



New Apple Industry Blossoming in Arizona

Southeastern Arizona growers hold two keys to a successful apple industry: potentials for high-quality apples and an early harvest. They need at least one more – a large, reliable volume of production – and that is within sight.

High quality makes the biggest difference. Apples good enough to be sold as fresh fruit fetch about 4 times the price of apples for cider or applesauce. Larger apples produced by hand-thinning are more valuable than small ones, pound-for-pound.

Parts of Cochise and southern Graham counties can grow sweeter apples than the Northwest Coast apples that dominate markets in Arizona and the rest of the West. Climate helps the Arizona apples reach a sugar content of 16 percent, compared with 14 percent for the same varieties grown elsewhere. Most people are impressed with the flavor difference.

The southeastern Arizona climate also speeds up blossoming and ripening on apple trees. Harvests are about 3 weeks earlier than in Washington and Oregon, and even ahead of California's new apple orchards. But winters provide enough chilling to stimulate large crops of popular varieties.

A few commercial orchards in Cochise County have a 20-year history, but apple acreage has grown dramatically in the past 5 years. The area has about 3 dozen commercial growers with about 2,500 acres of apple trees by recent tally, scattered in and near the Sulphur Springs Valley from Elfrida to Bonita. About 500 more acres were planted this winter. In all, only about 500 acres have reached the mature production age of 6 years.

By Dr. Michael W. Kilby
Tree, Fruit and Nut Specialist
Cooperative Extension Service



Top photograph: New plantings add hundreds of acres to apple orchards in southeastern Arizona. Below: Apple growers rely on bees for pollination. (Photos by Guy Webster.)



Hand thinning early each season makes apples plumper at harvest time.

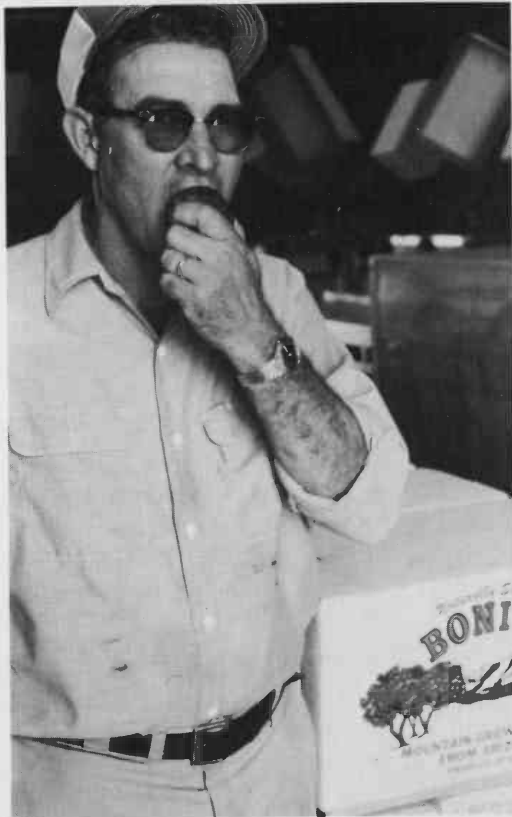
Last year's harvest of about 20,000 bushels of apples in the area was about 60 percent red delicious, 35 percent golden delicious, 5 percent Granny Smith, and a little bit of other goldens, Rome and Winesap apples. The Granny Smith, a tart green apple prized both for cooking and for eating fresh, is the hottest variety on the market today, so many of the newer plantings in Arizona and other states are that variety.

Some northern Arizona farmers have also been planting apple trees in recent years – about 200 acres of trees, mostly in Coconino County. Problems with spring freezes will probably hold back development of a major apple industry in the area, but small-scale marketing can feed many local apple-eaters most years.

Even in the desert climates around Phoenix and Tucson, Arizonans are planting backyard apple trees. Some new varieties such as Anna and Dorsett Golden can produce acceptable apples without much winter chill. However, the most popular apples for cooking and eating do need a cold winter.

The Sulphur Springs Valley gets cold enough winters, but rarely freezes in spring. That strengthens the apple business there, since orchards can produce a crop every year.

Grower Says, 'They Taste Like Fruit Again'



Joe Briggs

Joe Briggs and John Gammon run a packing shed that cleans, sorts and boxes apples from a dozen orchards in the Bonita area, including their own.

The volume through the packing shed is bound to grow. "We're way overbuilt for what we put through now, but in 2 years we'll probably have to expand to handle the volume," said Briggs last fall. He estimated then that the community had about 1,500 acres of apple trees, but that about half were still too young to harvest.

"The extra volume will probably make it easier for people to work with us," Briggs continued. "Some of these bigger supermarket chains, when they buy, they like to have 5,000 cartons of a particular size of apple, and we can't quite do that yet."

Consistent quality helps volume, too. He explained, "About 75 percent of the apples we put through yesterday graded extra fancy or fancy. That would have been more like 25 percent 2 or 3 years ago. . . . We're getting better at growing these apples."

About 35 people were working in the shed on a typical morning during last fall's harvest. They handled about 2,500 bushels in an 8-hour shift. During lunch break, many of the workers grabbed an apple or two.

Briggs ate one, too. Then he described one way Arizonans may be affected by the state's new apple industry: "I think that once people try these apples they're going to like them, because they taste like fruit again instead of a lot of the stuff we've been buying at the stores."

To attract major distributors as steady buyers, growers in the area probably need to offer a reliable supply of 2 to 3 million bushel boxes of fresh quality apples. The acreage already planted could produce about that much once all trees reach maturity, if the proportion of fresh quality apples is kept high. Now, that proportion ranges from about half the apples in some orchards to three-fourths of them in others.

From the growers' viewpoint, part of apples' allure is the potential for a steady market slot. Several other tree crops fluctuate more sharply in price from year to year. With peaches, for example, a grower might earn more per acre some years than he would with apples, but might lose his shirt other years, depending on harvests in major production areas.

Both peaches and apples require about 4 years and \$4,000 investment per acre (excluding land) to reach commercial levels of production. Mature apple orchards use about 3 acre-feet of irrigation water per year.

Most of the commercial apples in southeastern Arizona go through one of two packing sheds — one in southern Graham County that uses the "Bonita" label and one at Pearce that uses "Cochise."



Workers at the Bonita packing shed: Lupe Calderon (top left) fills a box with red delicious apples. Felipa Garcia (top right) steers small apples through a chute for bagging. Lee Miller (above) keeps packers supplied with empty boxes.

The new plantings in the area take advantage of recent developments in apple-growing that reduce harvesting labor and speed up the maturity of the orchard. Most new red delicious and Granny Smith trees are "spur" types. They bear identical apples to standard trees, but grow more compactly. Grafted to semi-dwarf rootstocks and pruned properly, these trees stay low enough to be harvested without ladders for up to 15 years. The smaller trees mean more trees per acre than in older orchards. They start bearing enough apples to be worth harvesting commercially by their third year.

Growing quality apples is year-round work. Proper pruning before blossoming keeps the tree healthy, productive and easier to harvest. Thinning out the number of apples on the tree gives bigger apples and a steadier year-to-year crop.

Consumers shun blemished apples, so growers have to take a price markdown even for minor skin defects. One type of blemish, speckling called cork spots, has affected several Arizona orchards. Water stress and lack of calcium cause the problem, so many growers now control it by spraying with calcium.

Codling moth, whose immature stage is the traditional worm in the apple, infests orchards worldwide. University of Arizona entomologists Dr. Dave T. Langston and Dr. Roger T. Huber are working with growers in both northern and southeastern Arizona on improved ways to monitor codling moth populations. They use traps baited with the moths' potent mating scent.

With controls on quality-lowering problems, with coordinated marketing of high-quality fruit, and with a little more increase in acreage, southeastern Arizona's apple industry can be a sustained, successful source for this popular and nutritious food.