University of California Cooperative Extension • Kings &Tulare County

UCCE Field Crop Notes

Volume 5, Issue 5 **November 2008**

Field Crop Meeting

Tuesday, December 16, 2008

Two Locations
Morning: Tulare County Agricultural Building, 4437 S Laspina St, Tulare
Afternoon: Riverdale Veteran's Memorial Hall, 3085 Mt Whitney Ave, Riverdale

Tulare County Agricultural Building
8:00 a.m. Registration
8:15 a.m. Meeting Begins – Ends at 12:00 p.m.

Riverdale Veteran's Memorial Hall *(Fresno Co.)*
1:00 p.m. Registration
1:15 p.m. Meeting Begins – Ends at 5:00 p.m.

Weed Control in Winter Cereals - Steve Wright, UCCE Farm Advisor, Tulare County

Yield and Quality Results in Winter Forage - Carol Collar, UCCE Dairy Advisor, Kings County

Diseases and Fungicides in Winter Cereals - Steve Wright, UCCE Farm Advisor, Tulare

Tricolored Blackbird Issue: Can birds and winter forage co-exist? Carol Collar, UCCE Dairy Advisor, Kings County

2008 Silage Corn Variety Trial - Dr. Shannon Mueller, UCCE Farm Advisor, Fresno County

Corn Stunt Update – Dr. Charlie Summers, UCD Entomologist, U.C. Kearney Research & Extension Center

BREAK

2008 Spider Mite and Fungicide Trials in Corn - Carol Frate, UCCE Farm Advisor, Tulare County

Getting the Most from Water-run Anhydrous Ammonia Applications - Dr. Larry Schwankl, Extension Irrigation Specialist, UC Davis

Irrigating Alfalfa with Limited Water Supplies - Dr. Blaine Hanson, Extension Irrigation Specialist, UC Davis

Winter and Spring Diseases in Alfalfa - Carol Frate, UCCE Farm Advisor, Tulare County

3.0 CCA Hours Approved, 1.5 PCA Hours Requested

For more information, call the Tulare County Cooperative Extension (559) 685-3303

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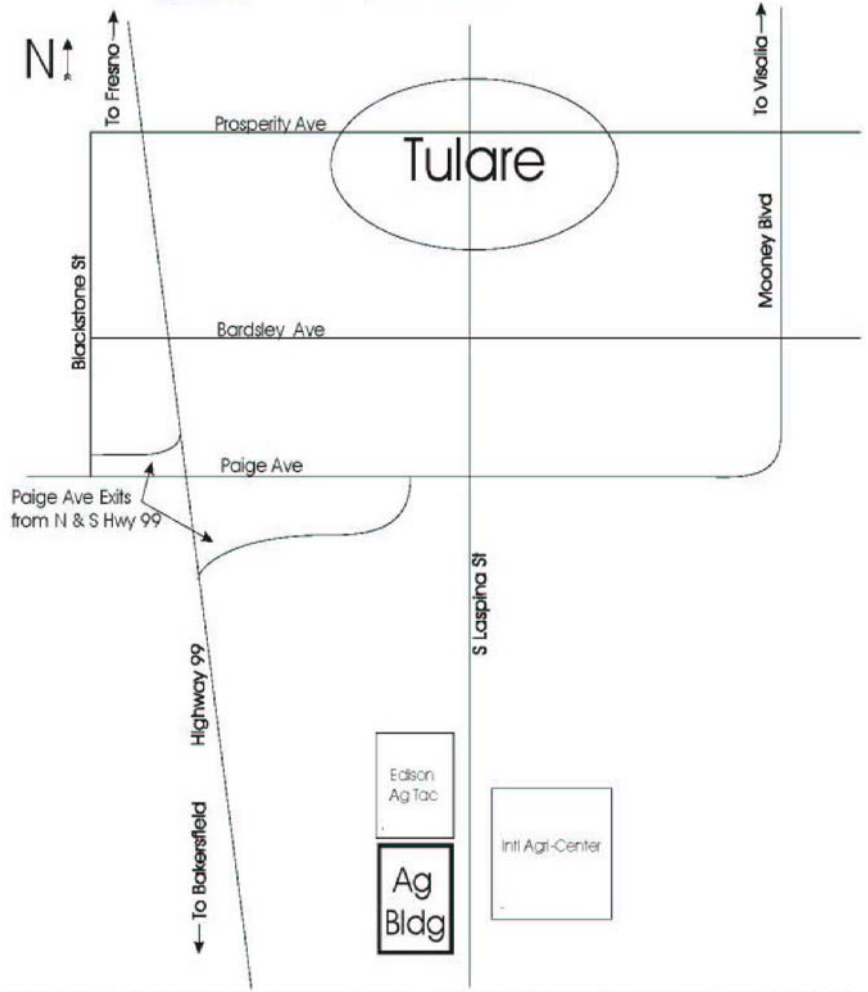
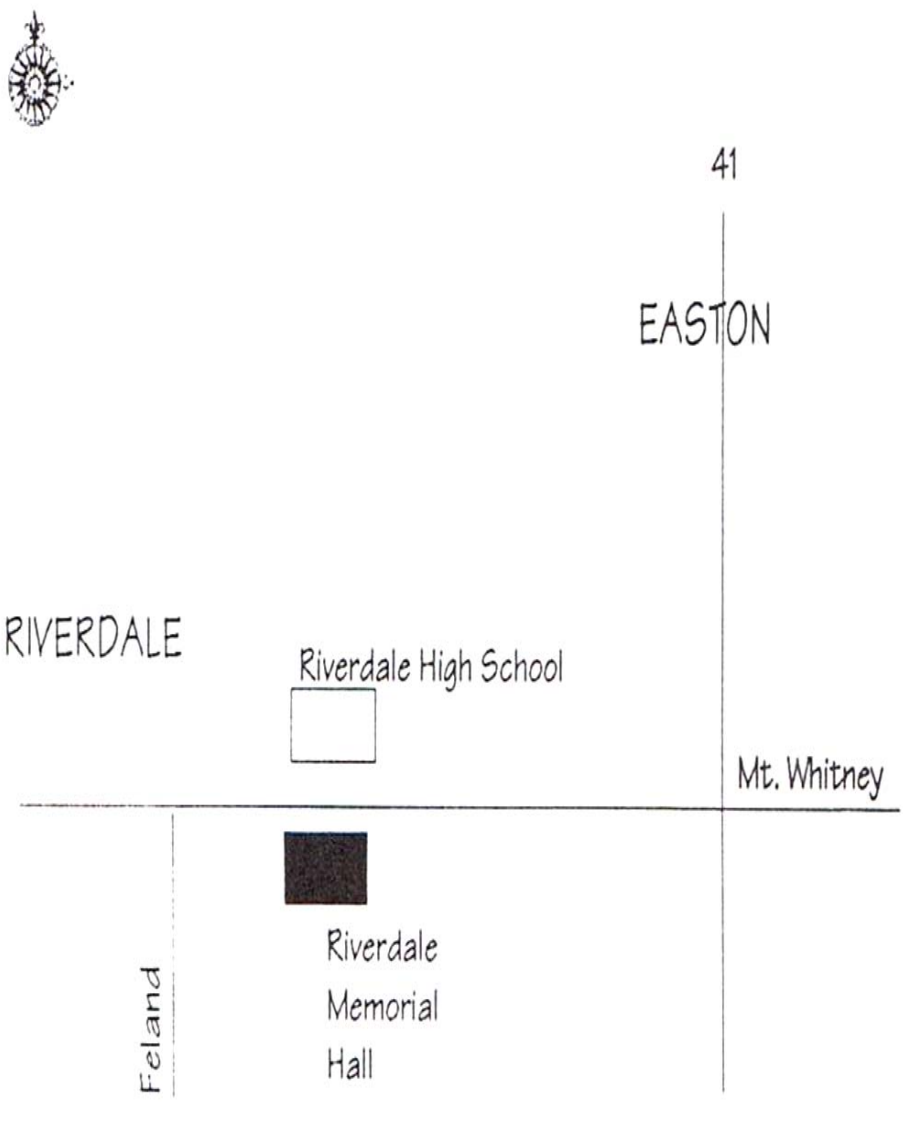


Traveling north on Hwy 99, take the Paige Ave exit. At the stop sign, turn right onto Paige Avenue. The next stop sign is Laspina St, turn right. We are about 1 mile down on the right.

Traveling south on Hwy 99, take the Paige Ave exit. At the stop sign, turn left. Take another left onto Paige Ave and go over the overpass to the stop sign which is Laspina St, turn right. We are about 1 mile down on the right.

Veterans Memorial Hall, Riverdale



Corn Stunt – Destroy corn volunteers!

Corn stunt disease was present in fields again this year. Furthermore, it was confirmed in fields further north in the San Joaquin Valley than it had been found before. This disease is caused by a spiroplasma named *Spiroplasm kunkelii*. Spiroplasmas are one-celled organisms similar to bacteria in many ways but, unlike bacteria, they are difficult to grow in artificial media. Confirming a diagnosis takes special laboratory procedures.

Corn is the only host of the pathogen in California. The stunt-causing spiroplasmas are carried from plant to plant by the corn leafhopper (*Dalbulus maidis*), a light colored insect about 1/8 inch long. In winter, the spiroplasmas survive inside adult leafhoppers or in volunteer corn. Volunteer corn can become infected when an infected leafhopper feeds on it. Volunteer seedlings, growing from an infected ear that fell to the ground at harvest, can carry the spirolplasmas. Infected volunteer plants serve as a reservoir for the disease organisms during winter and also act as a bridge from one growing season to another. Leafhoppers have even been found in volunteer corn plants that were severely damaged by frost. The leaves were withered but down between the leaf sheath and stalk, which was still green, live leafhoppers were found.

In 2008, some early plantings had infected plants although disease levels were generally low. Corn leafhoppers increased in number as summer progressed and as early fields matured, leafhoppers moved to younger fields. Some later plantings had high levels of disease while other late fields just had a few infected plants. With cool weather and few corn fields left to harvest, corn leafhoppers move to weeds, winter forage, alfalfa, and volunteer corn. While destroying volunteer corn will not prevent the corn leafhopper from surviving winter, it will deprive the insects of their best overwintering host and, more importantly, highly effective source of the stunt spiroplasma. **It is critical to destroy volunteer corn plants.**

During the season, over 40 plant samples and 30 insect samples were sent to Dr. Dan Opgenorth, a plant pathologist with the California Department of Agriculture. Surprisingly, some samples which looked like they had "classic" corn stunt, tested negative. Other samples that didn't look much like corn stunt tested positive for the disease. Obviously, there are still unanswered questions about this disease, how to test for it, and other symptoms that are observed in local corn fields.

Dr. Charlie Summers, UCD entomologist stationed at the UC Kearney Agriculture Center near Parlier, will provide a review and an update on the status of corn stunt at the Dec. 16th meeting.

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Carol Collar, Farm Advisor