



United States Department of Agriculture
National Agricultural Statistics Service

2016 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 45,903, just over 29 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 Management System was used on 13,404 bearing acres in 2016, accounting for 8.5 percent of the total raisin-type grape acreage. Fresno and Madera County growers have 50 and 40 percent of the Overhead Trellis acreage in the State, respectively. Kern County growers have 7 percent of the Overhead Trellis acreage. Other mechanical harvest systems include Continuous Tray at 20 percent of the raisin acreage and South Side and Open Gable with about one half of 1 percent each of the raisin-type grape acreage.

Although Fresno County has the most acreage with mechanical harvesting, at 33,399, that acreage only represents 29 percent of the Fresno County raisin-type grape acreage. Kern and Madera County growers harvest 17 and 40 percent of their raisin-type grape acreage by mechanical means, respectively.

By variety, Thompson Seedless grape acreage with mechanical harvesting is 33,373 or 24 percent of the total raisin-type grape acreage. Sixty-nine percent of the Fiesta grape acreage is harvested mechanically and 61 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 2016 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 form the past nine years 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, 2016

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	114,062	33,399	29	6,750	25,469	a/	a/
Kern	8,320	1,431	17	956	a/	a/	a/
Madera	25,321	10,224	40	5,415	4,701	a/	a/
Other Counties	9,707	849	9	283	818	622	890
Total	157,410	45,903	29	13,404	30,988	622	890

a/ Included in Other Counties to avoid disclosing data for individual operations.

Raisin-Type Grapes: Acreage by Variety, California, 2016

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
Fiesta	12,381	8,530	69	5,943	2,532	a/	a/
Selma Pete	5,063	3,071	61	1,540	1,062	a/	441
Thompson Seedless	136,873	33,373	24	5,603	26,798	596	377
Other Raisin-Type b/	3,093	929	30	318	596	26	72
Total Raisin-Type	157,410	45,903	29	13,404	30,988	622	890

a/ Included in Other Raisin-Type varieties to avoid disclosing data for individual operations.

b/ Includes Black Corinth, Dovine, Negrita Black, and Sultana varieties.

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.