

CU IN THE WOODS

USING HACK-AND-SQUIRT METHOD TO CONTROL UNDESIRABLE VEGETATION

By Jeff Fellers

Hack-and-squirt, sometimes referred to as frill-and-spray, is a herbicide application method that applies the herbicide into the stem (trunk) and is used to target specific undesirable trees. There is a slight variance between hack-and-squirt and frill-and-spray. Generally, hack-and-squirt refers to a cut or series of cuts around the trunk of the tree determined by tree diameter.



Figure 1: The downward cut that creates a cup for the herbicide. Photo Credits Stephen Enloe, UF/IFAS

Frill(girdle)-and-spray refers to a continuous cut around the diameter of the tree. These herbicide application methods are efficient, economical, and easy for a landowner to use as a vegetation management tool. Typically, this method is more effective for smaller areas as it can be time-consuming for large treatment areas.

The beauty of the hack-and-squirt method is that applications can be made at any time of the year with a few exceptions. Spring, when the sap is flowing, is typically not a good time for hack-and-squirt, since the sap can push the herbicide out of the wound and cause the application to be ineffective. Also, during a drought is not a good time to apply herbicides as your kill rate will be greatly reduced. Winter is a great time to be out on your property using the hack-and-squirt method to control undesirable vegetation.

The tools needed and the application method for hack-and-squirt are simple. A machete or hatchet and a spray

bottle are really the only tools needed. The hatchet is used to make a downward angle cut (approximately a 45-degree angle) in the stem of the tree (figure 1). The height of the cut should be a comfortable working height for the applicator which is typically around the waist area. The cut is then filled with herbicide using the spray bottle (figure 2). There is no need to overfill since the herbicide that runs out of the cut will be wasted. Depending on the label, generally, ½ to 1 ml of herbicide is applied to the cut. Larger trees may require more “hacks” around the stem. Typically, the label will define the spacing and will vary for different herbicides, for instance, it may read one hack for every three inches in diameter.

In table 1, several herbicides are listed that are labeled for hack-and-squirt or frill-and-spray. Keep in mind that there are various trade names that sell herbicides with the listed active ingredient. The table only lists a few common ones as examples. Make sure you read the label before you buy any herbicides to make sure it does list hack-and-squirt or frill-and-spray as an application method. The label is the law and it is very important that the label is followed for your safety and the health of the environment. Plus, if these methods are not listed, you may be wasting your time and money.



Figure 2: Herbicide application to the cut. Photo Credits Stephen Enloe UF/IFAS

Table 1. Hack-and-Squirt (frill and spray) and injection herbicides

Active Ingredient	Herbicide Trade Names	Application Method	Time of Year/ Sap Flow Period
2, 4-D	2,4-D Amine, 2,4-D Amine 4	Frill or girdle: 2.5 oz per gallon of water	Any time of year but best during growing season. Avoid peak sap flow in spring
Dicamba	Vanquish	Frill or girdle: continuous overlapping cuts with a 1:1 or 1:3 mixture.	Any time of year. Avoid times during heavy sap flow in spring
Glyphosate	Accord XRT II, Roundup Pro	Hack-and-squirt: apply 1 ml per 2 to 3 inches of trunk diameter to evenly spaced cuts (50% to 100% solution). Frill or girdle: as tree diameter increase better results are achieved with continuous frill. (25% to 100% solution)	Best during growing season after full leaf expansion. Avoid peak sap flow in spring
Imazapyr	Arsenal	Hack-and-Squirt: apply 1 ml per cut, make at least one cut for every 3 inches in diameter, space cuts evenly (100% solution) Frill: 2-inch interval between cuts, thoroughly wet cuts (25% to 100% solution)	Any time of year. Avoid times during heavy sap flow in spring
Triclopyr (amine)	Garlon 3A	Hack-and-squirt: apply 0.5 ml (undiluted) or 1 ml diluted (1:1) and make a continuous circle around tree Frill or girdle: same as above	Any season Avoid times of heavy sap flow in spring

References:

Mississippi State Extension: Applying Herbicides with the Hack-and-Squirt Method
<http://extension.msstate.edu/sites/default/files/publications/publications/p3276.pdf>

North Carolina State Extension: Accomplishing Forest Stewardship with Hand-Applied Herbicides
<https://content.ces.ncsu.edu/accomplishing-forest-stewardship-with-hand-applied-herbicides>

Penn State Extension: Using Hack-and-Squirt Herbicide Applications to Control Unwanted Trees
<https://extension.psu.edu/using-hack-and-squirt-herbicide-applications-to-control-unwanted-trees>

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