

UNIVERSITY of CALIFORNIA
Agriculture & Natural Resources



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Frost Dates and Other Temperature Data for San Luis Obispo County

Every commercial grower and gardener wants to know when he or she can expect the first and last frosts of the season. Obviously an unexpected frost can destroy an otherwise successful crop. The following table includes summary data for San Luis Obispo County:

	Average Dates				28° F Growing Season	Lowest Record Temp	Chill Hours	Grape Degree Days
	First Frost	Last Frost	First Hard Frost	Last Hard Frost				
Paso Robles	11/7	4/7	11/15	3/5	280	10	877	3275
San Luis Obispo	12/31	2/15	---	---	350	20	227	2632
Pismo Beach	12/31	2/15	---	---	350	24	180	2080
Santa Maria	12/10	3/5	---	---	350	21	482	2111
Cuyama	10/7	4/20	10/25	4/5	210	7	1040	3306

Average First and Last Frost refers to the days where the temperature drops to 32° F for the first and last times of the winter.

Average First and Last Hard Frost refers to the days where the temperature drops to 28° F for the first and last times of the winter.

The 28 Degree Growing Season refers to the number of days per year that can be expected to consecutively stay above 28° F.

Chill Hours is the number of hours accumulated on a daily basis that fall between 32° F and 45° F per season. Most deciduous fruit trees need at least 400 hours of chilling during the winter months November through February 15 to achieve vigorous growth and set fruit the following season.

Grape Degree Days is a cumulative index of the number of hours that the temperature climbs above 50° F from April through October. For the gardener, it provides a relative scale for determining how warm different areas get.

Average Monthly Temperatures

The Central Coast extends from the San Francisco Bay area Contra Costa County south to the mountain ranges of Santa Barbara County. The climate in this area is influenced by the Pacific Ocean. The region generally has a mild climate with cool summers on the coast, where fog is common, and warm summers in the interior.

Although frosts are infrequent in the winters near the coast, low-lying areas in the interior of this region can have temperatures below freezing. Winter protection and site selection can be critical factors in some locations in this region. The main temperate fruit and nut crops grown commercially in this area are almond, apple, apricot, cherry, pear, plum, prune, olive, and English and black walnut. It is also a major wine grape, and berry production area.

One note of caution – always remember that your particular location will be somewhat warmer or cooler than your nearest weather station. By comparing temperatures on your own thermometer to the temperatures published in the newspaper for a period of time, you can figure out quite closely how much warmer or cooler (or both) your location is as compared to your local weather station. The following table includes average temperature data for San Luis Obispo County:

Average Monthly High and Low Temperatures (°F)

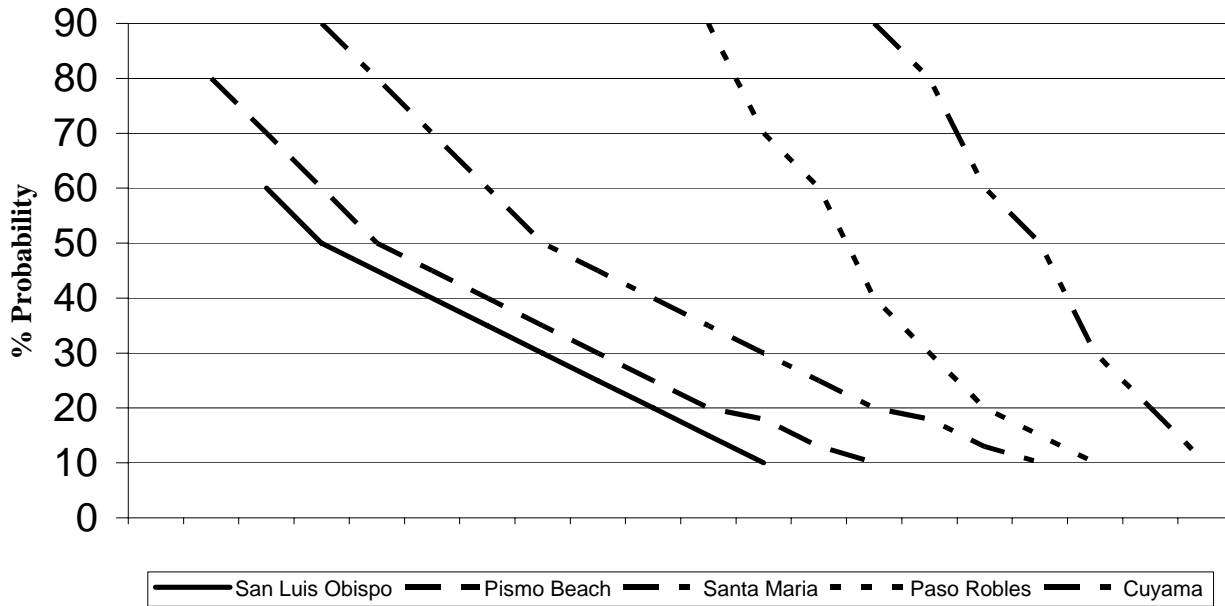
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Paso Robles												
Ave High	60	62	68	74	80	87	94	93	90	81	70	62
Ave Low	32	36	38	41	44	47	50	49	46	42	35	33
San Luis Obispo												
Ave High	62	64	65	68	69	74	77	77	78	75	71	64
Ave Low	42	44	45	46	48	50	52	52	52	50	46	43
Pismo Beach												
Ave High	62	64	65	67	67	69	69	69	69	72	71	69
Ave Low	42	44	44	46	47	50	52	53	52	50	47	44
Santa Maria												
Ave High	62	63	65	66	68	70	72	72	74	73	70	65
Ave Low	38	40	42	45	47	50	53	53	52	48	42	40
Cuyama												
Ave High	58	60	63	71	77	87	96	93	89	77	66	60
Ave Low	29	32	34	39	42	48	54	53	49	40	34	31

Frost Probability

Average frost dates are just that – averages. In any given year, the actual last date of frost may be weeks before or after the ‘average’ frost date. Graphs showing the probability of a frost occurring on any given date are perhaps more useful than are frost dates. Using a probability graph, a grower can decide how much of a risk he is prepared to take.

Frost Date Probability graphs give the probability of reaching either 32° or 28° F on a particular day. The following graphs show the probabilities of either a 32° F frost or 28° F frost for five locations in San Luis Obispo County. For example, in Paso Robles there is a 60 percent probability of receiving a 32° F frost on April 1.

Probability of 32 degree temperature by date



Weather station locations in cities for data reported here

- Paso Robles - Airport
- San Luis Obispo – Cal Poly
- Pismo Beach – City Hall
- Santa Maria – Airport
- Cuyama – Fire Station

ADDITIONAL RESOURCES

The California Backyard Orchard – A University of California Resource for Fruit and Nut Crops
<http://homeorchard.ucdavis.edu/>

University of California Fruits and Nuts Research and Extension Center – Weather Services
<http://fruitsandnuts.ucdavis.edu/weather/index.shtml>