

Pest Alert

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NOTE: BEGINNING JANUARY, 2001, PEST ALERT WILL ONLY BE AVAILABLE ON THE WEB. HARD COPY ISSUES WILL NO LONGER BE MAILED. FOR ELECTRONIC NOTIFICATION, PLEASE EMAIL YOUR ADDRESS TO bspm@lamar.colostate.edu

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CHEMSWEEP IN APRIL 2001

Due to the success of the previous Colorado ChemSweep Programs, MSE Environmental, Inc. will be returning for a statewide pesticide collection program in April 2001. This program is to help those involved in agribusiness, including farmers, ranchers, commercial applicators, golf courses, greenhouses and nurseries, dispose of banned and unusable pesticides.

During previous ChemSweep Programs, a total of 84,498 lbs. of waste pesticides has been collected from 265 participants statewide. Examples of waste pesticides that have been properly disposed of include: DDT, chlordane, carbaryl, alachlor, lead arsenate, lindane, dinoseb, calcium cyanide, chloropicrin, etc.

MSE will come to the location of all pre-registered participants, properly package the waste, become the generator and transport the waste for disposal. This program is designed to provide a low cost waste pesticide disposal that meets all State and Federal hazardous waste regulations. The cost to participants will be between \$2.25 - \$2.65 per pound. However, a minimum of \$50.00 (approximately 20 pounds of waste) is required for MSE to make an on-site visit.

Brochures, including registration forms, are available through Colorado State University Cooperative Extension Offices. Questions can be directed to the Colorado Environmental

Colorado State University, U.S. Department of Agriculture and Colorado counties cooperating.
Cooperative Extension programs are available to all without discrimination.

Pesticide Education Program at 970-491-6027, fax 970-491-3862 or e-mail smcdonal@lamar.colostate.edu. MSE can be contacted directly at 1-888-AGCHEM2 (1-88-242-4362).

WEED MANAGEMENT IN SEEDLING ALFALFA

Several herbicides are registered to control weeds in seedling alfalfa. Balan (benefin) and Eptam/Genep are effective against warm season grasses and some annual broadleaves such as pigweed and lambsquarters. These herbicides should be applied preemergence to weeds and must be incorporated immediately after application to prevent herbicide loss from volatility. Be sure to know field soil texture because application rate for these two herbicides is influenced by the clay and organic matter content in soil.

Postemergence herbicides registered for use in seedling alfalfa include Pursuit (imazethapyr), Buctril (bromoxynil) and 2,4-DB. These may be applied alone or as a tank-mix. Buctril and 2,4-DB will control many annual broadleaf weeds if applied when weeds are small. Neither is effective against grasses. Pursuit will control many broadleaf weeds and some grasses (e.g. foxtails, barnyardgrass, crabgrass, and suppression of quackgrass) if applied when weeds are small. Use of a methylated seed oil at 1.5-2 pt/A (e.g. Sun-It II) and liquid fertilizer at 1-2 qt/A (e.g. 28% N, 32% N, or 10-34-0) will dramatically improve weed control from Pursuit. When applying Buctril alone or in combination with 2,4-DB, be certain that alfalfa is in at least the 2 to 3 trifoliolate leaf stage (5 to 6 trifoliolate leaves is better) to avoid injury to alfalfa.

Be certain to read herbicide labels *before* using them to avoid problems related to soil texture, alfalfa growth stage, weed size and growth stage, air temperature, and incorporation. Also, remember that herbicides are only part of good weed management and do not forget cultural aspects to make alfalfa as competitive as possible. For more information, contact George Beck at (970)491-7568 or at gbeck@lamar.colostate.edu or see Fact Sheet 0.706 Alfalfa: Weeds, Diseases, and Insects. (Beck)

IPM AND TECHNOLOGY TRANSFER

The team provided plant pathology support for the CSU Bean Breeding and Crops Testing projects during 2000 by maintaining supplies of plant pathogens (rust, Fusarium, bacteria) used for lab, greenhouse and research station nurseries to screen breeding lines for disease resistance, in addition to disease evaluations and surveys statewide.

Surveys during the hot and dry year of 2000 found few outbreaks of foliar problems until late in the season when some rust was detected in eastern Colorado and western Nebraska on susceptible varieties of pintos and great northern. Follow-up surveys during the spring of 2001 will monitor early-season outbreaks of overwintered rust on volunteer beans that could threaten new crop fields planted to susceptible varieties. This information will be assimilated within the disease forecasts, pest reports and scouting calendars on the CSU VegNet web site (www.csuag.com) and DTN satellite pages (Colorado Information – activated by DTN at your request).

The Fall 2000 Issue of *Colorado Bean News* and CSU web site (archived at www.csuag.com) contained summary graphs of weather data from 2000 and 1999 at various bean production sites in Colorado, Kansas and Nebraska. The Colorado equipment is part of COAGMET – a network of remote electronic weather stations operated with help from the CDBAC and other commodity groups, the CSU Agr. Exp. Station, and the USDA/ARS. Plans for 2001 include annual maintenance, some expansion of the network coverage, and daily access to weather data via the web site.

Colorado, Nebraska, Wyoming and USDA/ARS scientists (Central High Plains Dry Bean & Sugar Beet Group) are planning to update and reprint their popular *Dry Bean Production and IPM Bulletin* later in 2001 for distribution during 2002. Look for their latest publication on Sugar Beets.

Summary of Bean Disease IPM Strategies:

- Rotate out of dry beans for at least 2 years.
- Eliminate bean debris and sources of volunteer beans during the fall of 2000 and spring of 2001.
- Plant high quality, certified, treated seed of disease resistant varieties, if available, and suitable for your market needs and seed quality demands.
- Follow recommended production practices to avoid stress from extremes of moisture, temperature, and soil compaction.
- Manage water and fertilizer inputs to provide adequate, but not excessive components for the crop need to avoid excess canopy development; if Rhizobial inoculants are used, do not over-fertilize.
- Carefully scout fields to detect foliar infection as early as possible, get confirmation of disease diagnosis from appropriate experts.
- Monitor reports on weather patterns, disease forecasts, and confirmed sightings in your region via the CSU VegNet (www.csuag.com).
- When infection is confirmed in or near your field, implement a timely program of fungicides and bactericides with protectant and/or systemic modes of action. Rotate appropriate fungicide chemistry, apply labeled rates, use an adjuvant, and stay within recommended spray intervals.
- Adjust combine at harvest to maximize seed quality, and reduce loss of seed, which can overwinter and germinate next spring to produce volunteer plants.
- Thoroughly incorporate each season's crop debris + pathogens to reduce carryover and potential disease pressure the following season. Rely upon cultivation and herbicides in next year's rotation crop to reduce volunteer bean emergence and possible infection by pathogens, which can then be spread to next year's host crop by wind, water, implements and animals.

(Howard Schwartz, Mark McMillan & Kris Otto, Fort Collins)

COAGMET – Weather Data Helps Colorado Agriculture

COAGMET is an acronym that stands for Colorado Agricultural Meteorological Network. For a decade now, an informal but effective partnership has been established involving several departments and agencies at Colorado State University, the U. S. Department of Agriculture, the Northern Colorado Water Conservancy District, commodity groups [including the Colorado Dry Bean Administrative Committee], and other individuals and organizations committed to Colorado agriculture. These groups are working together to collect and share weather data.

And why this effort? Weather affects almost every aspect of agriculture. It is easy to think that the only weather information that farmers need is an accurate forecast for the next day, the next week, or even the entire season. Yes, that would be nice, but it is also important to accurately document the weather conditions as they occur. Detailed, accurate and timely data on current and past weather conditions are very important for on-farm decision making and to support research leading towards a more profitable and sustainable agricultural economy.

COAGMET consists of a network of automated weather stations throughout Colorado, and the computer system for collecting, archiving, displaying, and disseminating the data. The basic elements observed by COAGMET weather stations include precipitation, temperature, humidity, wind speed, wind direction, solar radiation, and soil temperature. Currently most of these weather stations transmit data summaries for one-hour increments to the central processor at Colorado State University once daily just after midnight. Most stations are equipped with cellular phones.

COAGMET is a great example of what can be accomplished with the help of cooperation and collaboration. Back in the 1980s, Dr. Harold Duke and Mike Blue of the Water Management Unit of the USDA-ARS were setting automated weather stations to aid research projects on water use efficiency. At the same time, Dr. Howard Schwartz and Mark McMillan with CSU's Dept. of Bioagricultural Sciences & Pest Management were setting up weather stations to help study insects and diseases affecting crops in Colorado. The two groups decided to work together and by 1989 the foundations for COAGMET were in place. The Colorado Climate Center joined the team during the 1990s. Cooperative Extension, the Colorado Agricultural Experiment Station, and several commodity groups [dry bean, onion, potato] are also a part of the team.

Weather data from COAGMET are being used in several ways, one of which is irrigation scheduling. According to Dr. Duke, "Meteorological data such as COAGMET, has allowed an estimated 10% of U. S. irrigators to reduce their water applications an estimated average of 10 % per year, saving some 160 billion gallons of water each year."

Dr. Schwartz has demonstrated that careful monitoring of weather conditions can help producers anticipate insect and disease outbreaks, and reduce the quantity and increase the effectiveness of pesticide application, which can save tens of thousands of dollars for producers each year.

COAGMET is linked to Colorado State University's VegNet. VegNet, an outgrowth of years of work by Schwartz and McMillan, is an on-line resource maintained by CSU Agricultural Experiment Station and Cooperative Extension in concert with various commodity groups including dry bean, onion and potato growers; [in addition to various agribusiness entities including pesticide companies who support Integrated Pest Management approaches.] Crop and disease models can be run directly using COAGMET data.

The COAGMET website is: <http://ccc.atmos.colostate.edu/> then click on COAGMET. You can also reach this site and VegNet at www.csuag.com. Summary information is also posted on DTN satellite systems.

Excerpts from article in *Colorado Climate*, Summer 2000 – Vol. 1, No. 3
by Dr. Nolan J. Doesken, Asst. State Climatologist, Colorado State University, Fort Collins

CONTRIBUTORS

K. George Beck, Extension Weed Specialist, Perennial and Range (970) 491-7568;
gbeck@lamar.colostate.edu

William M. Brown, Extension Plant Pathologist, IPM and General (970) 491-6470;
wbrown@lamar.colostate.edu

Whitney S. Cranshaw, Extension Entomologist, Urban and Horticulture (970) 491-6781;
wcransha@ceres.agsci.colostate.edu

Sandra McDonald, Extension Specialist, Environmental and Pesticide Education (970) 491-6027;
smcdonal@lamar.colostate.edu

Scott J. Nissen, Extension Weed Specialist, Row Crops (970) 491-3489;
snissen@lamar.colostate.edu

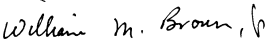
Frank B. Peairs, Extension Entomologist, Field Crops (970) 491-5945;
fbpeairs@lamar.colostate.edu

Howard F. Schwartz, Extension Plant Pathologist, Row and Vegetable Crops (970) 491-6987;
hfspp@lamar.colostate.edu

Philip H. Westra, Extension Weed Specialist, Row Crops (970) 491-5219;
pwestra@ceres.agsci.colostate.edu

Where trade names are used, no discrimination is intended, and no endorsement by the Cooperative Extension Service is implied.

Sincerely,


William M. Brown, Jr.
Extension Plant Pathologist