High Plains Pierce's Disease Meeting Scheduled for Tuesday, January 20th at the Lubbock Research & Extension Center

This past summer, the presence of Pierce's disease in the High Plains was confirmed following initial positive findings late last fall. Research and Extension personnel scrambled to find resources to work on this new discovery. Insect and disease surveys were conducted this past growing season and we are now just beginning to understand the disease complex under High Plains conditions. This coming January, a day-long educational seminar will be conducted to help High Plains grape growers understand the implications of PD in their growing region and to review research projects for 2009.

Meeting Agenda

9:30- Welcome & Introduction- Dr. James Supak

9:45- Diagnostics 101- What Laboratory Techniques Can and Cannot Tell Us- Dr. Lisa Morano

10:30- Coffee Break

10:45- Vector Ecology & Behavior- Dr. Blake Bextine

11:30- Pierce's Disease: Evidence & Symptomology- Jacy Lewis

12:15- Catered Lunch

1:15- Comparative Epidemiology of Pierces Disease- Dr. David Appel

2:00- Vector Management Strategies- Dr. Forrest Mitchell

2:45- Afternoon Break

3:00- Nursery Stock Issues- Dr. Ed Hellman

3:30- Current & Future Research for the High Plains- Jim Kamas

4:00- Question & Answer Session

Registration Fee is $20.00 per person. Registration will begin January 5th online at http://agrilifevents.tamu.edu Growers can also register by calling Texas A&M Conference Services at 979-845-2604 Registration will be accepted at the door, but pre-registration is encouraged to insure a seat and lunch.

If you have questions, contact Teresa Burns 806-632-9581 or thburns@ag.tamu.edu

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Research & Extension Personnel Seek to Understand Pierce's Disease on the High Plains of Texas

Texas PD Notes

Rootstock/Scion Study Planted in the Texas Hill Country– Mark Black

Sustainable plant disease control usually has multiple facets. Typically, no single practice is highly effective and a single practice (e.g., pesticides) may loose effectiveness after a few years. Thus Pierce's disease (PD) control suggestions involve multiple practices, each of which slows PD epidemics. Our goal is for growers to combine several practices that collectively slow PD to the point that it becomes a minor disease and vineyards are productive for many years.

What are the most limiting factors for PD control? We know that rootstocks vary from highly susceptible to partially resistant. Do rootstocks with partial PD resistance slow disease progress in scions with a range of susceptibility? To answer this question, we selected three scions with a range of PD reac-

tions and grafted each on three rootstocks with a range of PD reactions. For comparison, we grew three scions on their own roots and all 12 treatments were planted in November 2008 at a Gillespie County vineyard with a history of PD.

Vines in the trial will be closely monitored for growth and PD for at least 3 years. On the other hand, we expect that rootstock effect on PD in Chardonnay (own-rooted is quick to show symptoms and die) will be slight. We expect rootstock effect in Merlot (own-rooted has somewhat delayed PD symptoms) to be apparent. In Cabernet Sauvignon (own-rooted has most delayed symptoms) we expect very obvious effects of rootstock that might extend the productive life of commercial

vineyard blocks.

Even a simple additive effect of combining scion and stock will be useful to growers. In fact, we are hoping to detect a synergistic effect. Our hypothesis is that combining scions with delayed PD symptoms and rootstocks with the most PD resistance and higher vigor will significantly delay PD development and vine mortality in TX vineyards.

Over the next few years, we will monitor vine growth, yield and mortality among these combinations. These findings can help us develop strategies to extend the productive life of vineyards under pressure from Pierce's disease under Texas growing conditions.

Rootstock/Scion Combinations Grown in Uvalde Arrive Ready for Planting

Under the Leadership of Dr. Mark Black, Extension Viticulture and Plant Pathology Personnel Work With Becker Vineyard Staff to Establish New Test Block

PD Tolerant Variety Trials Established in Austin County– Jim Kamas

The Need For New Varieties- Richard Smart, Cornell doctoral student of Dr .Nelson Shaulis, and noted viticultural consultant has been quoted as saying that "Texas may not be the hardest spot in the world to grow grapes, but its damned close." Climatic extremes, fungal disease pressure and insect infestations make grape growing in Texas

challenging in every year for every grower. When Pierce's disease pressure is high to very high, growing susceptible varieties may well be a very poor choice for establishing a sustainable enterprise, even under the best of management practices. Evaluation of the growth, yield and fruit quality

of new, PD tolerant plant material will hopefully lead to increased varietal and wine-making choices for growers and vintners in over a third of the state's geographic area. An integral part of these evaluations will be fruit quality, soundness, and the ability to produce marketable wine.

Twelve New Rows of PD Tolerant Selections Planted at the PD Research Vineyard in Fredericksburg

PD Tolerant Variety Trials Established in Austin County, Cont.

In addition to a small planting at the Fredericksburg facility, a second new block was planted at the Doug Rowlette Vineyard in Industry, Texas represents a high PD risk location with higher bunch rot complex pressure during ripening. This larger planting consists of border row blocks of own-rooted tolerant varieties and interior nine-vine blocks of Munson varieties, German fungal disease tolerant varieties (apparently also PD tolerant), advanced selections from the U.C. Davis, Florida A&M and University of Arkansas breeding programs and other locally hybridized or heirloom varieties. All vines are grafted on 5BB rootstock for tolerance to nematodes and soil borne pathogens.

We will be counting on university oenological support to evaluate wine quality potential from these selections under variable Texas growing .

conditions. This project holds tremendous promise for increased wine production for areas under high PD risk. Lisa Morano is a co-investigator on this project, and Gulf Coast Viticulture Associate Fritz Westover will help oversee much of the day-to-day management of this planting. Without great cooperators and willing, energetic collaborators, this project would never have gotten off the ground.

Site of New Research Vineyard at Rowlette's in Austin County

Harris County Master Gardeners Help Fredericksburg Crew With Digging Chores

Lisa & Fritz Plant New Vines at the Industry Variety Evaluation Vineyard

2009/2010 USDA/APHIS Pierce's Disease Funded Programs

The Texas Pierce's Disease Research & Education Program continues to garner approximately $1.2 million in support annually and is highly supported and valued by wine growing states both east and west of the Rockies. Under a competitive project proposal review, a number of continuing and new projects were submitted to the Texas Pierce's Disease Research & Education Program's annual call for proposals. The following projects have been reviewed by university, APHIS and Texas PD advisory board members and are slated for funding this coming grant cycle:

◈ Evaluation of Vitis Germplasm with Potential Tolerance to Pierce's Disease and PD Extension Outreach– Kamas

◈ Development of a PD Management Program in Grape: Improving Detection of *Xylella fastidiosa* in Insect Vectors & Understanding Transmission Significance– Bextine
◈ Bacteriophage and Bacteriocins of *Xylella fastidiosa*: Potential Biocontrol Agents– Gonzales
◈ Phenology of Reproduction, Seasonal Response to Host Plants and Ecological Factors Affecting Survival of Xylem Sap Feeding Hemiptera (Auchenorryncha) Vectors of Pierce's Disease in Texas– Lauziére
◈ Investigation of Genetic Variability and Gene Expression Differences Among Xf Strains in Texas– Morano
◈ Insect Vector Management in Grape– Mitchell

◈ C-DI-GMP: A Molecular Tool for Addressing Pierce's Disease– de Figueiredo
◈ Investigation on the Use of Benigh Strains of Xylella fastidiosa for the Biocontrol of Pierce's Disease of Grape– Appel
◈ Developing Pierce's Disease Control Strategies for Texas: Host Plant Resistance, Vegetation Control, Safe Plants, Supplemental Hosts of *Xylella fastioda* and Isolate Characterization– Black
◈ Supplemental Pierce's Disease Investigations on the High Plains of Texas– Kamas, Lewis and Lauzière
◈ Infrastructure and Management Support for the Texas Pierce's Disease Research and Education Program– Supak