

Alfalfa Weevil Advisor

mesonet.org / Agriculture / Crops / Alfalfa / Alfalfa Weevil Advisor

The Oklahoma Mesonet Alfalfa Weevil Advisor is a simple degree-day heat unit monitor. Like other insects, the alfalfa weevil requires a minimum, or threshold, temperature for growth and development to occur. For the alfalfa weevil, the threshold is 48°F. The higher the temperature is above 48°F, the more heat units will accumulate that day.

Alfalfa weevils typically emerge from estivation (summer dormancy) and lay eggs in alfalfa stems in the fall and early winter months. The Alfalfa Weevil Advisor starts counting heat units on January 1st which is generally the coldest time of the year. As the warmer weather returns the eggs start developing. Egg hatch usually occurs when 150 degree-day heat units have accumulated. When this occurs, fields should be scouted on a regular basis for weevil larvae populations and damage.

The 150-degree-day heat unit level does not represent a treatment threshold. Ideally, a treatment decision should be based on a combination of degree-day heat units, weevil larvae populations, larvae size (instar), and alfalfa stem height. Additional information is available through <u>OSU Fact Sheets</u> - https://extension.okstate.edu/fact-sheets/scouting-for-the-alfalfa-weevil-in-oklahoma.html.

Egg populations vary from year to year. Sometimes, cold conditions (below 20°F for larvae and below 10°F for eggs) occur after eggs are deposited and may result in weevil mortality and lower larvae populations. Oftentimes, a second generation of alfalfa weevils occur in late spring.

The Alfalfa Weevil Advisor is a seasonal tool and is only active on the website from January 1st through August 31st each year.



Alfalfa Weevil Heat Units

You can obtain information for an individual site by using the pull-down menu. Select the site location and then get data. There will be both a graph and a table generated. Below is the graph for the Chickasha site. It shows the accumulated alfalfa weevil heat units for 2022.

Alfalfa Weevil Heat Units for Chickasha



The data is also available in a table format. It shows the daily minimum and maximum temperature, the daily alfalfa weevil heat units, and the accumulated alfalfa weevil heat units since the start of the year. With larger tables directional arrows at the top and bottom of the table allows easy navigation. The save and print button will allow the data to be stored or printed for future use.

| Alfalfa Weevil Heat Units for Chickasha | | | | |
|---|--------------------------|--------------------------|---------------------------------------|---|
| Date/Time | Minimum Temperature (°F) | Maximum Temperature (°F) | Daily 48°F base Degree-day Heat Units | Accumulation Daily 48°F base Degree-day Heat Units Since Jan. 1 |
| Feb 15, 2022 | 38.8 | 71.8 | 9.4 | 139.8 |
| Feb 16, 2022 | 57.0 | 75.0 | 18.0 | 157.8 |
| Feb 17, 2022 | 27.2 | 69.6 | 6.9 | 164.7 |
| Feb 18, 2022 | 14.5 | 49.5 | 0.1 | 164.8 |
| Feb 19, 2022 | 22.8 | 64.6 | 4.6 | 169.4 |
| Feb 20, 2022 | 40.2 | 70.7 | 9.2 | 178.6 |
| Feb 21, 2022 | 49.1 | 72.6 | 12.8 | 191.4 |
| Feb 22, 2022 | 17.4 | 70.6 | 6.6 | 198.0 |

Our Story: The Oklahoma Mesonet is a world-class network of environmental monitoring stations. The network was designed and implemented by scientists at the University of Oklahoma (OU) and at Oklahoma State University (OSU).

The Oklahoma Mesonet consists of 120 automated stations covering Oklahoma. There is at least one Mesonet station in each of Oklahoma's 77 counties. At each site, the environment is measured by a set of instruments located on or near a 10-meter-tall tower. The measurements are packaged into "observations" every 5 minutes, then the observations are transmitted to a central facility every 5 minutes, 24 hours per day, year-round.

For help with this or other Mesonet products, please call 405-325-3231, or email us at operator@mesonet.org.

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