Scientists, farmers begin trials of self-pollinating almond trees in California

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Every spring, thousands of beehives are trucked into the San Joaquin Valley in California for a massive pollination of almond trees.

Now all that could change as plant scientists and farmers begin trials of self-pollinating almond trees that have been in development for years.

If it works, growers could save hundreds of thousands of dollars in pollination costs.

"That is like the Holy Grail," said Roger Duncan, a University of California pomologist in Stanislaus County.

Almonds are grown statewide on more than 600,000 acres, and it is not unusual for larger operations to spend more than $1 million to rent bees. To help shave that expense, plant breeders have spent more than a decade trying to develop an almond tree that can pollinate itself.

Those in the hunt to develop and market a self-pollinating almond tree include Craig Ledbetter, a U.S. Department of Agriculture geneticist; the University of California; and private breeders.

The concept is not new. Self-pollinating trees have been used in Spain for years. But Spanish almonds tend to have a hairy texture and a strong almond taste.

Ledbetter's challenge was to isolate the self-pollination traits of the

Spanish tree and the mild taste and smoother texture of the nonpareil to create a new tree. After years of crossbreeding, Ledbetter believes he's found the right combination.

The USDA's new tree will be part of a field trial by the Almond Board of California, the industry's marketing and research arm. Trees from the University of California and private nurseries also will be evaluated.

Some growers have started their own trials.

Last year, Chowchilla farmer Jim Maxwell planted 40 acres of a new self-pollinating tree variety called Independence. The tree was developed by a private breeder.

"We have been watching the new trees with great interest, and we are very pleased with what we see so far," said Maxwell, CEO of Agriland, a farm management company that operates 4,000 acres of almond trees.

The next big step for growers and the almond industry is to see how well the trees perform in a commercial orchard setting. And that process could take several years.

Bob Curtis, director of agricultural affairs for the Almond Board, said new varieties must go through rigorous testing and evaluation to see whether the self-pollinating trees perform.

"It may take as many as eight years before we find out if we have a winner or a dog," Curtis said. "But there is no question that this is the future of the almond industry."

Beekeepers say they aren't overly concerned about being put out of business.

"I think you will see a natural gravitation to these new trees," said Roger Everett, a Tulare County beekeeper and president of the California State Beekeepers Association. "But ... some growers won't change because they know bees improve their yields, and they won't want to stop."