

Recent Developments in Nectarines in California

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The development of new yellow-fleshed varieties has greatly changed the nectarine industry. In 1952 the total acreage of nectarines in California was 3,793 acres. In 1959 the total had increased to 13,286 according to the statistics of the California Crop and Livestock Reporting Service. The leading varieties in 1951 were Quetto, John Rivers and Gower, which are all white-fleshed varieties. These varieties are disappearing rapidly as many orchards have been pulled and others topworked. From June 30th 1958 to the end of the season, the varieties Gower and Quetto alone

made up about 6% of the total shipments.

The California Tree Fruit Agreement has listed the most important varieties grown commercially in California as given in Table I. The 1958 interstate and intra-state shipments are combined and given as total shipments by variety. The varieties maturing before June 30th were not included because the agreement did not come into effect until this date.

The approximate maturity dates are given in comparison to Elberta in half-week increments. An approximation of the firmness of shipping

TABLE I. A comparison of the most important nectarines now being grown in California.

Variety	Maturity in weeks before or after Elberta	Total shipments of packages in 1958 and 1959	Firmness	Fruit size	Chilling requirements
Sunrise (Sel)	6 $\frac{1}{2}$ before	156,917**	6	S	6
Grand River (Sel)	6 "	73,711**	5	S	5
John Rivers (W) (Sel)	5 $\frac{1}{2}$ "	107,350**	3	S	8
Early Sun Grand	5 "	192,245**	7	M	6
Sun Grand	3 "	227,298	8	M	5
Early Le Grand (Cl)	3 "	268,704	VL		6
Panamint	1 $\frac{1}{2}$ "	20,791	6	M	5
Gower (W)	1 $\frac{1}{2}$ "	27,965	6	S	5
Grand Prize	1 "	7,924	6	M-L	5
Red Grand (Cl)	$\frac{1}{2}$ "	150,289	6	M-L	5
Quetta (Cl)	0	73,426	5	L	7
Freedom	0	61,482	5	L	7
Le Grand (Cl)	0	563,354	6		5
Grandeur (Cl)	1 after	33,898	6	L	5
Golden Grand	1 $\frac{1}{2}$ "	11,067	6		6
Late Le Grand (Cl)	1 $\frac{1}{2}$ "	237,551	6	VL	6
Gold King (Cl)	2 $\frac{1}{2}$ "	49,492	6*	L	5

Abbreviations: Sel: Semi-cling; W: White flesh; Cl: Cling.

*Suture ripens with Le Grand causing a soft suture area.

**Shipment made in 1959.

ripe fruit and the carrying quality is given on the basis of ratings from 1-10. This scale is based on 1 as being very soft and 10 being very firm. Elberta peach would be rated at 6 and the variety J. H. Hale would be given a value 8. John Rivers, a rather soft nectarine, was rated at 3. The sizes are given as: S—small, M—medium, L—large and VL—very large.

The chilling requirement is a very important factor in regard to the acceptance of a nectarine variety in California. One of the chief reasons for the rapid fall of the John Rivers variety is its high chilling requirements. Chilling requirements have been rated with regard to the ability of the variety to set fruit after warm fall and winter conditions. The value of 1 would represent a variety which required no chilling and the value 10 representing very high chilling requirements. July Elberta peach would be given a value of 5 and Elberta a value of 6.

The variety Quetta was selected by the Plant Introduction Service, U.S.D.A. at the Chico Plant Introduction Gardens from a group of seedlings grown from seed introduced from Quetta, N. W. India. The variety John Rivers was selected by the Rivers nursery and brought to the United States by the Plant Introduction Service. These varieties, and the variety Lippiat from Australia, when hybridized with peaches, have been the basis for most of the newer varieties. All of the yellow-fleshed varieties with the exception of Sunrise, Panamint and Gold King have been developed by Mr. F. W. Anderson in a private breeding program near Merced, California. The Sunrise variety was developed by Grant Merrill at Red Bluff, and Panamint was developed by Armstrong Nurseries at Ontario, California. Gold King is a late maturing

TABLE II. Ripening dates for a group of nectarines now being tested in California on a limited commercial basis.

Burchell Rose	5	weeks before	Elberta
Princess	5	"	"
Queen	5	"	"
Grand Haven	5	"	"
Star Grand II	4	"	"
Silver Lode	2	"	"
Grand Andy	2	"	"
Pioneer	1	"	"
Merry Gold	1½	"	"
Golden Grand	1½	"	"
Palomar		Same season as	Elberta
Sequoia		2½ weeks after	Elberta
Jordana	3	"	"
Regal Grand	3½	"	"
September Grand	5	"	"

mutation selected from the LeGrand variety by Mr. L. Hagler of Visalia. All the yellow-fleshed varieties are patented, which prohibits propagation without a license.

A large number of varieties are being tested or planted on a limited commercial basis. Table II lists the approximate maturity period of a group of varieties grown in limited commercial quantities.

The varieties Silverlode, Pioneer, and Palomar have been introduced by the Armstrong Nursery of Ontario, California. Princess and Queen were developed by Grant Merrill of Red Bluff. Sequoia was grown and marketed by Williams and Sons of Porterville. Jordana has been grown and marketed by Mr. J. Garebian of Fresno. Fireglobe was introduced by Dr. C. O. Hesse at the University of California, Davis. The remainder of the varieties have been developed by Mr. F. W. Anderson of Merced. Stark Bros., of Missouri, are testing some California varieties under Eastern conditions in limited commercial quantities. All of the varieties in this group except Fireglobe are patented.