Field Evaluation of Almond Rootstocks

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PROJECT SUMMARY

Objectives for Current Phase:

In support of a major ongoing 10-year project focused on evaluating alternative rootstocks,

- Continue to evaluate alternative rootstocks in various nonfumigated replant locations.
- Continue to evaluate alternative rootstocks for tolerance to Armillaria root and crown rot.
- Continue to evaluate the compatibility and field performance of alternative rootstocks used for several almond varieties, particularly Nonpareil.
- Continue to evaluate the compatibility and field performance of newer almond varieties grown on Marianna 2624 rootstock.
- Evaluate the field performance of alternative rootstocks used in heavy, high-pH soil in high-rainfall locations.
- Evaluate rootstocks under saline conditions

Background:

Rootstocks are literally the foundation of California's almond industry. Most of the commercial almond trees grow atop two specific peach rootstocks, Nemaguard and Lovell, which are generally productive, although in significant part because of the close attention they receive from growers.

Such care is essential because these two main rootstocks have well-known weaknesses. They are susceptible to specific nematodes; Prunus replant disorder, and Armillaria root rot and crown rot. And they perform poorly in heavy, alkaline soils.

Although a third rootstock, Marianna 2624, is in standard use in areas with heavy or Armillaria-infested soils, it can fail under replant conditions and be incompatible with Nonpareil and other varieties.

Discussion

One major component of this decade-long project consists of a broad-based effort to improve and expand the almond industry's stock of alternative rootstocks.

It includes the evaluation of candidate stocks—including some from Europe and Asia—under California replant conditions, as well as under a range of other California-specific conditions.

This evaluation process involves a number of separate rootstock trials initiated by UC Cooperative Extension personnel in Butte County (John Connell), Colusa County (John Edstrom), Stanislaus County (Roger Duncan), and Merced County (David Doll). These individual trials target specific conditions and the project objectives as outlined.

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Project Cooperators and Personnel: Joseph H. Connell, University of California Cooperative Extension, Butte County; John Edstrom, UCCE, Colusa County; Stan Cutter, Leslie J. Nickels Trust ; David Doll, UCCE, Merced County

For More Details, Visit

- Poster location 24, Exhibit Hall, Session 1; or on the web (after January 2011) at AlmondBoard.com/AICposters
- 2009-10 Annual Report CD (09-HORT4-Duncan); or on the web (after January 2011) at AlmondBoard.com/ResearchReports