

Pruning Principles for Grapes and Highbush Blueberries

Pruning is the removal of plant parts, usually during the dormant season, for the purpose of regulating crop size and quality. It also affects the quantity, quality, and location of vegetative growth and in concert with an appropriate fertility program helps the grower achieve a “balance” between good production of high quality fruit and the vegetative growth necessary for future crops.

Grapes

In making pruning decisions the grower must evaluate several variables. These include the previous year vigour of the vineyard, whether or not there was winter bud injury, and the colour, diameter, internode length and health of cane wood. The goal of every pruning operation is to achieve a balance between fruit and vine growth. A 5-10:1 ratio of fruit to pruning wood weight is considered in balance. If there was less than 5 lbs of fruit per pound of pruning wood, then the vine is out of balance. Likewise, if there was more than 10 lbs of fruit per pound of pruning wood, then the vine is also out of balance.

In general, if excessive vigour was observed the previous year, more buds should be left to control this excess vigour. If a two-cane training system such as Pendelbogen is employed, and excessive vigour was observed the previous season, the grower may consider leaving a third untied “kicker” cane as a growth anchor. If it is determined at some time that this anchor is not required, it can be quickly removed with a single pruning cut. If less than optimum vigour was observed the previous year, fewer buds should be left during dormant season pruning.

Colder than normal winter minimums suggest that bud damage is a real possibility and growers should again consider leaving an extra cane or two until after vigour and winter injury are known. As above, if spring vigour and bud injury are unaffected, these extra canes can be quickly removed.

When pruning, the bulk of the previous season’s growth is removed thus, selecting the few canes to remain, is important for best performance in the coming growing season. The best canes should be of normal vigour and pencil sized in diameter. Remember that good sun exposure is important for optimum wood maturity and fruit bud initiation. Canes that have matured properly and are fruitful can be identified by having a darker color which is indicative of greater periderm development. Weak growth or heavy bull wood should be removed.

Pruning should be completed before vines start to “bleed” in the spring. Avoid pruning on very cold days as canes are brittle and remaining canes can be cracked or broken while removing pruned wood.

Highbush Blueberries

Like grapes, the objective of pruning highbush blueberries is to maintain a balance between vegetative growth and good fruit production. If left unpruned, highbush blueberry plants will become highly branched with excessive twiggy growth that leads to reduced production of small, poor quality fruit. In overpruned bushes there is a direct reduction of yield, coupled with excessive new shoot growth. The properly pruned bush will find the balance between good production of large, high quality fruit and adequate new shoot growth to maintain this production the following year.

The most productive canes are five years old; after eight years, productivity starts to decline. It's for this reason that the ideal blueberry bush contains two or three canes of each age – young ones that will replace the oldest ones that are being removed, middle age ones that are at their peak of productivity, and old (eight-year-old ones) that are in their final year of production and are scheduled for removal. This makes a total of about 20 canes per bush.

Highbush blueberries need little, if any, pruning during their first few years of growth. During the first two years, it does pay to rub out any flower buds during March and April. This allows the plant to put energy into cane production. This can be easily accomplished by wearing heavy leather gloves and quickly running your hand up the cane to knock off the large fat flower buds located on the terminal ends of the fruiting laterals. During the third year, the first cane pruning may be necessary, but only to remove canes that are low growing. Growers should allow bushes to produce 1-2 pints of fruit this year, and only on strong wood. Any extra flower buds should be rubbed out.

Blueberry plantings should be in full production by year six. By this time, the bush should have two to three canes of each age. When mature blueberry bushes are pruned, the following steps should be followed:

1. Remove the low growth
2. Locate the oldest canes and prune out one of every six canes; thus, if the plant has twelve canes, remove two of the oldest ones
3. Remove the brushy, twiggy or diseased wood; a good rule to follow is to „prune back to new wood“
4. Thin the fruiting laterals
5. Shape the bush, if needed; the ideal bush has an open, upright vase shape

Different varieties have different growth habits and benefit from different pruning strategies. For example, spreading varieties like Patriot and Coville often bend over and produce an upright shoot at the top of the bend. Cut off the bending portion of the cane and leave the upright shoot. Continue to prune out one of every six canes as before. Upright varieties like Bluecrop, Jersey and Elliott benefit from selective cane removal from the middle of the bush so as to open the bush to sunlight. Once again, the one in six rule should be followed.

One final pointer: plants that are LESS vigorous need MORE pruning. Pruning will stimulate more new cane production on weak bushes. For more information, please contact:

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