

## Managing Perennial Weeds

Late summer and fall is a good time to control perennial weeds with herbicide treatments. Some refer to this time period prior to hard freeze as the “window of opportunity” for managing perennial plants. In addition, forage crops such as alfalfa or forage grasses that will be planted to row crops in the following spring are also good candidates for fall herbicide treatments. One of the best ways to control perennial plants in the fall is to apply Roundup® brand agricultural herbicide before the plants go dormant.

### Perennial Weed Growth and Management

Perennial weeds persist for more than two years and usually live for many years. Most perennials reproduce and spread by seed as well as vegetative plant parts. They grow back each year from roots, underground stems (rhizomes), stolons, or tubers. The roots or underground vegetative parts of these plants can act as storage tissues for survival from season to season. They generally flower and produce seed if allowed to grow undisturbed throughout the summer. Their persistence is largely due to this dual means of reproduction. Perennials can re-grow from seed as well as by producing new shoots after their top growth is killed by mowing, tillage, control practices, or freezing temperatures.

Cooler temperatures in the fall trigger the movement of food reserves down to the root or storage structures of perennial plants to build up reserves for growth in the following season. This is a good time to apply Roundup® brand agricultural herbicide because more of the product will translocate into the roots and vegetative plant parts to prevent re-growth. The application window for best control can vary with the perennial weed species. Perennial weeds like hemp dogbane, milkweed, pokeweed, and johnsongrass complete their life cycles earlier and should be treated before a frost. Perennial weeds like Canada thistle, curly dock, dandelions, and quackgrass can survive several light frosts and be treated later into the fall.

Successful management of perennial weeds involves prevention and control of seedlings and established plants. Seedlings can be controlled by cultivation or herbicides; whereas, repeated herbicide treatments or cultivation may be needed to control established plants. The best way to control perennial weeds is to prevent their establishment. Tillage implements can start new infestations by transporting and transplanting plant parts throughout fields. However, the uninterrupted growth of underground plant parts can be a major challenge in no-till where the lack of tillage can allow perennial plants to become established over time. Usually, repeated control or suppression of perennial weed growth by tillage or herbicide treatment for two or more years is needed for good management and control.

### Fall Herbicide Application Considerations

- A tank mixture of Roundup® brand agricultural herbicide with 2,4-D is generally recommended for best control of perennial broadleaf weeds. Perennial grasses and some broadleaf



weeds can be adequately controlled by Roundup® brand agricultural herbicide applied alone (Table 1).

- Ammonium sulfate should be added at the recommended rate to the spray tank before adding herbicides.
- Application should be made to plants that are actively growing and not under drought or heat stress.
- If the shoots of plants are cultivated or cut before application, allow at least 6 to 12 inches of re-growth before spraying.
- Allow 7 or more days after application before tillage for the herbicide to translocate within the plant as much as possible.
- Herbicides should be applied when daytime temperatures are greater than 50° F, and preferably when they are expected to exceed 60° F during the day. Spraying on a mild afternoon following a cold or cool morning can encourage translocation of the herbicide to the below ground plant parts.
- Applications can be made following a light frost (temperatures drop below 32° F, but leaf tissue is not damaged) on some perennial weed species. When a frost occurs, wait at least 2 days for the plants to recover and then check for damage before spraying. At least 60% of the plant leaf tissue should remain green for Roundup® brand agricultural herbicide to work effectively.

*(continued on page 2)*

## Managing Perennial Weeds *(continued from page 1)*

**Table 1.** Fall control of perennial weeds with Roundup® brand agricultural herbicides.

| Weed                 | Rate/Acre (GPA)  | Size/Comments  |
|----------------------|--|--|
| Alfalfa              | 1-1.5 qt. (3-10) alone or 22 oz. + 1 pt. 2,4-D (3-10)    | 6-8 inches or more of growth. Wait at least 7 days and follow the application with tillage for best results. |
| Canada Thistle       | 1.5-2 qt. (3-40)   | 6-9 inch rosette.  |
| Clovers (Red, White) | 2-3.3 qt. (3-20) alone or 22 oz. + 1 pt. 2,4-D (3-10)    | 6-12 inches.   |
| Curly Dock           | 2-3.3 qt. (10-40) alone or 22 oz. + 1 pt. 2,4-D (3-10)   | When plants have reached the mature stage of growth.   |
| Dandelion            | 2-3.3 qt. (3-40) alone or 22 oz. + 1 pt. 2,4-D (3-10)    | > 4 inches.  |
| Field Bindweed       | 2-3.3 qt. (3-20) alone or 44 oz. + 1 pt. dicamba (10-20) | Vines are between 6-18 inches in length. Apply when at or beyond full bloom.                                 |
| Hemp Dogbane         | 3 qt. (3-40)   | > 18 inches or allow plants to grow to a mature stage prior to treatment.                                    |
| Johnsongrass         | 22 oz. (3-10) or 44-64 oz. (10-40)                       | Use the higher rate in non-crop areas or in no-till. Boot to head stage or in the fall prior to frost.       |
| Milkweed             | 2 qt. (3-40)   | Late bud to flower stage of growth.  |
| Orchardgrass         | 22-32 oz. (3-10) or 44 oz. (10-40)                       | Apply when plants are at least 6-12 inches tall.   |
| Pokeweed             | 1 qt. (3-40)   | Actively growing plants up to 24 inches tall.  |
| Quackgrass           | 22 oz. (3-10) or 44-64 oz. (10-40)                       | 8 inches tall or greater. Use the higher rate in non-crop areas or in no-till.                               |
| Tall Fescue          | 22-32 oz. (3-10) or 2 qt. (10-40)                        | 6-12 inches of new growth.   |
| Timothy              | 1.5-2 qt. (3-40)   | > 10 inches or early heading stage of growth.  |

**Individual results may vary**, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.



**ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** **Tank mixtures:** The applicable labeling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions of each product used in the tank mixture. Monsanto has not tested all tank mix product formulations for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. Technology Development by Monsanto and Design(SM) is a servicemark of Monsanto Technology LLC. Roundup®, Roundup PowerMAX®, Roundup WeatherMAX and Design®, and Transorb and Design® are registered trademarks of Monsanto Technology LLC. ©2010 Monsanto Company. 08302010TED

