

Downy Mildew Update

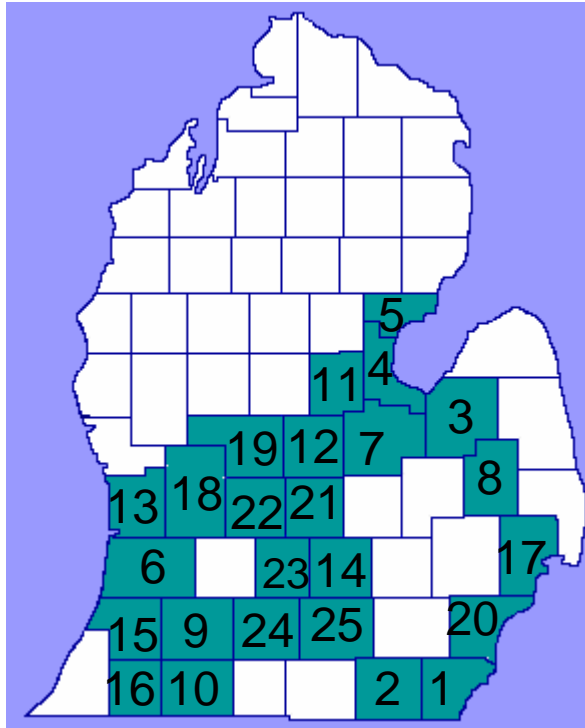
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Downy mildew continues to be a struggle for growers of pickling cucumbers. This crop is particularly sensitive to this disease. Now that the disease is widespread within the state, stretching the interval between fungicide sprays beyond 5 days will not work for extra-sensitive crops such as pickling cucumbers or slicing cucumbers. There are just a few fungicides that can be used effectively against this strain of downy mildew that is especially damaging to cucumbers. The fungicides recommended for downy mildew include alternating applications of Previcur Flex with Tanos. Based on an ongoing trial, the fungicide Ranman appears to be effective and can also be included in a downy mildew program. Each of the fungicides (Previcur Flex, Tanos, Ranman) should be mixed with a protectant including either mancozeb or Bravo (see previous CAT alert articles for additional information). All fungicides for this tank mix should be applied at full label rates. In our current fungicide trials, mancozeb appears to be more effective against the downy mildew than Bravo. However, there is a seasonal maximum amount for mancozeb that will likely be reached when frequent sprays are needed.

Other fungicides are not recommended at this time. A recent report from The Ohio State University reported that growers in that state are using hydrogen peroxide-based fungicides against downy mildew. I do not recommend using these types of products against this disease. Data from vegetable pathologists in other states clearly show that hydrogen peroxide-based products cannot provide the needed protection against downy mildew. I have included this type of product in my late-season downy mildew trial for comparison under Michigan conditions.

The trapping of downy mildew spores from around the state is wrapping up. I will continue to monitor the spore load in Monroe County until the end of the growing season.

Confirmed downy mildew reports in Michigan as of August 17, 2006



1	Monroe Co.	6/9 cucumber	7/27 cantaloupe	18	Kent Co.	8/10 cucumber
2	Lenawee Co.	7/19 cucumber	7/27 cantaloupe	19	Montcalm Co.	8/11 cucumber
3	Tuscola Co.	7/24 cucumber	7/27 winter squash 8/11 cantaloupe	20	Wayne Co.	8/14 cucumber
4	Bay Co.	7/24 cucumber		21	Clinton Co.	8/16 cucumber
5	Arenac Co.	7/24 cucumber		22	Ionia Co.	8/17 cucumber
6	Allegan Co.	7/25 cucumber		23	Eaton Co.	8/17 cucumber
7	Saginaw Co.	7/25 cucumber		24	Calhoun Co.	8/17 cucumber
8	Lapeer Co.	7/27 cucumber		25	Jackson Co.	8/17 cucumber
9	Kalamazoo Co.	7/28 cucumber				
10	St. Joseph Co.	7/28 cucumber				
11	Midland Co.	8/1 cucumber				
12	Gratiot Co.	8/1 cucumber				
13	Ottawa Co.	8/4 cucumber				
14	Ingham Co.	8/4 cucumber				
15	Van Buren Co.	8/4 cucumber				
16	Cass Co.	8/8 cucumber				
17	Macomb Co.	8/9 cucumber	8/9 cantaloupe			

Table 1. Spore trap daily totals (counts/m³/day) by location.

Date	Michigan counties					
	Allegan	Bay	Monroe	Saginaw	St. Joseph	Van Buren
July 1	0	10	*52	12	7	3
2	2	8	115	8	2	3
3	0	5	8,933	32	0	2
4	2	8	4,345	12	0	15
5	–	2	2,448	3	0	5
6	–	2	1,045	8	5	30
7	0	5	*1,557	2	13	2
8	2	8	6,268	8	20	20
9	5	5	*122	3	0	7
10	3	0	*93	5	3	5
11	2	13	3,970	5	0	2
12	2	2	48,878	5	5	13
13	12	23	48,230	7	18	30
14	12	13	2,162	2	3	5
15	3	2	52,127	5	12	30
16	8	2	14,185	0	22	63
17	3	3	7,637	0	7	53
18	2	10	2,410	3	2	37
19	13	37	*62,013	35	90	92
20	3	10	51,098	2	62	210
21	47	3	*53,398	3	72	288
22	108	40	†85	2	287	270
23	28	10	197	10	87	135
24	65	55	510	100	258	618
25	30	32	482	52	297	703
26	25	20	412	5	110	307
27	18	10	502	10	17	55
28	70	28	533	7	88	78
29	12	27	1,660	27	62	170
30	58	72	1,773	10	83	535
31	3	95	1,822	17	170	416
Aug. 1	27	157	1,172	13	127	613
2	58	22	837	8	102	510
3	35	3	137	15	5	7
4	1,195	67	13,747	175	58	117
5	1,188	167	7,290	48	60	235
6	1,028	178	34,150	95	188	380
7	848	27	1,553	147	0	367
8	548	13	14,398	70	5	125
9	3,105	152	15,073	210	268	452
10	2,243	50	12,180	948	207	227
11	225	7	1,257	27	-	195
12	2,028	10	10,637	5	-	55
13	5,115	28	20,170	28	-	32
14	588	12	5,917	65	-	118
15	3	85	20,307	10	-	77

**Spore tapes available, counts pending

†Spore trap moved to new location.