IN THE DIRT

Bagworm

Now is the time to remove last year's bags from high value small trees

Take time now to scout plants affected last year. Remove and destroy bags on high value, smaller evergreen trees will help reduce next year's bagworm population. Bags can be removed from now until insects hatch next year, approximately mid-May. Destroy bagworm eggs by removing bags from the plant and crushing or immersing them in soapy water. If bags containing eggs are discarded on the ground, eggs may survive winter fine then hatch and larvae return to the surrounding plants next summer. As many as 500 to 1000 eggs can overwinter in one female bagworm's bag.

Growing Onions – Set, Plants or Seeds?

Planting onions from small bulbs or "sets" is not the best way to grow large onions for storage. Plants grown from sets often begin blooming in mid-summer and stubbornly refuse to stop. Once that happens, onion bulbs don't increase much in size.

Onion Sets - This happens because onions are biennials. They grow foliage and a bulb the first season, then bloom and set seed in their second growing season. Growing the sets counts as one growing season – although it is definitely a short one! But it leaves the sets primed to begin reproducing by setting flowers after you plant them in the garden. This makes onion sets a great way to grow green onions, but not the best way to grow onions for long term storage.

Because of onion's biennial nature, plants grown from seed or transplants don't bloom the first year and so have more growing time to develop larger bulbs. Many mail-order companies and garden centers now carry onion transplants in spring, but you can also grow your own.

Growing Onion Transplants - Onion transplants can be grown in approximately 10-12 weeks. Sow seeds in late February or early March for planting outdoors in early May. Plant seeds ¾ inches deep in a seed-starting soil blend and keep them evenly moist. Once they sprout, provide the seedlings with bright light from a sunny, south-facing window, or better yet, provide supplemental light with fluorescent fixtures placed a few inches above them for 12-14 hours each day.

Transplant the little, grass-like seedlings outdoors as soon as garden soil is dry enough to work thoroughly and daytime temperatures reach 50° F. Onion transplants will tolerate light frosts. Planting as early as possible is important because more leaf growth equals bigger bulbs. Each leaf will develop one layer in the onion bulb and the more layers, the bigger the bulb at harvest.

Place the seedlings 4 inches apart in wide row plantings. When using "wide" rows plants are not placed single file on one long row, but spaced through a row ranging from 6 to 36 inches across. Use a row width that is convenient for you to reach from both sides, to make harvesting and weed control easier.

Direct Seeding - Onions can also be direct seeded. This is a good option if you can't find your favorite cultivar as a transplant. Plant seeds as soon as the soil can be worked, usually from mid to late March. Wide row spacing also works well when planting onion seeds. Plant the seeds 1/4 – 1/2 inch deep in the soil. Space rows 12-18 inches apart. Once the plants have 5-10 leaves, they can be thinned so the remaining plants are spaced 3-4 inches apart, and the harvested plants used as green onions.

Growing On - Onions grow best in well-drained soil, 6.5 pH, with a high level of organic matter. Raised beds, 4-6 inches high, work well to provide good soil drainage if the native soil is heavy. They also need plenty of sunlight, and regular watering. The installation of drip irrigation the length of the rows makes watering easier and more uniform. Don't be concerned if a large portion of the bulb develops above ground; that's normal for onions.

Source: https://communityenvironment.unl.edu/jan-2014#Onions

Dahlia 'City Lights Purple' Best of Show

One of the most enjoyable ways for gardeners to get through the dark, cold days of winter is to begin planning next summer's gardens. Over the next few weeks, we'll look at plants – annuals, perennials, edibles, trees and shrubs – to consider for addition to your gardens this summer.

First, we'll take a look at the top performers in Colorado State University's 2019 flower trials. The purpose of CSU's trial gardens is to evaluate the performance of annuals and perennials under stressful Rocky Mountain growing conditions, which include intense sun, drying winds, severe hailstorms, large fluctuations between day and night temperatures and dry growing conditions. Sounds a lot like Nebraska! Plants are evaluated on vigor, abundance of flowers, tolerance to environmental stress, and disease resistance.

The trial gardens, located on CSU's Fort Collins campus, are open to the public and are definitely worth a visit. The gardens are beautiful and plants are labeled, allowing visitors to stroll at will and decide which plants they like best.

Allium 'Millenium'

Top Perennial Performers - One section of the CSU trial program focusses on newly released perennial cultivars (cultivated variety) – three years or less. Each cultivar is allowed to overwinter twice and is evaluated for the characteristics mentioned above. One of this year's top picks is 'Millenium' ornamental onion.

'Millenium' plants develop a uniform mounded growth habit with the long linear leaves typical of alliums. Flowers are rosy-purple and long

lasting, very attractive to bees and butterflies. Flower stems are strong and upright. In the CSU trials, flower stems did not lodge (fall over), even under continued overhead irrigation. Plants reach a height of 15-20 inches, with a spread of 10-15 inches.

Millenium is easy to grow in full or partial sun, with average soil. It's available from several mail order nurseries, such as White Flower Farms, High Country Gardens, Walters Gardens and Proven Winners.

"Best Of" Annuals - Several annual selections were chosen with great characteristics worthy of consideration.

Best of Show – Dahlia 'City Lights Purple' (pictured on page 14) has deep burgundy, double flowers darkening almost to black toward the center of the flower. Foliage is a dark greenish-purple. Plants are compact with multiple branches, blooming from July to October. Plant height is 18-24 inches with a spread of 15-18 inches. Dahlias are not winter hardy in Nebraska, but their tubers can be dug up in fall and overwintered indoors for planting again the following year. Available from White Flower Farms.

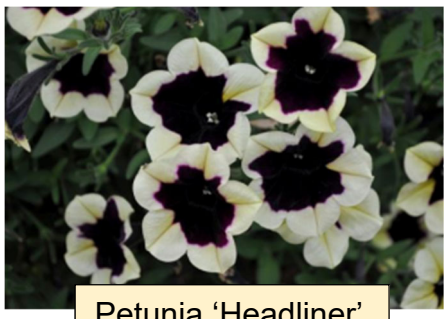
Begonia T Rex 'Ruby Slippers'

Best Novelty – Begonia T Rex 'Ruby Slippers' has very large red leaves with nearly black markings along the main veins and silvery edges. Rex begonias are grown primarily for their striking foliage, although they do produce small flowers. Plants are vigorous with a uniform growth habit and will add great color to shaded areas of the landscape. Provide plants with some protection from the wind to protect the large leaves from physical damage. Plant height is 16 inches with a spread of 16 inches. Find retail location from Terra Nova Nurseries.

Best New Varieties - Several great new cultivars were identified among common annual flower species. For pictures and more information, visit *http://www.flowertrials.colostate.edu/*.

- Angelonia 'Carita Purple' – deep purple flowers are very prolific on showy plants. Plants have a superior overall appearance even during the hottest part of summer.
- Begonia 'Tophat Pink' – this vigorous begonia grows well in sun, looking great in ground beds or containers. Plants are covered with flowers in rosy-pink.
- Bidens 'Campfire Flame' – flowers in beautiful shades of orange, red and yellow from early summer into September. Growth habit is very uniform and plants provide a very striking effect in containers.
- Petunia 'Headliner' – flowers have bold coloration with soft creamy yellow and a very dark purple star-shaped eye. Plants grow vigorously and hold up well in heat.

Bidens 'Campfire Flame'



Petunia 'Headliner'

Source: https://acreagenebraska.org/2020/02/04/dahlia-city-lights-purple-best-of-show/

Pruning to Create Strength and Good Structure in Young Trees

Sarah Browning, *Extension Educator, Lancaster County*

Trees are an essential part of any landscape, providing a wealth of benefits. However, there is also risk associated with trees either from a large tree falling, splitting, or branches breaking. When trees are located near homes, businesses or in areas with a lot of human activity, the potential for damage or injury when a tree fails or branches break is high.

Unfortunately, risk of branch or tree failure is often increased by improper pruning — or no pruning at all — starting when trees are young. Left unpruned, trees often don't create good structure on their own; some tree species have more inherent problems with poor structure than others.

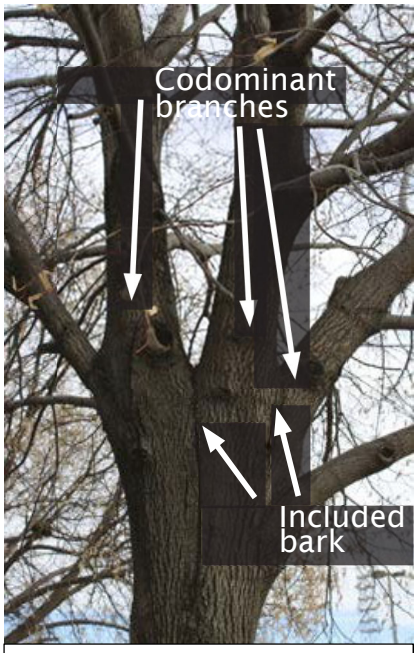
We can minimize risk with regular pruning, using proper pruning techniques, throughout a tree's life. The ultimate goal is to create good tree structure and strong branch-to-trunk connections. And now — late winter — is an excellent time to prune shade trees. Branches are easier to remove when not weighed down by leaves and the tree's branching structure is easy to see.

Structural Defects to Avoid - Several common problems occur in trees and can easily be corrected through pruning, especially if you address them when the tree is young. These problems are:

- Codominant branches.
- Included bark.
- Lack of pruning in young trees requiring removal of large branches later on.

Looking for these problems in your trees and developing a management plan is the best thing you can do to maintain the health and strength of your trees as they get large and mature.

Codominant branches are stems of approximately equal girth and height that originate from the same location on the tree. They create a weak union at that point on the trunk, because the branches do not develop a proper branch collar. A branch collar is an area at the base of a branch where new growth of trunk wood wraps around that year's new branch wood. This creates an interconnected, overlapping pattern of growth and creates a strong branch/trunk union.



Ideally, lower branches should be removed gradually during the first 25 years of a tree's life to prevent the need for removal of very large branches.

A frequent problem resulting from codominant branches is splitting of the trunk when the tree is older and under extreme load, such as a heavy snow or ice, or during very high winds. This type of failure is very common in older Bradford pears due to their strong natural tendency to form codominant branching. Almost any shade tree can develop codominant branches and, unfortunately, many homeowners unknowingly create codominant branching in their trees by pruning young trees incorrectly.

What can be done to manage codominant branches? Ideally they are pruned out when their branches and foliage make up only a small percent of the tree's total canopy. Shortening is another method that works well, especially if the branch has been allowed to get large and makes up a higher percentage of the tree's canopy. Remove some of the codominant branch's

height, making it several feet shorter than the main leader, cutting back to a secondary branch or shoot to redirect growth.

Why does shortening work? Growth hormone movement in trees is determined by shoot height. The main leader should always be the tallest shoot in the tree so it continues to receive the most growth hormones. Once you've shortened it, over the next few years, the shortened codominant branch will receive fewer growth hormones than the main leader, growing slower and allowing the main leader to develop. Eventually the codominant branch can be removed completely, or left in the tree as a secondary branch.

Included bark often develops at the junction of codominant branches. Bark is pinched between these competing branches, so there is no physical connection between them. Instead, at their base, is bark pressed against more bark. Often a trunk split will begin at this weak union point and once a split or crack begins to develop, it only gets worse over time.

Lower branches in trees are commonly removed to create better clearance beneath the tree for equipment and people. Removal of large limbs usually happens when tree pruning maintenance is not done on a regular basis, allowing branches to get very large before they are removed. The resulting large wound creates a perfect opening for wood rot fungi, since the wound is slow to close. Ideally, lower branches should be removed gradually during the first 25 years of a tree's life to prevent the need for removal of very large branches. Ideally, if a branch needs to be removed, it should be done before the branch diameter is more than 2–3 inches, especially on decay-prone trees like silver maple, red maple, willow, apple, cherry and hackberry.

Pruning Young Trees - Focus on creating good structure in your trees with the following strategies.

Develop and maintain a central trunk by shortening or removing any secondary leaders, which are branches originating from the trunk, grow very upright and approach the height of the main trunk.

Shorten or remove competing codominant branches so that only one main branch originates from any point on the trunk. Long-term structural branches should be spaced around the trunk like spokes in a wheel and up the trunk at alternating levels.

Slow the growth of lower, temporary branches by shortening them and remove them completely before they reach more than 1/3 the trunk's diameter.

How Much Can Be Removed? - One method used to determine how much live wood can be removed safely during one annual pruning is based on the tree's growth rate. Examine 6–12 twigs randomly around the tree's canopy to determine an average growth rate. Keep in mind if a large amount of pruning is needed, it may need to be spaced out over the course of several years. For trees putting on very little growth, limit pruning to address codominant branches.

For trees putting on an average of 6–12 inches of new growth, 10% of the canopy can be removed. For trees putting on an average of 12–24 inches of new growth, 10–15% of the canopy can be removed.

Trees putting on higher amounts of growth, on average, may tolerate 25% or more canopy removal. But, ideally, trees should be pruned annually, removing smaller amounts of live growth each time.