

# Fruit Tree Yields Affected By Many Factors

**NEWARK, Del.** — Many factors influence the quality and quantity of fruit a tree bears. Home gardeners sometimes wonder why their trees don't produce. Delaware State College extension agent Glenn Layton says the following are some of the possible reasons.

**Age** — Fruit trees purchased from a nursery are usually one to two years old. Depending on the species and variety, they require an additional two to seven years after planting to mature. Bearing ages for some of the most common fruit trees are: apple (two to five years), peach (two to four years), sweet cherry (four to seven years) and pear (four to six years). Dwarf apple and pear trees usually start to bear one to two years earlier than standard size trees, Layton says.

**Health** — Good health is essential for quality fruit production. Insects and diseases are the two main problems of fruit trees. Through a regular spray program, these problems can be controlled.

**Winter weather** — Most hardy fruit trees need a certain amount of cold weather to end their dormancy and promote spring growth. When winters are too mild, Layton says, spring growth is delayed, irregular and slow. These factors extend the period of blooming, and thereby increase the possibility of frost injury.

On the other hand, extreme cold during winter dormancy kills the fruit buds on some trees. Winter weather rarely threatens hardy apple, pear, plum, and sour cherry varieties. Sweet cherry trees, however, are relatively sensitive to cold until they become dormant,

while peach trees are very vulnerable to cold weather. Their buds can be killed by midwinter temperatures of minus 10 degrees F.

**Frost damage** — As fruit buds grow and open in the spring, they become increasingly susceptible to injury from frost. Exposed buds can usually withstand temperatures near 24 degrees F. However, Layton says the open blossoms of practically all fruit trees may be killed if the temperature drops below 27 degrees F.

When a heavy frost is expected, covering trees sometimes prevents bud or blossom injury, provided temperatures do not fall too low and the cold is of short duration. Cheesecloth, old bed sheets or similar protective coverings may be used.

During spring frosts, some commercial growers heat their orchards, but this is impractical for most home gardeners, Layton says. After a hard freeze, injured blossoms may appear normal, but if the pistils (center parts of the blossoms) are killed, the tree will not bear fruit.

**Pollination** — Without sufficient pollination, a tree may bloom but develop no fruits. Some species have what are called perfect flowers. That is, both the anthers (which contain pollen) and the pistils (which develop into fruit), are located in the same blossom. Trees that bear fruit through self-pollination are called self-fruitful.

However, there are many tree types with perfect flowers that can't produce fruit from their own pollen. These are called self-unfruitful and require pollen from another variety.

Self-fruitful trees include sour cherries, most peach varieties and

European-type plums. Self-unfruitful trees include most apple, sweet cherry, pear, and Japanese and American plums. To ensure pollination, two or more varieties of these types must be planted. Bees and other insects usually cross-pollinate trees growing close to each other.

**Available light** — Fruit trees need full sunlight for best production. Inadequate sunlight delays the beginning of fruit bearing and may reduce the

amount of fruit. Don't place fruit trees where they are shaded by buildings or other trees.

**Competition** — Trees grow more vigorously and bear better if they have adequate space to develop their root systems. Don't plant them where the roots of forest or shade trees compete for the same soil. To reduce competition from weeds or grass, cultivate, mulch, or apply a weed killer, Layton advises.

**Pruning** — Pruning during the first three or four years is very important for future fruit production. A pruned tree will be smaller but more productive than a comparable one that is not pruned. Trim to permit sunlight and spray materials to reach the center of the tree.

For further information on pruning and spraying fruit trees, call the county extension office in Newark (451-2506), Dover (736-1448) or Georgetown (856-7303).

## Dairymen Top New Market

**HARRISBURG** — Pennsylvania dairymen have tapped a new market for milk and other dairy products that could put a dent in local surpluses. It's the restaurant breakfast!

The Pennsylvania Dairy Promotion Program last month invited people in the Greater Johnstown-Altoona area to cash in "Real" seals from dairy products toward a breakfast at McDonald's. Each "Real" seal was worth 50 cents, with the offer limited to one per customer.

"And did they respond," explained Dairy Board Chairman Don Duncan.

More than 25,000 customers redeemed "Real" seals before the promotion ended April 30, including seals from specially prepared side panels on half gallon containers.

"That's almost double our most optimistic projection," said the Robesonia, Berks County dairyman. "We expect the good will generated by the media campaign to keep sales booming."

Area milk dealers also

benefitted. "We had our biggest month ever," reported one dealer, who relates a spurt in sale to customers seeking "Real" seals. Another milk dealer noted that "sales have increased in the last couple of weeks."

McDonald's objective was more than sales. The fast food chain also had a quality message. "We wanted to increase consumer awareness that we use real dairy products," said a company spokesman.

McDonald's accomplished both. One store reported a 23% increase

in breakfast business. All the participating stores had brisk business during the final weeks of the breakfast promotion.

"The great advertising and promotion effort by McDonald's made it a bargain for us," said Duncan, speaking for the 4,000 dairymen who support the Pennsylvania Dairy Promotion Program.

A sure sign of the promotion's success is the reaction from McDonald's stores in the area. "They want a similar deal," Duncan replied.

## No-Till Aids Legume Planting

**LEESPORT** — If you are looking at your pastures or permanent hayland and wishing you could establish a legume in the old sod without doing any tillage, wish no more says Duane Pysher, district conservationist of the Soil Conservation Service. "If a no-till drill is used on a no-till system, it is possible to do a legume-seeding in a sod field," adds Pysher.

A no-till seeding offers many advantages to the farmer. It is a

soil saving system because of the lack of tillage. It is a fuel and labor saving system. You are seeding into an existing firm seedbed and it also requires little or no time for stone removal.

For more information on no-till forage or small grain seedlings, contact the Soil Conservation Service or County Cooperative Extension Service in your area.

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