

## Small Fruits - Section Review

The small fruits are a group of botanically unrelated crops that all have small, soft, berry-like fruits. Because they are relatively low growing plants (not trees), and fruit are soft and perishable, culture, planting design, and harvest of these crops is quite different from tree fruits. Thus, it is difficult to generalize about small fruit crops. Look for similarities in culture and harvest and post-harvest handling, but be ready for vast differences in plant growth habit, flowering, and even fruit type (not all of these fruits are berries!).

Some important points to remember about small fruits:

- The last two members of the Rosaceae are discussed here - strawberry and brambles. Here, we began to look at other families - the Vitaceae (grape) and Ericaceae (blueberries).
- Grapes are by far the most economically important and heavily researched crop in this section, or perhaps overall. Universities located in grape growing areas will often have entire departments devoted to viticulture (grape growing) and enology (wine making). As you can imagine, my humble synopsis of this crop is very superficial, and you should consult one of many viticulture/enology texts listed to get a stronger perspective.
  1. **General Viticulture.** 1962. Winkler, Cook, Kliewer, and Lider. Univ. of California Press, Berkeley.
  2. **The mid-Atlantic Winegrape grower's Guide.** 1995. Wolf and Poling. N.C. State Univ. Coop. Ext. Ser., Raleigh, NC.
  3. **Knowing and Making Wine.** 1984. Peynaud. John Wiley & Sons, New York.
  4. **Vines, Grapes, and Wine.** 1986. Robinson. Alfred A. Knopf, New York.
- *Rubus spp.* (Brambles) are by far the most diverse group of fruit crops, so complex genetically that their scientific names often do not do justice to the real genetic background of the plants. That's why people refer to these crops as "*Rubus spp.*". There are brambles on every continent except Antarctica, and there is great variation in fruit size, color, and shape among these species. Pay particular attention to their life cycle and propagation methods, which are unique among fruit crops.
- Grapes are grown using many different training and pruning systems, depending on the intended use of the final product. As the book points out, the uses are: table, raisin, wine, and sweet juice. The two former categories are fruits eaten out-of-hand, and high yield takes precedence over internal quality

(sugar content, acids, etc). The latter two categories involve processing, and internal quality of the fruit is by far the most important aspect of the harvest. Yield is often sacrificed to obtain high internal quality of the grape berries, which in turn results in high quality juices and wines. This general rule applies to all fruits and vegetables: high yield and high internal quality are mutually exclusive. In fresh fruits, growers produce high yields of cosmetically perfect fruit to satisfy consumers, whereas in processed fruits, yield is reduced, cosmetics are not considered, and extensive testing and adjustment of the processed product occurs.

- Small fruits, in general, are easier to grow in backyard gardens than tree fruits. They can be managed from the ground, have fewer disease and pest pressures, generally require less annual maintenance, and take up less space in the landscape than tree fruits. If you are giving advice to a neighbor, client, or whoever on backyard fruit culture, you should make this point, as the average Joe/Jane is almost always happier growing blueberries or grapes than apples or peaches.
- Several species considered here are native to North America, unlike many of the tree fruits, nuts and tropicals.
- Notice the lack of rootstock usage in small fruits, exclusive of grapes. This is for a few reasons: first, the plants are readily propagated by cuttings or layers which are easier to do than grafting. Second, the renewal growth comes from the ground on bushes, so if we used a rootstock, we would end up with a rootstock bush after a few years, not the scion intended. If it weren't for disease/insect problems, rootstocks would not be used even for grapes, and they would be grown from cuttings as they were for centuries.
- An epigynous berry differs from a berry due to its inferior ovary position.
- The fruit types of strawberry (accessory) and brambles (aggregate) are similar in that both are derived from many ovaries from a single flower, yet in strawberry, the bulk of the edible portion is non-ovarian, whereas in brambles, the bulk (or all) of the edible portion is ovarian in origin.