



United States Department of Agriculture
National Agricultural Statistics Service

2019 California Raisin Grape Mechanical Harvest Report



Cooperating with the California Department of Food and Agriculture

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RESULTS

Total acreage harvested by mechanical means was 44,091, nearly 30 percent of the State's total raisin-type grape acreage, according to the Pacific Region Office of USDA's National Agricultural Statistics Service. The Overhead Trellis System was used on 13,031 bearing acres in 2019, accounting for 8.8 percent of the total raisin-type grape acreage. Fresno and Madera County growers have 49 and 42 percent of the Overhead Trellis acreage in the State, respectively. Kern and Tulare County growers have 6 and 2 percent of the Overhead Trellis acreage, respectively. Other mechanical harvest systems include Continuous Tray at 19 percent of the raisin acreage, South Side Trellis with 0.4 percent and Open Gable with about 1.2 percent of the raisin-type grape acreage.

Although Fresno County has the most acreage mechanically harvested, at 32,105, that acreage only represents 31 percent of the Fresno County raisin-type grape acreage. Madera County growers harvest 43 percent of their raisin-type grape acreage by mechanical means.

By variety, Thompson Seedless grape acreage harvested mechanically is 30,922 or 25 percent of the total Thompson Seedless grape acreage. Forty-nine percent of the Fiesta grape acreage is harvested mechanically and 67 percent of the Selma Pete acreage is harvested mechanically.

Most California raisins are produced by sun drying after placing bunches on paper trays on terraces between vine rows. The Overhead Trellis System has led to increased production of dried-on-the-vine raisins, increased machine harvesting, and decreased hand labor use.

PROCEDURES

The Pacific Region Office of USDA's National Agricultural Statistics Service, in cooperation with the California Department of Food and Agriculture, conducts an annual grape acreage survey. The 2019 Grape Acreage Report, published in April, summarized the latest survey results. At the request of the raisin industry, an additional question was added to the grape acreage survey to gather information on raisin-type acreage that is harvested mechanically. In addition to the mechanical harvest data, producers were asked to update acreage by variety and year planted. Growers were initially contacted by mail and follow up was done by telephone. This report summarizes data for mechanical harvest methods of raisin-type grapes. The totals included are only for those that voluntarily reported to this survey.

ACKNOWLEDGMENTS

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Raisin-Type Grapes: Acreage by County, California, 2019 ^{1/}

County	Total acreage	Mechanical harvest		Type of mechanical harvest			
		Acres	Percent of total acreage	Overhead trellis acres	Continuous tray acres	South side trellis acres	Open gable acres
Fresno	104,639	32,105	31	6,445	23,647	562	1,451
Kern	11,434	1,284	11	809	435	^{2/}	^{2/}
Madera	22,857	9,776	43	5,476	4,199	^{2/}	^{2/}
Tulare	6,843	836	12	299	376	^{2/}	^{2/}
Other Counties	1,763	90	5	2	6	56	328
Total	147,537	44,091	30	13,031	28,664	618	1,779

^{1/} Totals may not add due to rounding.

^{2/} Included in Other Counties to avoid disclosing data for individual operations.

Raisin-Type Grapes: Acreage by Variety, California, 2019 ^{1/}

Variety	Total acreage	Mechanical harvest		Type of mechanical harvest			
		Acres	Percent of total acreage	Overhead trellis acres	Continuous tray acres	South side trellis acres	Open gable acres
Black Corinth	1,334	501	38	239	211	^{2/}	^{2/}
Dovine	467	267	57	149	^{2/}	^{2/}	^{2/}
Fiesta	16,279	8,003	49	5,831	2,102	^{2/}	^{2/}
Selma Pete	6,486	4,317	67	1,955	1,105	^{2/}	^{2/}
Thompson Seedless	121,935	30,922	25	4,783	25,123	572	444
Other Raisin-Type	1,037	82	8	73	122	46	1,335
Total Raisin-Type	147,537	44,091	30	13,031	28,664	618	1,779

^{1/} Totals may not add due to rounding.

^{2/} Included in Other Raisin-Type varieties to avoid disclosing data for individual operations.

MECHANICAL HARVEST METHODS

OVERHEAD TRELLIS – Grapes are dried directly on the vine, forming a canopy over the rows. It allows the mechanical grape harvester to get underneath and gather the dried fruit.

SOUTH SIDE TRELLIS – In an east-west row orientation vineyard, an angled cross-arm is added to each trellis stake to support two wires on which fruiting canes are tied. The southern exposure of the fruit facilitates drying. The raisins may be harvested mechanically with a south side harvester.

CONTINUOUS TRAY – Grapes are mechanically harvested and laid out on a continuous (rather than individual) thin sheet of paper where they dry in the sun for two to three weeks.

OPEN GABLE – Trellis wires are connected between rows of v-shaped supports. The unique V-shape lets in additional sunlight and traps the heat. This greatly improves ripening and drying. Raisins are harvested mechanically with a harvester that has been modified to place the raisins in bins instead of gondolas.