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

No.	County	Region	Anthracnose (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	0.28 (4/13)	0.7 (4/13)	0	low (4/13, 15, 6.7 mm)
4	Fresno	East	0.25 (4/13)	0.59 (4/13-4/14)	0	low (4/13, 18, 9.1 mm)
5	Fresno	West	0	0	0	low (4/13, 13, 6.8 mm)
6	Kern	Central	0.36 (4/13)	0.9 (4/13)	0	low (4/13, 10, 5.7 mm)
7	Kern	East	0.51 (4/13-4/14)	0.11-1.13 (4/13-4/14)	0	0
8	Kern	West	0.3-0.4 (4/13-4/14)	0.81-0.92 (4/13-4/14)	0	0
9	Madera	Central	0.24 (4/13)	0.47 (4/13)	0	0
10	Merced	Central	0	0	0	0
11	Stanislaus	Central	0	0	0	low (4/13, 13, 10.4 mm)
12	Stanislaus	East	0	0	0	low (4/13, 15, 13.6 mm)
13	Stanislaus	West	0	0	0	low (4/13, 14, 9.6 mm)

* - 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

Low to moderate precipitation and cool temperatures occurred in all regions last week (Table 3) supporting the moderate risk for jacket rot/green fruit rot and shot hole at most locations in last week's forecast. Jacket rot/green fruit rot develops when senescing flower parts are in contact with developing fruit during wetness periods. Stanislaus-E and -W had the highest precipitation with 20 mm and 17.3 mm, respectively. Precipitation was lowest in Fresno-C and Kern-W with <3 mm. Average temperatures were ≤12.6°C across all regions, and average leaf wetness hours were between 4.1 (Kern-C) and 14.4 (Butte-W). Therefore, there was a zero risk for anthracnose for all regions and a low risk for bacterial spot only in Butte-W, Merced-C, and Stanislaus-W. Monitoring for shot hole is recommended, especially if there was an outbreak last fall, but fungicide applications should have been made earlier to protect leaves and fruit.

For the coming week, precipitation for all regions is generally forecasted low with up to 15.4 mm (Tables 1, 2). The highest rainfall is predicted for Stanislaus-E (15.4 mm), Merced-C (13.4 mm), and Colusa-E (13.0 mm), and is between 5.8 mm and 12.1 mm for the remaining regions. The risk for green fruit rot is low to moderate at this time until most of the jackets have fallen. The risk for shot hole is moderate for most regions, but as indicated above, a fungicide application should have been applied earlier. With rising temperatures and precipitation expected in most regions, the risk for bacterial spot on cv. Fritz is increasing and is high for all parts of Kern Co., moderate for Fresno-C, -E, and low for Madera-C. A follow-up bactericide application is suggested for high- and moderate-risk regions if this was not already done. The risk for anthracnose is moderate for Kern-E, -W, and low or zero for the remaining regions (Tables 1, 2). If additional rainfall and warm temperatures occur in the coming weeks, the risks for anthracnose and Alternaria leaf spot will be increasing. The risk for scab sporulation is also increasing for all parts of Fresno and Stanislaus Co., as well as Kern-C but remains low. Aerial Phytophthora symptoms could be developing in regions that had high rainfall in March 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. 8, through Mon., Apr. 15, 2024*

No.	County	Region	Avg Temp (in canopy) (Avg)°C	Avg Humidity (Avg) (%)	Total Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	11.7 – 19.7 (15.3)	54.5 – 72.3 (61.2)	11.3	3.0
2	Colusa	East	11.4 – 20.1 (15.4)	48.7 – 74.2 (61.6)	13.0	4.1
3	Fresno	Central	11.5 – 20.8 (15.9)	52.7 – 68.0 (61.2)	8.4	3.9
4	Fresno	East	12.1 – 20.7 (15.9)	65.2 – 74.4 (70.0)	12.1	5.1
5	Fresno	West	11.9 – 20.9 (15.8)	44.9 – 68.6 (54.5)	7.9	2.3
6	Kern	Central	11.8 – 20.8 (15.8)	45.1 – 66.5 (55.7)	8.3	2.5
7	Kern	East	12.7 – 21.8 (16.7)	43.4 – 70.5 (56.7)	6.5	1.9
8	Kern	West	12.4 – 21.4 (16.3)	45.6 – 64.8 (54.2)	5.8	0.9
9	Madera	Central	12.3 – 19.4 (15.6)	54.1 – 70.3 (63.1)	10.7	3.5
10	Merced	Central	12.3 – 20.1 (15.5)	58.4 – 69.4 (64.5)	13.4	3.9
11	Stanislaus	Central	12.0 – 19.5 (15.0)	57.2 – 73.0 (65.9)	10.9	5.9
12	Stanislaus	East	11.9 – 19.5 (14.8)	62.9 – 74.6 (68.7)	15.4	8.4
13	Stanislaus	West	11.9 – 20.5 (15.7)	54.8 – 72.7 (61.2)	9.9	2.8

Table 3. Previous week's actual weather for Mon., Apr. 1 through Mon., Apr. 7, 2024*

No.	County	Region	Avg Temp (in canopy) (Avg)°C	Avg Humidity (Avg) (%)	Total Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	7.5 – 15.1 (11.5)	51.3 – 80.5 (70.5)	9.2	14.4
2	Colusa	East	7.0 – 14.7 (10.9)	48.1 – 76.5 (67.5)	16.1	12.7
3	Fresno	Central	8.5 – 16.8 (11.9)	65.2 – 74.4 (70.4)	2.2	5.0
4	Fresno	East	7.6 – 16.8 (11.7)	60.7 – 76.4 (69.0)	14.2	11.7
5	Fresno	West	7.4 – 17.7 (12.3)	55.4 – 73.1 (61.4)	4.5	5.6
6	Kern	Central	7.8 – 18.6 (12.4)	54.0 – 73.3 (65.9)	6.7	4.1
7	Kern	East	7.5 – 18.1 (12.2)	58.3 – 79.5 (70.2)	13.0	9.6
8	Kern	West	8.6 – 17.7 (12.6)	58.6 – 70.3 (64.6)	1.7	4.7
9	Madera	Central	8.0 – 17.0 (11.9)	64.4 – 76.7 (69.8)	11.2	14.0
10	Merced	Central	7.5 – 15.8 (11.6)	64.7 – 78.7 (71.4)	13.5	8.0
11	Stanislaus	Central	7.3 – 16.2 (11.8)	63.0 – 81.5 (69.9)	14.3	9.7
12	Stanislaus	East	6.6 – 15.4 (10.8)	68.3 – 85.0 (74.4)	20.0	9.1
13	Stanislaus	West	6.7 – 15.5 (11.4)	60.7 – 81.2 (68.4)	17.3	9.7

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.

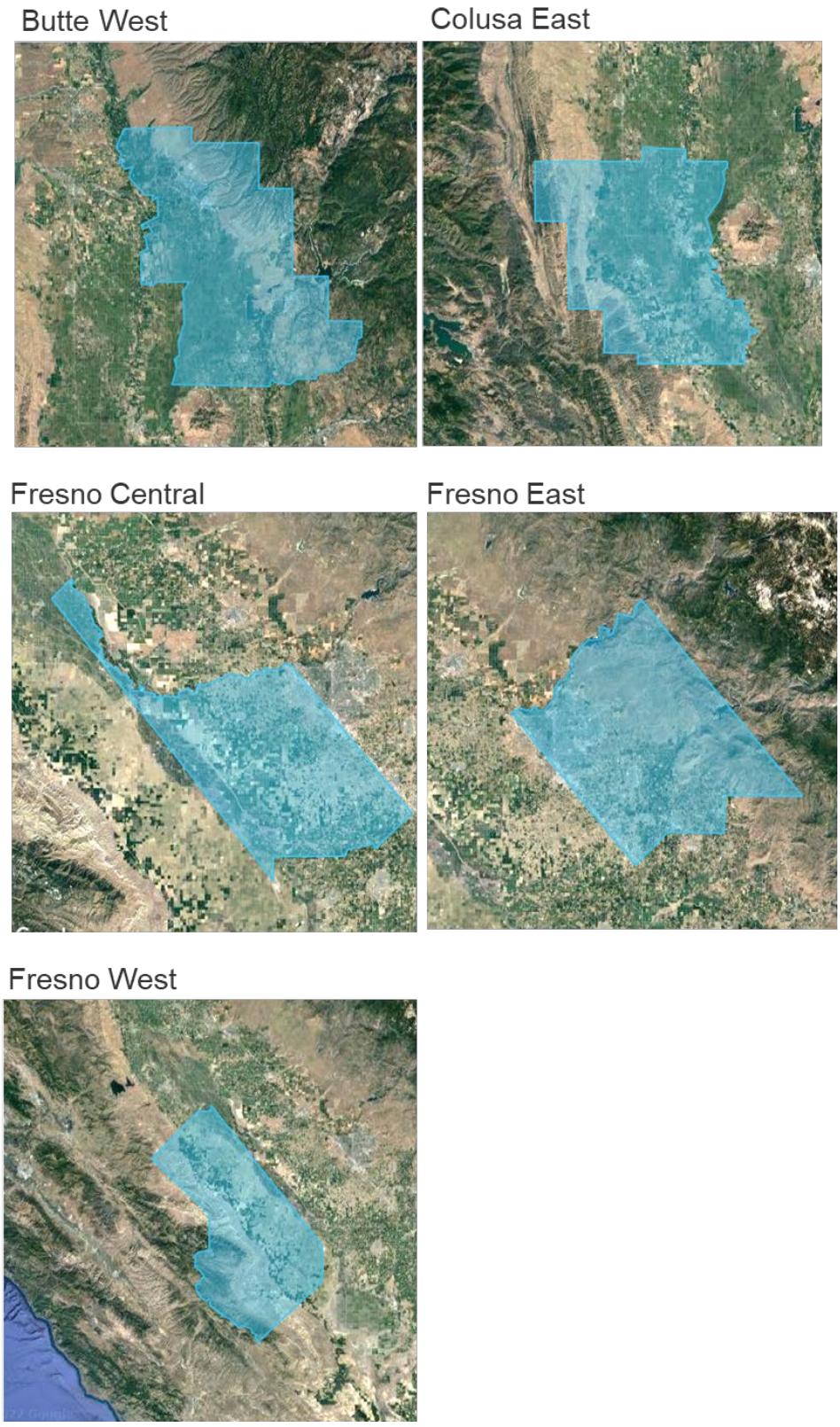

Fig. 2. Maps of counties and regions.