

Royal/Golden Zest Peaches and Smooth Texan Nectarines

David Byrne, Natalie Anderson and Zainab Mansur

Department of Horticultural Sciences, Texas A&M University, College Station, TX



Dr. David H. Byrne
d-byrne@tamu.edu



Natalie Anderson
n-anderson@tamu.edu



Zainab Mansur
zjmansur@tamu.edu

In the late 1990s, the *Prunus* Breeding and Genetics Program began to develop a series of early ripening yellow peach cultivars adapted to the medium chill zone (500-600 CU) of the southern USA. This work has resulted in 5 peach and 3 new nectarine cultivars that ripen consecutively from mid May to late June in the medium chill zone of Texas. Peach cultivars have similar size but better color, fruit shape and firmness as compared to 'June Gold' while nectarine cultivars ripen starting about 2 weeks before and finish a little after 'June Gold' (Table 1). RZ1, RZ2, RZ3, and RZ4 resulted from crosses done between adapted breeding materials with a high colored California cultivar. GZ is a cross between a Californian and a Brazilian peach cultivar. SMT1 and SMT2 share 'Crimson Baby' as a mother but have different pollen parents whereas SMT3 is a cross between the California nectarine 'Diamond Ray' and the Chinese nectarine 'Danmo'.

Table 1. Bloom time, ripe date, fruit size, firmness, and total soluble solids of Zest peaches and nectarines in Fairfield/Terrell, Texas (2005-2011).

Cultivar	Full bloom	Ripe date	Weight (g)	Firmness	TSS (%)
SMT1	03 Mar	15 May	111	7.2	11.0
RZ1	01 Mar	18 May	131	7.2	10.1
SMT2	04 Mar	22 May	117	7.5	10.1
Regal	13 Mar	23 May	111	7.0	10.6
June Gold	09 Mar	31 May	130	6.0	11.3
SMT3	09 Mar	04 Jun	108	7.7	12.9
RZ2	02 Mar	07 Jun	127	7.4	12.3
RZ3	02 Mar	13 Jun	135	7.2	12.5
RZ4	02 Mar	17 Jun	121	7.5	12.3
GZ	04 Mar	22 Jun	153	8.0	12.7

Full bloom = 60-80% flowers open, Ripe date = date when 20% of the fruit is firm ripe. Rating scale 0 – 9; 0-4 = unacceptable, 5 = marginal, 6 = good, 7 = very good, 8-9 = excellent for commercial use. RZ1 = Royal Zest One, RZ2 = Royal Zest Two, RZ3 = Royal Zest Three, RZ4 = Royal Zest Four, GZ = Golden Zest Five, SMT1 = Smooth Texan One, SMT2 = Smooth Texas Two, SMT3 = Smooth Texan Three.

Golden Zest Peaches and Smooth Texan Nectarines

The Zest peach series, SMT1 and SMT2 bloom approximately one week before 'June Gold', whereas SMT3 blooms with 'June Gold' in the medium chill zone (Table 1). Based on the relative bloom times of standard cultivars, these new peaches, SMT1 and SMT2 need about 550 chilling units (CU) whereas SMT3 requires about 650 CU to break dormancy. In spite of the earlier bloom, all seven have produced consistently in zones 2 (650-850 CU), 3 and 4 (500-750 CU) of Texas (Fig 1).



Royal Zest 1 Mid May



Royal Zest 2 - Early June



Royal Zest 4 - Mid-Late June



Royal Zest 3 - Early-Mid June



Golden Zest - Late June



Smooth Texan One - Mid May



Smooth Texan One - Late May



Smooth Texan Three - Early June

Ripening and Quality of the Zest Peaches and Smooth Texan Nectarines

These series of 5 peach and 3 nectarine cultivars that ripen consecutively from mid May through late June. RZ1, GZ, SMT1, SMT2, and SMT3 are clingstone and the rest are semi freestones or freestones. All these have medium-large to large fruit size and good to excellent flavor when properly managed and thinned. The mean soluble solids for these cultivars when picked mature are similar to or better than the common commercial cultivars. All the Royal Zest and Smooth Texan cultivars have an attractive yellow to orange ground color with a red blush over 60% to 95% of the fruit surface depending on the cultivar and environmental conditions. GZ has non-melting flesh, an attractive golden yellow ground color and a 20-30% red blush. SMT1 and SMT2 are high acid nectarines compared to SMT3. Sugar speckles in nectarines varies depending on the cultivar and environmental conditions (Table 1).

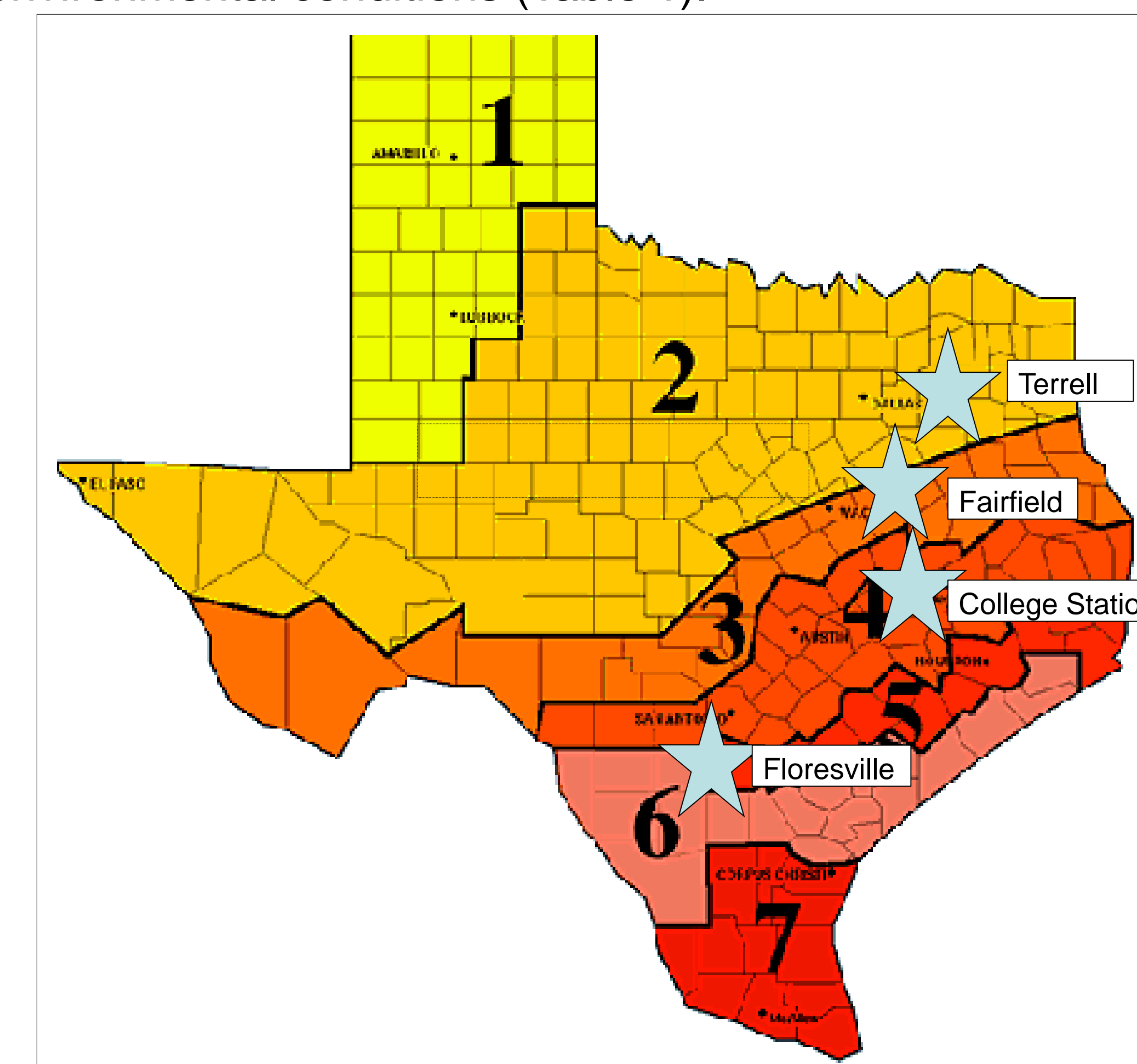


Figure 1. Chilling zones in Texas.

Acknowledgement

Collaboration of Dale Ham (Terrell), Tim Cooper (Fairfield), Cliff Caskey (San Marcos), and Frank Rhew (Floresville) is gratefully acknowledged. Without their generous contribution of their orchard space and their time and skill in growing the test trees, these cultivars would not exist.