



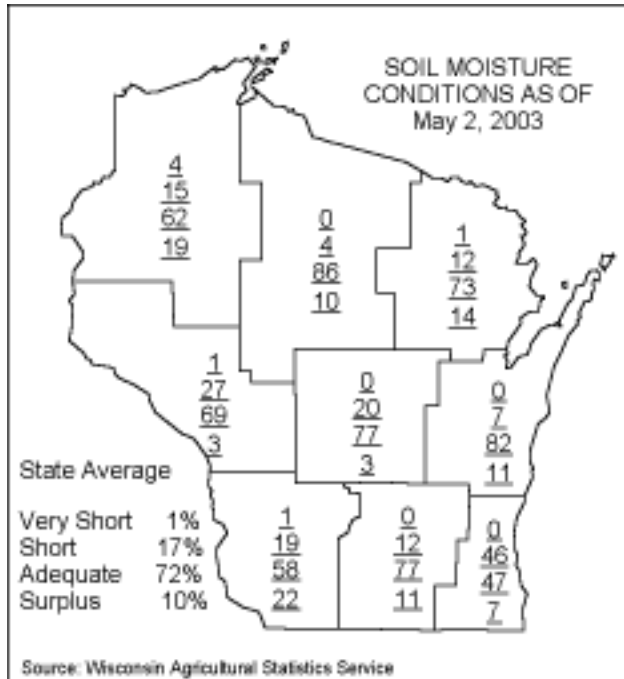
Wisconsin Pest Bulletin

Wisconsin Department of Agriculture, Trade & Consumer Protection

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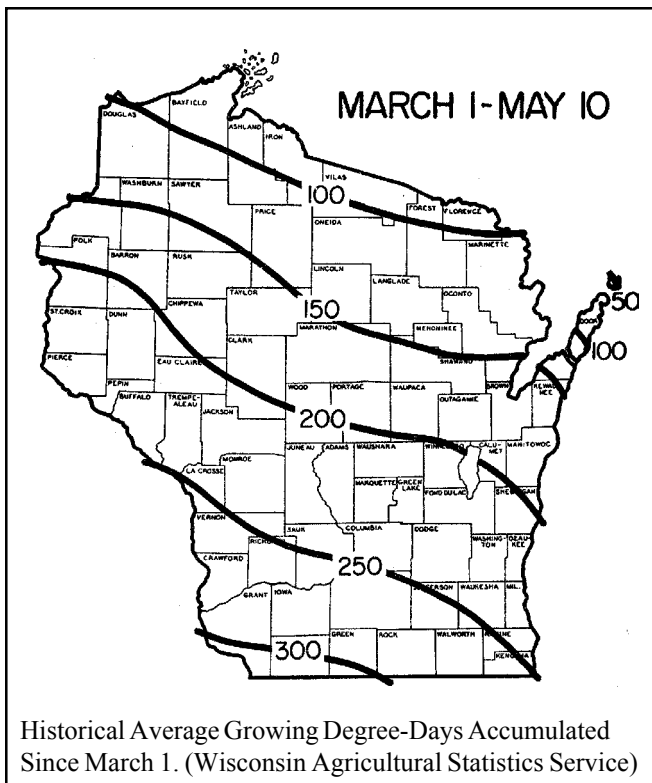


WEATHER AND PESTS

Weather has been favorable for plant growth and many acres of corn are beginning to emerge from the soil. Alfalfa development has been steady in the south, but insect activity has been slow so far. Surveys of forage legumes indicate insect populations are low for this time in May. Pea aphid hatch occurred during the third week of April, but populations remain less than 10/50 sweeps in most fields. Alfalfa weevil larvae began emerging from overwintered eggs around the same time, but few are being collected in the south central and southwest agricultural districts. The degree day accumulation above base 50°F since March 1 at the Madison airport was 248 as of May 8, which compares to 221 on the same date last year and a “normal” accumulation of about 254.

Growing degree days from March 1 through May 8 were:

Site	GDD*	2002 GDD	Norm GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	293	264	295	279	587
Lone Rock	280	238	251	253	559
SOUTHCENTRAL					
Beloit	281	263	268	268	569
Madison	248	229	254	238	526
Sullivan	245	242	237	228	516
Juneau	220	222	215	209	488
SOUTHEAST					
Waukesha	209	219	235	196	466
Hartford	197	206	212	186	450
Racine	176	201	229	169	411
Milwaukee	170	187	220	161	399
EAST CENTRAL					
Appleton	177	160	191	158	399
Green Bay	131	122	162	117	330
CENTRAL					
Big Flats	246	205	202	213	499
Hancock	233	196	201	214	485
Port Edwards	212	174	193	181	442
WEST CENTRAL					
LaCrosse	265	232	234	238	542
Eau Claire	241	179	190	209	502
NORTHWEST					
Cumberland	200	127	171	169	419
Bayfield	100	61	68	76	253
NORTH CENTRAL					
Wausau	178	135	164	147	387
Medford	171	116	153	140	376
NORTHEAST					
Crivitz	118	100	128	102	311
Crandon	140	98	117	112	335



ALERTS

Anastrepha sp. larvae in Manzano (Rocoto) peppers -

Multiple finds of live *Anastrepha* sp. larvae have been detected in Manzano (Rocoto) peppers (*Capsicum pubescens* c.v. Rocoto) on the Texas/Mexican border from shipments from Mexico and in several food stores in Georgia, Illinois, New Jersey, and New York. Effective May 1, 2003, the Animal and Plant Health Inspection Service (APHIS) suspended imports of Manzano (Rocoto) peppers from Mexico. At this time, Manzano (Rocoto) peppers from Mexico are not allowed entry into the United States. Other types of peppers from Mexico will be inspected and cut at a higher rate. (USDA)

LOOKING AHEAD

A brief forecast of pest-related events growers can anticipate in the upcoming week

European corn borer – Overwintered larvae are entering the pupal stage in regions where 246 DD (base 50°F) have accumulated. The first moths could appear in black light traps next week in some advanced southern areas, once 347 DD are reached.

Black cutworm – Emerging corn is at susceptible to cutting now. Continue to monitor fields carefully over the next two to three weeks, or at least until corn exceeds 15”.

Codling moth – Cool nights and rainy conditions may be temporarily slowing emergence in some areas, but adults should continue to appear this week. Our Racine Co. cooperator reported the capture of 5 moths, our Marquette Co. cooperator reported 3 moths, and our Sauk Co. cooperator reported a capture of 1 moth earlier this week. Once codling moths begin appearing in pheromone traps, look for the first sustained flight of male moths. Control treatments are most effective when applied 250 DD (base 50°F) after the “biofix” or cumulative capture occurs.

Meadow spittlebug – No nymphs were observed in Dane or Rock Co. fields, but we expect egg hatch is occurring at some localities. In the next week spittle masses should become evident in forage crops and roadside grasses.

Pine needle scale – Egg hatch should occur very soon, just as lilac is in ½ full flower.

CORN

European corn borer – The population of larvae going into last winter was moderate to high, averaging 0.66 borers/plant; that was 26% higher than in 2001 and 13% higher than the 10-year average. The mature, overwintered larvae are now constructing webs inside their tunnels in corn residue, in preparation for pupation. Pupation is beginning in the south, and can be expected in some parts of the central district by next week unless the weather turns cold. Moths can be

expected in black light traps by the first week of June.

Seedcorn maggot – If cool nights and rainy conditions continue to occur, damage to susceptible crops such as beans, corn and cucurbits could be observed in some areas. Cool, wet weather conditions sometimes delay seed germination and prolong adult emergence, making conditions right for damage to occur.

FORAGES

Alfalfa weevil – Development is off to a slow start. We’ve seen only a few days of the warm conditions weevil larvae really thrive on since overwintered eggs began hatching in the south about two weeks ago, and the recent rains certainly haven’t helped to accelerate larval growth. Few adults (1-3 per 50 sweeps) turned up in sweep nets in Dane and Rock Cos., while larvae numbered 0-7 per 50 sweeps. As mentioned last week, when conditions are suitable for alfalfa growth but aren’t favorable to alfalfa weevils, some fields may outgrow their weevil infestations. It’s not yet clear if this will be the case in some scattered southern fields. We’re not seeing the heavy weevil populations that ordinarily put the first crop and second crop regrowth at risk. As the first cutting draws near, it will become increasingly important to monitor alfalfa weevil activity. A few warm days will encourage development and feeding activity.

Aster leafhopper – Aster leafhoppers are a regular problem for Midwestern carrot growers because they vector aster yellows, a phytoplasma pathogen. The primary source of Wisconsin’s aster leafhopper population is the spring migration of adults from the southern United States. We also have a native population that overwinters in the egg stage, but it is generally only a minor source contributing to the overall seasonal population. Following the arrival of the migratory adults, this native population begins hatching from eggs laid last fall in winter wheat and other grasses.

Low numbers of migrants were observed in the south central and southwest districts as of April 30. While numbers are not high, they varied from 1-3 per 50 sweeps in Dane and Rock Cos. At present we have had few days suitable for rapid migration into the state. We could begin seeing nymphs of the native population in the next week or so. In addition to carrots, other susceptible vegetable hosts include lettuce, celery, carrots, and parsnip.

Alfalfa caterpillar – Larvae numbered up to 7 per 50 sweeps in scattered southern fields. Mostly 3rd and 4th instar larvae were collected.

Pea aphid – Populations in the south remain low, seldom exceeding 10 per 50 sweeps.

Clover leaf weevil – Larvae were swept from a few 10” alfalfa fields in Dane Co.. Overall, populations were low and seldom

exceeded 2 per 50 sweeps. Clover leaf weevil larvae look very similar to alfalfa weevil larvae, but are slightly larger and have a light brown head capsule instead of a black one. Clover leaf weevil larva feeding rarely results in economic losses. Be sure to exclude clover leaf weevil larvae from counts of alfalfa weevil larvae when sampling.

POTATOES

Powdery scab- Two shipments of seed potatoes from Colorado were recently found to have powdery scab, a disease not known to occur in Wisconsin. The seed potatoes, of the variety "Molli", were ordered destroyed by DATCP. The disease (caused by *Spongospora subterranea*) causes pustules on the potato surface which resemble common scab, and can cause infected tubers to shrivel in storage. The disease also causes galls on roots and stolons. The organism is also the vector of **potato mop top virus**, which was the focus of an extensive detection effort nationwide last year.

In the last year, preliminary field survey work and increased vigilance by shipping point and potato grading personnel for powdery scab has not turned up any evidence of the disease in Wisconsin. Further survey efforts on powdery scab are planned for this growing season.

The detection was made by alert growers who brought tubers to UW for disease identification. This is a good reminder that everyone has a role in protecting Wisconsin agriculture from exotic pests—particularly farmers. Our thanks to the growers for their vigilance and cooperation.

SMALL GRAINS

Bird cherry-oat aphid – Numbers have been on the increase since they first appeared around April 21. Counts range from 1-11 per 50 sweeps in the south central district.

English grain aphid – Counts are slightly higher than last week, ranging from 1-8 per 50 sweeps, but still remain low overall.

SOYBEANS

Free soybean cyst nematode testing offered -The University of Wisconsin Department of Agronomy, in cooperation with the Wisconsin Soybean Marketing Board, offers free Soybean Cyst Nematode (SCN) tests for Wisconsin farmers.

The tests allow farmers to sample up to three fields to determine if SCN is present and at what levels. Farmers who send samples to the laboratory will receive a report showing the SCN egg count and a brochure to help plan rotations and other cultural practices to lower the level of infestation.

Each testing kit includes a sample bag and prepaid mailer for one soil sample, which should represent 10-15 acres. The best times to collect samples for SCN testing and for soil fertility analysis is before planting in spring and around harvest time in autumn.

In 2002, the SCN laboratory processed about 160 samples. Sixty-three percent of the samples were negative and 30 percent showed low to moderate levels of SCN infestation.

To get soil sample test kits for early spring sampling, please contact Colleen Smith by email at clsmith8@facstaff.wisc.edu or by phone at 608-262-7709.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Aphids — Aphids were found on *Monarda*, or bee balm, in small numbers at a La Crosse Co. greenhouse. The aphids are our first find of the year and most likely came in on the stock. Aphids were also found on nursery stock in Polk Co.

Fungus gnats — Adults were found hovering above *Chrysanthemums*, or Garden Mums, at a Juneau Co. nursery dealer. These small flies are found on greenhouse grown plants if the soil is kept too moist for long periods of time. You can reduce the amount of gnats by letting the soil dry between watering and using a colored sticky card to monitor their populations..

Slugs — A common pest of *Hosta*, slug feeding was noted at a Fond du Lac Co. nursery dealer. There are many controls listed for slugs, ranging from beer in pie tins to diatomaceous earth and chemical controls.

Spider mites — Small numbers of two-spotted spider mite were found at a greenhouse in Monroe Co. on *Dahlias* in localized light amounts. Spider mites are usually a pest in hot, dry conditions. Insecticidal soap is very effective in controlling spider mites. Repeated applications are required, as the eggs will not be affected. It is important to get thorough coverage of the foliage, especially the lower leaf surface, where most of the mites reside.

Bronze birch borer – Infested whitespire birches were taken off sale at a greenhouse in Barron Co.

Whiteflies – Lantana had moderate numbers of whiteflies infesting them at a greenhouse in Polk Co.

Pine needle scale – The pine needle scale, *Chionaspis pinifoliae* (Fitch), is a serious pest of pines and other evergreen conifers. It occurs throughout the United States and parts of southern Canada but is generally more of a problem in the Midwest and eastern U.S. Heavy infestations of pine needle scale give the host tree a whitish cast giving rise to the term the "white malady". Although many pines and spruces serve as hosts, mugo and scotch pine are most

severely attacked in the Midwest and eastern U.S. Prolonged, heavy infestations can kill entire trees or individual branches. Infestations may also weaken plants making them vulnerable to attack by other insects and diseases.

This insect can overwinter as eggs under the female scale covering or as adult females. In Iowa the reddish eggs hatch from late April to late May. First instar nymphs, or crawlers, crawl about on needles for a short period of time, then settle down and insert their mouthparts into the needle. Females will spend their entire life in that spot. Males also stay stationary until they are adults when they will fly to mate with new adult females. As the newly settled crawlers begin to suck the plant juices, they change from a reddish color to a pale yellow. As the scales mature they begin to secrete a white, waxy substance that covers their entire body. When the scale becomes an adult it will be white, range in length from 2.5 mm to 5 mm, and be teardrop shaped. Adult males are also white but are usually smaller than the females and are capable of flying.

Depending on what part of Wisconsin you are in, pine needle scale may have one or two generations per year. There are two generations in central Iowa and upstate New York, while there is only one generation in most of Canada. This has implications for control of scale infestations.

There are several parasites and predators of pine needle scale. Most of the parasitic wasps don't provide a level of control that will keep scale populations from causing damage. One predator, the twice-stabbed lady beetle, is frequently associated with scale colonies but usually doesn't keep populations in check.

Control is best achieved when targeting the crawler stage. Dormant oil or other insecticides registered for scale control can be applied during the crawler stage when scales lack the waxy covering which protects them from insecticides.

Anthracnose — This may be a big year for anthracnose. We have found it in light to moderate amounts at nursery dealers in several counties so far including Fond du Lac, Juneau, and Monroe. It has been found on birch and daylilies. Symptoms on daylilies include elongated orange-yellow spots on the foliage which can grow together to form necrotic areas.

Apple scab — Commonly found on apples and crabapples later in the season, this fungal disease was found during our inspection of a nursery dealer in Barron and Monroe Cos. Only a few lesions were observed.

Black spot — A common problem on roses, this fungal pathogen was found on roses in light amounts in a Milwaukee Co. nursery dealer and in moderate amounts on assorted shrub roses in Barron Co. Black spot may become a big problem this year if the weather stays wet and

overcast.

Botrytis — This fungal pathogen is really taking off this year. It has been found in light to moderate amounts on shasta daisy, begonia, geraniums, peonies and many other species. It has been found at dealers in Juneau, LaCrosse, Milwaukee, Monroe and Sauk Cos. Steps to be taken to slow the spread of this pathogen in a hoop house include watering early in day so the foliage can dry out, spreading plants out for better air circulation, and using fans to provide good air circulation.

Coniothirium leafspot — This fungal pathogen was found in La Crosse Co on Adam's needle yucca in very light amounts. Symptoms include elliptical, necrotic, tan colored spots on the leaves of the plant. This leaf spot doesn't usually warrant any control measures.

Cedar apple rust — Reports have been coming in that cedars/upright junipers are starting to form telial horns on the galls. These is the orange, slimy stuff you find on cedars this time of year. These telia release spores which infect plants in the Rosaceae family (apple and crabapples). Infection on an apple tree was found at a dealer in Juneau Co.

Frost damage — Light to heavy amounts of damage were observed in Fond du Lac, Milwaukee, Monroe, Sauk and Sheboygan Cos. Plants affected were dwarf Alberta spruce, wintercreeper, ornamental pear, mums, magnolia, spirea and lilac. Keeping tender plants covered or inside hoop houses will reduce frost damage in the spring.

Unknown virus—We have been finding an unknown virus on bleeding hearts for years. A sample was taken from a La Crosse Co. nursery dealer and sent to Agdia for a virus screen. The screen covered 15 of the more common viruses. The viruses screened for were:
 Alfalfa Mosaic Virus—AMV
 Arabis Mosaic Virus—ArMV
 Broad Bean Wilt Virus—BBWV
 Chrysanthemum Virus B—CVB
 Cucumber Mosaic Virus—CMV
 Impatiens Necrotic Spot Virus—INSV
 Prunus Necrotic Ringspot Virus—PNRSV
 Tobacco Mosaic Virus—TMV
 Tobacco Ringspot Virus—TRSV
 Tobacco Streak Virus—TSV
 Tomato Mosaic Virus—ToMV
 Tomato Aspermy Virus—TAV
 Tomato Ringspot Virus—ToRSV
 Tomato Spotted Wilt Virus—TSWV
 Potyvirus Group—POTY
 Results were negative for all viruses tested.

Rose mosaic virus complex — This virus was noted on roses in Fond du Lac, Juneau, La Crosse, Monroe and Sauk Cos.. This is a complex of two viruses, prunus necrotic ringspot virus (PNRSV) and apple mosaic virus (ApMV).

They can be found together or separately on roses. PNRSV is observed as light green, irregular patterns on the foliage, with the leaves sometimes puckered. ApMV has a more yellow mosaic pattern on the leaves.

Spruce needle drop — The proper scientific name of this newly identified fungal pathogen is *Setomelanomma holmii*. DATCP inspectors discovered this pest for the first time a few years ago during nursery inspections of spruce. Since then we have found this fungus on stock grown in the state and also shipped into the state. One of the main symptoms is black fruiting bodies on the branches.

STATE/ FEDERAL PROGRAMS

Gypsy moth spray program - Our trappers will be setting two different types of traps again this year. For most of the state we will be setting the smaller “delta” trap that is triangular in shape and green or orange. This trap contains a pheromone string to attract male gypsy moths. Once inside, the moth is trapped in a sticky substance. These traps are non-toxic and pose no threat to humans or animals. Delta traps are hung on a tree about chest high with string. Delta traps can only hold about 20 moths before they become saturated. A common misperception is that these traps help control gypsy moth populations; however, they are only useful for monitoring populations.

The other type of trap used is the “milk carton” trap. These traps look like a 1/2 gallon milk carton with a roof on it, are always green and are hung on a low tree branch with string. They contain a pheromone string to attract males into the trap and a pest strip to kill the moth. The pest strip is similar to a flea or tick collar used for pets. Handling of the pest strip should be avoided. Milk carton traps can hold hundreds of moths and are used in the quarantined counties in eastern Wisconsin. This area is generally infested with gypsy moth and populations are certainly higher so a larger container is needed for data collection. Again, these traps do not eradicate the moth population. They are used to monitor the population and assist in determining where possible treatments may occur. Some areas not in the quarantine counties may also have milk carton traps. These areas are sites that have populations high enough that delta traps would not be used.

For more information on the gypsy moth spray program, please call our hotline at 1-800-642-MOTH.

FRUIT

Spotted tentiform leafminer – Peak adult emergence is occurring in the southeast. Begin sampling for leaf mines approximately one week after peak adult flight, or once 329 DD have accumulated. Decisions to control should be made based on the number of mines per leaf.

Meadow mouse (meadow vole) injury – We haven’t heard much about the meadow mouse in some time, but a few reports of winter injury have recently come in, one from a Pierce Co. orchard and the other from Dane Co. In some years little damage occurs and it’s easy to overlook the need for preventative control measures, but population explosions can occur, and when they do, meadow mice can cause severe injury to orchard trees, Christmas trees, and many kinds of woody stock.

Meadow mice tunnel through the snow and feed on the bark at the base of young trees, on roots, and sometimes on the lower branches. Because the snow conceals their activity the damage does not become apparent until after the snow has melted. The worst feeding damage usually occurs in late winter, when food grows scarce. Although we didn’t receive much snow in most areas last winter, something as simple as failing to keep grasses mowed can leave trees vulnerable to attack. Mowing around trees and shrubs in late summer and fall is the most important preventative measure, but when a population explosion is anticipated, 18-20” tall wire mesh mouse guards placed 2-3” in the ground at the base of a tree provide good control. Many garden centers and hardware stores sell plastic or paper wraps and wire guards that are also effective. When plastic or paper wraps are used in late fall, be sure to remove wraps in early spring. Wraps left on retain moisture and promote disease. For additional information on control refer to University of Wisconsin-Extension Bulletin #A2148 Meadow Mouse Control available online at <http://cf.uwex.edu/ces/pubs/>

Apple scab monitoring—Due to ongoing difficulties with web site management, we have decided to suspend our apple scab monitoring effort for this year. We will continue to monitor temperature at each cooperating orchard, and let you know when each orchard has passed out of the presumptive primary scab season. Our apologies for any inconvenience this may cause.

CALENDAR OF EVENTS

Sixth International Christmas Tree Research and Extension Conference- September 14-19, 2003. Henderson and Boone, North Carolina. More information can be found at www.ncsu.edu/feop/ctre.

Wisconsin Apple Growers Association IPM Field Day, Thurs. June 5, North Freedom, WI
Info at <http://www.waga.org/hot.html> or (920) 478-4277

QUOTE OF THE WEEK

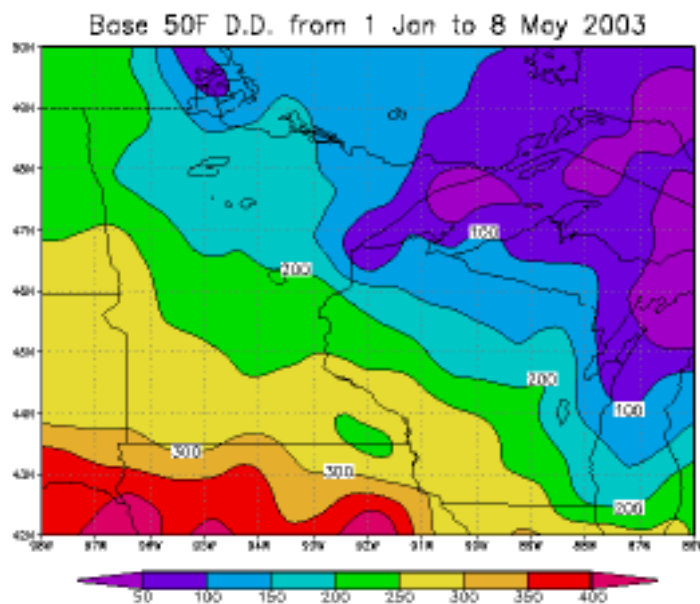
“What do I know of man’s destiny? I could tell you more about radishes.”

Samuel Beckett (1906-1989), playwright

WEBSITE OF THE WEEK

<http://plants.usda.gov/>

From the USDA Natural Resources Conservation Service comes this resource on the vascular plants, mosses, liverworts and lichens of the United States. Information on plant distribution, characteristics, images, references, cropping possibilities, nutrient removal, erosion prediction... A highly useful reference site.



<http://www.soils.wisc.edu/wimnext/tree/arbor.html>

Apple Insect Trapping Results					
County	City	Date	STLM	RBLR	CM OBLR
Crawford Co.					
	Gays Mills-W2	4/28-5/5	20	6	
Richland Co.					
	Hill Point	4/29-5/5	256	8	
		4/23-4/28	328	31	
Iowa Co.					
	Dodgeville	5/1-5/8	520	6	
Sauk Co.					
	Spring Green	5/1-5/8	3	12	1 0
Dane Co.					
	Deerfield	4/30-5/5	1008	43	3
	Madison	5/1-5/8	4	8	0 0
Pierce Co.					
	Spring Valley	5/1-5/8	73	31	0
	Beldenville	4/30-5/7	0	6	0 0
Trempealeau Co.					
	Galesville	4/22-4/29		10	0 1
Jackson Co.					
	Hixton	4/28-5/2	190	22	
Fond du Lac Co.					
	Malone	5/1-5/8	50	6	0
Marquette Co.					
	Montello	4/27-5/4	1152	144	3 5
Ozaukee Co.					
	Mequon	4/29-5/5	425	15.5	0
		4/22-4/28	375		
Racine Co.					
	Rochester	5/2-5/9	1576	18	5
Waukesha Co.					
	Waukesha	4/25-5/2			0
Sheboygan Co.					
	Plymouth	4/30-5/7	610	52	7
Door Co.					
	Sturgeon Bay	4/25-5/5	0	1	