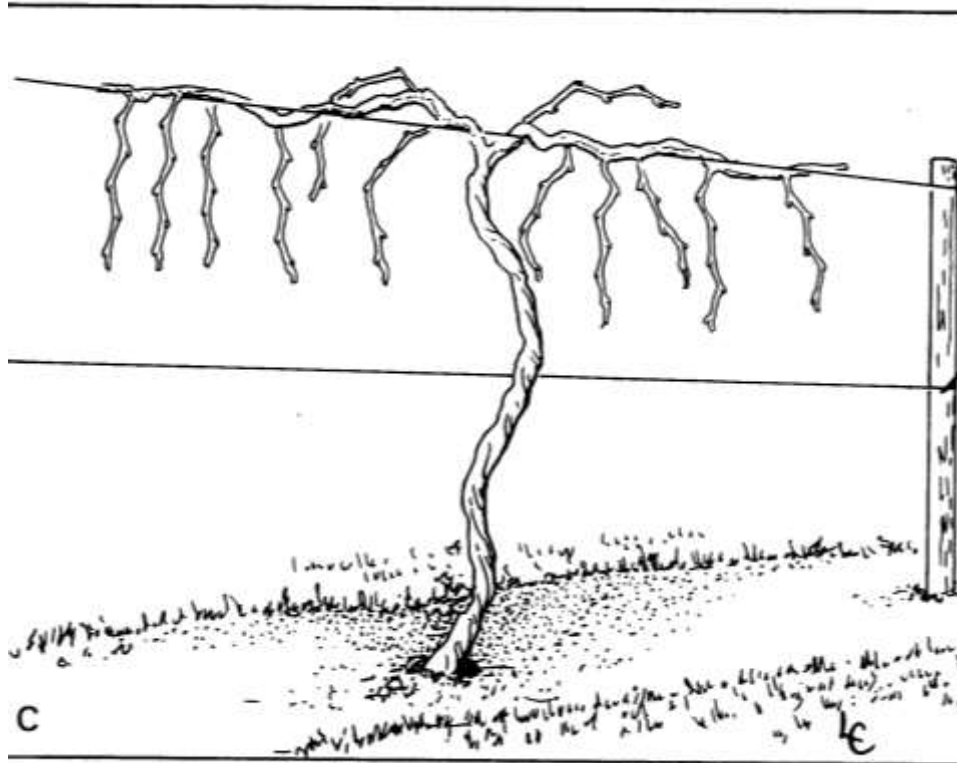
TRELLIS SYSTEM

Anchored End Post

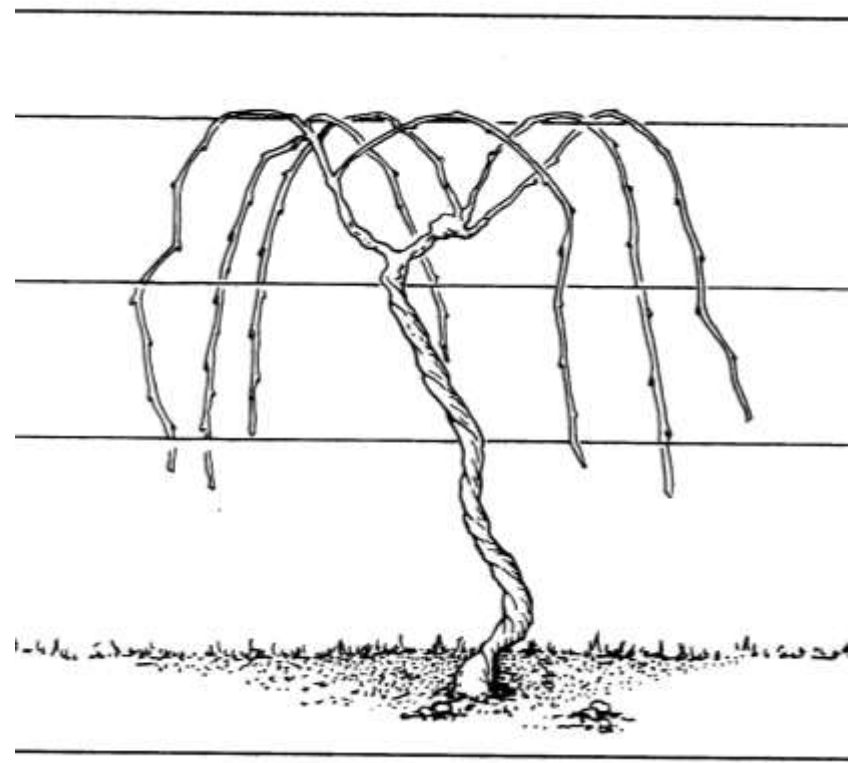
5-6" x 9-10' end post



TRAINING SYSTEMS



High Cordon



Umbrella Kniffen

TRAINING VINES



Late summer of year 1 or 2

NICE SMALL VINEYARD



BEFORE PRUNING



AFTER PRUNING



Later that season



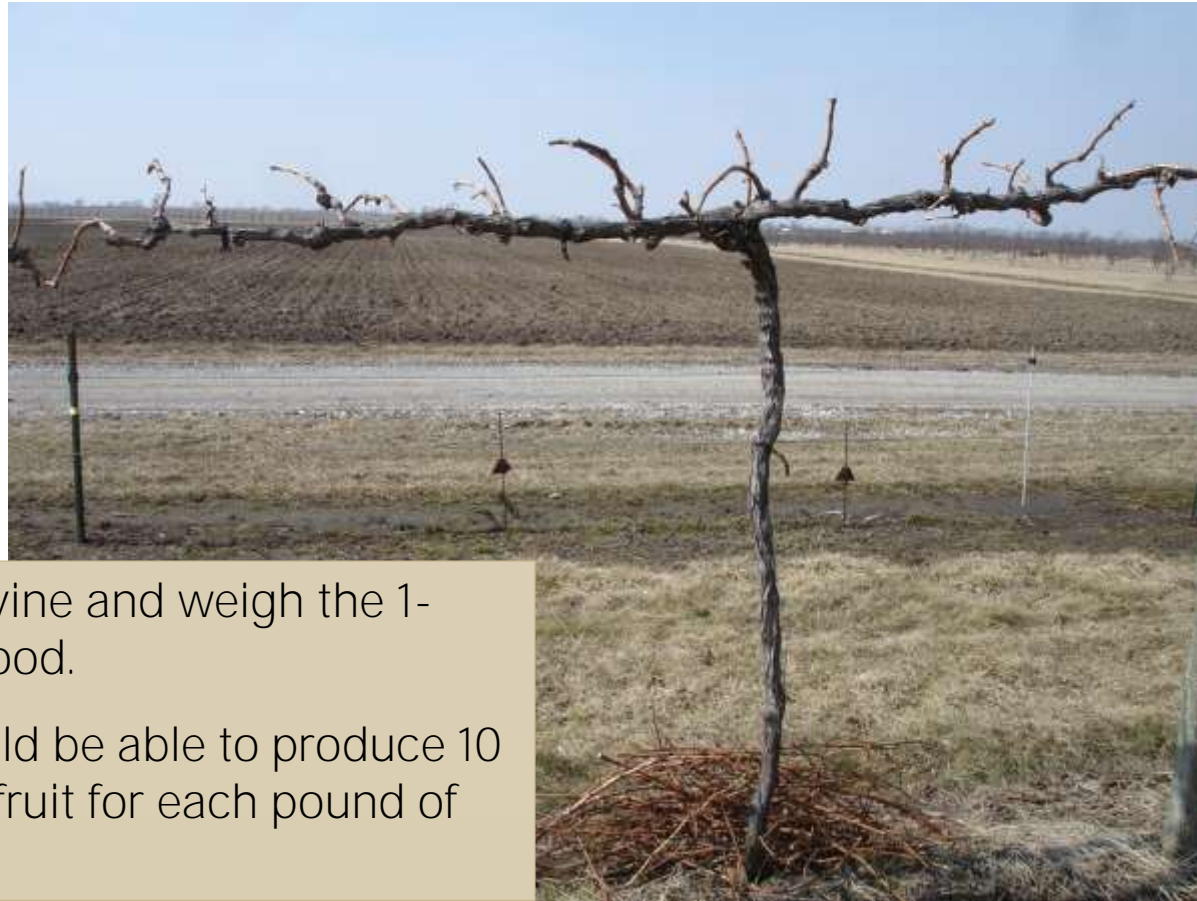
TOO MUCH VIGOR



PRUNING STRATEGY



BALANCE PRUNING BALANCED CROPPING



Prune the vine and weigh the 1-year old wood.

Vines should be able to produce 10 pounds of fruit for each pound of wood.

PRUNING FORMULAS



Save 3-4 node spurs for fruiting, 1 node spurs for renewal. Distribute spurs evenly along vine. Count the buds to determine how many are saved.



10 to 30 lb of fruit per vine at 8 foot vine spacing

WINE AND JUICE GRAPE VARIETIES

RED

Concord (Sunbelt)

Steuben

Chambourcin

Noiret

Corot noir

Foch

Marquette

Petite Pearl

WHITE

Niagara

Cayuga white

Brianna

La Crosse

La Crescent

Traminette

Vidal

SEEDLESS GRAPE VARIETIES

Mars (blue/black) - thick skin

Jupiter (blue/black) - skin cracks, downy mildew

Neptune (white) - excellent quality, cold tender

Faith (blue/black) - excellent quality, cold tender

Hope (white) - excellent quality, cold tender

Marquis (white) - disease susceptible, cold tender

Vanessa (red) - Adherent skin, crunchy texture

Suffolk red (red) - thick skin, light color

Growing Grapes in Indiana

COMMERCIAL HORTICULTURE • DEPARTMENT OF HORTICULTURE
PURDUE UNIVERSITY COOPERATIVE EXTENSION SERVICE • WEST LAFAYETTE, IN

Bruce P. Borden

Grapes are the most widely grown commercial fruit crop in the world, and also one of the most popular fruit crops for home production. Though grapes are adapted to a wide range of climates, the best production occurs in regions that meet certain specific climatic conditions. Successful production of grapes in Indiana depends on matching adapted cultivars (cultivated varieties) with good sites and following good cultural practices. Indiana's climate is suitable for production of high-quality juice, wine, and table grapes and there are many cultivars with adequate winter hardiness to survive in all regions of the state. However, cold winters and hot, humid summers can make grape growing a challenge.

The Grape Plant

The grape is a woody perennial vine that can live for many years with proper care. Grape flowers and fruit are borne only on new shoots that arise from dormant buds formed on the previous season's growth. As a shoot matures and drops its leaves, it is known as a "cane". It is from canes that the next year's fruiting wood is selected at pruning time.

Grape buds are classified as compound buds because they contain a primary bud and one to four separate, smaller buds. When growth starts in the spring, the primary, or central bud breaks dormancy and produces the fruiting shoot. Low mid-winter temperatures may cause death of primary buds, and spring frosts may occasionally kill the tender primary shoots during early stages of growth. If this happens one of the smaller buds usually develops into a shoot. These shoots are usually less vigorous and produce fewer, smaller fruit clusters. However, as these shoots grow, new compound buds are formed which will provide potential for a full crop the following season.

Flower clusters develop on shoots at nodes opposite a leaf. At nodes where fruit clusters are not formed, a tendril will develop. The number of clusters that develop per shoot is a genetically controlled characteristic of the cultivar that is not influenced much by the environment. The number of berries per cluster, however, is greatly influenced by the health and vigor of the vine, the environment during bloom, and other factors. Proper care of vines is necessary to meet full fruiting potential.

Site Selection

Climate

The major limiting factors to grape production in Indiana are cold temperature injury from winter cold and spring frosts, and diseases brought on by hot, humid weather and frequent rainfall during the growing season. Selection of a site with a desirable climate helps reduce the occurrence of these problems. The best sites for grapes are those with full sun exposure, mild winter temperatures, freedom from frost, and good soil drainage. Cultivar selection is also important in determining the suitability of a given site. Cultivars differ significantly in their ability to withstand cold and disease, so some are better suited for production in certain parts of the state than others.

Two important considerations in site selection are minimum winter temperatures and freedom from frost. Mid-winter minimum temperatures range from 0 to -5°F along the Ohio River Valley to -15 to -20°F in the north-west and north central regions. (See Figure 1.) Cultivar selection is often dictated by the minimum temperature expected for an area. Very hardy cultivars are capable of withstanding -15°F with little injury, while tender cultivars will suffer significant injury at temperatures slightly below zero. (See Table 1.) It is important to note that preconditioning of the vine, its state of acclimation, and the rate and amount of temperature change can dramatically affect the amount of cold injury sustained.

Freedom from frost events is another important characteristic of vineyard sites. Frost-free sites are usually areas with gentle slopes which are elevated above surrounding areas. Cold air drains from elevated sites to lower areas, which reduces the risks of damaging frost at the elevated sites. Elevated sites also have better air drainage throughout the growing season, which promotes rapid drying of foliage following dew or rain. Rapid drying of foliage greatly reduces disease incidence.

Length of the growing season is another important factor for grape production. It is determined by the dates of first and last frosts of the year. Length of the growing season (frost-free days) ranges from 190-200 days in the south

www.purdue.edu/hla/sites/yardandgarden/wp-content/uploads/sites/2/2016/10/HO-45.pdf

MISCELLANEOUS SMALL FRUIT



ELDERBERRY

- Native to Indiana
- Wines, juice, jellies, preserves, pie
- Prone to excessive suckering, difficult to maintain form
- Tolerant of pest/environmental conditions

Growing and Marketing Elderberries:
<https://extension.missouri.edu/publications/af1017>



CURRANTS

- Prefer cooler climate and rich, moist, well-drained soil
- Does not thrive in hot, dry places
- Early bloom, prone to frost damage
- Susceptible to insects & disease
- Require pruning/removal of old shoots
- Jellies, jams, pies



GOOSEBERRY

- Prefer cooler climate and rich, moist, well-drained soil
- Does not thrive in hot, dry places
- Early bloom, prone to frost damage
- Best with northern exposure & partial shade
- Require pruning/removal of old shoots
- Pies, preserves





Department of Horticulture

Purdue University Cooperative Extension Service • West Lafayette, IN

Currants and Gooseberries

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Currants and gooseberries are hardy and easy to grow. A few plants will produce enough fruit for typical family use, and this fruit is much prized for making jellies and pies. Currants are especially outstanding for jellies, while gooseberries are excellent for pies or preserves. Gooseberry pie is a rare delicacy seldom found outside the home.

Cultural Requirements

Currants and gooseberries prefer a cool climate and a rich, moist, but well-drained soil high in organic matter. Silt and clay loams are best, however, plants should do well on fertile sandy loams. Light, sandy soils that tend to become hot and dry during the summer, or land where water stands at any time during the year should be avoided. In general, neither crop thrives in hot, dry places. Because currants and gooseberries blossom very early in the spring, they should not be planted on low lands or in pockets where late spring frost may injure the blossoms.

The fruit of the gooseberry often scalds badly in hot weather, especially when exposed to direct sun. In southern Indiana, gooseberries thrive best when planted on a northern exposure, where they will be shaded part of the day. They also grow well on the north side of structures or in other partially shaded places. Gooseberries are subject to mildew. Therefore, they should be planted where the air circulation is good. On sloping ground, gooseberries should be planted high on the slope.

Commonly Available Currant Cultivars

Red Lake is considered the best red cultivar. The late-ripening, large, bright red fruits are borne in long-stemmed clusters, which makes picking easy. Plants are vigorous, strong, and usually more productive than other cultivars.

Wildier is a dependable, mid-season cultivar. Bushes are vigorous and productive. They yield good quality, large, bright red, attractive berries in long, compact clusters.

Black Currants are an alternate host for the disease known as white pine blister rust. Only those cultivars that are immune to the disease should be planted. Examples include **Consort**, **Crandall**, and **Crusader**.

Commonly Available Gooseberry Cultivars

There are two types of gooseberries, American and European. Fruit of the European cultivars is larger and better flavored than that of most American types. However, European plants are more subject to disease. American cultivars are likely to be healthier and more productive under Indiana growing conditions.

American Types

Pixwell is a hardy, productive cultivar with fruit that is medium sized, often borne in clusters, and pink when full ripe. The fruit hangs on long, slender stems, is of good quality, and is readily harvested. Canes are only moderately thorny.

Downing is a standard green-colored gooseberry. The plants are vigorous and highly productive. The fruit is only medium sized, with the skin and excellent quality.

Pocoman, although it bears only medium-sized fruit, is still among the largest of the American cultivars. The berries are red and good in quality, ripening about one week earlier than Downing. The plants are vigorous, productive, and less thorny than other cultivars. The fruit is very good for fresh eating when completely ripe. Pocoman is suggested for home use.

European Types

Fredonia is a good late cultivar. The bushes are moderately vigorous and productive. The berries are very large, dark red, attractive, and good quality.

Preparing the Soil

Prepare the soil thoroughly before planting. Be sure weeds, grass, and other troublesome perennial weed plants are destroyed.

For vigorous growth the first season, turn under and thoroughly mix liberal amounts of organic matter in the form of well-rotted manure, compost, or green manure crops. Peat moss can be used in small plantings.

Planting

Plant either 1- or 2-year-old plants. Vigorous, well-rooted 1-year-old plants are best. In Indiana, fall planting (October-

www.purdue.edu/hla/sites/yardandgarden/wp-content/uploads/sites/2/2016/10/HO-17.pdf

SUMMARY

- Small fruit crops are often an excellent choice for home fruit production
- Short shelf life – fresh consumption or preserved/processed for longer term use
- Many different crops and varieties available that are adapted to the region
- Must have knowledge of production practices to be successful
- Must be patient and willing to accept losses occasionally

Resources

The screenshot shows the Purdue Horticulture Extension website. At the top, there is a navigation bar with links for 'Apply', 'News & Stories', 'Visit', 'Give', and 'Emergency'. Below this is the Purdue University logo and the text 'Horticulture Extension College of Agriculture'. A secondary navigation bar includes 'Home', 'Directory', 'News', 'Events', 'Publications & Newsletters', 'Other Resources', and 'Mailing List'. The main content area features a grid of program icons: Home Yard & Garden, Master Gardeners, Controlled Environment Agriculture, Vegetable & Melon Crops, Fruit Crops, Food Safety for Fruit and Vegetable Farms, Turfgrass, Nursery and Landscape, Hort Business & Marketing, and More Programs. A section for 'Purdue Horticulture Publications and Newsletters' is also visible. On the right side, there is a social media widget for Twitter, showing tweets from @PurdueHortExt and @BSPurdueAg. A vertical social media sharing bar on the far right includes icons for Facebook, Twitter, LinkedIn, Email, and a plus sign for more options.

<https://ag.purdue.edu/hla/Extension/Pages/Home.aspx>

PRINT (AND WEB) RESOURCES



Questions?