FIRST AND LAST AVERAGE FROST DATE
FOR SONOMA COUNTY

While the past is not an absolute predictor of the future, past climate data is analyzed to determine the ***average*** first and last frost dates. The averages are derived from a 30-year NOAA dataset that includes frost-freeze date probabilities for locations throughout the United States. The datasets are updated every ten years. The 1971-2000 dataset[i] is archived for historical reference in state-wide formats. The 1981-2010 freeze data (published in 2016) uses an interactive map to locate freeze data for individual weather stations.[ii]

The 1981-2010 NOAA climate data below lists seven weather stations in Sonoma County: Cloverdale, Graton, Healdsburg, Petaluma, Santa Rosa (both Sonoma Airport and near Doyle Park) and Sonoma. Note that the data below predicts 10-, 50- and 90-percent probabilities of frost occurring before or after a particular date for a particular location. The threshold temperatures are significant: 36 degrees F suggests the potential for light frost; 32 F is the freezing point; 28 F is considered a hard freeze. Many seed company catalogs and online gardening sources only cite the 50-percent probability for 32 degrees F. When seeding and planting, consider the full array of frost/freeze information in NOAA's dataset. Remember that these are 30-year averages for past weather. Microclimates have their own characteristics that impact the occurrence of frost as might uncertain weather patterns due to climate change. Apply the following information as a guideline.

FALL—FIRST FROST DATE (probability of earlier date in fall than indicated):

LOCATION	Thresholds (degrees F)	10% Probability	50% Probability	90% Probability
Cloverdale	36	Nov 5	Nov 22	Dec 8
	32	Nov 20	Dec 7	Jan 4
	28	Dec 1	Dec 22	Jan 27
Graton	36	Oct 1	Oct 20	Nov 7
	32	Oct 22	Nov 9	Dec 3
	28	Nov 9	Dec 1	Jan 4
Healdsburg	36	Nov 3	Nov 20	Dec 6
	32	Nov 15	Dec 5	Jan 4
	28	Nov 29	Dec 23	Jan 23
Petaluma Airport	36	Oct 28	Nov 11	Dec 1
	32	Nov 9	Nov 29	Dec 28
	28	Nov 23	Dec 14	Jan 22
Santa Rosa Sonoma Airport	36	Oct 21	Nov 5	Nov 22
	32	Nov 6	Nov 24	Dec 15
	28	Nov 22	Dec 10	Jan 13
Santa Rosa City	36	Nov 3	Nov 17	Dec 4
	32	Nov 15	Dec 3	Jan 2
	28	Dec 1	Dec 23	Jan 24
Sonoma	36	Oct 19	Nov 6	Nov 26
	32	Nov 4	Nov 27	Dec 19
	28	Nov 20	Dec 13	Jan 18

SPRING—LAST FROST DATE (probability of later date in spring than indicated):

LOCATION	Thresholds (degrees F)	90% Probability	50% Probability	10% Probability
Cloverdale	36 32 28	Feb 23 Jan 7 Dec 17	Apr 1 Feb 11 Jan 10	Apr 30 Mar 28 Feb 13
Graton	36 32 28	Apr 11 Feb 25 Jan 4	May 2 Mar 31 Feb 14	May 29 Apr 28 Mar 19
Healdsburg	36 32 28	Feb 23 Jan 5 Dec 16	Mar 26 Feb 9 Jan 10	Apr 17 Mar 11 Feb 8
Petaluma Airport	36 32 28	Mar 9 Jan 20 Dec 18	Apr 10 Feb 25 Jan 20	May 6 Apr 9 Feb 19
Santa Rosa Sonoma Airport	36 32 28	Mar 22 Jan 31 Dec 26	Apr 15 Mar 2 Jan 30	May 2 Apr 8 Feb 24
Santa Rosa City	36 32 28	Feb 27 Jan 16 Dec 21	Mar 27 Feb 13 Jan 16	Apr 19 Mar 16 Feb 12
Sonoma	36 32 28	Mar 18 Jan 31 Dec 25	Apr 16 Mar 6 Jan 29	May 5 Apr 12 Feb 25

[i] U.S. Climate Normals: Freeze/Frost Data - CLIM20 supp no.1 (1971-2000), National Environmental Satellite, Data and Information Service, NOAA; for the state of California:
https://www.ncdc.noaa.gov/climatenormals/clim20supp1/states/CA.pdf
[ii] U.S. Normals Data (1981-2010) Map, National Climatic Data Center, NOAA,
https://gis.ncdc.noaa.gov/maps/ncei/normals

Compiled by Stephanie Wrightson, June 2017