Cooperative Extension: Colorado State University, Fort Collins, Colorado 80523

Pest Alert

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NOTE: BEGINNING JANUARY, 2001, PEST ALERT WILL ONLY BE AVAILABLE ON THE WEB.
FOR ELECTRONIC NOTIFICATION, PLEASE EMAIL YOUR ADDRESS TO bspm@lamar.colostate.edu. (Check out our complete web site!)

SUMMARY OF BEAN DISEASE IPM STATEGIES

1. Rotate out of dry beans for at least 2 years.
2. Eliminate bean debris and sources of volunteer beans during the fall of 2000 and spring of 2001.
3. Plant high quality, certified, treated seed of disease resistant varieties, if available and suitable for your market needs.
4. Follow recommended production practices to avoid stresses from extremes of moisture, temperature, and soil compaction.
5. Manage water and fertilizer inputs to provide adequate, but not excess components for the crop need to avoid excess canopy development.
6. Carefully scout fields to detect foliar infection as early as possible, get confirmation of disease diagnosis from appropriate experts.

7. Monitor reports on weather patterns, disease forecasts, and confirmed sightings in your region via the CSU VegNet.

8. When infection is confirmed in or near your field, implement a timely program of fungicides and bactericides with protectant and systemic modes of action. Rotate appropriate fungicide chemistry, apply labeled rates, and stay within recommended spray intervals.

9. Adjust combine at harvest to maximize seed quality, and reduce loss of seed which can germinate next spring to produce volunteer plants.

10. Thoroughly incorporate each season's crop debris + pathogens to reduce carryover and potential disease pressure the following season. Rely upon cultivation and herbicide 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.

SUMMARY OF ONION DISEASE IPM STATEGIES

1. Rotate out of onions for at least 2 years.

2. Eliminate onion debris, culls and sources of volunteer onions during the fall of 2000 and spring of 2001.

3. Plant high quality, certified, treated seed and clean transplants of disease resistant varieties, if available and suitable for your market needs.

4. Follow recommended production practices to avoid stresses from extremes of moisture, temperature, and soil compaction.

5. Manage water and fertilizer inputs to provide adequate, but not excess components for the crop need to avoid excess canopy development.

6. Carefully scout fields to detect foliar infection as early as possible, get confirmation of disease diagnosis from appropriate experts.

7. Monitor reports on weather patterns, disease forecasts, and confirmed sightings in your region via the CSU VegNet.

8. When infection is confirmed in or near your field, implement a timely program of fungicides and bactericides with protectant and systemic modes of action. Rotate appropriate fungicide chemistry, apply labeled rates, and stay within recommended spray intervals.

9. Complete drying of tops and necks prior to harvest is essential for good bulb curing and to reduce or eliminate spore spread from infected foliage to bulbs. Monitor storage facilities for evidence of hot or wet spots, and rely upon air movement to dry bulbs and reduce decay of onions that are known to be infected by pathogens.

10. Thoroughly incorporate each season's crop debris + pathogens to reduce carryover and potential disease pressure the following season. Rely upon cultivation and herbicide in next year's rotation crop to reduce volunteer onion emergence and possible infection by pathogens which can then be spread to next year's host crop.

SUMMARY OF POTATO DISEASE IPM STATEGIES

1. Rotate out of potatoes for at least 2 years.
2. Eliminate potato debris, culls and sources of volunteer potatoes during the fall of 2000 and spring of 2001.
3. Plant high quality, certified, treated seed of disease resistant varieties, if available and suitable for your market needs.
4. Follow recommended production practices to avoid stresses from extremes of moisture, temperature, and soil compaction.
5. Manage water and fertilizer inputs to provide adequate, but not excess components for the crop need to avoid excess canopy development.
6. Carefully scout fields to detect foliar infection as early as possible, get confirmation of disease diagnosis from appropriate experts.
7. Monitor reports on weather patterns, disease forecasts, and confirmed sightings in your region via the CSU VegNet.
8. When infection is confirmed in or near your field, implement a timely program of fungicides and bactericides with protectant and systemic modes of action. Rotate appropriate fungicide chemistry, apply labeled rates, and stay within recommended spray intervals.
9. Complete vine kill 3 weeks prior to harvest is essential for good skin set and to reduce or eliminate spore spread from infected foliage to tubers. Monitor storage facilities for evidence of hot or wet spots, and rely upon air movement to dry tubers and reduce decay of potatoes that are known to be infected by pathogens.
10. Thoroughly incorporate each season's crop debris + pathogens to reduce carryover and potential disease pressure the following season. Rely upon cultivation and herbicide in next year's rotation crop to reduce volunteer potato emergence and possible infection by pathogens which can then be spread to next year's host crop. (Schwartz)

FALL IS A GOOD TIME TO MANAGE NOXIOUS WEEDS

Noxious weeds, AKA invasive weeds, are an insidious problem in Colorado and throughout western U.S. Noxious weeds displace native plants and disrupt evolved ecosystem processes. Infestations of noxious weeds in pastures, rangeland, and other natural areas readily disperse onto adjacent land causing further problems and eventually disperse into agronomic fields where they decrease crop quality and yield. Weeds will spread – that is their nature. Prevention is the most powerful form of weed management and the cheapest and easiest weed to manage is the one you do not have. One of the best ways to prevent weeds from spreading is to control existing infestations.

Fall is a good time to exert noxious weed control. Herbicides are the primary tool of choice in the fall. Biological control agents generally have finished preying on weeds by fall and most

grazing livestock will not consume weeds this time of year. Mowing and hand pulling are most effective when practiced before weeds go to seed. Biennial weeds, such as musk thistle, are in the rosette growth stage (except those setting seed) and can be readily controlled with herbicides. Perennial weeds, such as Canada thistle, Russian knapweed, and leafy spurge, also are very susceptible to fall-applied herbicides. The physiology of these latter weeds changes as the daylight continues to shorten and temperatures decrease. It is not fully understood how these changes increase their susceptibility to herbicides applied in fall, but land managers can seize the opportunity and take advantage of our empirical knowledge base.

Late fall also is the best time to seed competitive perennial grasses that will help to reclaim infested areas. Often times noxious weed infestations form monocultures, or nearly so, and if weed populations are depleted by some control method, a disturbed area will be left behind. Weeds readily invade disturbed areas and the best way to combat this weedy attribute is seed the area with desirable plants. A dormant seeding done in late October or early November will allow desirable seeds to imbibe soil moisture and be ready to emerge early the following spring to establish and compete with recovering weeds.

The growing season is not finished, so make your fall noxious weed management plans and take advantage of their susceptibility to control methods this time of year. For more information, contact George Beck (970-491-7568) (Beck).

KARNAL BUNT VERSUS COMMON BUNT

Well Karnal bunt (KB) is still a hot political potato in the wheat industry. I am off to a KB summit in Oklahoma City tomorrow and Wednesday (it continues on Thursday but I am scheduled elsewhere). There is certain to be all sorts of active, interesting and unfortunately, passionate discussion. It is still a political and market problem and not one resolvable by science.

At our American Phytopathological Society (APS) meeting in Salt Lake City week before last, we had a special session to discuss the current KB situation. While there are many things we do not know about the pathogen and the disease it causes, there is general agreement that the disease is not a significant biological threat to health, quality or yield under U.S. conditions. It was pointed out that the outbreaks in North Central Texas this year were severe enough to cause darker grain and smell. This is what some are using as a justification to continue quarantines and suppression activities. Cow residue!

Well you get worst than what was in Texas (we did in Colorado this year) if you save your own seed and do not treat it for common bunt. Common bunt is probably more of a threat to wheat growers than KB is. But most growers are up-to-date enough to not use older bin run seed and if they do use bin run seed at all, then treat it with an appropriate seed treatment. KB can be managed.

In the policy statement put out by APS in 1996, it stated that 1) KB could not be successfully quarantined----this year proved that; 2) KB could not be eradicated----this year proved that as well, fields that had been out of wheat when wheat was grow again it was even worse in a couple of instances. 3) APHIS should de-regulate and move to a management mode. This is what most in the research community and US Wheat believe.

Needless to say it will be an interesting meeting and I will get back to you. In the mean time---please use certified seed, but if you must use bin run seed then you sure better treat it.

Unfortunately Karnal bunt is much like the Alar crisis (if some of you remember that). The only relevant truth that came out of that is best summed up by a comment from the Kiplinger Newsletter that I have not been able to forget. It goes something like this “In the world of public policy making in a Democratic society there is no truth-only perception”. As long as we adhere to an unfortunate mistake we made when we first put the quarantine on Mexico the rest of the world will too. It is time to bite the bullet and de-regulate Karnal bunt. Because if we don’t it will get us, even in Kansas, Dorothy. (Brown)

NOW IS THE TIME TO TAKE CARE OF VOLUNTEER WHEAT

As many of you know wheat streak mosaic virus and its wheat curl mite vector carry over most effectively on volunteer wheat. While there are other sources such as corn, CRP grasses, etc., volunteer wheat is still the primary source of the virus and the vector. When we get the moisture that we have had recently some growers are tempted to get in there and plant early. This in turn creates a very good opportunity for the virus to be moved into the emerging wheat at a very early stage and subsequently create a potential problem for both winter survival and/or good growth in the spring.

It is critical to mechanically or chemically knock down the volunteer growth before new wheat seedlings begin to emerge. This is essential for preventing not only wheat streak mosaic but also the other viruses and some insects, such as Russian wheat aphid, from having the opportunity to move into the new crop. Now is the time to be a good neighbor and knock down your volunteers. Just because we did not have a wheat streak mosaic this past season does not mean we will not this coming one. (Brown)

GOSS’S WILT REPORTED SHOWING IN THE NORTHEAST OF STATE

We have had several reports and some samples come in from the Wiggins/Fort Morgan area with mild Goss’s wilt symptoms. Bill Curran (Pioneer) had samples checked out in their laboratory and reports that they were positive for the bacterium that causes the disease. We have checked only for the bacterial streaming generally associated with the bacteria and while seeing some, it has not been as vigorous as we generally associate with Goss’s wilt. The problem is being observed on varieties that are normally considered to be resistant or at least more tolerant to Goss's wilt. This may be why we are not seeing the vigorous symptom development and bacterial streaming historically associated with the disease.

I would like to have any comments and samples that field staff, growers and others encounter sent in to us. It is very interesting that this is showing up comparatively late in the season and in such an atypical pattern. (Brown)

RUST DISEASES IN TURF CAN BE A PROBLEM IN THE FALL

Plant diseases can be problems for turf growing under stressful conditions. Sod field regrowth after harvest is a period when the turf is especially susceptible to rust diseases in the fall with some rain or heavy dew. Curt Swift took a series of photographs at a sod farm on Saturday,

September 8, on the west slope. The photos clearly demonstrate the severity of leaf rust under such conditions. Curt has put the photos on the Internet. You can check them out at **http://www.colostate.edu/Depts/CoopExt/TRA/PLANTS/kbgrust.html**

Severely infected turf is thin, and orange to yellow in color. Other rusts can cause turf to appear red or brown. Early symptoms of the disease appear as light yellow flecks on leaves or stems depending on whether the rust is a leaf rust or stem rust. Note that there are more that 34 reported rusts on turf grass types. These will vary dependent on turf type, environment and location. Rust spots enlarge and elongate parallel to the veins in the stem or leaf. As the fungus matures, spores are produced which erupt through the leaf tissue creating pustules. These pustules are called uredia; the exposed spores are urediospores. The urediospores give the fungus its characteristic rust color, hence its name. Lawnmowers and other equipment used on rust infected turf will be coated with these rust-colored spores. Unless equipment is properly cleaned it can spread spores through the field.

Control

Turf should be provided proper care to avoid stress. This includes attention to water, fertilizer, and mowing frequency. When this disease is severe, clippings should be removed to reduce the production of urediospores. Optimal temperatures for growth of the rust fungus and urediospore production is between 20 and 30o C (68 - 86o F).

Fungicides reported to be effective against rust include Banner (propioconazole), Bayleton (triademefon), Fore (mancozeb), and Rubigan, Patchwork (fenarimol).
Also Heritage (azoxystrobin) is labeled for rusts on turf and should be very effective, we (Brown) have used it on small grain rusts and it does a good job. Problem is that it is very expensive and not readily available to homeowners. Daconil (chlorothalonil) is also good if you can find it. It is being phased out of the homeowner market and there is even some concern that it may be also lost to other markets as well.
(Brown and Curt E. Swift, Area Extension Horticulture Agent, Grand Junction)

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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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