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Pest Alert

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**The Pest Alert is now found on the World Wide Web at
www.colostate.edu/programs/pestaalert**

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PEST ALERT GOES TO WEB

Yes, the time has come for us to move the Pest Alert to the web. Over the next year we will be making the transition and by January 2001 we'll only be putting the Pest Alert out on the web. As I mentioned in the January issue, there are several reasons for doing this.

Use of the web allows the Pest Alert to be more timely and of immediate use.

It will cost less to produce and thus be free to anyone wishing to access it.

It will allow more use of illustrations and even color, which, at the present time, has not been possible.

In the transition period we will be continuing to put out a hard copy to those subscribers presently on our list. No new subscriptions will be accepted. We will also be putting Pest Alert on the web at <http://www.colostate.edu/programs/pestaalert>.

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

We realize that there may be a few interested persons who do not have access to the web. We recommend that they contact the local extension office, library, Kinko's or other computer services resource to access the Pest Alert. (Brown)

EVERY YEAR IS A GOOD YEAR FOR WEEDS!

The dry, open winter of 1999-2000 delayed the emergence of many weeds. While winter annual weed populations are not as high as in some years, there always seems to be enough moisture for flixweed, blue mustard, or downy brome to be a problem in alfalfa, small grains, and in non-crop areas. The first flushes of kochia have arrived and it will not be long before spring germinating noxious weeds will begin to appear. Leafy spurge often emerges in February along the Front Range, but the dry weather delayed its emergence until late March. This may give false hope that there will be fewer weeds to manage in this year. Beware however, weeds, especially noxious weeds, always are troublesome and one should be finished designing weed management plans for 2000 so they can be implemented in a timely fashion. Don't be fooled, every year is a good year for weeds and droughty years may favor deep-rooted perennial noxious weeds even more because they invariably seem to find adequate soil moisture. For more information, contact George Beck (970-491-7568; gbeck@lamar.colostate.edu). (Beck)

COLORADO'S WEED FREE HAY, FORAGE, AND MULCH PROGRAM

In 1993, the Colorado Legislature passed a new law, the Weed Free Forage Crop Certification Act (35-17.5-103 C.R.S.). This law provides a mechanism to prevent weed seed (and other propagative parts) dissemination in hay, forage, and mulch. It is a voluntary program in which growers may participate and is administered by the Colorado Department of Agriculture.

In Colorado, the U.S. Forest Service and BLM require that all hay and forage brought onto federal lands under their administration be certified as weed-free. These products will bring a premium in the marketplace and this program represents a good business opportunity for progressive growers. Those interested in certifying a field should contact the Colorado Department of Agriculture in Lakewood at (303) 239-4140. Fields must be inspected 10 days before each cutting where certification is desired.

This is an excellent program and will save taxpayers significant future expenses relative to noxious weed management. For more details, contact Don Gallegos at the Colorado Dept. of Agriculture or George Beck at CSU, (970) 491-7568. (Beck)

NEED TO BEGIN SCOUTING WHEAT

We are expecting to see a lot of wheat virus occurrence this year and it is already starting. We now have confirmed soil borne mosaic (SBMV) from the Stratton area and wheat streak mosaic (WSMV) from the Yuma area. The laboratory is getting set up to support a more intensive wheat virus survey this season. We are especially interested in the occurrence and distribution of High Plains Disease (HPV).

To help us get a handle on the virus situation, growers and others in the field need to be out there now scouting. Scouting is a critical component of wheat IPM. Getting the right I.D. on

a field problem is essential to facilitate the most effective and economic control. Sometimes the I.D. will only help on the next time around in avoiding a problem.

In Colorado the fungus diseases are not a critical component in the disease complex. It is the viruses that cause us the most loss. Kansas is already reporting barley yellow dwarf (BYDV) problems. With the high oat-bird cherry aphid populations we had last fall, it is more than likely we will also see this virus as the weather warms up. Barley yellow dwarf virus occurs in patches or along fencerows because it is transmitted to wheat by aphids. The aphids usually move into a field from the edges from adjacent crops or weeds. In some instances they will land in the field and then a wingless stage will move the virus out forming a patch-like diseased area of wheat plants. Symptoms include stunting and yellow or purple discoloration of leaf tips on the upper leaves. In contrast, remember that nitrogen deficiency was characterized by yellowing of the lower leaves. Also in many cases the BYDV discoloration will move from the tip of the leaf along the margins initially forming a chevron like symptom.

Wheat streak mosaic virus symptoms a much more variable, forming yellow streaks, spots or yellowing of the leaves. A diagnosis can sometimes be made by the distribution of the symptoms in the field. With the leaf mosaic pattern in the leaves being the most severe the closer to volunteer wheat. All varieties are subject to attack, but TAM 107 and Jagger more tolerant. A variety like Tomahawk can really be damaged.

Kansas has already report leaf rust in some of their southern counties. Also the national rust lab reports high levels of leaf rust in Texas. In the past we have not been able to make fungicide applications on Colorado wheat (TAM 107) pay for themselves in increased yield. Certainly yields will be improved with fungicide applications, but the cost is more than the gain - especially if low prices continue.
(Brown)

HOW TO SEND IN A WHEAT SAMPLE

The Kansas plant clinic had a few suggestions for getting the best results when sending in wheat samples through the mail. It reminded me to pass along the same reminder to you. First send it no later than Wednesday during the week so that it arrives in the lab by Friday. If you send the samples later than that they frequently get caught up in the mail and end up sitting in the mailroom over the weekend. Overnight mail samples should be sent by Thursday or earlier in the week.

Package samples in ziplock bags, then boxed for mailing. Do not add water. Always include a completed plant clinic sheet. The information accompanying the specimen is sometimes as important as the specimen. This is especially true when abiotic problems are involved. It's important that the lab receives as fresh a sample as possible to provide the most accurate diagnosis. (Brown)

START NECROTIC RING SPOT CONTROL IN KENTUCKY BLUEGRASS

Necrotic ring spot (NRS) is a severe disease of Kentucky bluegrass in home lawns in Colorado. Newer Kentucky bluegrass varieties tend to be better adapted to heat stress and lower mowing heights. Some of the newer varieties also have resistance to some fungal diseases. But so far there is little to no information on resistance to NRS. The NRS fungus is

most active in the cooler part of the growing season and in a year where we have not experience extremely low temperatures may be getting an earlier start. This along with the lack of winter moisture may set us up for a severe problem in Front Range bluegrass lawns.

Symptoms of NRS become the most apparent when temperatures begin to go up in June. They generally occur in the same spot each year. First as small patches in the turf, 2 to 6 inches in diameter. First as a lighter green but quickly foliage changes to a dull reddish-brown, tan, and finally a straw color. In the final stages of the disease, blighted areas of turf form throughout the lawn. NRS patches generally form circles up to 2-3 feet in diameter with healthy grass occurring in the centers of patches which results in a characteristic "frog-eye" pattern.

As the summer progress, root growth is slowed by high soil temperatures, and plants cannot rapidly replace diseased roots. The resultant stress on the infected plants prevents adequate water uptake to the foliage and the plant dies.

NRS is very difficult to control once it is established. The best approach is prevention with an integrated cultural practices program that will prevent stress development and thus suppress disease development. The grass should be maintained in a vigorous, but not over stimulated, growing condition. A balanced fertilization program is important.

Avoid excessive nitrogen fertilization in the early spring. Split nitrogen applications throughout the season with a higher percent of the nitrogen fertilizer applied in late summer or early fall. Use acidifying nitrogen sources such as ammonium sulfate. Slow-release nitrogen fertilizers should be used for spring fertilization to avoid large burst of growth.

Thatch management is critical. It is important in suppressing disease development. Lawns should be core-aerated yearly. In instances where NRS is established core-aeration in both spring and fall may be necessary. Also equally important is watering and mowing practices. If considerable root damage has already taken place, it will be necessary to lightly syringe infected areas during the day to make up for the inability of the roots to pick up water. Mowing heights should be kept at 2 ½ to 3 inches. This provides protection for the growing points of the turf from drying and heat.

Fungicide applications can help in remedial situations but without enhanced cultural practices will not provide long-term solution. Timing of fungicide applications is critical for effective control. Make the first preventive application in spring when the soil temperature at a depth of 2 inches remains above 65 degrees F. This varies along the front range, but generally the first application should be made mid to late-April and/or early-May depending on the year. Dr Tisserat in Kansas suggests the first application for summer patch (a different disease not known to be in Colorado) about 2-3 weeks after the crabgrass germinates with a second application about a month after the first. This will also depend on the fungicide being used.

Some fungicides that can be used are azoxystrobin (Heritage), propiconazole (Banner and others), triadimefon (Bayleton and others), and fenarimol (Rubigan). We so far have only had results with fenarimol but are now testing the azoxystrobin (Heritage). From all indications it should do well.

NOTE—Fungicides without good cultural practices will not provide long term management of NRS. Good cultural practices are essential to properly correct and prevent future NRS development. (Brown)

OTHER SPRING TURF DISEASES

As the grass greens up we will begin to see some leaf diseases on Kentucky bluegrass. One of the first leaf spot diseases is common leaf spot caused by the *Helminthosporium* (syn *Drechslera*) fungus. This leaf spot shows a small purple lens-shaped spot on the leaves. Centers of the spots turn light gray or tan and are bordered by a dark band. The fungus may continue to colonize the crown area during persistently cool weather (65-75 F) and result in death of the plant, in what is frequently called the melting out stage. Most newer bluegrass varieties are reported to be resistance to this disease. It is the older, common types of bluegrass like Marion that is damaged the most.

To manage melting out use a good cultural management plan. Over-seed with good quality seed of known resistant varieties. Avoid excessive nitrogen applications in the spring. Move the mowing height up to 3 inches in late spring.

Try to decrease the amount of shading and increase air circulation with selective pruning of shrubs and trees.

Under Colorado conditions, fungicide applications are not normally necessary for this disease on home turf.

Powdery mildew will show up in partially shaded areas, next to tree trunks, hedges or on the north sides of houses or other structures. The fungus shows as a white powdery fungal growth on the leaf surface. Under Colorado conditions plants are seldom damaged much and almost never die. Powdery mildew is more of a curiosity than a problem.

Like common leaf spot it is most often seen on older varieties. To control mildew, try to improve light and air penetration. Development of powdery mildew indicates that that area is not suitable for grass. It may be necessary to remove trees or other plants or use different ground covers for these areas. Also a deck or patio might be the best way out.

Ascochyta leaf spot is also a leaf spot disease that is being increasingly noted by homeowners and turf care practitioners. This disease can be pretty much found though out the season. It is again a disease more associated with stress situations. The most characteristic symptom is a dying back of the leaf from the tip resulting in a pinched looking area between the healthy and infected areas of the leaf blade.

As with the other 2 disease noted above, improved cultural practices are generally sufficient to give fairly good control of this problem.

Because of the semi-arid nature of Colorado's environment, leaf diseases are rarely important to home or recreation turf. Good cultural practices will prevent most of the leaf diseases or at least suppress them to non-damaging levels. Mow frequently and at a high cut. (Brown)

FIRE BLIGHT AND FUNGUS DISEASE TREE SPRAY TIME IS NOW

Apples, crab apples and some ornamental relatives of these plants are susceptible to fire blight and several fungus diseases. Fungus disease such as powdery mildew, scab and rust are common on the Front Range. Most of the apple and crab apple varieties are in full bloom now. Now is the critical period for controlling the fire blight bacteria and scab, rust and mildew caused by different fungi.

If your trees have a history of any of these diseases you need to develop a spray program to protect susceptible varieties. These sprays should go on at 7- to 10-day intervals (depending on the types of sprays you are using) at least through mid-May. If you have had problems with fire blight, consider streptomycin applications during bloom but alternate them with a copper-based fungicide.

Juniper-Hawthorn rust, Juniper-Apple rust is also in their infection periods as the leaves of hawthorns, apples and other susceptible host begin to expand. These rusts have to have the juniper host available. Spray application timing can be based on when the galls on the junipers begin to expand and turn yellow to orange. It is at this point that the spores that will infect the apples and hawthorns are being formed and spreading to the newly emerging leaves on the summer host.

Some control can be accomplished by removing the galls on the junipers, if there are not too many. Separation of the junipers and apples and hawthorns can help but spores can be carried for some distance on the winds. In some instances homeowners can remove the junipers to facilitate lessening the amount of fungus spores in the immediate area.

Whatever fungicide is used, read the label carefully and follow the directions. (Brown)

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. (Beck)

DANDELIONS IN ESTABLISHED ALFALFA

Dandelion populations are very high this year in many situations including established alfalfa. Typically, if a dandelion problem is significant in an established alfalfa field, it may need to be rotated to a new crop. Often dandelion population increases are indicative of alfalfa stand decline. However, this year dandelion seems to be fairing rather well even in good stands of alfalfa.

Pursuit plus 2,4-DB will control dandelion reasonably well. Consult the label for rates and be sure to watch the temperature restrictions for 2,4-DB. It may be too late to control dandelion for the first cutting, but if this weed is a problem in your field, consider spraying Pursuit plus 2,4-DB immediately after the first cutting. (Beck)

VEGNET = POTATO, ONION & BEAN TECHNOLOGY TRANSFER

Get the latest information on weather patterns, plant development and pest alerts that can affect your crop and productivity in Colorado and Nebraska. Colorado State University is pleased to announce that the popular VegNet program will be available again as a resource for crop consultants, vegetable producers and others involved with the industry during 2000. The dry bean portion of this program will be supported in part by the Colorado State University Agricultural Experiment Station & Cooperative Extension, **Colorado Dry Bean Administrative Committee, Nebraska Dry Bean Commission**, Novartis Crop Protection, BASF, Elf Atochem NA, Agtrol International, Rohm & Haas, Zeneca Ag Products, and American Cyanamid. Other vegetable segments (onion, potato) will be supported also by the CSU Integrated Pest Management Program, Colorado Onion Association, Arkansas Valley Growers & Shippers Association, and the Colorado Potato Administrative Area III Committee.

Environmental Monitoring and Disease Forecasting programs will rely upon the **COAGMET** (Colorado) and **High Plains Climate Center** (Nebraska) remote electronic weather station systems that generate daily macroclimatic weather data accessible via internet for growers and researchers alike. The regional data has been very reliable for disease forecasting efforts during recent years for early blight and late blight of potato, rust of bean, and purple blotch of onion. CSU personnel continue to adapt and adopt additional pest monitoring and forecasting models for these crops and others throughout Colorado; including initial testing of Cercospora Leaf Spot of Sugar Beet in eastern Colorado during 2000.

The 2000 **VegNet Program** and information will be available in 3 formats for easy access:

- **Web Site** <http://www.colostate.edu/Orgs/VegNet/> or via www.csuag.com
- **DTN Satellite** 800-485-4000 to subscribe, activate the Colorado Information Section
- **Pest Alert** Weekly newsletter available from Colorado State University, available as a mail subscription or via the internet at <http://www.colostate.edu/programs/pestalert/>

The success and utility of the VegNet program is directly **dependent upon your input**, especially with reports regarding crop development, sightings of rust, late blight, early blight,

bacterial diseases and other pests, or damage from storms. Your report will be handled confidentially, and descriptions of affected areas will not include specific field locations or grower names. The purpose is to share information on trends and especially early alerts so that others in the vicinity can scout their fields to decide if a production or pest management strategy should be implemented on a more timely basis.

Please share reports on pest sightings or other concerns with Howard Schwartz, Mark McMillan and Joe Hill (potato emphasis) at CSU. Our program personnel and students will be involved with periodic surveys and research plots throughout the region, and look forward to interacting with vegetable producers and industry personnel during 2000. In addition, our potato project continues to communicate closely with complementary efforts and expertise available in Nebraska (Dr. Alex Pavlista) and Wyoming (Dr. Gary Franc).

Please collect diseased plant samples for diagnostic confirmation and to help us monitor pathogen variability, especially for potato early blight and late blight. Enclose diseased samples within moist paper in an UNSEALED plastic bag and mail to H. F. Schwartz. If suspected early or late blight samples are sent to the CSU Disease Clinic, have them notify our project for payment of diagnostic expenses.

Thank you again for your support and participation.

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POLICY PAPER ON ROLE OF USE-RELATED INFORMATION PUBLISHED

On July 14, 1999, EPA published a Federal Register notice announcing the availability of a draft document for public comment-The Role of Use-Related Information in Pesticide Risk Assessment and Risk Management. This paper is being released for a 60-day public comment period, as part of a process developed in conjunction with the Tolerance Reassessment Advisory Committee (TRAC) to ensure that EPA's policies related to implementing the Food Quality Protection Act (FQPA) are transparent and open to public participation. The paper announced in this notice summarizes the types of use-related information used by EPA in risk assessment and risk management, where the data come from, and how the Agency employs these data.

The Federal Register notice includes questions on which EPA is particularly seeking comment. The paper is available through the OPP Docket and on the Internet at:

www.epa.gov/pesticides/trac/science/.

Comments can be submitted in person, by mail, or electronically as described in the Federal Register notices. The Federal Register notice is available electronically at

www.epa.gov/fedrgstr. (McDonald)

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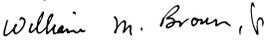
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Where trade names are used, no discrimination is intended, and no endorsement by the Cooperative Extension Service is implied.

Sincerely,


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