

Low Temperature Injury to Peach Flower Buds in Southwest Virginia in 1982

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Generally, late spring frosts rather than low winter temperatures are instrumental in reducing the survival of peach flower buds in Southwest Virginia. The present study presents the relative flower bud survival among 44 peach and 3 nectarine cultivars following a period of extreme low temperatures in Southwest Virginia.

On January 17, 1982 a temperature of -22.2°C was recorded at Woolwine, Virginia, the site of a peach and nectarine cultivar planting.² All cultivars, planted in blocks of at least 5 to 20, were five years old, unless otherwise stated. On January 26, 1982 composite samples of previous seasons

shoots, 20-38 cm in length when possible, were collected from five or more trees of each cultivar. Shoots were sampled from the outside of the tree canopy at a 1.5 m distance from the ground.

Samples contained in plastic bags were stored in a cooler to reduce desiccation. One day after sampling, approximately 300-600 flower buds of each cultivar were cut and the percent survival determined. Flower buds were rated as dead following observation of browning of internal flower parts. Results are presented on the basis of highest to lowest percent flower bud survival.

Table 1. Peach flower bud survival, January low temperature,² 1982, J. Murray Harman Orchard, Woolwine, Virginia.

Cultivar	Tree age	Percent flower bud survival	Cultivar	Tree age	Percent flower bud survival
Clayton	5	87.5	Early Loring	3	64.7
Jayhaven	5	87.4	Glohaven	5	64.1
Emery	5	85.9	Shippers Late Red	3	64.0
Sweethaven	5	85.7	Autumn Gold	5	63.9
Biscoe	5	83.6	Loring	5	63.8
Redgold ²	5	82.4	Flavortop ²	5	62.1
Fantasia ²	5	81.4	Sunshine	3	62.0
Ellerbe	5	81.4	Richhaven	3	61.5
Redhaven	5	80.5	Late Gold	3	60.7
Hamlet	5	79.5	Gleasons Elberta	5	60.5
Redskin	4	78.0	Candor	5	59.9
Redkist	4	77.3	Blake	3	57.6
Sunhigh	5	76.4	Suncrest	5	57.5
Brighton	4	75.5	Topaz	3	55.7
Normon	5	74.5	Sweet Sue	5	53.0
Windblo	5	73.2	Rio Oso Gem	5	49.7
Cresthaven	5	70.7	Marqueen	5	49.5
Correll	5	70.5	Havis	3	49.3
Honey Dew Hale	5	68.3	Derby	3	48.4
Talla	5	68.1	Sunbrite	5	47.1
Earliglo	5	67.5	Jersey Queen	5	45.7
Autumnglo	5	67.4	Redglobe	5	39.7
Early Rio	3	66.0	Yakimaw Hale	5	29.2
Washington	5	65.3			

²Temperature of -22.2°C on January 17, 1982.

²Nectarine cultivar.

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