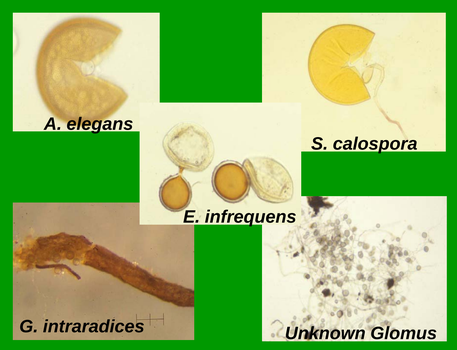
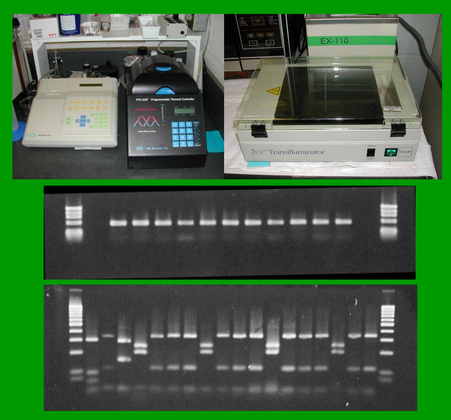
Root Physiology Lab - R. Paul Schreiner, Matthew Scott, Jennifer Christie

USDA-ARS-HCRL, Corvallis OR 97330 paul.schreiner@ars.usda.gov

Understanding Ecophysiology of Roots and AMF to Develop Sustainable Practices that Optimize Root & AMF Functions

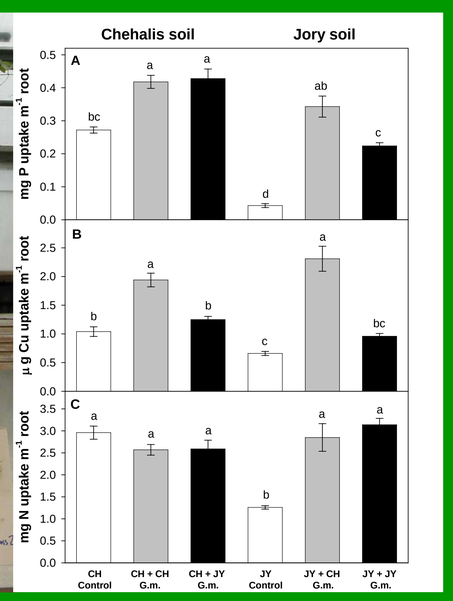




Measuring Diversity of AMF with Classical & Molecular Tools

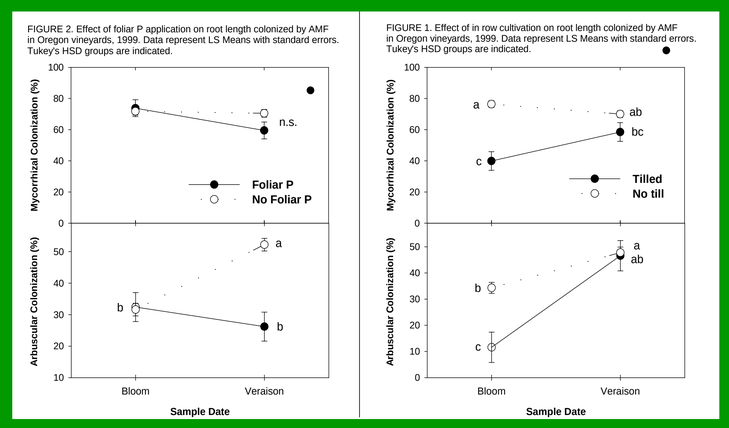
Assessing Function of Different AMF species Under Controlled Conditions

- Growth Promotion
- Nutrient Uptake
- Drought Tolerance

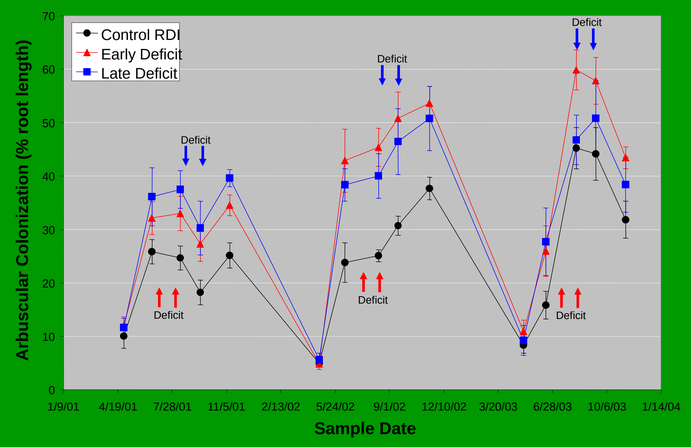


Determining Impact of Management Practices on Roots, AMF Colonization, and Plant Performance in the Real World

Effects of Foliar P use and Tillage on AMF in Commercial Pinot noir Vineyards

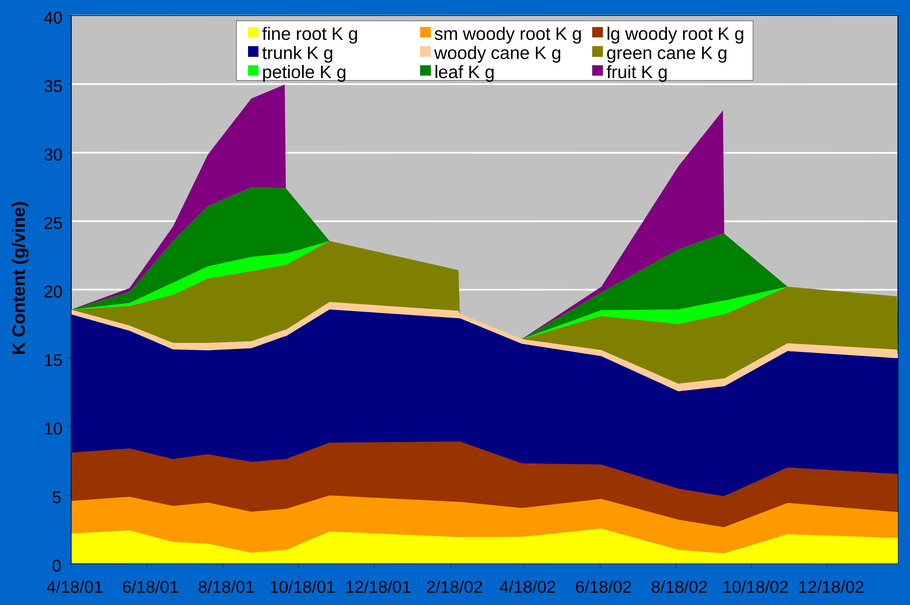


Effect of Irrigation on Arbuscular Colonization of Cabernet Sauvignon

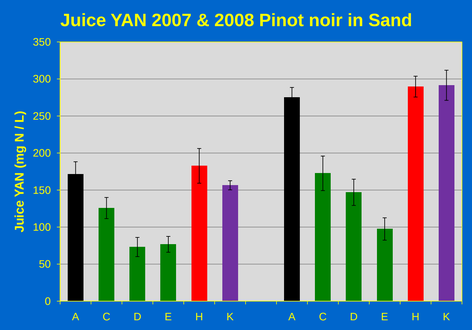
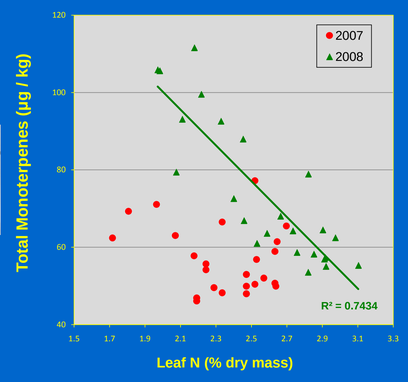


Understanding Mineral Nutrient Requirements of grapevines to Optimize Quality

Potassium Content of Pinot noir grapevines at Woodhall Vineyard 2001-2002



Measuring Whole Vine Mineral Uptake & Partitioning of Nutrients in Different Organs

Evaluating Mineral Nutrient Supply to Pinot noir grown in Sand Culture

- Measure Effects of N, P, K on Physiology and Fruit Quality
- Establish tissue test Guidelines for Winegrapes