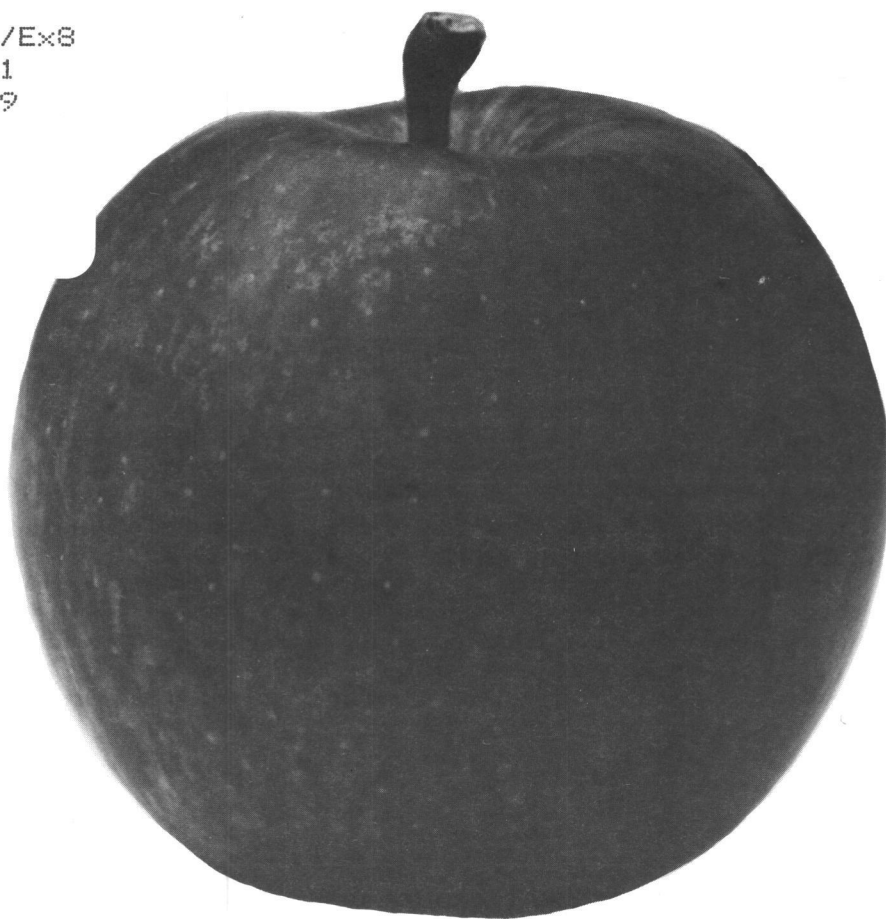


Gala

A New Early-Maturing Apple Variety

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Gala, a new apple variety from New Zealand, has been successfully introduced to American apple markets in recent years. The quantities of Gala sold in U.S. markets have increased rapidly. High prices paid to U.S. growers of Gala have encouraged a few to plant it.

In New Zealand, Gala harvest starts in the latter half of February. The fresh Gala crop begins arriving in the U.S.

about a month later, and it's in the markets for about 2 or 3 months. In a small trial plot at Corvallis, Oregon, Gala harvest began about September 6 and lasted about 2 weeks.

In Milton-Freewater, Oregon, and the warmer parts of eastern Washington, color picking starts about August 15-20, with a second picking a week later. This is at least 2 or 3 weeks before Delicious.

To obtain Gala, the top British variety, Cox's Orange Pippin, was crossed with the most commonly grown American variety, Delicious. The variety Kidd's Orange Red resulted. This was crossed, in turn, with Golden Delicious, and the result was Gala.

Since its introduction in 1960 in Greytown, New Zealand, a number of more highly colored strains of Gala have been found, and three of them have been named and introduced through nurseries.

Because the color of the original Gala is unstable, and colored "sports" are often found, it's to be expected that numerous additional strains will be discovered and named. A strain with compact growth habit has also been discovered.

Fruit characteristics

The appearance of Gala is distinctively different from that of any other variety on the U.S. markets—creamy yellow, overlaid with bright orange-red stripes or blush. Although the minimum red color for harvest of Gala in New Zealand is 25%, most fruit have 30 to 60% of the surface covered with red stripes.

Three named mutant strains are Royal Gala, Regal Gala, and Imperial Gala. Royal and Imperial Gala are striped mutants with much more red than Gala. Imperial Gala's red is slightly darker than Royal Gala's, and

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the shape is slightly taller. Most trees of Royal Gala bear fruit that is 50 to 80% red.

These striped strains are highly unstable in color. In any planting, there'll be quite a number of trees whose fruit show no more color than ordinary Gala. Regal Gala is a more recently discovered mutant that is a more stable blush type, but it may not be in the U.S. yet.

Such color "sports" of Gala appear spontaneously with fair frequency, so U.S. orchardists who buy trees of Gala (or one of its mutants) should expect to see some variability in fruit color.

Royal Gala matures about a week later than Gala. Young trees of the colored sports can usually be harvested in three pickings. There is a danger that, because they color early, Gala's colored mutants will be picked too early, before their flavor is fully developed.

The fruits of Gala are uniformly round-to-oval and small to medium in size. Although they are larger on a tree with a very light crop, they do not become as large as most other varieties. The stem is long and thin. The lenticels are inconspicuous. The skin has some tendency to russet, but it has not affected packout.

In New Zealand, Royal Gala infected with "russet ring" virus shows rings of russet in midseason. These symptoms vary from season to season. This may not be a problem in the U.S., as virus-free trees are available. The fruit of Gala is free of bitter pit.

Sales from the Pacific Northwest have been of bulk-packed fruit 2½ inch and larger, all grades in the same box. Packouts have been high.

Gala's flavor is sweet, aromatic, and mild. After 1½ months of storage and 10 days at room temperature, Gala's soluble solids (mostly sugars) measured 15.4%, and firmness was 14 pounds. Gala dessert quality was outstanding. Samples were from the best harvest date in Corvallis.

Opinions differ about whether there's any difference in flavor between Gala and its mutants. Those who think there is a difference favor ordinary Gala.

The color sports appear to have tougher skin and are less likely to show damage inflicted during harvesting and handling.

As long as the fruits are in good condition, they're crisp, firm, and juicy. If held too long in cold storage or on a grocery shelf, they become soft; however, their shelf life is greater than that of Golden Delicious.

Fruits that become overmature on the tree develop a crack near the stem. These must be sorted out so they don't rot in shipment. Cracking is the most important criterion for deciding when harvest must begin.

In 1986 at Orondo, Washington, cracking started when fruit tested 21 to 24 pounds, starch readings were 2.5 to 3.5, and soluble solids were 13 to 14.5. The first pick at Orondo was about August 25.

Overmature fruits develop an oily skin and are very easily marked during packing. Gala is not susceptible to preharvest drop.

Tree characteristics

The tree of Gala resembles its parent, Golden Delicious. It has medium vigor, branches with moderate frequency, spreads moderately, and bears very early. It doesn't need to be headed to produce enough branches on a central-leadered tree. Spreading to widen crotch angles is rarely needed.

The branches of virus-free Royal Gala tend to break out at the crotches if their crotch angles are narrow. With the exception of especially upright limbs, tying down limbs isn't necessary to stimulate fruiting—at least with trees on rootstocks such as M26 and M7, which promote early heavy bearing. Unless chemically thinned, it will alternate-bear.

The best fruit is produced on spurred laterals on 1-, 2-, and 3-year-old wood. In New Zealand, Gala often bears laterally on wood of the previous season. Fruit from such buds is small and late-maturing. Gala is a heavy, early producer. Under good growing conditions, you can pick half a box per tree in the third leaf.

In some districts, Gala blooms over a long period, as much as 20 days. It is a good pollinizer for Granny Smith and Delicious, but it does not pollinize Golden Delicious. It can be pollinized by any midseason variety that has good pollen (such as Delicious or Granny Smith) or by crab apple varieties.

Because there's evidence Gala will set fruit without pollination by another variety, one prominent grower in Orondo, Washington, has planted it in a solid block without pollinizers. If it resulted in a low seed count, this would reduce the problem of alternate bearing.

Gala is susceptible to scab, mildew, and fire blight—more susceptible to mildew than Delicious.

There appears to be no reason to use growth regulators on Gala except for chemical thinning. Like Golden Delicious, Gala will need plenty of thinning. Start with a bloom-time spray of Elgetol at about 1 pint/100 gallons, sprayed dilute for good coverage in the tree tops.

Use a handgun trained on areas of heavy bloom if the bloom is uneven. NAA at 2 ppm, mixed with Sevin at ¼ pound/100 gallons, has been used as a postbloom thinning when Elgetol has not thinned enough.

Although this has not been thoroughly tested, Gala does appear to have sufficient cold-hardiness for all apple districts in the Pacific Northwest. Productivity of mature Gala orchards is generally less than that of Granny Smith and somewhat less than that of Delicious.

A few New Zealand growers have used summer pruning on large, mature Gala trees. They remove some current-season shoots to let more light into the trees. Six weeks to a month before harvest, they either head these shoots to stubs about 6 inches long or leave them untouched to form next year's fruiting wood.

While this brings the greatest benefit to the fruit on the outer surface of the tree, the increased light let into the inside fruit brings them up to 25% red color.

Orchard designs

With vigor similar to Golden Delicious—and a tendency to early, heavy bearing—Gala is well-suited to modern high-density orchard designs. Trees on M26 could be placed 6 × 14, and the central leader fastened to a simple 8-foot trellis for support during the early years of production. Training by the "axis" system, which involves very little pruning for training, will bring it rapidly into heavy production.

Trees on semivigorous rootstocks like M106 or M7 have begun to bear in the third summer after planting. On moderately good soil, with no replant problem, trees on these stocks could be spaced 14 × 8 for a high-density planting, or 12 × 18 for a medium-density planting.

Gala has grown vigorously on a fumigated old orchard site in north central Washington. Some growers have been pleased with early results on the Tatura Trellis. In New Zealand,

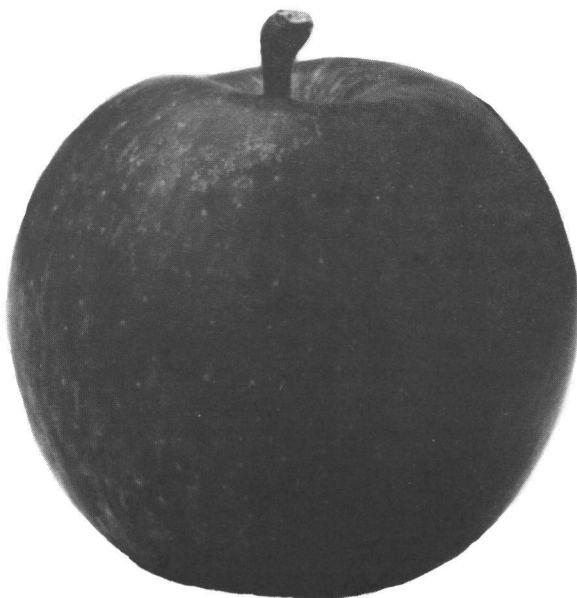
Gala performed very well on the Lincoln Canopy and matured their fruit a week early.

High-density planting seems justified if we assume that Gala's very high prices (with few Gala's produced in the U.S.) won't last after there's substantial production. In the first few years of production, before the trees are pruned for containment in their allotted spaces, yield per acre is proportional to the number of trees per acre. Using tree supports in the early years will allow a minimal amount of pruning, which will also promote early, heavy production.

As the Gala tree has only medium vigor, a young tree can easily be dwarfed by fruiting. Don't let the lower limbs become too large in relation to the central leader—or fruit too heavily. Otherwise, the top half of the tree may develop slowly. Usually, the tree grows rapidly for the first two summers, then slows because of cropping.

Use pesticides safely!

- **Wear** protective clothing and safety devices as recommended on the label. **Bathe or shower** after each use.
 - **Read** the pesticide label—even if you've used the pesticide before. **Follow closely** the instructions on the label (and any other directions you have).
 - **Be cautious** when you apply pesticides. **Know** your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.
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Management differences

The management of Gala orchards must differ in several significant ways from management of Delicious or Newtown orchards:

1. Early chemical thinning for fruit size must be successful, using the same materials as with Golden Delicious.
2. Make every effort to develop trees with fruiting wood that's well exposed to light. (There are no "spur types" in the nursery trade at this time, so you'll have to do this through rootstocks, training, and pruning—perhaps including late summer pruning.)
3. Regular annual pruning for renewal of fruiting wood is essential: Fruit produced on wood more than 3 years old is usually small and poorly colored.
4. Several pickings will be required—and much more intense supervision of pickers to get consistent maturity.
5. Starlings were a problem in one orchard. Mesurol controlled them.

Marketing differences

The Gala deal may be short, probably over in about 3 months. According to research in France, it can be stored from September until March, in air at + 2°C. New Zealand marketers have developed point-of-sale advertising that emphasizes "The new flavour experience fresh from New Zealand."

Although Gala looks distinctive, the emphasis is on flavor. New Zealand maintains high standards for maturity, color, condition, size, and uniformity through its Apple and Pear Board. U.S. producers must match these standards if the Gala we produce is to succeed.

In summary, Gala and its color sports may be a profitable apple to grow, at least for the next few years:

- Gala matures approximately with late Italian prunes, and it requires at least three color pickings.
- Gala performs well on dwarf or semidwarf rootstocks, grows well on some fumigated old orchard soils, and doesn't require a lot of heading and spreading for training.
- Gala crops heavily at an early age but needs support to hold up the crop.
- Gala's fruit size is always small.
- Gala's fruit is very sweet, crisp and juicy, and it stores well for a few months.

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