

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

What is basal bark treatment?

Basal bark herbicide treatment is a control method in which an oil soluble herbicide is mixed with an oil carrier instead of water and applied directly to the bark of woody plants less than 6 inches in diameter.

Is basal bark herbicide treatment the best option for my situation?

This method is most useful where the target tree or shrub density is moderate to low, manual labor is available, and dead standing trees and shrubs can be tolerated. It can be used selectively with little to no damage to surrounding vegetation. Basal bark treatment is not recommended where thousands of stems per acre need to be treated. Historically, basal bark treatments could not be used with triclopyr ester or imazapyr where spraying into water was inevitable. However, a new acid formulation of triclopyr (Trycera) can be used where standing water is present.

On what size trees, shrubs, and vines will this method work?

Basal bark treatment is effective on almost all woody invasive plants less than 6 inches in diameter including vines. The bark of trees in this size range is generally thin and does not prohibit herbicide penetration. Trees larger than this are NOT effectively controlled with basal bark treatment unless they have very thin, smooth bark. Chinese privet is a good example of a shrub with thin bark that can be treated at any size.

What time of year is best to use this method?

Basal bark herbicide treatments can be done almost any time of the year with most invasive trees, large woody vines, and shrubs. Late summer through the fall is the optimal time to apply. However, late fall is



often the easiest time from an operational standpoint. Temperatures are cooler, herbaceous vegetation is dormant, and undesirable critters are less active.

The only time basal bark treatments should not be applied is in the early spring when trees are experiencing strong upward sap flow. This upward sap flow may reduce herbicide translocation to the roots and result in poor control. Additionally, do not cut treated trees or shrubs for at least 6 months as herbicide absorption and translocation may be very slow in some species.

What equipment do I need?

Basal bark treatments are most easily applied with backpack sprayers or handheld pressurized spray bottles. Use an adjustable cone nozzle or a 25-degree angle flat fan spray nozzle at low pressure to prevent overapplication and herbicide waste.

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 was used as the oil carrier. While it can still be used, newer oil carriers are safer and just as effective. These are called basal oils or bark oils and are formulated to maximize herbicide penetration through bark. These oil carriers are not available in retail garden centers but can generally be purchased through farmer co-ops and pesticide distributors.

One of the most effective herbicides for basal bark treatment is the oil soluble formulation of triclopyr called tricyera, a relatively new formulation of triclopyr. Trycera, can also be used but has not been as widely tested. Another option is an oil soluble formulation of imazapyr. However, due to a high degree of soil activity and the potential for nontarget damage to surrounding vegetation, imazapyr is generally recommended only for professional applicators.

How much herbicide should I mix?

For Trycera or triclopyr ester herbicides that contain 4 pounds of product per gallon, mix 1 part herbicide plus 4 parts oil carrier. This gives you a 20 percent herbicide by volume mixture—often expressed as 20 percent v/v or vol/vol. A ready-to-use (no mixing required) basal bark triclopyr ester product can be purchased online and from some pesticide distributors.

If a different concentration is desired, use the following simple formula to calculate the amount of herbicide needed to add to the tank: fluid ounces of herbicide to add to the tank = $1.3 \times \text{desired gallons of spray mix} \times \text{desired herbicide percentage}$. For example, if you wanted to mix 2 gallons of a 20 percent solution of herbicide, then $1.3 \times 2 \times 20 = 52$. This means 52 fluid ounces of herbicide is needed to add to the 2-gallon total volume.



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I already have a glyphosate or triclopyr amine herbicide. Can I use them instead?

No. Avoid using any glyphosate or triclopyr amine products for basal bark treatments. They will not be effective because they are water soluble and will not penetrate the bark well enough to provide adequate control.

Do I need to add any surfactants to the herbicide and basal oil?

Surfactants are not required for basal bark treatments. However, a spray indicator, such as a colorant or dye, may be useful to see what has been treated. Some basal oils that already have a spray indicator included are available.

How do I apply the herbicide/oil mix?

Spray the bottom 12 to 18 inches of each stem all the way around, including the root collar. Maintain a low pressure to avoid herbicide drift. 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. Do not spray this mix on any leaves, even of plants you want to kill. It is a waste of herbicide.

Are there any grazing restrictions?

Consult the herbicide label on the specific product used to check for livestock grazing restrictions.

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- or chemical-resistant gloves, long sleeves, long pants, shoes, and socks.