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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 87-2] [March 13, 1987]

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**INSECT
PLANT DISEASE
WEED SCIENCE**

NEWS

DEPARTMENT OF AGRONOMY (WEED SCIENCE) UNIVERSITY OF NEBRASKA-LINCOLN,
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Weed Control Strategies for Winter Wheat

Spring is rapidly approaching and winter wheat producers should be formulating plans for controlling weeds in winter wheat fields. Uncontrolled weeds compete with wheat for water, nutrients, light, and space, and can reduce yields dramatically. Research has shown that one tansy mustard plant per square foot can reduce wheat yields by 15%, while the same population of blue mustard plants can reduce yields by 30%. Pennycress has been a major problem for wheat growers in eastern and central Nebraska. Further, spring-germinating weeds can cause problems after wheat harvest in western Nebraska by using valuable soil water during the fallow period. Therefore, it is important to control weeds in growing wheat.

The first step in an effective weed control program is to scout the field to determine how many and what type of weeds are present. Scouting should be done as early as possible in the spring, as weed competition with wheat is most severe in early stages of growth. Also, winter annual weeds, such as mustards, will be in the proper growth stage for herbicide application in early spring. Scouting is best accomplished by walking 50 or 100 feet into the field. Weeds are not visible through the windshield of a rapidly-moving pickup until it is too late to control them. Cooperative Extension Agents and area specialists are available to assist with weed identification, if necessary.

Scouting the field may reveal that there are very few or no weeds present and immediate chemical treatment is not warranted. Winter annual weeds present in populations of 1 or more plants per square foot, however, require that action be taken to avoid unnecessary yield loss. Glean is recommended as an early spring treatment to control winter annual broadleaf weeds in wheat. It also offers the advantage of long residual activity, which provides weed control throughout the growing season. Glean should be used only in a wheat-fallow rotation, as it will persist in soil for several years and may injure rotational crops such as corn, sorghum, beans, or sugar beets. The recommended use rate of Glean is 1/6-1/3 oz/acre; 1/2 oz/acre may be used if heavy weed

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infestations or perennial weeds are present. Include a surfactant at 1 qt/100 gal of spray solution when Glean is applied. The cost of Glean at 1/3 oz/acre is approximately \$5.00 per acre.

If no weeds were found during the first scouting, or the farmer cannot use Glean because of rotational restrictions, the field should be scouted again in late March or early April. Some fields may have remained weed-free, however, many will have become infested with spring-germinating weeds such as Russian thistle and wild buckwheat. Ally + 2,4-D is recommended as a mid-to-late spring treatment for broadleaf weed control in wheat. Ally has greater postemergence activity than Glean, but provides residual weed control for only 4-6 weeks. Ally should be used primarily in a wheat-fallow system, but does allow rotation to grain sorghum within 10 months of application. Recommended use rates for this combination are Ally at 1/10 oz/acre + 2,4-D low-volatile ester at 4 oz/acre. Add a surfactant at 1 qt/100 gal of spray solution. This treatment costs about \$3.00 per acre.

Banvel + 2,4-D may also be used to control broadleaf weeds in wheat. The crop must be well-tillered but not jointed when the treatment is applied. Significant crop injury can occur if Banvel + 2,4-D is applied to winter wheat after jointing. Banvel + 2,4-D is a good treatment for producers in eastern Nebraska who must control mustards early, but because of rotational plans, cannot use Glean or Ally + 2,4-D. Recommended use rates are Banvel at 4 oz/acre + 2,4-D amine at 3/4-1 pt/acre. The cost is about \$2.35 per acre.

2,4-D can be used to control mustards including pennycress where other weeds are not a problem. 2,4-D has no residual activity and will not control later germinating weeds. Use 1 pint of 2,4-D amine or 1/2 to 3/4 pint of ester. The treatment cost is \$.75-\$1.50 per acre.

Broadleaf weeds in winter wheat can be effectively and inexpensively controlled. The mustards, including pennycress, must be treated before the flower stalk elongates. The treatments discussed here are reasonably priced and can return the cost of treatment by increasing wheat yields and quality, and eliminating harvest problems due to weeds. However, it is imperative to first identify and assess weed problems by scouting wheat fields before selecting a herbicide treatment.

Don't Plow Alfalfa Sod - Spray It

Killing alfalfa with herbicides is more economical than plowing, is very effective, and leaves the soil less subject to erosion. An excellent seedbed results from herbicide-killed sod whether the crop is planted no-till or following light tillage. The most consistent treatment we have evaluated for alfalfa control is 1 qt 2,4-D + 0.5 pt Banvel/A with 2 qt 2,4-D ester/A a close second. The herbicide approach will cost \$5.00-\$6.00/A + application compared to \$10.00-\$15.00 for plowing and seedbed preparation. Alfalfa should be actively growing and have at least 4" of green growth at treatment.

Applications should be made at least 1 week before corn planting and 4 weeks before sorghum planting. Where soybeans are to be planted, Banvel should not be used and 2,4-D should be applied 4 weeks before planting. There is no label for a 2,4-D application prior to soybean planting, however, growers have been successful. These treatments should not be used prior to planting fieldbeans.

Can you combine the alfalfa control treatment with a residual herbicide for annual weed control and save one application? Our experience with atrazine suggests that alfalfa control suffers when the treatments are combined.

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