



WALNUT NOTES

Weed Control

Weeds affect black walnut trees the same way they affect other crops. They rob them of moisture, nutrients, and light. But walnut growers can use a variety of mechanical and chemical methods to protect their trees from weeds.

Mechanical Controls

Cultivation is the most effective mechanical weed control method. You can cultivate thoroughly using a tandem disc, but that may damage feeder roots. Roots will be damaged less if you cultivate shallowly with a rototilling attachment. Begin right after "green up" in the spring, and repeat as often as necessary to keep weeds from getting taller than 6 inches. Time the last cultivation of the season to let vegetation recover enough to provide erosion protection during fall and winter. Take care: as trees get larger, their lateral branches are easily torn off by equipment operated close-by.

Periodic mowing provides plenty of sunlight for young trees by removing the tops of weeds and grasses; but weed roots remain actively in place. Do not substitute mowing for cultivation or herbicides.

Mulching with plastic, sawdust, bark, or wood chips can control weeds, but consumes a lot of time and money. It is practical only in small plantations.

Chemical Controls

Chemical weed control works better and costs less than mechanical control, but must be done with skill and care.

Two general types of chemicals are used in walnut plantings: (1) preemergent herbicides are applied early in the spring before seeds begin to germinate when moisture conditions are favorable; (2) *postemergent* herbicides act upon contact with the foliage and are applied when the vegetation is growing vigorously.

Several chemicals are effective in controlling weeds in black walnut, particularly one preemergent herbicide, simazine, and five postemergent herbicides: atrazine, amitrol, dalapon, glyphosate, and 2,4-D. These are tolerated well by black walnut, generally available, inexpensive, and safe when handled and applied properly. Consult your State forester to find out what other chemicals may work satisfactorily in walnut plantings.

The type of herbicide you need to use depends on the types of weeds you need to control. It may take a combination of herbicides to control the various weeds in a plantation because no single one works best in all situations. For example, a chemical mixture will work better than a single chemical when both grasses and broadleaf plants are present. Dalapon will control the annual and perennial grasses; 2,4-D will

control the broadleaf plants. Applying a combination of postemergent herbicide and simazine is often the most effective way to control weeds. The postemergent herbicide controls initial vegetation, and simazine provides residual weed control.

Applying chemicals-If your land is fairly level and the trees are uniformly spaced, you can use a farm-type sprayer to either broadcast the chemical or spray it in strips. Broadcast spraying covers the entire area and uses the most herbicide. Strip spraying costs less than broadcast spraying and reduces the possibility of soil erosion. Spraying 2-foot strips on each side of walnut seedlings at 10- or 12-foot spacings requires only 30 to 40 percent as much herbicide as broadcast spraying.

Spot spraying 4-foot circles around each tree, using a hand-held backpack sprayer, is the most versatile and, for smaller areas, probably the easiest and cheapest way to control weeds.

Broadcast spraying generally requires more than 20 gallons of water and chemical to cover an acre. When spot or strip spraying, adjust the amount of solution per acre in proportion to the actual amount of ground sprayed. Monitor agitation, pressure, and calibration carefully to ensure an accurate rate of application.

Herbicides-what, when, how much

Vegetation present. Apply postemergent herbicide in combination with simazine for residual weed control

- A. Walnut seedling absent:
 - 1. Dowpon M (dalapon) 4-15 lbs/acre
 - 2. Dowpon M 4-15 lbs/acre
plus 2,4-D 1-3 lbs/acre
 - 3. Amitrol-T (amitrole) 2-4 lbs or 1-2 gals/acre
 - 4. AAtrex (**atrazine**)¹ 2½-5 lbs/acre
 - 5. Roundup (glyphosate) 1½-2 qts/acre
- B. Walnut seedlings present:
 - 1. Roundup (glyphosate) 1½-2 qts/acre

¹*Apply atrazine in the fall preceding the spring when you plan to plant. Usually, an application of atrazine without simazine will provide sufficient weed control.*

Precautions.-Before applying any herbicide, check State and federal regulations concerning its use, follow directions on the label, and take recommended safety precautions. Although the recommended chemicals are not normally considered dangerous, be sure to handle with care.