

# TIMELY INFORMATION

## Agriculture & Natural Resources

### Basal Bark Herbicide Treatment for Invasive Plants in Pastures, Natural Areas, and Forests

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**Is basal bark herbicide treatment the best option for my situation?** Basal bark herbicide treatment is most useful where the target tree or shrub density is moderate to low, where manual labor is available and where small dead standing trees and shrubs can be tolerated. This method can be used selectively with little to no damage to surrounding vegetation. Basal bark treatment is not recommended where there are thousands of stems per acre to treat. Additionally, basal bark treatments cannot be used where spraying into water is inevitable.

**What equipment do I need?** Basal bark treatments are most easily applied with backpack sprayers or handheld pressurized spray bottles (Figure 1). Use an adjustable cone nozzle or a narrow angle spray tip at low pressure to prevent overapplication and herbicide waste.

**What size trees, shrubs, and vines will this method work for?** Basal bark treatment is effective on almost all woody invasive plants, including vines, that are less than six to eight inches in diameter. Bark of trees in this size range is thin and does not prohibit herbicide penetration. However, trees larger than this are generally NOT effectively controlled with basal bark treatment unless they have very thin, smooth bark.

**What carrier and herbicides do I use?** Basal bark treatments are different than foliar treatments. An oil carrier is used instead of water and only specific oil soluble herbicides are effective. Historically, diesel oil or kerosene was used as the oil carrier. However, today there are many oil carriers that are safer and more effective. These include seed oils, vegetable oils, mineral oil, and “bark oils” which are formulated to maximize herbicide penetration through bark. **Note:** These oil carriers are not available in retail garden centers but can generally be purchased at farmer’s co-ops and pesticide distributors.

One of the most effective herbicides for basal bark treatment is an oil soluble formulation of triclopyr called triclopyr ester (i.e., Remedy® in pastures, Garlon 4® in forests and natural areas, and some generics). Another option is an oil soluble formulation of imazapyr such as Stalker®. However, due to its high degree of soil activity and the potential for non-target damage to surrounding vegetation, imazapyr is not recommended for general homeowner use.



Figure 1. Basal bark treatment of Chinese Privet.

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**Do I need to add any surfactants to the herbicide and basal oil?** No surfactants are required for basal bark treatments. However, a spray indicator (e.g., a dye) may be useful to help determine where you have already sprayed. Some basal oils are available that already have a spray indicator included with the oil.

**How much herbicide should I mix?** For Remedy®, Garlon 4®, or triclopyr ester generics, mix a 20% herbicide solution with an oil carrier. This is often referred to as a 20% volume to volume (v/v) solution. For example, mix 1.5 pints (26 fluid ounces) of herbicide with 3.25 quarts of an oil based carrier to make 1 gallon of solution. Alternatively, use a ready-to-use basal bark product such as Pathfinder II® which requires no mixing. **Note:** One gallon will treat many small trees and is plenty for small jobs!

**How do I apply the herbicide?** Use a narrow angle flat fan spray nozzle or an adjustable solid cone nozzle with very low pressure. Spray the bottom 12 to 15 inches of each stem all the way around, including the root collar (Figure 1). For multi stemmed clumps, be sure to treat every stem. Also spray any large exposed roots. Spray to wet the stems, but do not puddle the herbicide at the base of the stems (Figure 2). Do not spray this mix on any leaves, even of plants you want to kill. It is a large waste of herbicide.



**Figure 2.** What a stem should look like after basal bark treatment.

**What time of year is best?** Basal bark herbicide treatments can be done any time of the year with most invasive trees, large woody vines and shrubs. While late summer through fall is often best, late fall is often the easiest time from an operational standpoint. Temperatures are cooler, herbaceous vegetation is dormant, and undesirable critters are less active. In Alabama, the only times basal bark treatments should not be applied is when trees are experiencing strong upward sap flow in the early spring. This upward sap flow may reduce herbicide translocation to the roots and result in poor control. Additionally, do not cut treated trees for at least six months as herbicide absorption and translocation may be very slow in some species.

**Are there any grazing restrictions and what about pets?** You will need to consult the label for the specific product you use concerning livestock grazing restrictions. Keep pets out of the area while treating.

**I already have a glyphosate or triclopyr amine herbicide. Can I them instead?** No. Avoid using any glyphosate or triclopyr amine products for basal bark treatments. They will not be effective as they are water soluble and will not penetrate the bark well.

**What safety gear should I use when doing basal bark treatments?** Always follow the herbicide label and use the required personal protective equipment. This generally includes safety glasses, rubber gloves, long sleeves, long pants, and shoes and socks.