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Forage Crops

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**Perennial Weed Control
Chemicals-Cultivation-Crop Rotation**

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Perennial noxious weeds have taken many years to develop into the serious problem they are today. They are mostly foreign plants introduced into a favorable ecological situation. As such, they are the most serious pollutant of our land resource. Only through a persistent, conscientiously applied program over several years can they be eradicated. The suggestions made in this and other publications have been successfully applied by other land owners. They will help you to solve your perennial weed problem if you fit them to your land and crop management programs.

Team Work

The most effective and practical method of controlling perennial weeds in badly infested fields is to apply a suitable combination of cropping, chemicals and cultivation. By developing and persistently applying a combination fitted to the individual farm it is possible to increase crop yields and also bring perennial weeds under control.

Suitable Crops

Crops best adapted to use for controlling these weeds are silage or grain corn, small grains, or grass. Short season cultivated crops, such as beans and potatoes can be used to advantage. Thick vigorous alfalfa is very effective in controlling Canada thistle. It is also effective in checking field bindweed.

Most other crops should not be grown on land infested with perennial weeds.

Fertilizer and Management Essential

Good stands of healthy vigorous crops compete best with weeds, and are also essential for high yields. Have a soil test to determine fertilizer needs. Use adequate amounts of nitrogen, phosphorous and other needed nutrients. Prepare a good seed bed, use heavy seeding rates, irrigate properly and manage for top yields.

Crop Rotations for Irrigated Areas

It is usually best to plant grain or corn for three consecutive years when starting a crop-rotation program for weed control. Spray with 2,4-D twice a year as outlined in the chart. This reduces the stand of weeds so that a vigorous, thick stand of alfalfa hay or grass pasture can be established. After 4 years of alfalfa cut for hay, or grass pasture sprayed twice a year with 2,4-D, plow the field and plant it to beans, potatoes, or cereals. When a suitable crop rotation and spraying program is conscientiously followed, the weeds will be reduced to the point where spot application with an appropriate herbicide will eliminate the few remaining plants. It may be necessary to repeat the rotation and spray program.

The following suggested rotation may have to be modified for different areas and for different types of weeds. Severe weed situations may require fallow in the rotation. Use appropriate herbicides and other practices to control weeds each year of the rotation.

SUGGESTED ROTATION-IRRIGATED AREAS

First year	Grain or corn
Second year	Grain or corn
Third year	Grain or corn
Fourth year	Alfalfa hay or grass pasture
Fifth year	Alfalfa hay or grass pasture
Sixth year	Alfalfa hay or grass pasture
Seventh year	Alfalfa hay or grass pasture
Eighth year	Potatoes, beans, grain or corn

Use of Herbicides for Perennial Weed Control in Cereals

2,4-D is registered for a rate no higher than 1½ lbs. per acre applied either between tillering and boot or from dough stage to harvest. When used between tillering to boot do not feed or graze treated foliage for 2 weeks. When used at dough or later stage do not use straw for feed. Use amine formulation.

	Field Bindweed	Canada Thistle or Perennial Sow Thistle	Whitetop
<p>Established GRASS PASTURE</p> <p>Good pasture management is essential for successful weed control</p> <p>Fertilize according to soil test each year as needed</p>	<p>Spray in early summer no later than first bloom with 2 lbs. 2,4-D per acre. Spray again in the fall at same rate.</p> <p>Do not spray when producing dairy cows or animals for immediate slaughter are in pasture. Wait two weeks after spraying before grazing.</p> <p>Or, spray with 6 lbs. of Dicamba per acre when weeds are actively growing, July or August. Do not graze with producing dairy cows for 60 days and remove meat animals from treated area 30 days before slaughter. Don't harvest for hay for dairy or slaughter animals.</p>	<p>Spray in early summer no later than first bud, with 4 lbs. 2,4-D per acre. Spray again in the fall at the same rate.</p> <p>Do not spray when producing dairy cows or animals for immediate slaughter are in pasture. Wait two weeks after spraying before grazing.</p> <p>Or, spray with 6 lbs. of Dicamba per acre as indicated for field bindweed.</p>	<p>Spray in early summer no later than first bud with 2 lbs. 2,4-D per acre. Spray again in late fall at same rate.</p> <p>Do not spray when producing dairy cows or animals for slaughter are in pasture. Wait 2 weeks after spraying before grazing.</p>
<p>To establish ALFALFA HAY or GRASS PASTURE on Irrigated Land</p>	<p>Having been in grain for three years, give under grain in Current Information seed the infested field to a forage crop. Seeding can be made in mid-August after grain harvest. Remove excess straw, drill forage seed immediately and follow with 2 more irrigations at 10 day intervals. If time allows, irrigate after first harvest, wait 2 weeks, spray with 1 lb. 2,4-D per acre, plow 7 days after spraying, prepare and seed desired forage crop. When fall harvest is complete, spray any weed growth with 4 lbs. 2,4-D per acre. In spring plow deep, prepare a firm seed bed, and control Canada thistle seed 15 lbs. per acre. For all other weeds seed a good alfalfa. For all other weeds seed a good alfalfa single variety or mixture. Irrigate and mow as necessary for weed control until alfalfa is established.</p>		
<p>ALFALFA</p> <p>Fertilize according to soil test</p>	<p>A vigorous, thick stand of alfalfa cut for hay will prevent spread of morning glory but will not crowd it out.</p> <p>Do not use chemical control; it will eliminate the stand of alfalfa.</p>	<p>Where 3 cuttings per year are possible, a thick stand of alfalfa maintained 4 years can give complete eradication.</p> <p>Plant a wilt-resistant alfalfa. It is necessary to maintain a thick stand and vigorous growth for 4 years.</p>	<p>Do not use alfalfa control whitetop. Alfalfa fields infested with whitetop must be cut early (when whitetop begins to bud) to prevent seed production. This results in lower yields of alfalfa and weakening of stand.</p>

Russian Knapweed or Leafy Spurge	Perennial Ground Cherry or Perennial Milkweed	Quackgrass
<p>Spray in early summer later than first bud with 2,4-D per acre. Spray in the fall at same</p> <p>Do not spray when pro- g dairy cows or ani- for immediate slaugh- re in pasture. Wait 2 s after spraying before ng.</p> <p>spray with 6 lbs. mba per acre as for bindweed.</p>	<p>Spray in early summer with 2 lbs. of 2,4,5-T per acre when weeds are in bud stage. Do not graze with producing dairy ani- mals or animals for slaugh- ter for 2 weeks after appli- cation.</p>	<p>No control or eradication possible in grass pasture.</p>
<p>d as 156, seed- l, re- igate or 4 after per bed prac- n the . To esis- dap- lish. ed.</p>		<p>Land infested with quackgrass should not be planted to alfalfa or grass.</p> <p>If a field is infested with quackgrass and it is desirable to plant it to grass or alfalfa the quackgrass should be eradicated before planting. This can be done most effectively by dry cultivating with a spring tooth cultivator until the quackgrass roots are all out of the soil and killed by drying. To do this, plow the field dry and cultivate once a week or oftener during the hot dry months of mid and late summer.</p> <p>Quackgrass can also be controlled by treating with E.P.T.C. (Eptam). This herbicide is registered for use when seeding alfalfa. To accomplish this, plow, disc the soil to prepare seed bed until the roots are chopped into small, 2"-3" segments. Apply the E.P.T.C. according to label directions and incorporate immediately by discing and cross discing. After incorporation alfalfa may be planted.</p>
<p>Do not use alfalfa; it will not eradicate these weeds. Well fertilized heavy stands will help hold them in check if three cuttings are taken each year.</p>		<p>Do not use alfalfa to control quackgrass. If an established stand of alfalfa is infested with quackgrass prevent seed formation by mowing when the first heads of grass appear.</p> <p>Two new herbicides, not registered as yet, will give quackgrass control in alfalfa. They are Kerb and Sumitol. Petitions for registration have been submitted.</p>

Dicamba (Banvel) is registered for spot use in Idaho under wheat fallow programs and where wheat will follow wheat in the crop sequence. It does an excellent job on field bindweed, Canada thistle and Russian Knapweed. It does a fair job on leafy spurge.

Rotations for Non-Irrigated Areas

The choice of a rotation under non-irrigated conditions is usually determined by the amount of annual moisture. Therefore, fallow must often be included in the rotation. A well managed fallow program is the most effective method for controlling perennial weeds in non-irrigated fields. Where perennial weeds exist, cultivate the fallow every 14 days with a cultivator that will cut off all weed shoots.

A grain crop that can be sprayed with 2,4-D is best to include in a rotation under non-irrigated conditions. Under most non-irrigated conditions, only one spraying a year is possible. This spray, combined with cultivation immediately after harvest and a deep fall plowing, will thin the stand sufficiently to permit establishment of grasses, alfalfa, or sweet clover. Do not seed a grain crop when establishing alfalfa or grasses. The alfalfa or grasses need all the room to grow strong root systems.

It will be necessary to mow the grasses or legumes one or more times to control the weeds the first season.

Weed Seedlings

Thousands of weed seeds may infest the plow layer of soil in old, established stands of perennial weeds. Chemicals do not kill weed seeds. CONTROL OF SEEDLING PLANTS IS, THEREFORE, ESSENTIAL IN ANY WEED PROGRAM. Killing young seedlings is easy. Seedlings of any noxious weeds die when the roots are cut by cultivation or when sprayed with the proper herbicide within a month after they come through the ground. **Kill them before they can become established.**

Ditches and Fence Rows

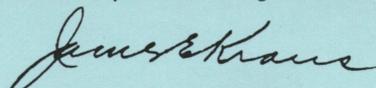
Encourage the growth of desirable perennial grasses along ditch banks and fence rows. A thick stand of grass provides competition to weeds and helps to keep them from becoming established. Level and seed all new ditch banks immediately. Plant crested wheat or stream bank wheat grass on the dry banks, Kentucky bluegrass on the better moisture sites and redbud at the water's edge. Spray weeds at least twice a year on ditch banks and in fence rows with 2,4-D or other suitable herbicides. Apply in 30 to 60 gallons of water per acre.

SUGGESTED ROTATIONS — NON-IRRIGATED AREAS

	8-year	8-year	6-year	3-year
First year	Grain	Grain	Grain	Wheat
Second year	Grain	Grain	Sweet Clover	Fallow
Third year	Alfalfa	Grass	Sweet Clover for green manure	Wheat (Periodically work in grass or alfalfa crop)
Fourth year	Alfalfa	Grass	Grain	
Fifth year	Alfalfa	Grass	Grain	
Sixth year	Alfalfa	Grass	Fallow*	
Seventh year	Grain	Grain		
Eighth year	Fallow*	Fallow*		

* Cultivate every 14 days if perennial weeds are present; otherwise, often enough to control annual weeds and prevent seed production.

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James E. Kraus, Director