

Developing Gooseberries for Commercial Specialty Markets

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The market is wide open for quality dessert gooseberries. Gooseberries are the most shelf-stable berry handled commercially. A gooseberry picked at the green mature stage and held at 0.5 C will ripen normally at room or refrigerator temperatures.

Gooseberries are an ideal candidate for development as a specialty fruit crop. Prices and demand have been high and have continued to grow during recent years. There is a wide variety of colors, shapes, and textures in the more than 200 varieties of gooseberries that are accessible in germplasm collections around the world. A small fraction of these are being cultivated commercially, and more of the varieties could easily be introduced commercially. A number of the varieties are similar, and it is possible to group them according to similarities for the convenience of buyers.

Growing Gooseberries

Gooseberries have the reputation in Europe as being easy to grow. Once established in New York plantings, they do fine, but getting them started can be a challenge. Anthracnose leaf spot, powdery mildew, and imported currant worm are the pests that have the greatest impact during establishment of the plants. During the first three years plants seem to creep along as they gain leaf area. Often I find that growers have anthracnose infections that appear and go undetected. In a matter of a couple of weeks the plants

become defoliated, and begin to grow again in the late summer. Plants that are debilitated by such infections are much more susceptible to winter damage and winter kill of the entire plant. The bottom line is that pest control, especially for the three mentioned pests is critical, especially for young plants.

Cordon pruning is the recommended training system for fresh dessert gooseberries (Figure 1 and Figure 2). Advantages include larger fruit size, easier picking, better air ventilation for disease control, better spray penetration, and easier maintenance pruning. The disadvantages



Figure 1. (left) Mature, cordon-trained gooseberry plants.
Figure 2. (above) Cordon-trained gooseberry plants.



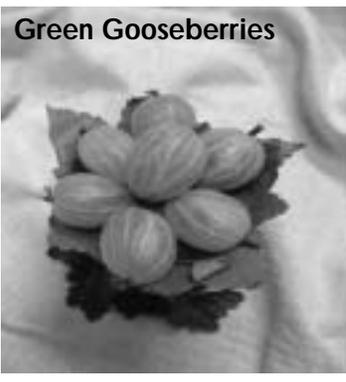
Yellow Gooseberries



Red Gooseberries



Early Sulfur Gooseberries



Green Gooseberries

Figure 3. Gooseberry grouping by color, texture, shape and size.

es include cost of establishment and additional worker skill and attention needed for plant establishment. Cordon plants are spaced about 0.5 meters apart and trained up a single stake. Lateral branches are pruned out annually after bearing fruit as they are replaced by new one year wood.

Gooseberries are most easily propagated by stooling or layering to assure good rooted cuttings. Cuttings propagated during the summer months in the greenhouse are also quite successful. Success with rooting dormant cuttings varies with variety, but is not usually very dependable in New York.

Evaluating Gooseberry Varieties

As with any fruit species, it is important to evaluate fruit quality, yield, disease resistance, and bush growth habit. The focus of our evaluations has been on fruit quality since the berries have proven to be a very high value crop. Moderate yields with certain varieties can be compensated for by higher prices and pests mentioned above can be controlled with IPM practices. New higher yielding, disease-resistant varieties will be slow to appear due to limited funding for breeding and selection programs. We can build an industry by carefully choosing marketable varieties, and expanding breeding research in the future as funds become available.

The flavor sensation of gooseberries can be described as:

a) The juice, which is usually sweet in ripe gooseberries, is first to reach the palate, followed by a balancing when the acid is released as the skin is chewed.

gooseberries are sour when unripe, and sweeten up as they ripen. When slightly unripe to ripe, the fragrance is light and fruity. As the berries turn dead-ripe to over ripe, most of them take on a muscat-type heavy flavor.

Fruit size, texture, color, and shape varies among varieties. Size is determined genetically and by cultural practices. Some varieties such as 'Marigold' have the capacity to set heavy yields of large fruit, while others require cordon training and thinning to produce large fruit size. Shapes can include round, oval, and tear-dropped. Textures can be smooth or hairy. Colors vary in all shades of red, yellow, purple, green, and white. Some named varieties look and taste almost identical, and experts say that DNA tests could possibly prove them to be identical.

Varieties Commercially Available Today

Varieties available in the US are limited. A few are available on a commercial scale, and others on a small scale, or in the form of germplasm in the collection at Corvallis. One variety, 'Jeanne', was just released this summer at Corvallis, and the germplasm is avail-

b) The fragrance unique to each variety is picked up last as the fruit remains in the mouth and olfactory sensations are realized. Most

ble for multiplication. 'Jeanne' gooseberries are highly resistant to white pine blister rust and to powdery mildew. The plant's robustness protects it from insect threats as well. 'Jeanne' is highly resistant to pests like aphids and sawflies. According to NCGR research leader Kim Hummer, the plant produces green berries that ripen to a deep red as they mature to their full size of about 5 grams. 'Jeanne' also boasts a higher yield than similar cultivars such as 'Invicta' and 'Captivator', producing about 3.3 pounds of the flavorful fruits per plant during the growing season.

The following varieties are available in commercial quantities from nurseries in the US.

- 'Captivator': Antique red, tear-drop shape, medium size, late bearing, good flavor, semi-thornless
- 'Hinnomaki Red': Brilliant red, oval shaped, medium size, good flavor
- 'Invicta': Mildew immune, anthracnose susceptible, large, green, somewhat hairy, bland flavor
- 'Poorman': Red, oval shape, medium size, good flavor
- 'Tixia': Large, red, semi-thornless

The following varieties are available on a small scale

- 'Achilles': Large, red, round, industry standard in Holland
- 'Careless': Large, green, oval, good as cooking or fresh berry, industry standard in England
- 'Catherine': Large, green, oval to round
- 'Colossal': Large, green, oval to round
- 'Crown Bob': Large, oblong, red
- 'Early Sulfur': Early, hairy, golden, oval, excellent flavor

- ‘Hoenigs Earliest’: Smooth, golden, medium, good flavor
 - ‘Keepsake’: Large, smooth, green
 - ‘Leveller’: Very large, round, yellow-green, industry standard dessert berry in England, slow growing
 - ‘Sabine’: Medium round, ruby red, sweet fruit
 - ‘Whinham’s Industry’: Large, round, red, industry standard in Holland
 - ‘Whitesmith’: Large, round, green, industry standard in Holland
- Varieties Not Yet Available, But Desirable**
- ‘Firbob’: Transparent yellow, large, smooth, as much as six week shelf life at 0.5 C
 - ‘Heart of Oak’: Long tear-drop shaped, green smooth
 - ‘Ingall’s Red Prolific’: Long, tear-drop shaped, red, smooth
 - ‘Langley Gage’: the sweetest gooseberry, white, smooth, oval to round
 - ‘London’: Large, red, smooth
 - ‘Lord Elco’: The largest gooseberry produced with no special care, green, smooth, oval
 - ‘Marigold’: Yellow, late, large, very productive plant

Grouping

Gooseberry Types

Gooseberries have been grouped together for their similarities. They could be sold as the same “type” of gooseberry on the commercial market without distinguishing between varieties. Grouping is possible by color, texture, shape, and size (Figure 3).

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These varieties are available in European germplasm collections, and we are working to get them into the collection at Corvallis. Their fruits are desirable for the fresh dessert market. All have good flavor.

- ‘Ajax’: Large, round, deep red
- ‘Champagne Yellow’: Brilliant yellow, hairy, round
- ‘Cousen’s Seedling’: Transparent golden, tear-drop shaped, a favorite when displayed
- ‘Dan’s Mistake’: Round, red, smooth, large