

# GARDENING IN BARROW

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## Controlling Greenbrier in the Landscape

Greenbrier, sawbrier, and catbrier are all common names for a vine in the smilax genus which includes 12-15 species. Greenbrier is in the *Liliaceae* family, closely related to Daylilies, Lilies and Yucca.



All species have an extensive underground rhizome tuber system and most have sharp spines on the above ground stems. The leaves are usually very waxy and shiny. The plants are either male or female and females bear fruit ranging in colors from black, blue or red when they ripen. A wide variety of birds eat the fruits, and many forest animals use the foliage and tubers as a food source. But that is where the positive characteristics end. This plant can live in low light conditions which gives it the ability to live under the canopy of shrubbery for 2 -3 years which gives it a great head start on developing a strong root system. The plant usually starts when berries are consumed by birds then pass through their digestive system.

Once it has developed an extensive root system it is difficult to control with herbicides. If you have just one plant physically removing the vine and as much of the root system (rhizomes) as possible is your best option.

What if you have multiple vines and plants? If greenbrier is growing in a natural area with only mulch on the ground, there are 2 -3 herbicides that can be used which would be deadly to sensitive ornamental plants. Call your local Extension Office for more information. If greenbrier is growing in an ornamental planting you have 2 options.

1: Try to unravel the vine from the shrubs, or flowers. Do not cut the vine and be careful not to break any of the stems. Lay the vine on bare ground or on a piece of plastic. Spray or sponge-apply a 5 percent solution of glyphosate (approximately 6 oz of glyphosate/gallon of water, using a product containing 41 percent active glyphosate). Be careful to avoid drift or contact of the spray solution with desirable foliage or bark. Allow the herbicide to stay on the plant for 48 hours, and then cut the stem back to ground level. If the greenbrier attempts to regrow, spray or wipe a 5 percent solution of glyphosate on the sprouts when they are 6 to 8 inches high.

If the vine cannot be unraveled from the shrub, cut the vine as close to the ground as possible. Immediately paint concentrated (full strength) glyphosate on the cut stem. Again make sure that the concentrated glyphosate is 41 percent or greater active ingredient (glyphosate). If the plant re-sprouts, sponge on or spray a 5 percent solution of glyphosate when the sprouts are 6 to 8 inches high. Always use proper precautions and follow label directions when using any pesticide product.

## Leaves Have Burned Appearance?

Many plants in the garden and landscape are susceptible to a bacterial disease called fireblight. Apples, crab apples, ornamental and fruiting pears, loquat, flowering quince, hawthorn, pyracantha, and even rose and spirea are susceptible to the disease. Fireblight attacks blossoms, leaves, shoots, branches, fruits, and roots; however the most common symptom is dark brown to black stems and leaves on the tips of branches as though they were burned by fire. The affected bark becomes sunken and eventually dry and may have cracks at the edge of the canker. The end of the limb may bend over like a shepherds crook (see next page). Dead leaves and fruit remain on the tree and branches may ooze a dark sap.

Initially the disease often enters the tree through natural openings, especially flowers and wounds in the spring. Once established in the tree, fireblight quickly invades through the current season's growth into older growth. Fireblight can be spread from diseased plants by rain, wind, and pruning tools. Insects also help

spread the disease to healthy plants.



To help control this disease prune out infected branches 8 inches below the damage during spring and summer. Avoid pruning when the plants are wet. Discard or burn plant prunings. Dip pruning tools in 70 percent isopropyl alcohol (rubbing alcohol) between each cut. Wash and oil shears when you are finished. This practice avoids spreading the pathogen.

Avoid heavy nitrogen fertilization, especially in summer, when succulent growth is most susceptible to fireblight infection. Avoid splashing water. Chemical control is not very effective and needs only to be used to prevent the disease. Therefore, in years when warm, wet weather coincides with flowering and leaf emergence, spray plants with a fungicide containing basic copper sulfate or streptomycin to reduce infection. Applications will need to be made every 3 -4 days during bloom. This will not control the disease on infected plants! The best treatment is prevention. Plan ahead by selecting plants that are resistant or at least tolerant to the fireblight bacterium.

### Key to Gardening.... Grow your Soil

There are many variables to consider when starting a vegetable garden. What crops does your family enjoy eating, how much time can you dedicate to planting, weeding, picking and processing fresh vegetables, how close is water to your garden, where is the best place on your land to have a garden with sunlight in mind, how do you keep out deer, rabbits and other wildlife? Whether you are a traditional gardener or an organic gardener; the most important aspect of a successful garden is constantly striving to improve the health of your soil.

Because of the weathered rock underground we call parent material; our area is cursed with acidic soil. I will spare you the chemistry lesson, but acid soils prevent the uptake of needed nutrients by plants and it makes aluminum and manganese more available to plants. Aluminum and manganese are toxic to plants. So the first step in growing your soil is to make sure the pH (which measures the acidity or alkalinity) is acceptable to the plants you intend to grow. Most vegetables prefer to grow in a soil pH of 6.0 – 6.5. The range of the pH scale is from 0 (which is strongly acidic) to 14 (which is strongly alkaline). A soil test will tell you the pH level and the nutrient level of your soil. In the absence of a soil test I would apply 30 lbs. of limestone per 1000 sq. ft of garden area every other year. Though there are several liming products on the market, I would use dolomitic limestone; either powdered or pelletized. These products will take 2 -4

months to react in you soil therefore it is important to soil test early and apply your limestone well before planting season. A handful of dolomitic limestone rich in calcium and magnesium is also good to add to the planting hole of tomatoes and peppers to prevent blossom end rot.

Loosely defined soil is a mixture of mineral matter (weathered rock/ soil particles), water, air, and organic matter. Unfortunately in the southeast where we get hot summer temperatures and 50 inches of rain or better in most years, the decomposition rate of organic matter is rapid. Therefore our soils hold usually less than 3 % organic matter. In a new subdivision where severe grading has occurred, you could have less than 1% organic matter. This decaying plant material or organic matter provides many benefits to our soil: improves the soil structure, reduces erosion, improves water infiltration, improves water holding capacity, and serves as a source of nutrients. Organic matter can actually improve the soil's ability to hold nutrients for plant growth. Most gardeners can have a ready source of organic matter by maintaining a compost pile. Fall leaves and pine straw can be added to nitrogen rich materials such as coffee grounds, tea bags, vegetable scraps, grass clippings and even old prunings to make good compost for garden soil. A second option is to just bags of fall leaves to your garden each fall once the vegetable plants have been removed. Till or turn these leaves with a garden fork in to the soil to speed decomposition. Still another option is to add large quantities of potting soil, mushroom compost or peat moss to your garden in order to improve the amount of organic matter. Organic matter helps loosen hard compacted clay soils and improves the amount of oxygen in the soil.

Well, after you have performed a soil test and added lime if needed plus added organic matter, it is now time to work on the nutrient levels. In order for the soil to support the plants you will need nutrients. Yes, organic matter has some nutrients but in most cases you will need additional nutrients in the way of granulated or liquid fertilizer or animal manures to grow a crop. If using a granular fertilizer purchase one like 10-10-10 or 5-10-15. This will feed your plants nitrogen, phosphorous and potassium. 5-10 -15 tells you that the 40 lb bag contains only 2 lbs of nitrogen, 4 lbs of phosphorous and 6 lbs of potassium. The rest of the bag is filler and sand. Fertilizer can be broadcast over the entire garden and plowed in prior to planting or banded down each row 3 -4 inches from the vegetable plants. The most efficient use of fertilizer is to band 1/3 to 1/2 of the fertilizer at planting and make other applications every 2 -3 week intervals applied in shallow furrows slightly below the seed level.

With the acidity level corrected, organic matter and fertilizer added, your soil is ready to grow a garden. Now all you need is 8 hours of sunshine each day and 1 inch of water per week to have a healthy productive garden