

Almond Board of California Disease Forecasts 2023
in cooperation with the University of California and Semios

Table 1. Daily risk assessment disease forecasts for Wed., April. 13 through Wed., April 20, 2023*

No.	County	Region	Alternaria leaf spot (date, value, level)^	Anthracnose (date, value, level)^	Bacterial blast (date, value, level)^	Bacterial spot (date, value, level)^	Green fruit rot (date, precipitation, level)^
1	Butte	West	0	0	0	0	4/17-4/18: 0.03 mm total; low
2	Colusa	East	0	0	0	0	0
3	Fresno	East	0	0	0	0	0
4	Fresno	Central	0	0	0	4/12-4/20: 0.39; Low Risk 7-day index	0
5	Fresno	West	0	0	0	0	0
6	Kern	Central	0	0	0	0	0
7	Kern	West	0	0	0	0	0
8	Kern	East	0	0	0	0	0
9	Madera	Central	0	0	0	0	0
10	Merced	Central	0	0	0	0	0
11	Stanislaus	East	0	0	0	0	0
12	Stanislaus	Central	0	0	0	0	0
13	Stanislaus	West	0	0	0	0	0

* - 7-day forecasts are based on temperature (inside- and outside-canopy measurements), precipitation, and leaf wetness which are powered by the Semios® precision farming platform.

^ - Numerical risk is scaled as follows: 0 = no risk, 1 = action threshold (Note: values may exceed 1 due to hourly accumulations).

Industry Advisory - Summary for Selected Almond Growing Regions

Precipitation occurred sporadically in the 13 regions last week. For 4/6-4/8, precipitation totals of 12.6, 4.21, 0.03, 0.53, 0.54, and 1.88 mm occurred in Butte-West, Colusa-East, Madera-Central, Stanislaus-Central, Stanislaus-East, and Stanislaus-West, respectively. Fresno-Central had a total of 0.22 mm on 4/9 and 4/12 (0.11 mm on each day). Average in-canopy temperatures were cool (12.3 to 20.9°C) across the regions and favorable for *Botrytis cinerea* to cause jacket rot/green fruit rot. Wetness allows *Botrytis cinerea* and other fungi to grow from senescing flower parts into healthy developing fruit. The pathogens of green fruit rot can still grow at cool temperatures. Therefore, areas that had high rainfall should be scouted for green fruit rot, especially in cultivars with high fruit set, and management practices should be applied to prevent this disease. Last week's temperatures were too high for bacterial blast/canker and thus, the forecast was 0 risk for these diseases.

Predicted low or no rainfall and low to moderate temperatures in the coming week will result in a zero risk for Alternaria leaf spot and anthracnose for all regions (see Table 1). Forecasted temperatures are warmer than threshold levels for bacterial blast and canker that are below 0°C (32°F) that also make these diseases at 0 risk in the coming week and potentially the rest of the year. Bacterial blast samples (i.e., twig dieback), brown rot blossom blight (spur and shoot dieback), and green fruit rot that are currently being submitted to my lab are positively identified for these three diseases. These diseases that resulted during the cold wet weather events in Feb. - March during bloom are developing symptoms with the warmer conditions experienced in the last several weeks. Bacterial spot on almond cv. Fritz is forecasted to potentially be a problem in Fresno-Central. Last week, 26 h of leaf wetness with a total 0.22 mm of precipitation resulted in the 7-day index being carried forward this coming week. Still with low precipitation and moderate temperatures in the coming week (Table 2), forecasted risk is low for bacterial spot in the coming week.

The website <https://www.ag-radar.com> (password: Almondboard2022) displays actual and forecasted disease risk assessments for each region. Because these are regional forecasts, actual and predicted precipitation may vary among locations within each region. Additionally, historical records and experience for specific locations should be considered. This advisory will be updated weekly. The website "2022 Fungicide Efficacy Tables" is available to optimize fungicide selection and applications (<http://ipm.ucanr.edu/PDF/PMG/fungicideefficacytiming.pdf>).

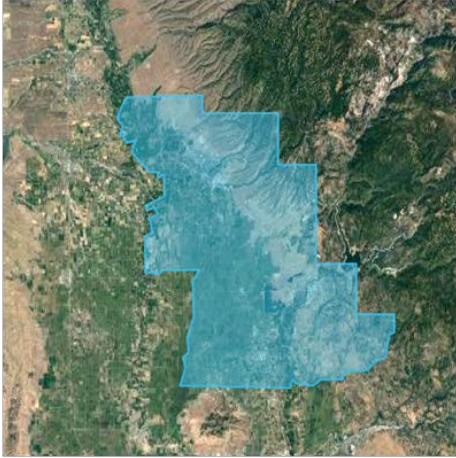
Table 2. Forecasted weather for Thursday, April 13 through Wednesday, April 20, 2023*

No.	County	Region	Date	Avg Temp (in canopy) °C	Avg Humidity (%)	Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	4-13 to 4-20	11.1 to 14.9	33.3 to 58.9	0.03	0
2	Colusa	East	4-13 to 4-20	12.1 to 15.0	33.2 to 60.9	0	0
3	Fresno	Central	4-13 to 4-20	12.8 to 16.9	48.0 to 58.8	0	<1 (4/14: 1 h)
4	Fresno	East	4-13 to 4-20	12.8 to 17.4	53.2 to 64.5	0	<1 (4/13-4/14: 6 h)
5	Fresno	West	4-13 to 4-20	12.4 to 16.8	41.7 to 54.7	0	0
6	Kern	Central	4-13 to 4-20	12.3 to 17.5	48.3 to 57.6	0	0
7	Kern	East	4-13 to 4-20	13.4 to 19.2	51.7 to 60.1	0	0
8	Kern	West	4-13 to 4-20	13.8 to 18.5	43.2 to 50.7	0	0
9	Madera	Central	4-13 to 4-20	12.8 to 16.2	52.0 to 64.0	0	<1 (4/14: 2 h)
10	Merced	Central	4-13 to 4-20	12.3 to 15.5	54.2 to 63.9	0	<1 (4/13-4/14: 5h)
11	Stanislaus	Central	4-13 to 4-20	12.4 to 14.5	46.1 to 63.6	0	<1 (4/14: 1 h)
12	Stanislaus	East	4-13 to 4-20	10.8 to 14.6	57.7 to 66.3	0	<1
13	Stanislaus	West	4-13 to 4-20	12.7 to 14.7	40.0 to 63.5	0	<1

Note: In this table, the order of some regions is the same as table 1 and was generated using the RADAR on-line forecasted report powered by the Semios® precision farming platform.

Fig. 1. Maps of counties and regions.

Butte West



Colusa East



Fresno Central



Fresno East



Fresno West



Fig. 2. Maps of counties and regions.

Kern West



Kern East



Kern Central



Stanislaus Central



Stanislaus East



Stanislaus West

