COOPERATIVE PEST SURVEY BULLETIN

State of Wisconsin
Department of Agriculture
Trade & Consumer Protection

Agricultural Resource Management

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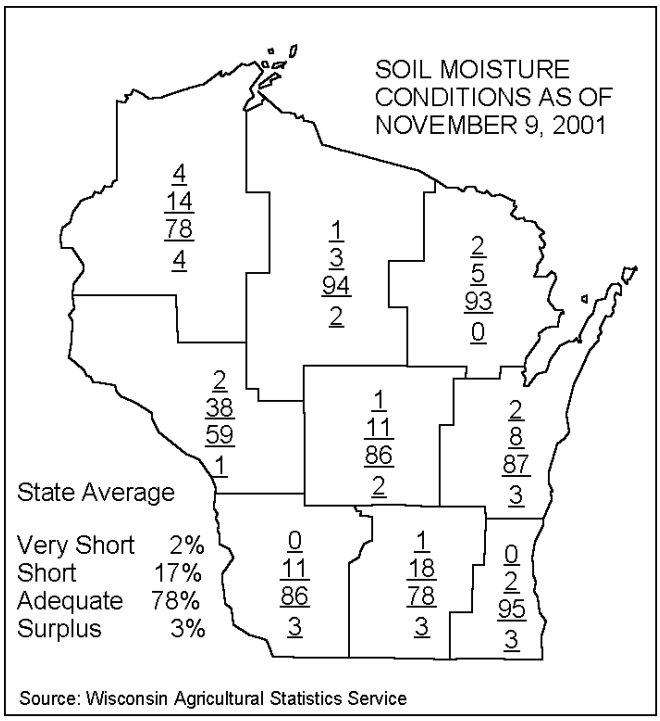


WEATHER AND PESTS

Warm conditions have been a pleasant surprise for most farmers and growers. Corn harvests are better than expected, but soybean harvest has been slightly lower than average. Rye and winter wheat are thriving in the warm weather. Cranberry harvest is almost complete.

THE YEAR IN REVIEW— PLANT DISEASE SURVEY

In many ways and for most crops, the growing season of 2001 brought much that was expected. A few unusual diseases were present, however. Some highlights of the season include:

Frogeye Leaf Spot of soybean – For the second year in a row, this generally southern disease of soybeans was detected in southern Wisconsin in August. **Frogeye** has caused yield losses in the Mid-South and Mississippi Delta regions, but both the incidence and severity of the disease in WI have been very low. DATCP will continue to monitor the disease closely.

Soybean Cyst Nematode (SCN)– With data from UW, two more counties (Marquette and Dodge) were added to the list of Wisconsin counties known to have established populations of **SCN**. This brings the total number of WI counties with **SCN** to 26. However, extensive survey efforts in Pierce and Brown counties, and additional sampling in sixteen other counties, failed to detect the pest during our survey in 2001.

Stripe rust of wheat was found in Wisconsin in 2001 for the first time in many years. **Stripe rust** is usually found in cool, wet climates such as the Pacific Northwest, and rarely appears in the Midwest. Information from the USDA Cereal Disease Laboratory indicates that 2001 brought the "most widely dispersed **Stripe rust** development observed throughout the northern winter wheat area in at least 40 years." **Leaf rust** made its usual appearance. **Stem rust** was also observed, though late in the season.

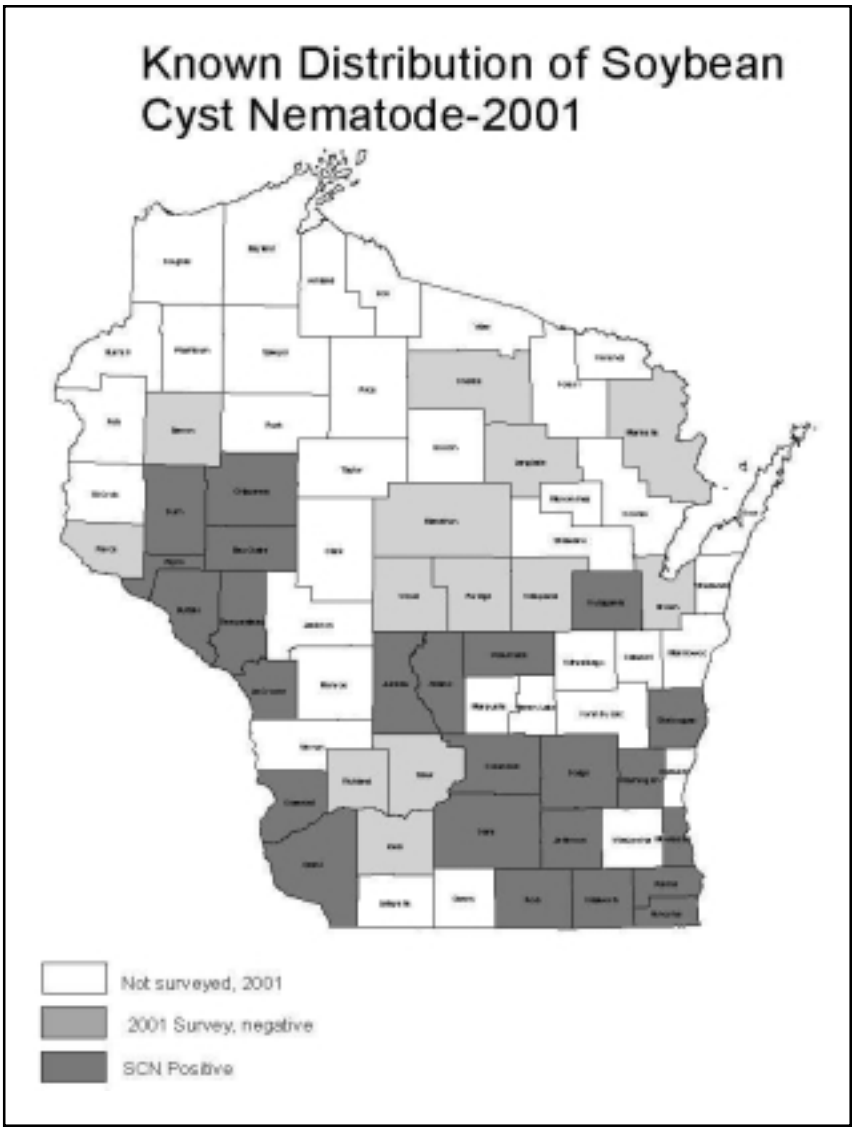
Daylily Rust gathered some attention in 2001. This Asian disease of daylilies was first recognized in the southeastern United States in the summer of 2000. By the end of the 2001 growing season, Wisconsin had been added to the list of states where **daylily rust** has been detected.

Common diseases that were more prevalent than last year include **Powdery mildew of wheat**, which was widespread early in the season; and **common rust of corn**, which continued its increased presence on both field and sweet corn.

CORN

European Corn Borer – The annual fall abundance survey documented a statewide average of 40 borers per 100 plants in grain corn. This compares to 24 per 100 in 2000, and a 10-year average of 48 larvae per 100 plants. Larval counts were low to moderate throughout much of the state, except in the West Central and Southwest districts, where considerable population increases were observed. Extensive stalk breakage and shank tunneling were encountered in the southwest part of the state; however, only low amounts of subsequent ear drop were noted while the survey was in progress.

Pupation of the 2000-2001 overwintering larvae began at 246 DD (base 50ºF), which occurred around May 9 throughout much of the state. The first moth detection of the season was recorded on May 15, in Calumet Co. Peak first flight moth activity, which typically occurs once 631 DD have been reached, occurred around June 13 in the southernmost counties, and by June 20 farther north. The first flight of moths continued into the first week of July. The earliest egg mass was detected on June 14 in Lafayette Co., and larval feeding became apparent during the following week. Based on the low 2000 fall abundance survey average (24%), and potential for winter mortality, a light first flight was anticipated. Survey observations supported this forecast.



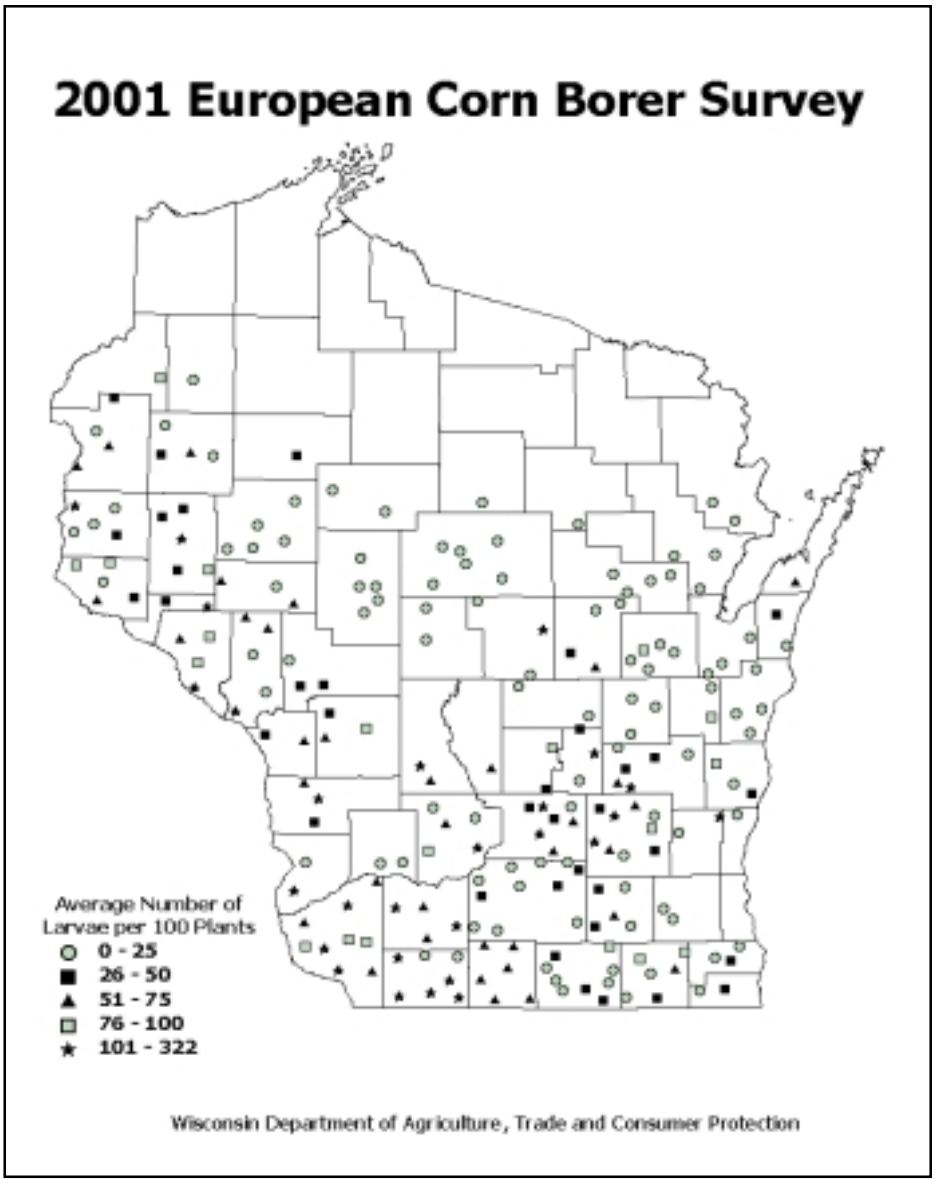
Moths of 2nd flight began emerging around July 18, and the peak of summer **European corn borer** activity occurred around August 1 in the Madison area, and by August 8 in the northern counties. Surveyors detected egg masses from

European Corn Borer Fall Survey Summary 1992-2001
Average Number of Larvae per 100 Plants

District	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	10 Yr. Ave.
NW	8	26	20	10	32	3	2	15	24	33	18
NC	1	15	8	17	41	26	1	3	4	5	12
NE	37	2	10	53	47	18	1	18	3	7	20
WC	10	17	45	121	80	15	2	30	31	67	42
C	9	29	92	123	102	9	2	30	41	48	49
EC	9	13	28	249	65	26	3	25	19	33	47
SW	5	65	110	631	51	39	17	57	39	87	110
SC	13	14	101	265	83	35	10	61	33	48	66
SE	5	40	107	308	79	35	10	31	16	36	67
State Ave.	11	25	58	197	64	23	5	30	24	40	48

the second flight of moths most frequently between the 1st and 14th of August. Moth activity slowed substantially between August 16th and 23rd, and tapered off almost completely by the second week of September.

Based on the fall larval abundance survey, 21% of the state's corn acreage had populations exceeding 75 borers per 100 plants. See map and table for further summaries.



APIARY

APIARY PROGRAM – The 2001 **FALL SURVEY** showed again a marked decrease in **varroa mite** infestations. Only 24% of checked hives tested positive for ***Varroa destructor***, compared to 47% in 2000, see table below. The average infestation of an untreated colony in 2001 was 1.2% g 0.03, lower than last year's average of untreated colonies which was 2.86% ± 0.043. Colonies treated with CheckMite™ in fall showed 0.04% g0.001 and spring use only 0.09% ± 0.004. Most treatments were not even completed at the time of testing.

To successfully overwinter hives in Wisconsin, a **varroa** test of 250 bees should show less than 3 **varroa** (1% or less). The continuing drop in **varroa** populations is

Honey Bee Fall Survey

	1998	**1999**	**2000***	**2001***
Total Colonies Tested*	140	175	137	193
<=1% VARROA	51%	57%	67%	84%
>1% **VARROA**	49%	43%	33%	16%
Positive for **VARROA**	73%	60%	47%	24%
AMERICAN FOULBROOD	6.5%	16%	5.8%	8.6%
CHALKBROOD	4%	14%	5.4%	10.9%

*Powdered Sugar Test as described by Ellis & Macedo.

Christmas Tree Fields Inspected

County	Number of Fields	Number of Acres
Adams	5	142
Ashland	1	25
Buffalo	1	30
Chippewa	2	57
Clark	7	109.5
Columbia	5	245
Dodge	1	18
Door	3	52
Dunn	6	6
Eau Claire	4	410
Forest	1	15
Grant	2	75
Green	1	20
Iowa	1	30
Jackson	55	1919.5
Jefferson	1	9
Kenosha	1	13
Kewaunee	2	6
Langlade	21	430
Lincoln	33	874
Manitowoc	1	6
Marathon	15	210.5
Marinette	11	271
Marquette	12	298
Monroe	7	148
Oneida	4	110
Ozaukee	1	23
Pepin	1	25
Pierce	2	7
Polk	1	25
Portage	14	357
Price	21	456
Racine	1	5
Richland	2	22
Rock	5	160
Rusk	7	100
Sawyer	3	160
Shawano	11	239
Sheboygan	1	45
Taylor	13	763
Trempealeau	1	5
Vernon	2	11
Walworth	6	234
Waupaca	5	69
Waushara	61	1514
Wood	13	195

probably due to increased use of CheckMite™ over the last three years.

BROOD DISEASES - Brood comb inspections of 256 hives showed a marked increase in **chalkbrood** with 10.9%. Cool and wet conditions in spring were conducive to this fungal disease which usually does not affect the colony in the long term. More serious are continuously high levels of **American Foulbrood (AFB)** with 8.6% and an increasing number of resistance to **oxytetracycline** (**Terramycin).** Four new cases of **resistant AFB** were determined in 2001 with the help of the Beltsville Bee Lab.

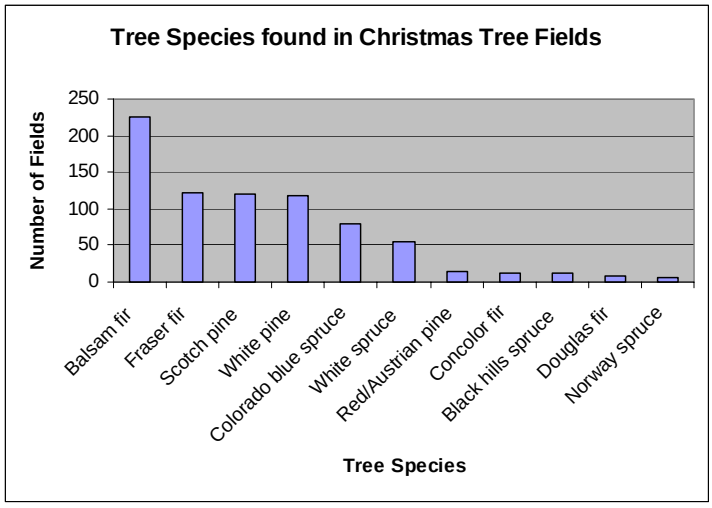
Increasing numbers of **Small hive beetles** (***Aethina tumida***) were found in Florida migratory hives in 2001. Two neighboring resident apiaries showed significant infestations. Infested hives did not show any damage due to beetle activity. Infestations are not considered established populations. Beetles were found in 10 Wisconsin counties in 2001 compared to 5 counties in 2000. Fact sheets on the use of CheckMite™ for **small hive beetle** control and are available from the Apiary Program, call (608) 224-4575.

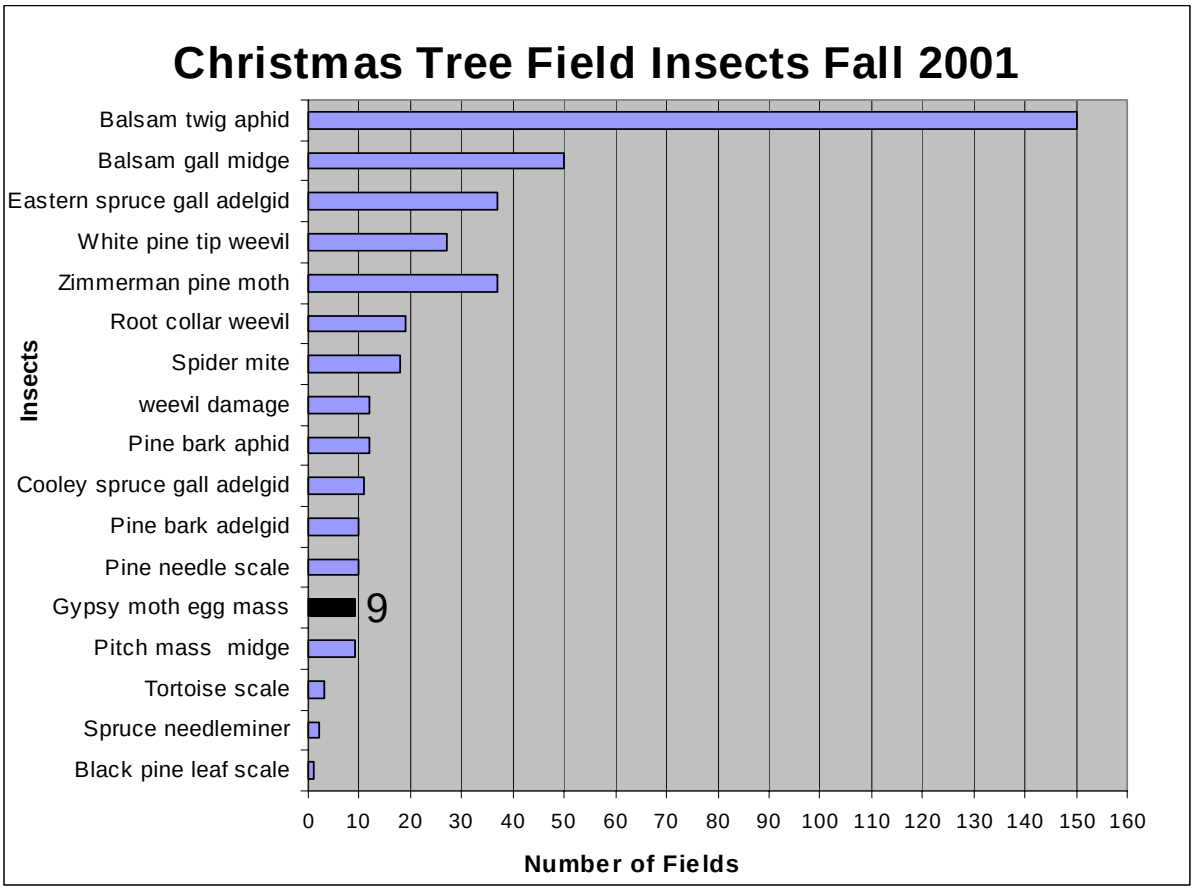
GINSENG

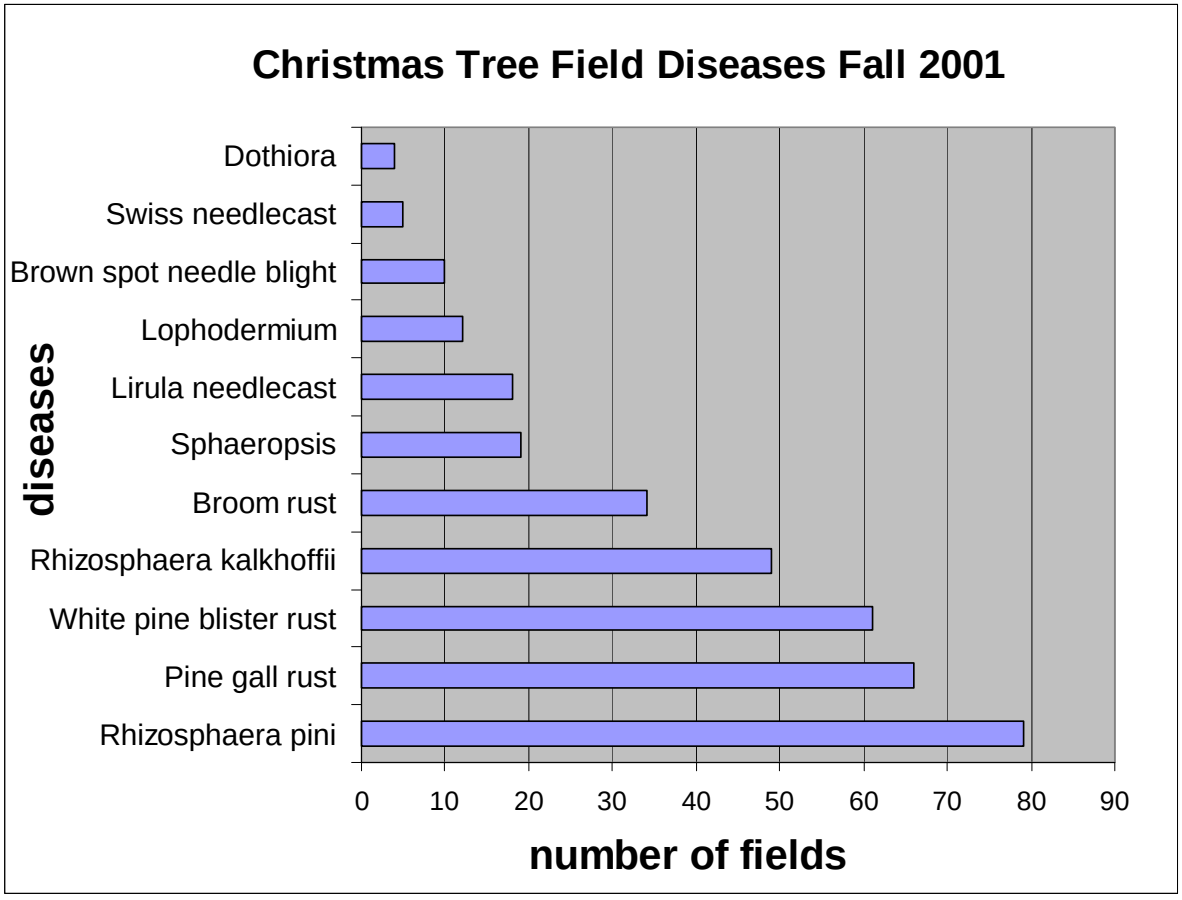
CULTIVATED GINSENG EXPORTS – Growers report selling 264,763 lbs of dry root harvested in 2001 as of today. Dealers sold 149,004 lbs of the 2001 harvest during the same time frame. Ginseng growers report 803,024 lbs of ginseng harvested in 2000 sold up to today. Dealers sold 802,553 lbs of the 2000 harvest so far.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Christmas Trees- DATCP inspectors began inspecting Christmas trees on Sept. 4th and still continue. To date, we have inspected 375 Christmas tree fields; around 9,950 acres in 47 counties so far this year. This is an increase from last year when we inspected around 250 fields in 39 counties. Our finds are summarized in the table and graphs.







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This is the first year that Christmas tree growers have been licensed in a similar fashion nursery dealers and nursery growers. Now all Christmas tree growers in the state need to be licensed, and all Christmas tree growers are inspected, not just those that are shipping out of state. Inspection reports will be mailed in late Nov. or early Dec.

Plant inspection certificates- If you are a Christmas tree grower who has not received a plant inspection certificate and needs one, please call 608-224-4576. Growers should give copies of this certificate to each truck and sales lot. Plant inspection certificates can be copied, faxed, and put on labels to facilitate shipping. We recommend using a State Phytosanitary Certificate for shipments to California. A Federal Phytosanitary Certificate is required for shipments outside the U.S. Please call 608-224-4596 if you need one.

Balsam gall midge- Wreath and Christmas tree producers, if you are shipping the California be sure that your wreaths are free of balsam gall midge. These small insects create swellings on needles, and eventually the needles discolor and can drop. Although not a regulated pest, some states such as California do not allow boughs with galls present to be imported. Balsam gall midge is generally found in the northern half of Wisconsin on balsam fir.

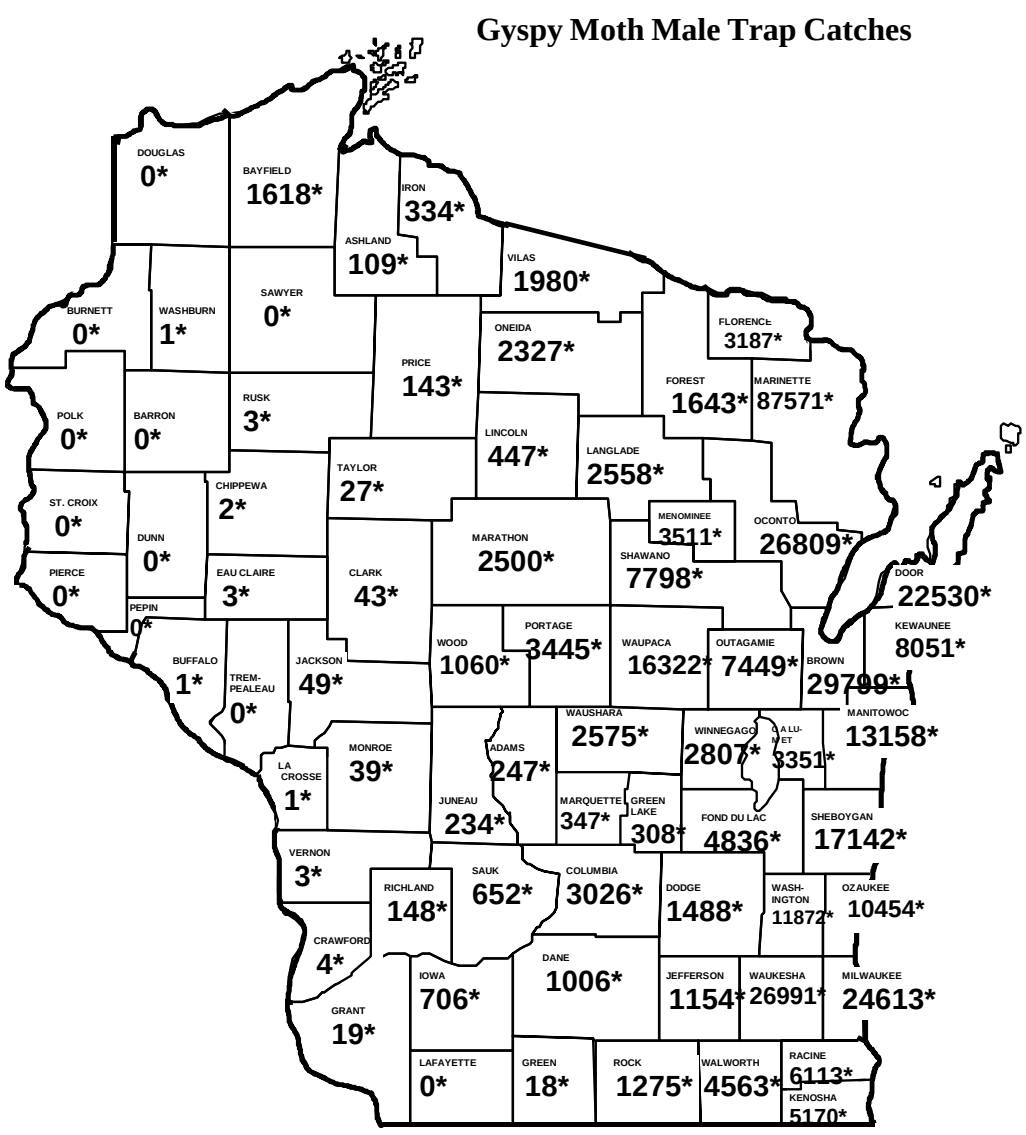
Gypsy moth egg masses- Gypsy moth egg masses were found in the deciduous trees surrounding 9 Christmas tree fields in the state. Egg masses were found around one field in Marinette Co., one field in Portage Co, and 7 fields in Waushara Co.. This marks the first time gypsy moth egg masses have been found adjacent to Christmas tree fields. Growers were instructed to not ship trees from within 100 feet of an egg mass to areas not quarantined by gypsy moth. Preliminary winter egg mass inspections for nurseries indicate there are more egg masses on or near nursery stock than in previous years as well.

Christmas tree lot inspections- Christmas tree sales lot inspections will begin after Thanksgiving. Our goals are to examine all trees for regulated pests, to check tree origin and certification if necessary, and to locate grower who are not yet licensed. Growers and wholesalers, please let your Wisconsin vendors know your full business name and county or state where the trees originated from.

STATE/FEDERAL PROGRAMS

Gypsy moth Program - Trappers completed trap takedown in early October. The unofficial trap catch for 2001 is 384,929 moths. This includes cooperator totals of 48,024 moths. The data is currently being checked for errors and will be used to help determine the 2002 treatment and trapping programs. See map for all county totals.

Fall egg mass surveys are currently being conducted and should be finished the week of November 12th. There are



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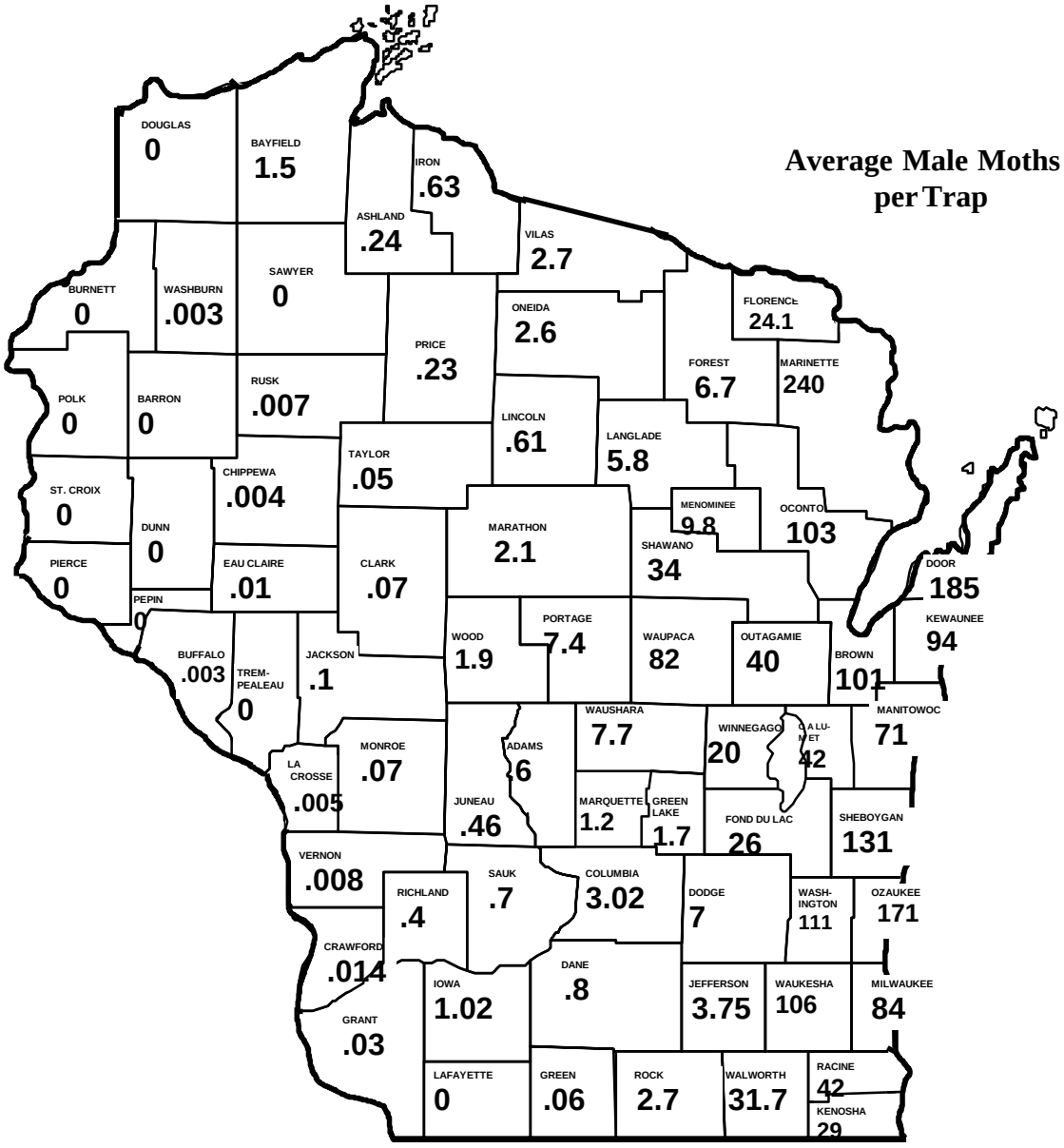
three crews of four doing surveys for alternate life stages. The results of the surveys should be available the week of November 26th.

Currently, alternate life stage have been found in 20 non-regulated counties. Here is a list of counties and the number of sites found in each one: Bayfield (3), Columbia (8), Dane (11), Florence (3), Forest (3), Green (1), Green Lake (2), Iowa (2), Iron (1), Jefferson (2), LaCrosse (1), Langlade (2), Lincoln (1), Marquette (2), Oneida (1), Portage (8), Rock (3), Sauk (3), Vilas (1), and Wood (1).

The list of regulated counties reporting alternate life stages are: Brown (9), Door (6), Kewaunee (6), Manitowoc (3), Marinette (33), Menominee (2), Milwaukee (5), Oconto (24), Ozaukee (4), Shawano (3), Sheboygan (2), Walworth (1), Washington (4), Waukesha (8), Waupaca (4), Waushara (3), and Winnebago (1).

This information is also used to determine treatment blocks and delimitation trapping for 2002. 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 and type in "gypsy moth" in the search box.



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