Adapting to Changing Science & New Challenges

Presented at the 2016 Show Me Grape and Wine Conference

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Outline

• Problems and responses in California
• Lessons learned
• Challenges for MO growers
• Response to new problems
• New tools for the tool box
• Final thoughts for MO grapegrowers
Problems and responses in California

• Phylloxera
• Vine mealybug
  – Spread on rootings from certified nurseries
• Pierce’s Disease and Glassy-winged Sharpshooter
• Red Blotch Virus
PD and GWSS

• Keep GWSS confined to So Calif
  – Temecula Valley grapes and citrus intermixed
  – Risk was movement on container ornamentals
  – Funding needed for inspections
  – Widespread scouting

• State and Federal funding to do more research into PD cause and prevention
  – Connections in CDFA and USDA-ARS
Red Blotch Virus (GRBaV)

• First suspected at UC Davis, Oakville vineyard
  – Two identical budwood accessions from a certified source, two years apart
  – Different rootstocks
• Significant red leaf symptoms, 50% and 100%
• By the time identified, widespread in Napa, Sonoma
• Found to be in “Certified” rootstocks and benchgrafts
Red Blotch Virus (GRBaV)

- Red leaf symptoms
- No reaction to ANY of the molecular tests
- Viticulturists assumed it to be a virus
- Virologists assumed it to be a viticultural problem
- *Observed it in the source, a certified nursery
  - Therefore it is a GTA, a graft-transmitting agent
“New” Grapevine Pinot Gris Virus (GPGV), Italy, Calif
Lessons Learned

• Keep close contact with state legislators who can provide critical support in times of need
  – Assisted in check off ($/ton)

• Be ready to engage pathologists, virologists, entomologists
  – Not just MO but other states
    • E.g. Kamas from TX (re: PD) and speakers at this meeting
  – In CA, initial info about phylloxera and rootstocks came from other countries

• Avoid jumping to conclusions: positive or negative
  – All tests have false positives and false negatives
    • LR false negatives
    • RB false negatives
Lessons Learned (cont’d)

• Problems emerge, usually, outside of funding cycles
  – Scientists and/or students are already committed to other projects
  – Difficult to “staff up”
  – Need surveys to establish extent of a problem
Challenges for MO growers

- In California
  - High density of vineyard operations
  - Regional grower groups
  - Regional tech groups
  - Regional meetings
- Contrast in MO
  - Lower density of vineyards
  - Fewer meetings
  - No vit tech group
Response to new issues

• Document the problem/syndrome
  – Notes
    • Date, conditions, variety (-ies)
    • Extent of the problem
      – In the vineyard
      – On the vine
  – Flag the vines and end posts
  – Photos
    • Of leaves
    • Of whole vines

• Revisit the area/vines again and take more notes and photos, due to changes over time
Response to problem

• Vine count
  – Invaluable to document the progression of the problem
  – Non-symptom vs Symptom
  – Non-symptom vs “Mild” vs “Severe”

• Pre-harvest Map
  – Helps determine “near neighbor” adjacency
  – Is the problem coming in from the outside or also within vineyard, vine-to-vine spread?
  – Helps determine the longevity of the vineyard
  – How quickly is problem spreading?
Response to new issues

• Communicate the problem
  – To University Extension staff
  – To local growers
    • Same variety
    • Same conditions (soil, climate)
  – To statewide growers
  – To the Internet
    • Archived for future
    • Retrievable
New Tools

• Flash cards (not new)
  – Photos of diseases, insects and disorders
    • In your truck
    • Expandable when new problems arise
Available from Michigan State Extension Bookstore (online)
http://shop.msu.edu/product_p/bulletin-e2889.htm
(2011)

$20.00

**Index section**
- Insect and mite pests
- Natural enemies
- Diseases
- Nutritional deficiencies
- Physiological disorders
- Spray injury symptoms
New Tools

• Flash cards (not new)
  – Photos of diseases, insects and disorders
    • In your truck
    • Expandable when new problems arise

• Internet
  – Photos and information
    • Flickr, Google Photos
  – Cell phone App
New Tools

• Blog, FaceBook page
  – Communication, communication, communication

• Twitter
  – Communicate

• Webinar
Webinar
Produced by the
National Clean Plant Network

Clean Plants
for the future of the Eastern Wine
and Grape Industry

Weekly, March 10-31, 2016, presented by UC Davis and Cornell University
Final Thoughts for MO Growers

• Develop methods of communication
  – Grower to University
  – Grower to grower

• Develop archival facilities for storage of:
  – Photos
  – Articles
  – Documents
Final Thoughts for MO Growers

• Keep good relationships with MU administrators and State Ag leaders
  – Financial assistance may be needed
  – Regulatory assistance also

• Avoid jumping to conclusions

• Avoid tendency to downplay potentially significant new problems
  – “Whistling past the graveyard”