

# Cultural Practices for Summer Royal

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Summer Royal is a mid-season black seedless table grape developed and released by David Ramming and Ron Tarailo of the USDA-ARS in Fresno, California. Formerly known and tested as USDA selection B74-99, this cultivar was released in the spring of 1999. The cultivar resulted from the cross of seeded cultivar A69-190 and seedless cultivar C20-149 made in 1985. The clusters are medium in size, conical in shape and are slightly loose with round to oval-shaped

berries weighing approximately 5.0 grams. Only a few hundred acres of this cultivar have been planted to date. The cultivar has excellent eating characteristics; the berries are firm and crisp and have a sweet, neutral flavor.

## Site Selection and Planting

Summer Royal is extremely vigorous when planted on its own roots. Vigor is increased when grafted to rootstocks most commonly used for table grape production in the San Joaquin Valley, including Freedom and Harmony. Vines are commonly spaced 8' within the rows and 12' between the rows.

## Training and Trellising Systems

Quadrilateral cordon training and spur pruning are suggested for maximum productivity and fruit quality. Depending on vine vigor and in-row spacing, 32 to 40, 2-bud spurs are normally retained on quadrilateral cordon trained vines. Quadrilateral cordon trained vines may be trellised to either the standard California "T" or open gable systems, but the gable system is preferred. Bilateral cordon training is not recommended due to inadequate productivity. Cane pruning is also not recommended.

## Productivity and Crop Load Management

Based on limited experience, yields have been observed to range between 900 to 1200 (22 lb.) boxes per acre for vines on an open gable system. However, a potential problem with this variety is that natural berry set can be variable among sites. In some vineyards, fruit set is poor and yields are reduced as a result. In these cases methods to increase fruit set, such deficit irrigation or girdling at bloom may be warranted. Poor set is common in young vines and/or high vigor vines. It appears that site-specific experience is necessary for the selection of optimum bloom treatments. Regarding cluster management, a minimal amount of cluster tipping is needed and heavy crop loads have not been observed to impede color development.

### **Girdling and Gibberellic Acid**

Gibberellic acid thinning sprays are not necessary due to the cultivar's adequate natural shatter and loose architecture. The natural berry size of the cultivar is moderate (5 grams per berry), so sizing treatments are desirable. Girdles applied at fruit set (5-6 mm in berry diameter) increased berry weight approximately 25% compared to ungirdled controls. Recent work suggests that gibberellic acid rates at 10 grams per acre, combined with a girdle at fruit set increase berry size nearly 40%. Girdling and gibberellic acid treatments also increased berry diameter and length, but had no significant effect on soluble solids or acidity.

### **Canopy Management**

Canopy management practices, including shoot thinning, basal leaf and tendril removal and summer hedging, are similar to those normally performed on other cordon trained/spur pruned cultivars.

### **Special Problems and Considerations**

Fluctuations in productivity have been observed in some Summer Royal vineyards. The reasons for these fluctuations appear to be related to climatic conditions during the fruit bud differentiation period. It appears that Summer Royal, like Autumn Royal, requires relatively high temperatures and high light conditions during the fruit bud differentiation period to produce maximum bud fruitfulness.

Summer Royal berries are susceptible to berry cracking near the stylar tip of the berry. Furthermore, control of Western flower thrips populations is a critical step in the prevention of berry cracking and subsequent fruit damage.