

Almond Grower Says Soil Fertility Is Key to Higher Yield

ALMONDS are Ron Piazza's only business. He grows almonds on his own land, leases almond orchards, manages almond orchards, manages orchards for other property owners and runs a commercial hulling plant. In all, he farms about 450 acres of almonds around Denair, CA, in the San Joaquin Valley.

His wide experience in almond production has provided some insight as to the various levels of success of growers. The differences in some cases are extreme, with a yield variable of 1,000 lb/A or more.

"When you do this type of analysis, you have to look at all the crucial factors: almond varieties grown and planting patterns, soil type, irrigation practices, and so forth. Then you have to go back and compensate for the variables and identify tree blocks which should have roughly equal production potential," Mr. Piazza says.

The more informal research he did, the more interesting it became, and the more

growers he talked to. The net result of his observations led Mr. Piazza to conclude that an almond grower's fertility program is the single biggest factor accounting for varying yields "when all other factors are reasonably equal."

He says growers seem to fall into three basic categories when it comes to fertilization practices:

A. Growers with low-producing orchards who use minimal amounts of straight nitrogen (N) with little or no potash (K).

B. Growers in middle production group – by far the largest – who make ample use of N and supplement periodically with K and occasionally with phosphorus (P).

C. Growers in this relatively small group have the highest yields and use a full fertilizer with N, P, and K. "These growers religiously use a complete fertilizer with a guaranteed analyses of those three nutrients every time they fertilize – whether two or three time a year."

The increased yields enjoyed by the "C" group far outweigh the extra cost for fertilizer, Mr. Piazza believes. The "C" group probably spends \$250 per acre per year vs. \$125 per acre for the middle group. The "A" group growers usually spend less than \$100 per acre each year, he estimates.

While the low-fertilizer growers never harvest more than 1,500 to 2,000 lb/A, the high-fertilizer orchards have produced "on specific varieties in specific years, over 4,000 lb/A. Yet they have the same age and variety trees, the same soil profile and the same amount of water as the others." ■



ALMOND GROWER Ron Piazza at his hulling plant.

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