COOPERATIVE PEST SURVEY BULLETIN

State of Wisconsin
Department of Agriculture
Trade & Consumer Protection

Agricultural Resource Management

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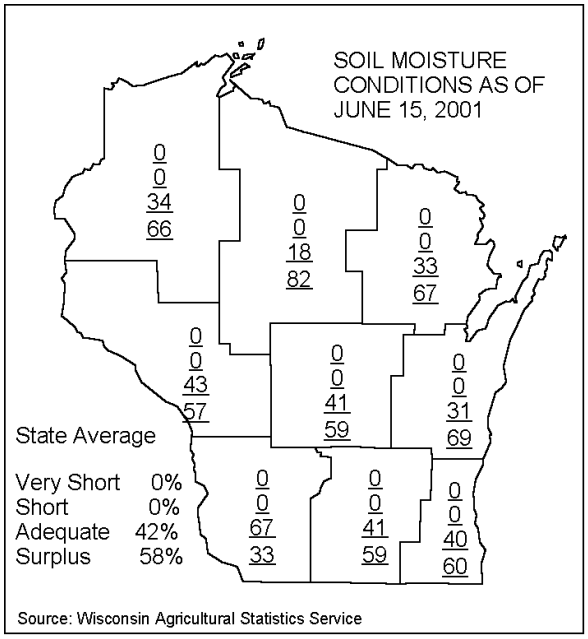

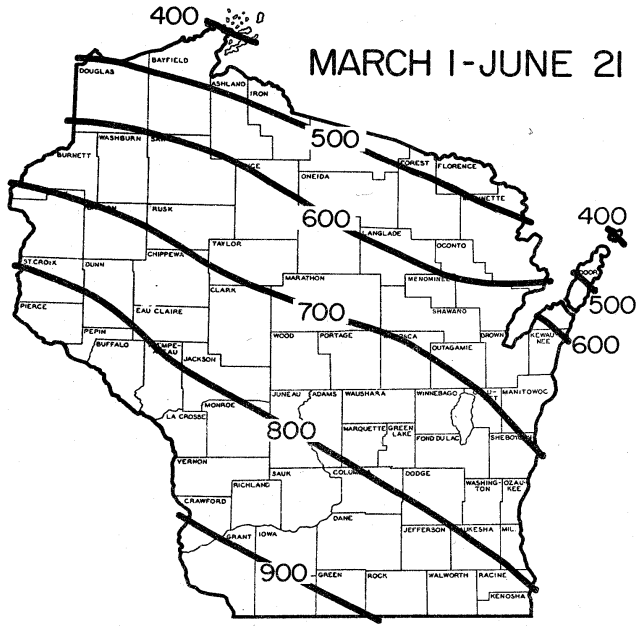

Historical Average Growing Degree-Days Accumulated Since March 1. (Wisconsin Agricultural Statistics Service)

WEATHER AND PESTS

Water, water everywhere... and plenty of storm damage as well. Growers throughout the state are being challenged with standing water, wet hay and tardy crop growth.

A new pest of apple trees was discovered in the state. The **apple ermine moth** was found on apple trees at a nursery dealer in Columbia Co. (see **ALERTS**)

Growing degree days from March 1 through June 20 were:

Site	GDD*[1]	2000 GDD	Normal GDD	Base[1] 48	Base[1] 40
SOUTHWEST					
Dubuque, IA	871	979	930	904	1577
Lone Rock	798	897	846	829	1485
SOUTHCENTRAL					
Beloit	893	911	876	932	1622
Madison	798	832	846	844	1486
Sullivan	840	843	819	867	1555
Juneau	817	850	768	856	1520
SOUTHEAST					
Waukesha	778	811	807	815	1469
Hartford	771	808	773	816	1452
Racine	713	764	802	767	1371
Milwaukee	689	730	781	751	1333
EAST CENTRAL					
Appleton	695	737	667	738	1328
Green Bay	622	658	640	675	1237
CENTRAL					
Big Flats	729	777	766	756	1360
Hancock	726	769	748	756	1358
Port Edwards	670	735	760	693	1273
WEST CENTRAL					
LaCrosse	804	976	834	818	1456
Eau Claire	742	868	755	778	1365
NORTHWEST					
Cumberland	677	718	722	717	1277
Bayfield	468	459	408	476	949
NORTH CENTRAL					
Wausau	610	679	686	632	1182
Medford	608	656	668	646	1183
NORTHEAST					
Crivitz	581	607	592	620	1167
Crandon	595	612	573	617	1140

[1]Data from Bill Bland et. al., Soil Science, Univ. of Wisconsin-Madison.

GDD (Growing Degree-Days) are synonymous with degree-days above modified base 50°F, with no low temperature below 50°F or above 86°F used in calculation. See map for Historical Average Growing Degree Days.

ALERTS

Soybean Aphid – UW Entomologists detected the first **soybean aphids** of the season in a Rock Co. soybean field. Low numbers of aphids were later found in a Columbia Co. field, indicating soybean aphids are beginning to migrate to soybeans from their overwintering sites. Pest surveyors searched for **soybean aphids** in Dane, Iowa, Green, Clark, Juneau, Marathon and Chippewa Cos. as well, but found no signs of **aphid** activity. Population densities are very low at this time, but may increase rapidly under favorable conditions. Producers should begin scouting now for **soybean aphids** along soybean stems and on the undersides of leaves, and for **soybean aphid** feeding injury characterized by yellow, cupped leaves.

http://www.inhs.uiuc.edu/cbd/aphid/photos.html

Apple ermine moth (*Yponomeuta malinellus*) - Apple ermine moth was positively identified by the Smithsonian last Friday. The larvae were discovered during a nursery dealer inspection in Columbia Co. on May 24, 2001. The apple trees it was found on originated from a nursery in Oregon. The Oregon Department of Agriculture was notified and has starting investigating the situation.

DATCP is in the process of tracking down any other *Malus* nursery stock shipped by the Oregon nursery. For more information visit one or more of the following websites:

http://www.inra.fr/Internet/Produits/HYPPZ/RAVAGEUR/6ypomal.htm

http://www.cfia-acia.agr.ca/english/ppc/science/pps/datasheets/ypomale.shtml

http://cru.cahe.wsu.edu/CEP/Publications/eb1526/eb1526.html

http://www.ceris.purdue.edu:80/napis/pests/aem/facts.txt

http://oda.state.or.us/Plant/plant_archives/1998_Annal_Report/1998annrep2.htm

CORN

European corn borer – Ten of 100 plants examined in a Grant Co. cornfield contained the characteristic shot holes created by early instar larvae. First instar larvae had tunneled deep inside the whorl. Other fields surveyed in Grant, Green, Dane, Columbia and Marathon had no apparent **European corn borer** lifestages. All lifestages may be present at this time.

Black Cutworm – Several hundred acres of field corn in Iowa and Columbia Cos. were replanted as a result of heavy **black cutworm** feeding injury. Widespread **black cutworm** infestations rarely occur, but localized infestations such as these demonstrate the importance of pheromone trapping and early scouting of seedling corn.

Holcus spot on corn- This disease was detected in Walworth Co. The incidence was about 2% while the severity level was less than 1%. **Holcus spot** is caused by a bacterial disease ***Pseudomonas syringae pv. syringae***. The bacteria overwinter in infected residue. During warm (77-86º F), wet and windy weather the bacteria are splashed or blown onto corn plants resulting in infection. Lesions on the leaves are round to elliptical and may be surrounded by a yellow halo.

FORAGES

Potato leafhopper – No nymphs were found this week. Sweep averages in Grant, Green, and Iowa Cos. were consistent at 24 to 28 adults/50 sweeps. The treatment threshold is 1 leafhopper/sweep.

Alfalfa weevil – Few larvae were found in alfalfa in Grant, Green and Iowa Cos. Pest numbers have been light all spring. It is not likely to be damaging this season.

SMALL GRAIN

Stripe smut of winter wheat in Wisconsin- Stripe smut has been found in winter wheat in southern Wisconsin. It was detected in Dane, Dodge, Jefferson and Columbia Cos. This is the first report of this rust occurring in Wisconsin. **Stripe smut** is active when daytime temperatures are below 60ºF for

prolonged periods of time. Hot weather should limit the expansion of pustules and new infections.

Symptoms and signs of **stripe smut** are present on flag leaves at this time. The primary symptoms are long streaks of yellow leaf tissues that follow veins. Pustules of rust spores are in rows within the yellow stripes. In most cases it is probably too late to apply a fungicide for protection. Again, the presence of **stripe smut** is a rare occurrence in Wisconsin. **(Craig Grau- UW Plant Pathology Dept. and DATCP)**

Glume Blotch of winter wheat and rye- This disease was found on winter wheat in Walworth Co. and on rye in LaCrosse Co. The disease incidence and the severity levels are low at these locations; however, it can impair seed filling when infection occurs before heading. Wet and windy weather favors epidemics. This fungus overwinters in debris or volunteer wheat. Control measures include rotation, elimination of volunteer wheat plants and the use of disease free seed.

VEGETABLES

Septoria blotch on peas- This disease was detected in a field in Waushara Co. with 10% desease incidence and severity level of 10%. The disease is found primarily on the lower, senescing portion of the plant, including maturing pods. Diseased plant parts may dry out prematurely. The causal fungus is ***Septoria pisi.*** Crop rotation is the most important control measure. Pea cultivars differ in susceptibility; later maturing cultivars are more tolerant than early cultivars.

GINSENG

Cultivated Ginseng Survey – Soils were water-saturated in several gardens in Marathon Co. **Phytophthora root rot** is starting to infect plants under these conditions. Foliar symptoms consist of drooping leaves. Rapidly wilting plants often show no discoloration. Foliage with red discoloration may indicate **Rusty root** problems. Leaves wilt less quickly because the disease progresses much slower than **Phytophthora root rot**. Both root rots can be found infecting the same roots. For control treatments please check your copy of " CONTROL OF DISEASES, PESTS AND WEEDS IN CULTIVATED GINSENG IN WISCONSIN 2001".

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Honeylocust plant bug - Numbers were moderate on honeylocust at nurseries in Dane and Jackson Cos.

Leafhoppers - A dramatic rise in numbers was observed at nurseries in Dane and Jackson Cos. Numbers were particularly high on burning bush, red and amur maples, and witch-hazel. Both adults and nymphs were present.

Fletcher scale - Light to moderate numbers were found on yews at nurseries in Dane, Eau Claire and Jackson Cos. Densiformis yews had the highest numbers of scales. Crawlers were evident on new growth. Now is the time to treat for **fletcher scale**.

Cooley spruce gall adelgid - Small numbers of nymphs were found on douglas-fir at a nursery in Dane Co. No new galls were observed on Colorado spruce at that nursery.

Leaf crumpler - Both larvae and pupae were found on a crabapple at a nursery in Dane Co.

Pale green weevil - This beetle (*Polydrussus impressifrons*) was founding scalloping the leaves of birch at two nurseries in Jackson Co. It was also found on various trees and shrubs at nurseries in Dane and Door Cos.

Honeylocust pod gall midge - Small numbers of galls were observed on honeylocust at a nursery in Jackson Co.

Imported willow leaf beetle - Larvae were busy skeletonizing leaves at a nursery in Jackson Co.

Euonymus caterpillar - Small numbers of colonies were found on burning bush at a nursery in Jackson Co.

Bronze birch borer - Lumpy bark indicating **bronze birch borer** attack was seen on white birch at nurseries in Jackson and St. Croix Cos.

Spiny witch-hazel aphid - The classic corrugated leaves of river birch caused by this insect were noted at at two nurseries in Jackson Co.

Dusky birch sawfly - Small larvae were found on river birch at a nursery in Jackson Co. No damage was evident.

Bristly rose slug - This larvae of this sawfly were found feeding on nearly wild rose at a nursery in Eau Claire Co. Light amounts of damage were recorded.

Maple petiole borer - Damage from this sawfly was observed on sugar maple at nurseries in St. Croix Co.

Cylindrocladium root rot - This fungus was recovered from some wilting lilacs at a nursery in Fond du Lac Co. Heavy, saturated clay soil was a contributing factor in this disease.

Rhizosphaera needle cast - Moderate amounts of **needle cast** were seen on Colorado spruce at nurseries in Dane, Door and Jackson Cos.

Septoria leaf spot - Light amounts of leaf spots were observed on dogwood, spirea and honeysuckle at nurseries in Dane and Jackson Cos.

Anthracnose - We are still seeing a lot of **anthracnose** on

maples and oaks at nurseries throughout the state. We are also seeing some leaf spotting on daylilies and river birch at nurseries in Dane, Rock and Jackson Cos.

Rhizosphaera needle cast - Moderate amounts of **needle cast** were seen on Colorado spruce at nurseries in Dane, Door and Jackson Cos.

Botrytis - Asiatic lilies at a nursery in Dane Co. had light amounts of leaf spotting due to *Botrytis elliptica*.

Septoria leaf spot - Light amounts of leaf spots were observed on dogwood, spirea and honeysuckle at nurseries in Dane and Jackson Cos.

Volutella leaf spot - A small number of pachysandra plants at a nursery in Dane Co. were observed with symptoms of this fungal disease.

Fusarium canker - Crabapples at a Fond du Lac Co. nursery were suffering from fatal cankers on the main trunk.

White pine blister rust - White pine at nurseries in Dane and Eau Claire Cos. had flagging branches indicative of this disease.

Swiss needle cast - Moderate amounts of needle cast were observed on douglas-fir at nurseries in Dane and Door Cos.

Black spot - The number of lesions was increasing on roses at nurseries in Dane and Door Cos.

Phyllosticta leaf spot - Light amounts of leaf spotting were observed on Norway maple at a nursery in Jackson Co.

Fire blight - Upright cotoneasters at a nursery in Jackson Co. were being hit hard by this bacterial infection. Nearly 100% of the plants were affected.

STATE/FEDERAL PROGRAMS

GYPSY MOTH PROGRAM - Trappers are continuing to set traps statewide. As of 6/20/01, trappers have set 15,588 (47%) of the expected total of 33,438 traps. Thirteen counties have been completed and they are: Buffalo, Crawford, Dodge, Florence, Kenosha, Kewaunee, LaCrosse, Manitowoc, Oconto, Pepin, Racine, Washington, and Waupaca. Counties that are at least 50% complete are: Adams (56%), Clark (89%), Douglas (58%), Eau Claire (51%), Forest (60%), Grant (67%), Green (95%), Jackson (73%), Lafayette (65%), Pierce (64%), Polk (70%), Rock (83%), Rusk (88%), St. Croix (85%), Sauk (74%), Sawyer (95%), Taylor (69%), Vilas (51%), Waushara (76%), and Wood (59%). Trapping will continue for 2-3 more weeks.

Trappers are using GPS units to mark each trap location. This information is downloaded to produce maps showing the exact location of each trap we set. Trappers will eventually take another GPS reading during trap takedown to record the moth catch at each trap location. This information will be used to produce maps showing the moth catch for each county and will also help determine delimitation sites and treatment sites for next year.

For more information on the GYPSY MOTH PROGRAM, please call our hotline at 1-800-642-MOTH or visit our website at http://datcp.state.wi.us/static/gypsymoth

FRUIT

Codling Moth – Based on the degree day model (base 50°F) available for codling moth, it is likely that the eggs laid by the first flight of moths that appeared in mid-to late May are now hatching throughout most parts of the state. Research has found that in Wisconsin, **codling moth** egg hatch is approximately 50% complete around 713 DD, a point that has been surpassed in the south and is rapidly approaching in the northern counties. The larvae emerging from these eggs mature in July, pupate, and produce a mid-summer flight of moths. Generally 1000 DD are needed to complete each generation. In Wisconsin there are two generations of **codling moth** and sometimes a partial third during warm years. The larvae of these latter generations cause the most significant damage. **Codling moth** control should be carefully timed to target larvae hatching from eggs. Once larvae tunnel into fruit, insecticide applications are ineffective. For control recommendations see the 2001 Commercial Tree Fruit Spray Guide (UW-Madison Cooperative Extension Service Publication A3314).

http://www.uky.edu/Agriculture/Entomology/entfacts/fruit/cm.gif

Codling Moth Degree Day Model (Base 50°F)

1st moth	occurs at	248 DD

1st egg hatch	occurs at	491 DD
1st peak flight	occurs at	500 DD
Egg hatch 50% complete	occurs at	713 DD
2nd moth peak flight	occurs at	1577 DD

Apple Maggot – Cooperators should place both the yellow sticky board and the red ball traps for the earliest emerging **apple maggot** flies. The red ball trap resembles a ripening apple and attracts female flies for egg laying. The yellow sticky trap attracts immature male and female flies. For best results, place traps along the south side of trees, in the earliest maturing variety. The red ball and yellow sticky traps are visual traps, therefore they are only effective when they can be seen by apple maggot flies. Be sure to place traps in an exposed spot in the outer part of the tree canopy

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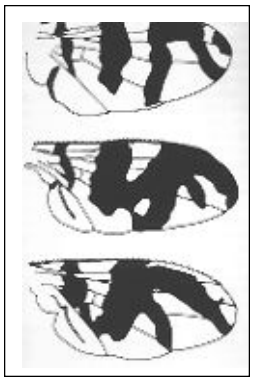
Apple Maggot

Rhagoletis pomonella (Walsh)
http://www.ento.vt.edu/Fruitfiles/AppleMaggot.html

The visual traps used to attract **apple maggot** flies typically attract other kinds of flies as well. There are a few closely related species that might be mistaken for the apple maggot (see picture below**). Apple maggots** are small flies with characteristic wing markings. They have black banded wings and white bands on their abdomens. They also have a white spot on their thorax (Consult Melody Walker [608] 224-4595 or Krista Lambrecht [608]224-4594 for help with **apple maggot** identification. Cooperators can expect the first trap catches to occur around mid-June (that's now!). Treatments target flies before the female deposits hers eggs, and may be necessary when 5 **apple maggots** are trapped per red ball.



Wing Banding Patterns: cherry fruit fly (top); black cherry fruit fly (middle); *APPLE MAGGOT* (bottom)
http://www.ento.vt.edu/Fruitfiles/AppleMaggot.html

Apple Insect Trapping Results

County City	Date	STLM	RBLR	CM	OBLR
Grant Co.					
Sinsinawa	6/13-6/20	18			
Crawford Co.					
Gays Mills-	6/13-6/20	48	0	0	18
Gays Mills-	6/11-6/18	15	0	3	0
Richland Co.					
Hill Point	6/12-6/18	10	0	1	10
Richland Ce	6/13-6/20	14	0	2	23
Richland Ce	6/13-6/20	31	1	5	17
Iowa Co.					
Dodgeville*	6/14-6/21	0	3	10	2
Spring Gree	6/13-6/20	21	28		
Dane Co.					
Middleton	6/13-6/20	13	23	8	
Deerfield	6/11-6/18	231	0	9	0
Waunakee	6/13-6/20	34	3	2	13
Green Co.					
Brodhead	6/11-6/18	101	22	2	4
Juneau Co.					
Mauston	6/10-6/17	31	2	0	0
Dunn Co.					
Menomoni	6/13-6/20	9	0	0	1
Pierce Co.					
Spring Valle		6/12-6/19	7	0	0 0
Fond du Lac Co.					
Rosendale	6/11-6/18	46	17	2	0
Malone	6/11-6/18	3	0	1	8
Marquette Co.					
Montello*	6/10-6/17	217	0	0	15
Ozaukee Co.					
Mequon	6/6-6/11	0	0	1.25	
	6/12-6/18	10	0	2.75	
Racine Co.					
Rochester*	6/14-6/20	1435	11	70	26
Brown Co.					
Oneida	6/3-6/10				

* indicates NEW COOPERATOR!

BLACKLIGHT TRAPPING RESULTS

For the week ending June 20

Site	Euro. Corn Borer	Army-Worm	Black Cutw.	Vari. Cutw.	Spot. Cutw.	Corn Earw.
South Central						
Mazomanie	8	41	13		19	
Middleton	9	2	1		2	2

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