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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 89-03] [April 4, 1989]

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INSECT PLANT DISEASE WEED SCIENCE

NEWS

DEPARTMENT OF AGRONOMY (WEED SCIENCE) UNIVERSITY OF NEBRASKA-LINCOLN,
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No. 89-03
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Correction

The March 21 newsletter contained an error in the winter wheat section with regard to the recommendation for Ally plus 2,4-D. The correct rates are Ally at 0.1 ounce/A plus 1/2 pint of 2,4-D ester.

No-Till Weed Control

Weed control is a key to success with no-till crop production. Control of weeds established at planting time as well as later developing weeds is required. New developments make economical, effective weed control programs available for most situations. One approach is to combine a postemergence and a residual herbicide applied at planting time. Another is to make an early preplant application of residual herbicide and eliminate the postemergence herbicide.

Planting Time Treatments

Because of the early planting date with corn, emerged weeds are usually small or not present at planting time. Most preemergence corn herbicide treatments containing a triazine will control small annual grass and broadleaf weeds. Because of the later planting date with soybeans and sorghum, emerged weeds are more likely to be present. For control of these larger weeds it is usually necessary to add a postemergence herbicide such as Gramoxone or Roundup to the preemergence material.

Early Preplant Treatments

Early preplant herbicide treatments for weed control in no-till have become popular. When is the best time to apply these treatments? The key to timing the application is germination of the weeds.

With early preplant treatments the objective is to have the herbicide in place prior to weed seed germination, especially grasses. Broadleaf weeds are not as much of a concern because most treatments include a triazine (atrazine, Bladex, Lexone, Sencor) which will kill emerged broadleaf weeds, especially when combined with 2,4-D. Having the herbicide in place 1 to 2 weeks before weed seed germination allows time for rainfall to activate the herbicide before it is needed. Summer annual grasses normally don't germinate in no-till fields before May 1 in east central Nebraska and progressively later northward and westward.

Applying treatments several weeks before weed seed germination can shorten the period of control after germination. This concern applies particularly to shorter-lived herbicides including Bladex, Lexone, and Sencor. With very early applications of these herbicides a decrease in weed control after planting may occur. A split application with one portion early and the other at planting time helps maintain control.

Prowl, and particularly Surflan, are long lasting and require substantial rainfall for activation. Performance of these herbicides benefits from early application as this increases the likelihood of ample rainfall prior to weed seed germination.

The "1989 Herbicide Guide," available from Extension offices, lists suggested herbicide treatments for no-till crop production.



Weed Control in New CRP Seedings

Preplant Treatments

2,4-D ester is an economical choice to control broadleaf weeds at least one month before seeding grasses or legumes. Use 1 pint/acre for most small broadleaf weeds; increase the rate to 2 pints/acre if large weeds are present at application. Remember that 2,4-D can persist in the soil for up to 4 weeks after application and it may injure grass seedlings and legumes if applied within 30 days of planting.

Landmaster II at 40-72 ounces/acre can be used for grass and broadleaf control, but because it contains 2,4-D, it must also be applied at least 30 days before grass and legume seeding. Apply Landmaster in 10 GPA of carrier or less; Landmaster is formulated such that additional surfactant is not needed.

Roundup may be applied before seeding or before grasses and legumes emerge to control most grass and broadleaf weeds. Use 1 pint/acre and add a surfactant (at least 80% active ingredient) at 0.5% v/v; ammonium sulfate can be added at 2% w/v (17 lbs per 100 gal of spray solution) to further improve activity. Always apply Roundup in 10 GPA of carrier or less.

Cyclone can also be applied as a burndown treatment to control emerged weeds before seeding or preemergence. Use 1.5-2.0 pints/acre and add a surfactant at 0.25% v/v.

The preplant treatments discussed will not injure grasses or legumes when applied at the recommended interval before grass seeding. However, because of their short soil persistence, they will not control weeds that emerge after forage seeding, and a postemergence treatment may be required later to control weeds in the established grass and/or legume stand.

Preemergence Treatments

Glean is labeled for preemergence application at 0.33 ounce/acre to the following grasses; blue grama, bluestem, meadow or smooth brome grass, buffalograss, galleta, green needlegrass, indian ricegrass, prairie sandreed, sand dropseed, sand lovegrass, side oats grama, switchgrass, wheatgrass, and Russian or beardless wild rye. Add a surfactant at 0.25% v/v if weeds have emerged before application. Do not use Glean on areas that will be tank mixed with Roundup to control grass weeds before or at seeding time.

Atrazine is labelled for preemergence application in pure switchgrass or big bluestem stands only. It will kill other grass species and legumes. Apply 1-2 quarts/acre after planting but before the grass emerges. Use the lower rate on high pH, low organic matter soils. Atrazine can be tank mixed with Cyclone or Roundup to weeds that are present at application.

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