

Buckthorn Chemical Control

Misuse of pesticides can injure applicator and/or damage the environment. Always **READ THE LABEL** before applying! Know what you are doing **BEFORE** using any chemical. Wear protective gear and use proper equipment that is in good working condition. This information is not an endorsement of particular products or practices. Pesticide use must follow label directions and applicable state and federal laws.

| Chemical | Active Ingredient | Application | Advantages | Disadvantages |
|-------------------------------------|---|---|--|--|
| Roundup/Rodeo Non-restricted use | Glyphosate Roundup 41.0% Rodeo 53.8% | <ul style="list-style-type: none"> ✓ Mix 1:3 with water, add spreader sticker and dye ✓ Apply to all stump surfaces with pressure sprayer immediately after cutting ✓ Apply when >32°F | <ul style="list-style-type: none"> ✓ Less environmental/user risk | <ul style="list-style-type: none"> ✓ Low efficacy ✓ Must be mixed ✓ Will not work in spring during bud break and leaf expansion |
| Garlon 3A Non-restricted use | Triclopyr 44.4% amine salt Can purchase small amounts as Ortho "Brush-B-Gone" | <ul style="list-style-type: none"> ✓ Always wear protective eye gear ✓ Apply undiluted with brush, wick applicator, or low volume spray ✓ Use blue dye in solution to mark treated stumps | <ul style="list-style-type: none"> ✓ More cost effective on large acreage ✓ Amine salt formula stays put ✓ High efficacy ✓ Year round use | <ul style="list-style-type: none"> ✓ Poses health risk (serious eye injury) ✓ Cost per gallon impractical unless acreage is large |
| Garlon 4 Non-restricted use | Triclopyr 61.6% ester | <ul style="list-style-type: none"> ✓ Dilute 1:4 with diluent oil ✓ Apply with low pressure and ultra low volume wand using a Y-2 or Y-3 nozzle ✓ Completely encircle basal 10" of tree, thoroughly wetting bark but NOT to the point of runoff | <ul style="list-style-type: none"> ✓ Basal bark treatment doesn't require cutting tree ✓ Lower user risk than Garlon 3A ✓ More cost effective on large acreage ✓ High efficacy | <ul style="list-style-type: none"> ✓ Cost per gallon impractical unless acreage is large ✓ Must be mixed (oil diluent) ✓ Can cause damage to non-target plants due to volatilization and/or overspray |
| Tordon RTU Non-restricted use | Picloram and 2,4-D | <ul style="list-style-type: none"> ✓ Use brush or wick applicator. ✓ Cover outer cambium layer completely; avoiding over application. ✓ Application by pressure sprayer greatly increases non-target impact ✓ Avoid over-application | <ul style="list-style-type: none"> ✓ Ready to use (no mixing) ✓ Relatively inexpensive ✓ High efficacy ✓ Year-round use. | <ul style="list-style-type: none"> ✓ Picloram moves readily in soil ✓ Highly toxic to non-target plants ✓ Major groundwater contaminant ✓ Persists in the environment. |

Read the pesticide label and follow the instructions as a final authority on pesticide use!

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All current buckthorn control techniques are labor-intensive and may have limited success unless follow-up site management is planned for and implemented. Chemicals are not the only way to control buckthorn, but the alternatives – manual removal and/or fire - also have associated advantages and disadvantages as well as variable success rates.

Chemicals do require special care and handling. The following practices outline safe, responsible and effective procedures for pesticide use and handling that can help protect our environment, our water supplies - and ourselves. Pesticide users must follow all legal requirements such as:

- Always read and follow all product label directions and precautions, appearing on (or included with) the pesticide containers. Eliminate or minimize exposure to pesticides during mixing, loading, cleaning and applying.
- Read and follow local, state and federal regulations regarding pesticide application procedures and transport of pesticides.
- Applicators must know the exact location of the area to be treated, as well as the potential hazard of spray drift or subsequent pesticide movement to surrounding areas. It is illegal to allow spray drift to move off the target site.
- Know what to do in case of accidental pesticide exposure.

In addition to legal requirements, consider the following voluntary Best Management Practices (BMPs) when making pesticide application and handling decisions.

- Purchase only the amount of pesticide you will use in a season.
- Mix chemicals where appropriate to minimize surface runoff in case of spills.
- Use the lowest appropriate rate to minimize pest resistance, damage to non-target plants, and potential for environmental contamination.
- Calibrate equipment properly before mixing and recalibrate periodically and whenever the type of nozzle is changed. Replace worn nozzle tips, cracked hoses and faulty gauges.
- Time application in relation to anticipated weather conditions to achieve the greatest product performance (Avoid high-energy rainfall shortly after application).
- Shower after completion of application. Wash any affected areas after possible exposure to skin and remove personal protective equipment prior to eating, drinking or smoking.
- Wash and dry personal protective equipment and store separately from other laundry. Wash clothes exposed to pesticides separately from other laundry.
- Know what to do in case of pesticide poisoning. Have a pesticide first aid kit readily available. Check the product label for instructions and call the nearest poison center in the event a pesticide is swallowed, or in the event of a serious dermal or inhalation exposure.

Minnesota Regional Poison Center
Greater Minnesota and East Metro
651-221-2133 or 1-800-222-1222

Hennepin County Regional Poison Center
West Metro
612-347-3141

For additional information on chemical and pesticide use, please go to the Minnesota Department of Agriculture at: <http://www.mda.state.mn.us>. For additional buckthorn control information, please check with the Minnesota Department of Natural Resources at <http://www.dnr.state.mn.us> or the Minnesota Department of Agriculture.

For further assistance with buckthorn identification and management, contact the Washington Conservation District at 651-275-1136 or <http://www.mnwcd.org/>.