

# GENERALIZED CALENDAR OF EVENTS FOR INSECTS AND DISEASES IN WISCONSIN





















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## ALFALFA

### Generalized calendar of events for insects & related pests on WI alfalfa

Timings shown are approximate and may fluctuate according to location within the state. Degree Day accumulations and timing of insect migrations need to be monitored carefully. Narrow lines indicate that field damage is less likely to be detected.

	April	May	June	July	August	September
Alfalfa weevils						
Pea aphids						
Plant bugs						
Potato leafhoppers						

**Alfalfa weevils.** Initiate scouting at egg hatch (300 Weevil Degree Days, Base 48° F). Small larvae will chew tiny “pin holes” in the upper leaflets. Larger amounts of foliage will be consumed as larvae mature. The economic threshold for first cutting is when 40% of the stems show signs of tip feeding. If a field is within 7 days of cutting, use an early harvest to control larval feeding. Continue to monitor regrowth for signs of weevil damage. If stands fail to regrow and larvae or adults are present, or if second cutting tip feeding exceeds 50%, control may be necessary. By mid-June most weevils have changed into adults and will leave the field.

**Pea aphids.** Are an occasional alfalfa insect pest and can be present on all cuttings. However, third and fourth cuttings have the greatest potential to reach the economic threshold

(100 aphids/sweep). Beneficial insects and timely harvest often keep aphid populations below threshold. If aphids are above threshold and the field is scheduled to be cut within 7 days, take an early cut to control pea aphid populations.

**Plant bugs.** Plant bugs are an occasional insect pest of alfalfa. A combination of either tarnished plant bugs and/or alfalfa plant bugs can damage alfalfa. Mixed populations of both species and life stages (adults and nymphs) may be present in a field at any given time. The economic threshold for alfalfa that is < 3 inches is 3 plant bugs/sweep. For taller alfalfa consider treating if field populations are more than 5 plant bugs per sweep.

**Potato leafhoppers.** Potato leafhoppers migrate to Wisconsin each year and are considered the most damaging insect pest on alfalfa. However, populations vary greatly from year to year be-

cause of migration patterns. Adult potato leafhoppers may arrive in April, however, economic populations are usually not present until third and fourth cuttings. Begin scouting new alfalfa seedlings in June. The potato leafhopper economic threshold is dependent on plant height. Alfalfa should be sprayed or cut according to the threshold in the following table.

<b>Alfalfa Height</b>	<b>Economic Threshold</b> (ave # potato leafhoppers/20 sweeps)
3 inches	0.2
6 inches	0.5
8-11 inches	1.0
>12 inches	2.0 Use an early harvest for control if field was schedule to be cut within 7 days

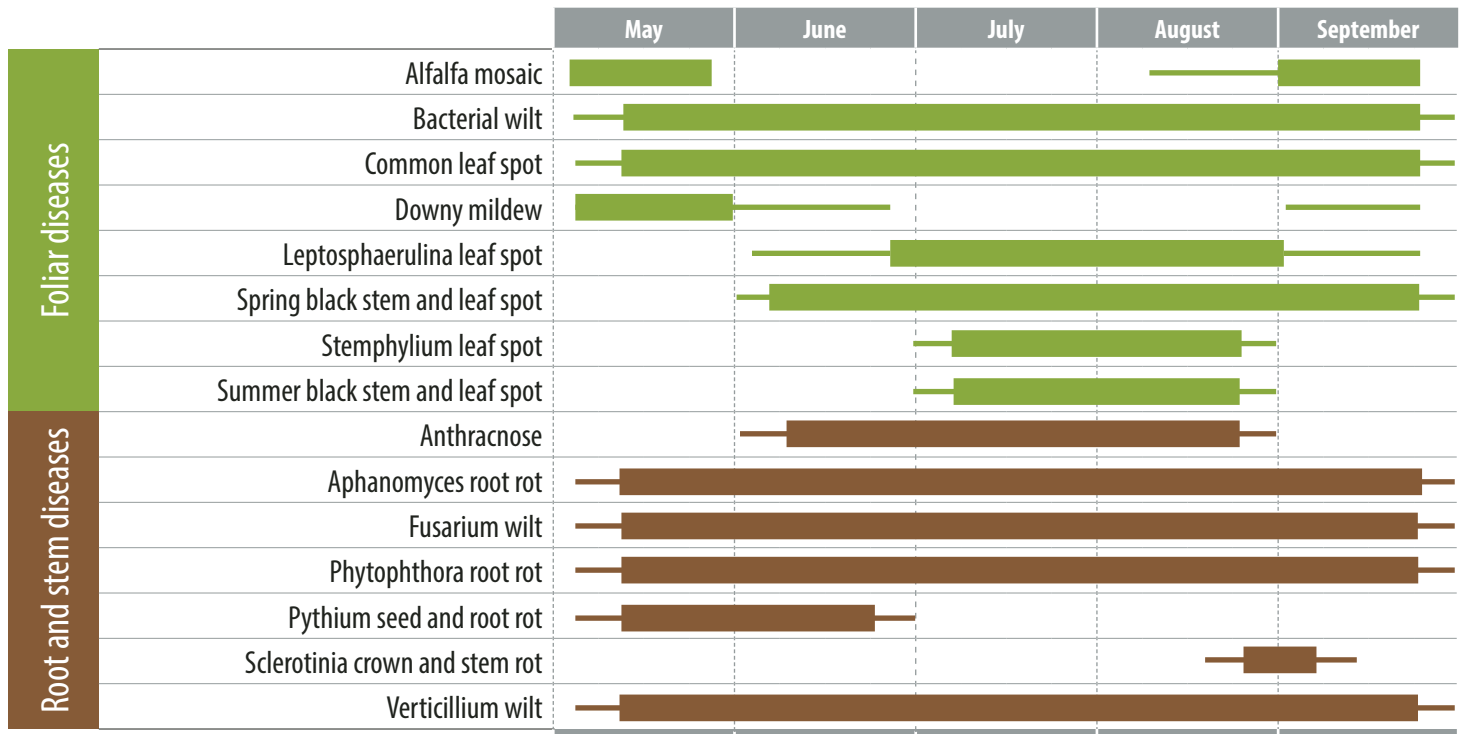
**Other insects.** Alfalfa fields host many insect species. Most are not considered to be a pest on alfalfa. Many of these insect species can be natural enemies of other insect pests or are pollinators. Get accurate identification before a field is considered for an insecticide application.





# Generalized calendar of events for common diseases in WI alfalfa

Timings shown when the disease is typically visible and are approximate, varying according to location within the state.



**Alfalfa mosaic.** Can be commonly observed in alfalfa fields. This disease cannot be treated in season because it is caused by a virus. Alfalfa mosaic virus is transmitted by aphids. Thus, choosing varieties with aphid resistance may help reduce alfalfa mosaic.

**Bacterial wilt.** This disease is found everywhere alfalfa is grown. Resistant varieties are the primary means of managing this disease. Where bacterial wilt has been confirmed, at least a 2-year break of planting alfalfa back in that field should be employed.

**Common leaf spot.** Common leaf spot is very common in Wisconsin. When this disease is observed, harvest should not be delayed. When harvest is delayed more than 35 days, and the disease is active, significant defoliation can occur. Fungicides are available to manage this disease. Contact your local extension office for recommendations on fungicide product.

**Downy mildew.** Can be commonly observed when conditions are cool and wet. In mature stands, management of this disease is often not needed in Wisconsin, as resistance is common in most varieties. However, young stands of susceptible varieties can be hit hard. It is suggested to seed susceptible cultivars in the spring, rather than the fall to avoid winterkill induced by downy mildew.

**Leptosphaerulina leaf spot.** Leptosphaerulina leaf spot is very common in Wisconsin. When this disease is observed, harvest should not be delayed. When harvest is delayed more than 35 days, and the disease is active, significant defoliation can occur. Fungicides are available to manage this disease. Contact your local extension office for recommendations on fungicide product.

**Spring black stem and leaf spot.** Spring black stem and leaf spot is very common in Wisconsin. When this disease is observed, harvest should not be delayed. When harvest is delayed more than 35 days, and the disease is active, significant defoliation can occur. Fungicides are available to manage this disease. Contact your local extension office for recommendations on fungicide product.

**Stemphylium leaf spot.** Resistance in alfalfa is available to Stemphylium leaf spot. When this disease is observed, harvest should not be delayed. When harvest is delayed more than 35 days, and the disease is active, significant defoliation can occur. Fungicides are available to manage this disease. Contact your local extension office for recommendations on fungicide product.

**Summer black stem and leaf spot.** Can occur in Wisconsin when weather is hot and humid. Resistance in alfalfa is available to summer black stem and leaf spot. When this disease is observed, harvest should not be delayed. When harvest is delayed more than 35 days, and the disease is active, significant defoliation can occur. Fungicides are available to manage this disease. Contact your local extension office for recommendations on fungicide product.

**Anthracnose.** Can cause a crown rot and stem disease of alfalfa in Wisconsin. The primary method of managing anthracnose is with resistant varieties. However, multiple races of the anthracnose pathogen exist. Therefore, careful consideration of resistance type is recommended in areas where anthracnose has been a problem.

**Aphanomyces root rot.** Can be a significant issue on alfalfa grown in Wisconsin, especially on newer stands. Usually worse in poorly drained fields. Management is primarily accomplished us-

ing resistant varieties. Multiple races of the pathogen exist. Therefore, careful consideration of resistance type is recommended in areas where *Aphanomyces* root rot has been a problem. Improving drainage in a field can also help manage *Aphanomyces* root rot. Seed treatments are generally not effective for this disease.

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**Fusarium wilt.** Was once a significant disease of alfalfa in Wisconsin. However, excellent disease resistance has been deployed in most modern varieties. Choose a resistant variety where *Fusarium* wilt has been identified as a problem.

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**Phytophthora root rot.** Usually worse in poorly drained fields. Management is primarily accomplished using resistant varieties. Multiple races of the pathogen exist. Therefore, careful consideration of resistance type is recommended in areas where *Phytophthora* root rot has been a problem. Improving drainage in a field can also help manage *Phytophthora* root rot. Seed treatments can be used to manage this early-stand disease problem. Contact your local extension office for recommendations on fungicide product.

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**Pythium seed and root rot.** Usually worse in poorly drained fields. Improving drainage in a field can also help manage *Pythium* seed and root rot. Seed treatments can be used to manage this early-stand disease problem. Contact your local extension office for recommendations on fungicide product.

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**Sclerotinia crown and stem rot.** Can be a problem in newly established stands. Usually worse in late summer or fall seedings. Spring seeding should be performed in areas where *Sclerotinia* crown and stem rot has been a problem. A few resistant varieties have also been identified.

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**Verticillium wilt.** This is a problematic vascular disease of alfalfa. It is controlled primarily by variety resistance. Younger stands should be mowed before older diseased stands. Careful sanitation of equipment is recommended where disease is active.