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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 89-09] [May 16, 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. 89-09
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When and How to Rotary Hoe

The rotary hoe, properly used is an effective tool for weed control in row crops. Crop plants seeded 1 to 2 inches deep escape appreciable injury from a rotary hoe. For best results weed seedlings should be in the "white stage," from germination to emergence at the time of hoeing. Timeliness is critical for success because emerged green weeds, even though small, are generally too well anchored for control. A second hoeing 5-7 days after the first provides improved control. A dry firm soil surface during the hoeing operation is required. A rain-free period of several hours after hoeing is needed to desiccate the weed seedlings. Hot windy conditions for a few hours after the operation are best. A rainy period of several days seriously reduces the effectiveness of a rotary hoe program. A rotary hoe will not satisfactorily control larger-seeded weed seedlings including shattercane and velvetleaf because they germinate deeper in the soil and are more firmly anchored than small-seeded weeds such as pigweed and foxtails. Operational speeds of 7-14 mph are used in rotary hoeing. Effectiveness is greater at the faster speeds; however, injury to delicate crops also increases with speed.

Crop safety is a consideration in rotary hoe timing. Care should be taken not to cover the crop as it emerges. Corn can be hoed practically any time after planting until the crop reaches 4-5 inches in height. The exception would be to avoid hoeing corn planted in furrows from the spike to 1-leaf stage on loose soil to prevent covering the plants. A test strip can be hoed to evaluate damage. Sorghum should not be hoed between the spike stage and the 2-inch height stage to avoid covering the small seedlings. Soybeans should not be hoed between the crook stage, just prior to emergence, and approximately 3 days after emergence. Hoeing soybeans during emergence results in unnecessary stand loss. Stand losses of 5-10% are common with each hoeing of sorghum and soybeans. If necessary, increased planting rates can be used to compensate for stand loss.



With proper timing and operation, a rotary hoe can provide economical weed control with minimum crop damage. Understanding the factors involved is the key to success with a rotary hoe.

Turfgrass Research Field Day

The 14th Annual UNL Turfgrass Research Field Day and Equipment Show will be held Tuesday, June 20, 1989 from 8:00 a.m. to 3:00 p.m. The Field Day will be held at the John Seaton Anderson Turfgrass Research Facility, just south of the Agriculture Research and Development Center headquarters located at Mead, NE.

Reclassification of Bromoxynil

Bronate, Bucril, and Bucril + Atrazine herbicides have recently been reclassified as Restricted Use Pesticides. All of these products contain bromoxynil and significant label changes have occurred. Additions include: 1) New warning statements; 2) Specific use directions requiring additional protective clothing and clean-up procedures; 3) The requirement of mechanical transfer systems when handling 30 gallons or more product in a single day; 4) Use of enclosed cabs when applying 180 or more acres in a single day; and 5) New chemigation and aerial restrictions.

Grass Control in Ornamentals

Perennial grasses such as brome grass, bluegrass, and quackgrass often become troublesome weeds in iris, peonies, other herbaceous plantings, and woody ornamentals. Likewise, annual grasses including crabgrass, foxtails, barnyardgrass, and annual bromes present somewhat similar problems. There is an answer.

Two soybean herbicides, Poast and Fusilade, are labeled for use in a wide variety of plants. Both products spell death for grasses, but seldom hurt broadleaf plants. Labels for the products differ. Both Poast and Fusilade 2000 require additives such as crop oil concentrate or surfactants for effective results. The suggested mixing rate is 3 tablespoons per gallon of water plus 2 tablespoons of additive. Fusilade can also be found in a ready-to-use product called Grass-Be-Gone or Ornamec at most lawn and garden centers. Apply as a wetting spray when there is good top growth on the unwanted grass.

Scott Nissen Joins Staff at Lincoln

Dr. Scott Nissen recently joined the Agronomy Department at Lincoln. His responsibilities include Teaching and Research with research emphasis on herbicide and weed physiology. Scott is a native of Iowa and completed a Ph.D. at Montana State University. He recently completed a Post-doctoral Fellowship at the University of California, Davis. Welcome aboard, Scott.

Alex R Martin

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Bob Stougaard

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