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., May 20, through Mon., May 27, 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, T, LW value, Precip.)^
1	Butte	West	0	0	0; seasonal-DI = 35	0
2	Colusa	East	0	0	0	0
3	Fresno	Central	0	0	0	0
4	Fresno	East	0	0	0; seasonal-DI = 9	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; (7-day DI = 2.2)	0	0
9	Madera	Central	0	0	0; seasonal-DI = 10	0
10	Merced	Central	0	0	0	0
11	Stanislaus	Central	0	0	0	0
12	Stanislaus	East	0	0	0	0
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. 5-, 7-, and 21-day disease indices (DI) are also shown that provide the previous risk for a region.
^ - 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 rainfall and moderate average temperatures occurred in all regions last week (Table 3). Average daily leaf wetness durations ranged from 12.4 h in Butte-W, 7.4 h in Fresno-E, 7.0 h in Stanislaus-W, and 4.6 h in Madera-C to ≤3.3 h in other regions which resulted in DSV values of 2 in Butte-W to 1 in the remaining regions for each day last week accounting for an Alternaria fungicide treatment for Butte-W, Fresno-E, Stanislaus-W, and Madera-C. The risk for Alternaria leaf spot reached a DSV of 11 with a seasonal risk of 35 in Butte-W. Seasonal DSV accumulation for Alternaria leaf spot is 10 in Madera-C, 9 for Fresno-E, and 1 in Kern-C, -E confirming the forecast. Fungicide treatments are suggested at DSV of 8 to 12 depending on the intended level of disease management. Other regions still have a 0 seasonal DSV indicating low risk. With cool temperatures and very low to no rainfall, the risk for anthracnose was low. Last week, bacterial spot risk reached 1 for Fresno-E and 2.2 for Kern-W (7-DI 3.2), indicating high to moderate risk for this disease, whereas other regions had zero risk. Management practices are limited for this time of year for bacterial spot. Last week, the high daily leaf wetness duration under moderate temperatures (>12° lows to < 35C highs) resulted in a low to moderate risk for scab sporulation in Butte-W (87 total LW h, 12.4 LW h/day), Colusa-E (23,3.3), Fresno-E (52, 7.4), Madera-C (32, 4.6), and Stanislaus-W (49, 7).

For the coming week, no precipitation, low daily leaf wetness hours, moderate temperatures, and low humidity are forecasted for all regions (Table 2). Daily leaf wetness values of <1.6 h are forecasted for Stanislaus-E, and <0.5 h per day for other regions. Temperatures are still moderate (daily averages between 19.5° and 26.3°C) with daily maximum values increasing to highs of up to 35.5°C. With no rainfall and low leaf wetness forecasted in the coming week, zero to low risk is predicted for anthracnose, Alternaria leaf spot, bacterial spot, and almond scab sporulation as shown in Tables 1, 2. Relative humidity and low leaf wetness that are forecasted in many regions in the coming week will also reduce scab sporulation, unless irrigation practices increase the wetness periods. In last week's summary (Table 3), higher leaf wetness occurred than what was forecasted in Butte-W, Colusa-E, Fresno-E, Madera-C, Merced-C, and Stanislaus-C, -W, which increased the risk for scab sporulation at these locations.

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., May 20, through Mon., May 27, 2024*

No.	County	Region	Avg Temp (in canopy) (Avg)°C	Avg Humidity (Avg) (%)	Total Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	18.6 – 23.4 (21.3)	22.7 – 51.8 (36.4)	0	0
2	Colusa	East	18.1 – 23.6 (21.3)	23.8 – 55.3 (37.1)	0	0.3
3	Fresno	Central	18.7 – 23.0 (20.6)	37.7 – 52.0 (43.9)	0	0
4	Fresno	East	18.9 – 23.1 (20.9)	40.2 – 55.0 (46.9)	0.1	0.4
5	Fresno	West	18.0 – 21.5 (19.9)	29.3 – 51.0 (39.5)	0	0.1
6	Kern	Central	18.0 – 22.5 (20.2)	31.9 – 51.0 (41.6)	0	0
7	Kern	East	19.4 – 24.0 (21.7)	30.9 – 49.6 (42.0)	0	0
8	Kern	West	18.2 – 22.1 (20.9)	31.1 – 51.3 (41.1)	0	0
9	Madera	Central	18.4 – 22.3 (20.0)	40.8 – 52.1 (47.0)	0	0.4
10	Merced	Central	17.8 – 22.0 (19.8)	41.6 – 55.5 (47.6)	0	0.5
11	Stanislaus	Central	17.1 – 21.3 (19.3)	38.7 – 56.0 (45.8)	0	0.5
12	Stanislaus	East	18.2 – 21.5 (19.3)	44.3 – 58.4 (49.9)	0	1.6
13	Stanislaus	West	17.3 – 22.0 (19.5)	30.4 – 54.2 (42.3)	0	0.4

Table 3. Previous week's actual weather for Mon., May 13, through Sun., May 19, 2024*

No.	County	Region	Avg Temp (in canopy) (Avg)°C	Avg Humidity (Avg) (%)	Total Precip. (mm)	Leaf Wetness (hours/day)
1	Butte	West	19.7 – 22.6 (22.0)	64.4 – 71.6 (68.1)	0	12.4
2	Colusa	East	18.5 – 23.2 (20.7)	46.6 – 64.1 (56.3)	0	3.3
3	Fresno	Central	20.4 – 22.7 (21.8)	61.1 – 63.6 (59.1)	0	0
4	Fresno	East	21.5 – 23.9 (22.8)	50.2 – 59.0 (54.7)	0	7.4
5	Fresno	West	20.4 – 24.3 (22.8)	37.6 - 56.2 (49.2)	0	0
6	Kern	Central	20.6 – 23.3 (21.8)	55.4 – 62.6 (58.3)	0	0.1
7	Kern	East	22.1 – 24.7 (23.5)	47.5 – 58.6 (54.3)	0	0
8	Kern	West	21.0 – 25.2 (22.9)	45.9 – 55.8 (50.6)	0.2	0
9	Madera	Central	20.0 – 23.5 (21.9)	50.8 – 63.1 (58.0)	0	4.6
10	Merced	Central	19.2 – 22.1 (20.9)	50.5 – 66.7 (60.9)	0	1.9
11	Stanislaus	Central	19.1 – 21.8 (20.4)	42.7 – 65.5 (54.4)	0	2.6
12	Stanislaus	East	17.3 – 22.0 (19.5)	30.4 – 54.2 (42.3)	0	0
13	Stanislaus	West	18.3 – 21.7 (20.2)	45.6 – 66.3 (56.4)	0	7.0

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.

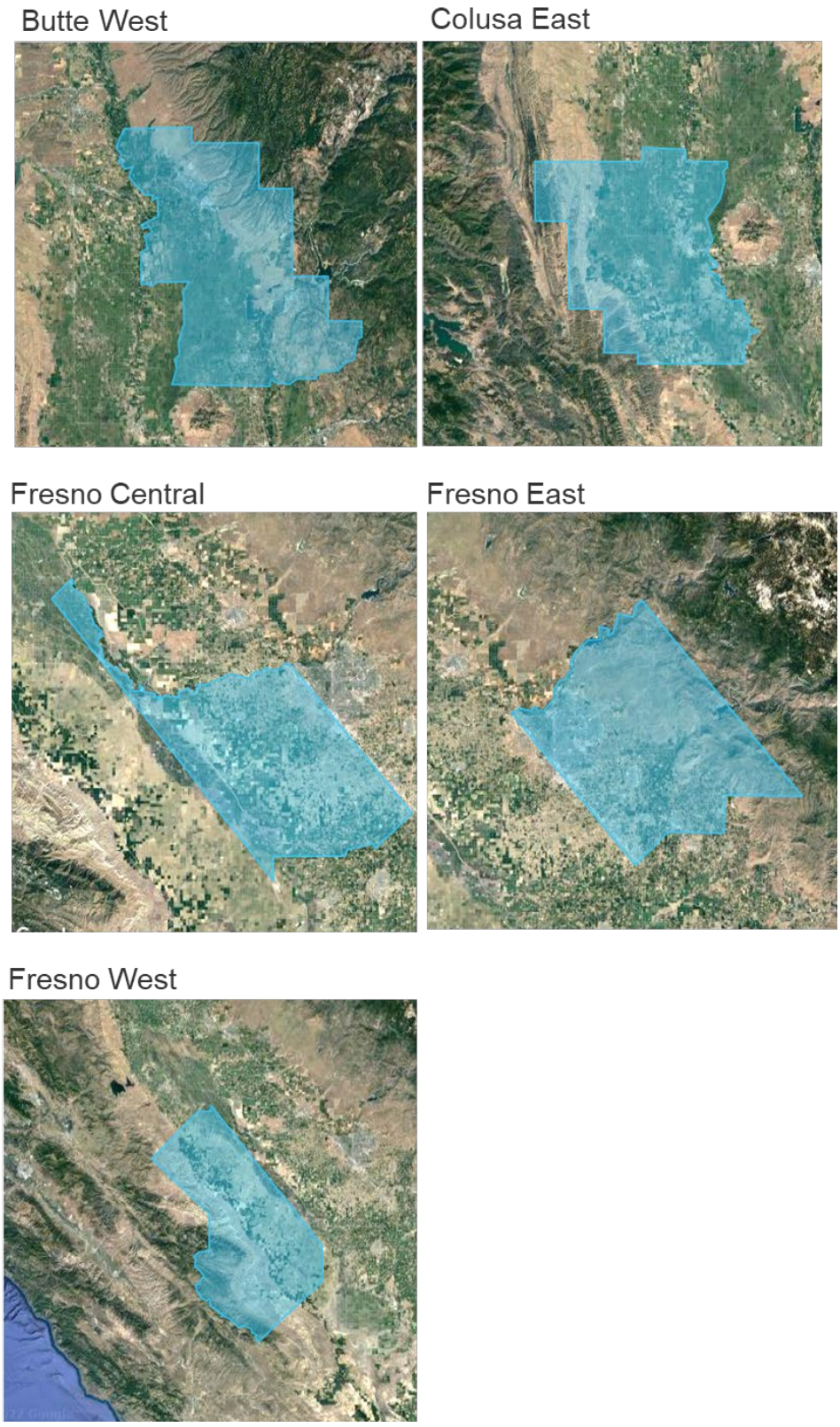

Fig. 2. Maps of counties and regions.