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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 91-2] [March 22, 1991]

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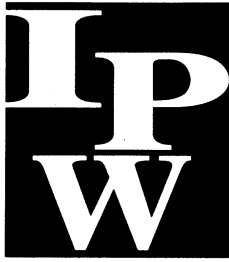
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Insect Science Plant Disease Weed Science

NEWS

UNIVERSITY OF NEBRASKA COOPERATIVE EXTENSION • INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES

No. 91-2

March 22, 1991

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WEED SCIENCE

Accent and Counter 20CR —

The Story Continues to Change

We have just received word that DuPont has changed the Accent label with respect to the use of Counter 20CR. Although we have not seen a new label, the following information has been conveyed to us:

Under the heading *Directions for Use*, the label will state "Do not apply Accent if the crop was previously treated with Counter 15G, as severe injury may result. Do not apply Accent if the crop was previously treated with Counter 20CR applied in furrow at planting, or over the row at cultivation."

Under the heading *Notice of Warranty*, the label will state that DuPont will not be responsible for losses or damage resulting from applications of Accent when applied to crops previously treated with Counter 20CR applied in a band at planting.

We interpret the new wording to mean you can legally use Accent if Counter 20CR was previously applied only as a band application. However, DuPont will not be responsible for any crop injury resulting from this use and is not

actively promoting this type of application. The Counter 20CR label does not disclaim this type of application. If crop injury is observed after applying Accent to corn previously treated with Counter 20CR in a band, contact American Cyanamid.

The Accent label formerly said not to apply Accent to corn previously treated with Counter, regardless of the formulation; however, the Counter 20CR label did not disclaim this practice. The new wording is intended to allow farmers to use this approach without fear of being taken to court by the EPA, or in some states, by the Attorney General.

While it may now be legal to use Counter 20CR in a band and treat later with Accent, we have only one field season of experience and limited information regarding this practice. We are not recommending this application until we evaluate this practice under more than one growing season.

Alex Martin and Robert Stougaard



UNIVERSITY OF NEBRASKA-LINCOLN, COOPERATING WITH THE COUNTIES AND THE U.S. DEPARTMENT OF AGRICULTURE



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Manage Weeds with Prescribed Burns

Prescribed burning can remove weeds and encourage desirable plants. It can increase forage production, nutritive quality and palatability, and enrich wildlife habitat. A prescribed fire is applied skillfully for a specific purpose and under proper weather conditions.

The way a plant responds to fire depends on the position of its growing point. Growing point position is influenced by stage of plant maturity and plant growth characteristics. Generally, if the growing point is above the soil surface within the flames of the fire front, the plant will be damaged or killed. Desirable perennial grasses tolerate fire when dormant because their growing point is at or below the soil surface.

Control Japanese brome and downy brome by burning after their growing point is elevated in mid to late April. Musk thistle also can be controlled with fire if the growing point is exposed to high temperatures. Plants which reproduce solely by seed, such as eastern redcedar, can be controlled by fire.

Factors to Consider

A fire prescription is a guideline for conducting a prescribed burn. Specific fire prescriptions depend on the factors that influence fire behavior: weather conditions, fuel characteristics, and topography.

The more important weather variables are relative humidity, air temperature, and wind speed. Fuel characteristics that affect fire behavior include the amount, continuity, and volatility of fine (grasses) and coarse (woody) fuel.

High-volatile fuels have high concentrations of volatile compounds, i.e., fats, waxes, oils, etc., that are flammable and capable of producing flaming firebrands. Firebrands are flaming plant debris that are lofted into the air. High-volatile fuels can be burned safely if proper precautions are taken. Eastern redcedar is an example of a high-volatile coarse fuel.

Low-volatile fuels contain small amounts of volatile compounds. They can be burned safely within a wider range of environmental conditions than high-volatile fuels.

Weed Tour Set

The 1991 Nebraska Weed Tour will be held in June. The tour will begin in eastern Nebraska on June 17 and conclude at Scottsbluff on June 20. Details will be provided later.

Improper timing of a fire can reduce plant productivity. In tallgrass prairies, warm-season grasses, i.e., big bluestem, switchgrass, indiagrass, should be burned just before or during growth initiation in the spring. Burning earlier can promote cool-season grasses, such as smooth brome.

Planning the Burn

Proper planning is essential to safe execution of a prescribed burn and should be done well in advance. Plan burn objectives, area to be burned, pre-burn management practices, how to conduct the prescribed burn, and post-burn management practices. Safety is of utmost concern and can be assured with proper planning and coordination.

For more complete information about the use of prescribed burning, refer to the Nebraska Extension Service Publications G88-894, Grassland Management with Prescribed Burning, and EC 90-121, Conducting a Prescribed Burn.

Robert Masters, Range Scientist
USDA-Agricultural Research Service

IPW News

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Lisa Brown Jasa, Editor

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Atrazine Label Cites Methods To Cut Exposure

As of Sept. 1, 1990, all atrazine produced and released for shipment was classified Restricted Use. Several exposure reduction measures were added to the label, including:

1. It cannot be applied through any irrigation system.
2. The maximum amount of atrazine that may be applied to corn and sorghum per year is 3 pounds active ingredient per acre.
3. Application to corn and sorghum more than 12 inches tall is prohibited.
4. Protective clothing requirements are listed.

5. Atrazine products may not be mixed, loaded or applied within 50 feet of any well or sink hole.
6. Proso millet and rangeland uses have been deleted.

The new restrictions do not apply to older labeled product. Older atrazine products may be used in accordance with the label on that container. Only the restrictions on the container label apply to that product. However, we would suggest that the new label directions be followed when using older products particularly as the label relates to environmental protection and applicator safety.

Alex Martin and Bob Stougaard

PLANT DISEASE

Select Quality Seed to Avoid Later Problems

Plant pathologists often list the use of disease-free seed as a means of managing plant diseases. However, seed packages are not labeled or guaranteed to be disease-free. It would be more practical if plant pathologists recommended using the best seed possible. Following are some ways to check for quality seed.

Many plant diseases can be seed-borne either externally or internally. Some can be easily controlled with seed treatments (chemical or heat). Some diseases produce propagules or symptoms that can be seen on the seed (smuts and bunts). Others cannot be easily controlled or noticed. All seed-borne diseases have the potential to reduce stands, yields, and crop quality.

The grower needs to consider the quality and source of the seed to be planted. Seed with high germination rates from a certified seed producer has potentially less disease than bin-run seed from a low yield field. Select a well-adapted variety (hybrid, cultivar, blend) for expected environmental conditions because it may perform better even in the presence of disease. Also, consider using a variety resistant to diseases known to exist in the intended locations.

Several other factors also need to be considered relative to seed selection. Are chemical seed treatments appropriate, economical, and justified? Seed treatments may be a good insurance policy if the seed ends up waiting for good weather after planting and before germination in a wet

field. Or, seed treatment could be just another expense cutting into your profit margin. Has the seed bed been adequately prepared to insure good seed/soil contact and proper planting depth? This can greatly influence the uniformity of the stand.

There are many factors we cannot control at planting such as the weather being too hot, too cold, too dry, or too wet. We can choose the seed, seed treatments, and assess seed bed preparation. If good quality seed is planted properly, the chances for good stand and high yields of a quality product are increased.

Luanne Coziahr

For Your Information

The following publications were recently released by the Department of Agricultural Communications. To order a copy, see your local Extension Office.

CC 358, The Food, Agriculture, Conservation, and Trade Act of 1990: An Overview, Part I — The Commodity Provisions (Titles I - XI).

CC 359, The Food, Agriculture, Conservation, and Trade Act of 1990: An Overview, Part II — The Conservation Provisions (Title XIV).

G79-471, Choosing Corn Hybrids. This publication explains what factors to consider when selecting a corn hybrid and how to obtain recent hybrid test data.

Seed Treatments Offer Some Security

Questions arise every spring regarding the use of fungicide seed treatments for soybeans. What should be used? Does it pay off? How should they be applied?

Although there are no pat answers to these questions, the following guidelines may help producers make more informed decisions.

Growers should be aware that the purpose of most fungicide seed treatments is to prevent attack by seed- or soil-borne fungi. The protection offered by seed treatment fungicides will not offset low germination due to poor quality seed, but it should improve seedling survival once germination and emergence occurs.

Numerous seed- and soil-borne fungi can cause seed decays and seedling diseases if weather conditions favor their development. For most of these fungi, a broad-spectrum seed treatment containing captan, chloroneb, maneb or thiram usually provides satisfactory protection. However, these products do not effectively control early season diseases caused by the water molds (species of *Phytophthora* and *Pythium* fungi) or by *Rhizoctonia*.

If fields have a history of severe seedling diseases caused by these fungi, seed treatment with one of the products listed in the table may mean the difference between a satisfactory stand and one that needs to be replanted.

David Wysong

Fungicide Seed Treatments for Soybeans

Active Compound(s)	Seed Treatment Trade Names
<i>For seedling diseases caused by Rhizoctonia fungi</i>	
carboxin	Vitavax 34
carboxin plus captan	Orthocide Vitavax 20-20 Enhance
carboxin plus terraclor (PCNB)	Vitavax-PCNB
carboxin plus thiram	Vitavax-200 RTU-Vitavax-Thiram Vitavax Pour-on
thiabendazole plus captan	Agrosol Agrosol Flowable
thiabendazole plus thiram	Agrosol T Agrosol Pour-on
thiabendazole plus captan plus terraclor (PCNB)	Rival
<i>For seedling diseases caused by Phytophthora and Pythium</i>	
metalaxyl	Apron-FL Apron Dry Apron 25W
metalaxyl plus captan	Apron + Captan
metalaxyl plus terraclor (PCNB)	Apron-Terraclor Dust Apron-Terraclor

Consider Metalaxyl for Treating Soil, Alfalfa Seed

As a seed treatment metalaxyl is sold as Apron 25W, and as a soil treatment as Ridomil 2E. Both applications are used to prevent *Pythium* damping-off or *Phytophthora* root rot in seedling alfalfa. Establishment is a critical period in the productive life of an alfalfa stand.

Both the *Pythium* and *Phytophthora* species that attack young alfalfa plants are present in the soil. If cool, wet

weather develops shortly after planting, these two pathogens become active and rot the roots and crowns of seedlings. This may result in significant stand loss, usually at considerable economic consequence to the grower.

Although many growers use *Phytophthora* resistant varieties, this resistance may not protect seedlings from

Continued on Page 5

Metalaxyl

Continued from Page 4

infection. This is where Apron or Ridomil has a place in disease management. Application of either of these products will protect seedlings during stand establishment, usually the first three to four weeks after emergence. After this the genetic resistance of the variety will provide longterm protection.

Apron 25W is applied to the seed at the rate of 2 ounces per 100 pounds of seed. It may be applied as a

water-based slurry through standard slurry- or mist-type commercial seed treatment equipment. Ridomil 2E is applied at planting at the rate of 4 pints per acre as a broadcast surface spray in a minimum of 20 gallons of water. If the alfalfa seed was previously treated with Apron 25W, the application rate of Ridomil 2E is reduced to 1 pint per acre. Do not feed green forage or cut for hay for 60 days after treatment with Ridomil 2E.

John Watkins

INSECT SCIENCE

Robert E. Roselle

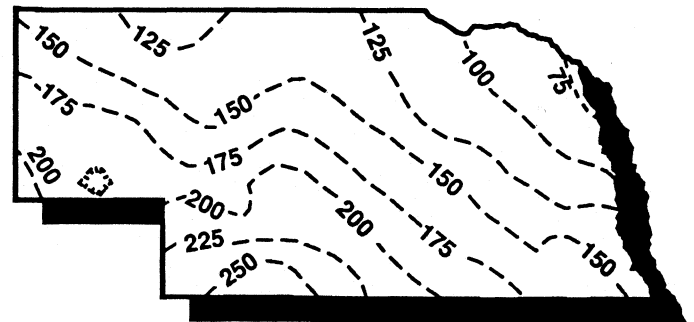
To many Nebraskans the name of Bob Roselle was synonymous with good solid information on pest control. For more than 30 years, Bob served the University and the people as Extension Entomologist in the Department of Entomology.

Among his achievements and legacies are one of the strongest Extension entomology programs in the country, his many friends and followers and a Nebraska agriculture that has prospered in part due to his sound advice and recommendations. Bob served as Project Leader during his entire tenure at the UNL Institute of Agriculture and Natural Resources, receiving several citations and awards for outstanding work. He was most proud of his NCEA Outstanding Specialist Award because it came from his valued colleagues in the Nebraska Cooperative Extension Service. In addition, he received the USDA Superior Service Award in 1964 as well as several others.

Bob was perhaps best known for his role as entomologist on the Backyard Farmer show on NETV, the longest running show on public broadcasting. He retired in 1983.

Robert E. Roselle passed away Feb. 5. He will be missed, but his work will continue as an example of outstanding leadership in Extension entomology programs.

Fred Baxendale



Degree Day Accumulations as of March 18

Still Early for Sampling Weevils

The map indicates the degree day accumulations for the alfalfa weevil as of March 18. We thank Al Dutcher and Ken Hubbard of the Department of Ag Meteorology and the High Plains Climate Center for providing this information. The accumulation of degree days can be used to predict insect development. (See page 3, IPW News 91-1)

We expect that weevil larvae are present in areas with 200 or more degree days. Growers should begin sampling for weevils when 300 degree days have accumulated. Therefore, it is still too early to begin sampling for the weevil in all parts of the state. We will explain the suggested method for alfalfa weevil sampling in the next issue of IPW News.

Steve Danielson

Pesticides: Risk Varies With Entry Routes

Chemicals, by their very nature, are toxic and require care when being used. Learning to manage the risks involved is an important aspect of pesticide use.

There are three routes through which a pesticide enters the body: dermal (skin and eyes), inhalation (lungs) and oral (mouth). Of the three routes, the most common

means is through the eyes and skin. It also is the easiest route to prevent entry.

The risk involved with pesticide exposure is a function of the product toxicity and the potential for

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Pesticides Continued from Page 5.

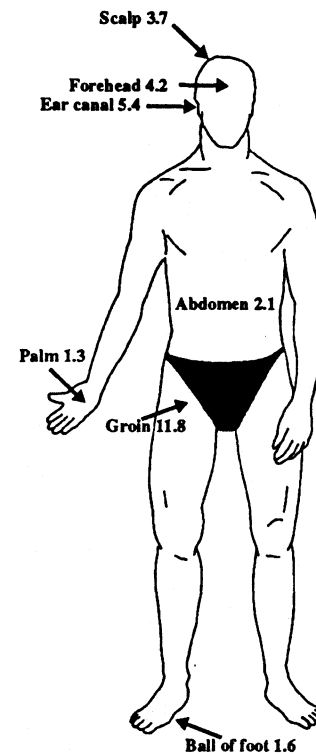
personal exposure. Knowing the toxicity and exposure allows you to minimize the risk.

Using protective clothing and equipment when handling pesticides provides a means for managing much of the risk. The absorption of a pesticide through the skin differs depending on what part of the body the product comes in contact with. The index of dermal pesticide absorption provides an example. The index is based on the value of one for the forearm, a common area of exposure. Other parts of the body are compared to the forearm in their ability to absorb pesticides. (See Figure.)

The forehead will absorb at a rate more than four times faster than if the product contacted the forearm. Remember too, how easy it is to transfer a chemical from one part of the body to another and cause serious effects. If an individual has a pesticide on his or her hands and wipes a sweaty brow, the material can easily be transferred from the hand to the forehead.

Pesticide risks can be managed. Be aware of the toxicity of the materials you are using and reduce potential exposure as much as possible.

Larry Schulze
Environmental Programs



Risk factors for pesticide entry to the body.

Quality Samples Ensure Better Diagnosis

If you have insect or disease problems, a good sample can lead to an accurate diagnosis and proper control recommendations. Following are guidelines for submitting quality plant disease and insect samples.

When preparing the sample, include the following information:

1. Name of collector
 2. Date of collection
 3. Location (geographic and specific site location)
 4. Description of pest problem
 5. Description of plants, plant parts, or objects or materials affected
 6. Degree and extent of damage
 7. Recent history of site or area (cultural, chemical, environmental)
 8. Other information (photographs, maps, sketches)
- Send generous amounts of sample material showing various stages of symptoms and/or injury. If possible, send healthy plant material for comparison and evaluation. Package and label healthy material separately.

Time and extremely high temperatures can seriously reduce sample quality. Refrigeration helps maintain quality. Try to deliver samples as quickly as possible.

Transport all samples in crush-proof or adequately protected containers.

When submitting insect samples, also follow these guidelines:

1. Send several intact insect specimens, and if possible, more than one life stage.
2. To transport live insects, place them in ventilated containers with sufficient host material.
3. Place dead hard-bodied insects in layers of soft cotton or tissue paper. Place soft-bodied insects in leak-proof containers with 70% alcohol.

When submitting plant samples, also follow these guidelines:

1. Place leaves or plant sample on absorbent toweling and place in a loose plastic bag. Do not add moisture.
2. Send whole plants, including roots, if possible.
3. Plant material that has been dead for an extended time may not show clear symptoms. Send material showing the transition zone between healthy and unhealthy.

Please submit your sample through your local Extension Office. Agents have training and expertise and often can provide an immediate response. If not, the sample will be forwarded to the appropriate clinic. For more information on sample collection and preparation, read the Extension publication, NebGuide G76-322, How to Handle Insect and Plant Specimens for Identification.

Luanne Coziahr and Jim Kalisch