

Almond Board of California Disease Forecasts 2024
in cooperation with the University of California and Semios

Table 1. 7-day disease risk forecasts for Mon., Apr. 15, through Mon., Apr. 22, 2024*

No.	County	Region	Anthraco nose (value, date, color code)^	Bacterial spot (value, date, color code)^	Alternaria leaf spot (value, date, color code)^	Almond scab sporulation level (date, LW value, Precip.)^
1	Butte	West	0	0	0	0
2	Colusa	East	0	0	0	0
3	Fresno	Central	0	0	0	0
4	Fresno	East	0	0	1 (4/17)	0
5	Fresno	West	0	0	0	0
6	Kern	Central	0	0	0	0
7	Kern	East	0	0	0	0
8	Kern	West	0	0	0	0
9	Madera	Central	0	0	0	0
10	Merced	Central	0	0	0	0
11	Stanislaus	Central	0	0	0	0
12	Stanislaus	East	0	0	0	low (4/15, 13, 0.1 mm)
13	Stanislaus	West	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). Color code risk: **yellow** = low, **orange** = moderate, **red** = high.

Industry Advisory - Summary for Selected Almond Growing Regions

Moderate precipitation with 9.6 mm (i.e., Colusa-E) to 30.4 mm (i.e., Stanislaus-E) and cool temperatures with averages of 13.9 to 15.7°C and lows in the single digits occurred in all regions last week (Table 3). Average daily leaf wetness hours ranged from 4.6 (Fresno-W) to 15.0 (Madera-C). Therefore, there was a zero to low risk for anthracnose for all regions except for Kern-E and -W where risk was moderate and a zero risk for Alternaria leaf spot, two diseases that require higher temperatures and wetness or high relative humidity, respectively. Due to cool temperatures during wetness and rain events, there was a zero to low risk for scab sporulation in all regions. With slightly higher average temperatures in all regions of Kern Co. and Fresno-W, the potential for bacterial spot was high in these regions. Monitoring for shot hole is recommended, especially if there was an outbreak last fall, but fungicide applications should have been made in March or early April to protect leaves and fruit.

For the coming week, zero or near zero precipitation and low numbers of leaf wetness hours/day (i.e., ≤6.3 h) are forecasted for all regions (Table 2). Temperatures are increasing in all regions but are still moderate (daily averages between 16.9 and 19.5°C). Therefore, the risks for anthracnose, bacterial spot, Alternaria leaf spot, and scab sporulation are zero or low for all regions (Tables 1, 2). Shot hole is not a threat; infected fruit are large enough that they are unlikely to drop, and with full canopies, the chance for leaf drop is low, unless high rainfall occurs. With warming temperatures in the coming weeks, the risks for anthracnose, Alternaria leaf spot, and scab will be increasing if additional rainfall, leaf wetness, and/or high relative humidity occurs. Aerial Phytophthora symptoms could be developing in regions that received high rainfall in March and early April and had the disease last year.

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 Mon., Apr. 15, through Mon., Apr. 22, 2024*

No.	County	Region	Avg Temp (in canopy) (Avg) ^o C	Avg Humidity (Avg) (%)	Total Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	13.7 – 19.2 (17.7)	52.5 – 76.2 (59.8)	0	1.3
2	Colusa	East	14.2 – 19.4 (18.1)	56.2 – 70.3 (59.5)	0	2.0
3	Fresno	Central	12.7 – 20.8 (18.5)	53.9 – 73.2 (60.8)	0.2	3.5
4	Fresno	East	12.2 – 20.7 (18.5)	59.1 – 75.2 (66.5)	0	6.3
5	Fresno	West	14.0 – 20.4 (18.4)	39.6 – 67.3 (53.4)	0.1	0.9
6	Kern	Central	12.1 – 20.4 (18.2)	48.0 – 72.9 (58.1)	0	2.1
7	Kern	East	12.9 – 21.1 (19.5)	49.5 – 72.3 (57.5)	0.1	0
8	Kern	West	13.0 – 20.4 (19.0)	44.3 – 74.1 (56.4)	0	2.1
9	Madera	Central	12.6 – 20.1 (17.9)	54.9 – 77.1 (64.9)	0	3.8
10	Merced	Central	13.1 – 19.8 (17.7)	55.1 – 74.4 (64.3)	0	3.5
11	Stanislaus	Central	13.4 – 18.9 (17.0)	55.7 – 74.8 (65.0)	0	4.0
12	Stanislaus	East	12.1 – 18.8 (16.9)	60.3 – 82.2 (68.8)	0.1	6.0
13	Stanislaus	West	13.1 – 19.9 (17.5)	50.8 – 70.5 (60.8)	0.1	1.8

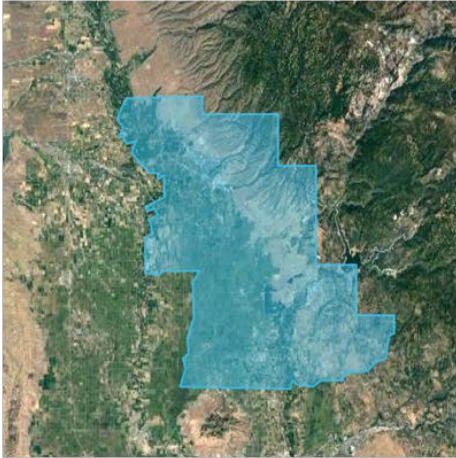
Table 3. Previous week’s actual weather for Mon., Apr. 8 through Mon., Apr. 15, 2024*

No.	County	Region	Avg Temp (in canopy) (Avg) ^o C	Avg Humidity (Avg) (%)	Total Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	9.6 – 18.5 (14.5)	51.9 – 91.5 (71.4)	15.3	13.3
2	Colusa	East	9.0 – 18.1 (13.9)	47.5 – 84.8 (63.2)	9.6	11.9
3	Fresno	Central	9.5 – 18.9 (14.1)	60.3 – 81.8 (68.9)	21.3	4.7
4	Fresno	East	9.3 – 19.5 (14.4)	56.3 – 81.1 (66.6)	26.4	13.7
5	Fresno	West	10.4 – 20.4 (15.7)	46.3 – 76.8 (56.6)	13.5	4.6
6	Kern	Central	9.9 – 20.9 (15.6)	51.9 – 79.1 (61.1)	13.8	5.1
7	Kern	East	8.8 – 21.2 (15.2)	50.4 – 82.3 (63.3)	16.7	9.3
8	Kern	West	9.6 – 20.1 (15.1)	55.7 – 81.9 (62.3)	14.3	6.6
9	Madera	Central	10.0 – 18.9 (14.5)	62.8 – 79.6 (69.8)	21.6	15.0
10	Merced	Central	9.1 – 18.4 (14.0)	69.1 – 82.7 (72.6)	26.4	8.0
11	Stanislaus	Central	9.4 – 19.5 (14.8)	54.9 – 85.3 (67.1)	23.6	11.9
12	Stanislaus	East	9.1 – 19.0 (14.1)	65.2 – 86.3 (73.4)	30.4	8.6
13	Stanislaus	West	9.5 – 19.1 (14.8)	44.3 – 81.3 (63.3)	21.3	10.9

Note: Data in these tables were 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

