

Pruning Southern Highbush Blueberry in Florida

Pruning is an essential part of blueberry production. It is used to promote postharvest growth of new foliage and fruiting wood, balance vegetative and reproductive growth, reduce disease and insect pressure, assist in mechanical harvesting efficiency, promote new cane growth and plant longevity, and help establish new plantings.

Postharvest Hedging

Postharvest hedging or topping is typically done shortly after fruit harvesting is finished, usually in late May or early June. Delaying hedging until mid-to-late summer may negatively impact floral bud differentiation and yield. Many growers use mechanical hedgers or sickle bars mounted on tractors to reduce plant height to around 40–48 inches, while also trimming the sides of the plant so they do not spread too far into the row middles (Figure 1). While many growers hedge straight across the top of the plant, some growers prefer a “rooftop” cut angled 45–55 degrees up to a point in the center of the plant canopy. Hedging promotes growth of the plant canopy and new fruiting wood (Figure 2), and is essential to vigorous, healthy growth throughout the summer (and through fall and winter for evergreen production). Hedging also allows greater sunlight penetration into the canopy, which may increase the number of flower buds. While most southern highbush cultivars respond well to this pruning, it should be noted that ‘Chickadee’ does not. Several growers have reported that ‘Chickadee’ can struggle to achieve significant regrowth following hedging, especially after the plant is around 2 years old. These growers have adopted the practice of lightly tipping ‘Chickadee’ following harvest instead of the typical hedging.

In addition to promoting vegetative growth, hedging can help reduce disease pressure by removing fungal disease pathogens from the field. It also opens up the plant canopy to allow for better air flow (promoting faster foliage drying and therefore less fungal disease) and better coverage when spraying fungicides and insecticides. Hedging can also remove damaging insects from the plant’s top growth, including wax scale and blueberry bud mites. Because hedging can create an entry point for disease pathogens such as *Botryosphaeria* (stem blight), it is important to spray a fungicide, such as captan, immediately after hedging to help minimize the opportunity for plant infection.



Figure 1. Blueberry field following mechanical hedging
Credits: D. Phillips, UF/IFAS



Figure 2. Regrowth following summer hedging
Credit: D. Phillips, UF/IFAS

New Plant Establishment

Growers may consider removing around $\frac{1}{3}$ to $\frac{1}{2}$ of the top of young blueberry plants when they are planted in the field if they have become long, leggy, and rootbound in their containers. This will help balance the top of the plant with the root system until root growth can support a larger plant top. It was previously common practice to remove flower buds from young plants in the first year after planting to encourage foliage and canopy growth. However, on certain vigorous cultivars in the evergreen system some growers have been harvesting young blueberry plants within 12 to 18 months after planting. Therefore, removing buds in the first year is not recommended in every situation.

Many growers interested in machine harvesting have begun to place cardboard cartons or plastic sleeves over new plantings during the first two years to train the plant to have a narrower crown, which can help reduce ground loss during harvesting (Figures 3 and 4). The cartons may also protect young stems from herbicide damage, and (in certain cultivars) reduce the need for pruning of suckers emerging from the bottom of the plant. However, once the cartons are removed, continued pruning at the base of the plant is needed to maintain a narrow crown.



Figure 3. Cardboard cartons on young blueberry plants.
Credits: J. Williamson, UF/IFAS



Figure 4. 'Farthing' plant previously trained to a narrow crown with cartons.
Credits: J. Williamson, UF/IFAS

Cane-Renewal Pruning

After a blueberry plant is around 4 to 5 years old, cane-renewal pruning should be performed each year to stimulate the growth of new canes and open the plant canopy for better airflow and sunlight penetration. This can help encourage plant vigor, lengthen the productive life of the plant, and reduce fruit load if needed to promote earlier ripening and larger fruit. Around $\frac{1}{4}$ of the oldest canes should be removed each year by cutting them back to the plant crown or to a strong lateral point. Dead, weak, crossing, or low-spreading branches can also be removed at this time. Cane-renewal pruning is typically done during December or January in Florida, when plants in the deciduous system are dormant, although it can also be performed at the same time as summer hedging.

Rejuvenation Pruning

If blueberry plants have not been pruned for several years and are unproductive, it may be possible to rejuvenate the plants through aggressive pruning, depending on the cultivar and overall plant health. With this method, all of the plant's canes are hedged back to 1–2 feet, either in early summer or during winter when deciduous plants are dormant. This will significantly reduce the yield on these plants for the next one or two seasons. If growers have this situation and are evaluating this type of pruning, they should consider using it on only a portion of their field in a year to maintain some level of production during this process.

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