

**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Michigan	Alcona	Alger	Allegan	Alpena	Antrim
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	22,234	66	34	596	151	160
.....farms, 2012	23,463	77	34	610	186	164
.....acres treated, 2017	5,515,923	8,419	2,838	146,688	19,949	16,395
.....acres treated, 2012	5,396,912	9,808	2,768	166,799	20,167	16,495
Cropland fertilized, except cropland pasture .....farms, 2017	21,119	63	32	573	134	158
.....farms, 2012	22,516	69	33	586	169	155
.....acres treated, 2017	5,476,783	8,361	2,539	146,019	19,652	16,039
.....acres treated, 2012	5,351,495	9,616	2,458	165,845	19,067	15,997
Pastureland and rangeland fertilized .....farms, 2017	2,255	5	5	42	26	15
.....farms, 2012	2,313	14	4	61	40	23
.....acres treated, 2017	39,140	58	299	669	297	356
.....acres treated, 2012	45,417	192	310	954	1,100	498
Manure .....farms, 2017	9,687	36	30	298	88	83
.....farms, 2012	9,149	38	20	275	109	83
.....acres treated, 2017	825,365	1,431	490	30,845	3,489	4,677
.....acres treated, 2012	761,437	2,263	1,210	33,135	4,632	4,100
Organic fertilizer (see text) .....farms, 2017	1,401	3	11	24	12	26
.....farms, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
.....acres treated, 2017	82,256	302	34	1,366	475	150
.....acres treated, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	8,158	11	4	288	23	76
.....farms, 2012	11,136	18	14	358	59	85
.....acres, 2017	2,171,602	964	29	75,043	3,146	11,439
.....acres, 2012	2,218,992	2,142	353	61,138	4,417	8,839
Weeds, grass, or brush .....farms, 2017	17,875	40	19	464	81	105
.....farms, 2012	21,713	51	27	571	141	156
.....acres, 2017	5,919,857	9,257	2,267	150,867	19,204	17,932
.....acres, 2012	5,767,291	7,152	2,169	179,629	17,020	14,430
Nematodes .....farms, 2017	1,573	-	4	59	-	12
.....farms, 2012	2,441	1	3	60	9	21
.....acres, 2017	407,101	-	22	19,991	-	590
.....acres, 2012	376,530	(D)	8	5,957	101	1,431
Diseases in crops and orchards .....farms, 2017	4,573	6	9	135	25	50
.....farms, 2012	5,141	5	5	149	35	58
.....acres, 2017	944,112	654	582	19,416	1,884	8,671
.....acres, 2012	781,472	192	14	15,119	1,236	3,985
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	1,490	1	2	33	6	39
.....farms, 2012	1,893	5	-	48	11	45
.....acres on which used, 2017	281,266	(D)	(D)	5,121	1,020	7,454
.....acres on which used, 2012	230,525	10	-	4,173	481	3,931

  

Item	Arenac	Baraga	Barry	Bay	Benzie	Berrien
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	179	19	356	440	94	497
.....farms, 2012	155	21	326	447	82	574
.....acres treated, 2017	44,719	3,292	80,531	148,196	5,146	91,405
.....acres treated, 2012	45,260	2,810	79,304	134,772	5,325	92,511
Cropland fertilized, except cropland pasture .....farms, 2017	176	13	337	438	82	488
.....farms, 2012	151	21	311	443	75	569
.....acres treated, 2017	44,557	3,149	79,454	148,063	4,744	91,047
.....acres treated, 2012	45,163	2,810	78,333	134,670	5,114	92,197
Pastureland and rangeland fertilized .....farms, 2017	15	6	50	8	23	28
.....farms, 2012	9	-	43	10	12	24
.....acres treated, 2017	162	143	1,077	133	402	358
.....acres treated, 2012	97	-	971	102	211	314
Manure .....farms, 2017	59	18	196	52	62	109
.....farms, 2012	45	16	180	47	22	100
.....acres treated, 2017	6,072	216	20,742	4,459	890	4,127
.....acres treated, 2012	6,486	382	23,758	3,620	538	4,065
Organic fertilizer (see text) .....farms, 2017	8	5	31	10	14	25
.....farms, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
.....acres treated, 2017	2,756	7	843	347	182	400
.....acres treated, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	51	6	101	173	43	330
.....farms, 2012	75	8	115	228	52	429
.....acres, 2017	7,589	608	30,043	54,412	3,352	40,179
.....acres, 2012	11,347	454	33,377	43,576	3,418	49,557
Weeds, grass, or brush .....farms, 2017	150	8	271	402	57	457
.....farms, 2012	145	18	303	460	79	589
.....acres, 2017	53,108	3,518	82,660	169,234	4,059	95,963
.....acres, 2012	44,593	2,858	81,750	152,906	5,061	100,490
Nematodes .....farms, 2017	22	-	14	48	4	48
.....farms, 2012	18	1	28	78	12	95
.....acres, 2017	2,462	-	5,554	5,623	51	8,150
.....acres, 2012	2,772	(D)	6,331	12,139	95	10,773
Diseases in crops and orchards .....farms, 2017	33	2	48	105	29	218
.....farms, 2012	35	6	28	120	38	260
.....acres, 2017	6,824	(D)	6,889	14,061	1,909	17,361
.....acres, 2012	7,455	59	4,825	19,584	2,199	21,980
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	13	-	7	46	17	77
.....farms, 2012	7	4	8	25	23	129
.....acres on which used, 2017	3,217	-	437	14,204	1,041	4,646
.....acres on which used, 2012	1,712	24	184	4,743	1,909	10,643

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**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012 (continued)**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Branch	Calhoun	Cass	Charlevoix	Cheboygan	Chippewa	
Commercial fertilizer, lime, and soil conditioners	farms, 2017	421	456	381	99	105	91
	2012	482	493	391	122	97	81
acres treated, 2017	160,163	129,588	131,595	7,401	4,508	5,501	
	2012	143,299	124,118	124,301	9,040	5,667	5,647
Cropland fertilized, except cropland pasture	farms, 2017	407	434	377	84	87	85
	2012	477	483	378	108	93	78
acres treated, 2017	159,519	128,764	130,806	7,044	4,059	5,038	
	2012	142,862	123,145	123,310	8,628	4,993	5,455
Pastureland and rangeland fertilized	farms, 2017	43	55	35	21	28	12
	2012	32	45	55	23	19	8
acres treated, 2017	644	824	789	357	449	463	
	2012	437	973	991	412	674	192
Manure	farms, 2017	190	191	135	56	56	68
	2012	175	190	147	59	58	74
acres treated, 2017	15,131	12,481	18,057	1,591	1,395	3,383	
	2012	11,430	17,501	12,556	2,180	3,286	3,320
Organic fertilizer (see text)	farms, 2017	16	25	14	9	14	6
	2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
acres treated, 2017	519	340	675	140	101	(D)	
	2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--	farms, 2017	149	154	134	33	25	17
	2012	185	219	185	56	40	18
Insects	acres, 2017	66,087	52,495	70,970	2,105	982	1,048
	2012	43,998	45,446	54,865	1,650	1,028	230
Weeds, grass, or brush	farms, 2017	344	393	312	66	58	29
	2012	453	457	362	92	61	51
acres, 2017	172,804	146,616	127,865	4,600	3,394	1,134	
	2012	159,092	148,308	128,657	6,413	2,991	1,484
Nematodes	farms, 2017	25	17	37	14	4	-
	2012	40	39	56	10	7	-
acres, 2017	8,994	4,554	28,621	1,104	6	6	
	2012	9,347	3,734	10,830	84	31	20
Diseases in crops and orchards	farms, 2017	47	52	47	16	11	12
	2012	72	65	73	22	13	7
acres, 2017	20,135	4,984	23,666	495	671	102	
	2012	14,209	11,317	15,606	862	62	21
Chemicals used to control growth, thin fruit, ripen, or defoliate	farms, 2017	8	7	17	8	4	2
	2012	25	9	20	10	9	3
acres on which used, 2017	3,520	340	5,332	(D)	227	(D)	
	2012	4,948	679	5,547	116	36	(D)

  

Item	Clare	Clinton	Crawford	Delta	Dickinson	Eaton	
Commercial fertilizer, lime, and soil conditioners	farms, 2017	118	519	13	76	42	483
	2012	135	556	14	124	56	534
acres treated, 2017	11,137	127,339	223	9,060	2,729	138,517	
	2012	14,062	139,860	238	16,764	4,754	131,223
Cropland fertilized, except cropland pasture	farms, 2017	113	513	5	69	39	457
	2012	131	541	11	115	49	515
acres treated, 2017	10,324	126,974	43	8,336	2,671	137,385	
	2012	13,325	138,999	187	13,982	4,473	129,643
Pastureland and rangeland fertilized	farms, 2017	24	37	8	21	4	65
	2012	26	40	4	33	16	68
acres treated, 2017	813	365	180	724	58	1,132	
	2012	737	861	51	2,782	281	1,580
Manure	farms, 2017	110	209	12	46	20	179
	2012	97	206	8	68	23	207
acres treated, 2017	5,340	25,025	100	3,977	1,062	8,775	
	2012	5,565	22,433	(D)	4,438	1,390	11,640
Organic fertilizer (see text)	farms, 2017	23	30	-	1	4	21
	2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
acres treated, 2017	1,327	2,720	-	(D)	8	968	
	2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--	farms, 2017	21	144	-	14	17	141
	2012	28	206	4	39	18	264
Insects	acres, 2017	3,406	39,040	-	1,890	677	40,604
	2012	1,556	58,219	13	2,414	737	47,529
Weeds, grass, or brush	farms, 2017	71	452	7	43	33	412
	2012	98	559	6	98	44	509
acres, 2017	9,942	165,994	82	7,305	1,714	145,776	
	2012	10,413	165,371	30	10,161	2,933	146,976
Nematodes	farms, 2017	5	17	-	3	3	28
	2012	7	47	1	6	6	36
acres, 2017	641	2,467	-	-	(D)	5,120	
	2012	59	4,477	(D)	274	387	3,966
Diseases in crops and orchards	farms, 2017	12	66	-	9	5	64
	2012	14	86	1	22	11	57
acres, 2017	233	8,103	-	388	343	11,276	
	2012	537	16,000	(D)	1,298	572	8,688
Chemicals used to control growth, thin fruit, ripen, or defoliate	farms, 2017	4	10	-	5	5	4
	2012	7	14	-	14	6	15
acres on which used, 2017	(D)	468	-	311	341	32	
	2012	(D)	613	-	499	(D)	396

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**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012 (continued)**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Emmet	Genesee	Gladwin	Gogebic	Grand Traverse	Gratiot
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	111	333	153	7	252	489
2012	116	333	173	11	255	487
acres treated, 2017	4,602	75,763	16,853	90	23,212	191,822
2012	4,876	75,541	20,251	712	24,351	201,967
Cropland fertilized, except cropland pasture .....farms, 2017	105	289	145	5	243	489
2012	102	316	167	11	247	475
acres treated, 2017	4,309	75,147	16,332	(D)	22,814	(D)
2012	4,532	75,053	19,428	(D)	23,180	201,296
Pastureland and rangeland fertilized .....farms, 2017	14	57	28	2	25	4
2012	22	30	36	2	23	20
acres treated, 2017	293	616	521	(D)	398	(D)
2012	344	488	823	(D)	1,171	671
Manure .....farms, 2017	73	138	86	20	70	142
2012	75	101	87	13	98	159
acres treated, 2017	2,527	7,148	3,129	193	1,697	32,116
2012	1,390	6,865	3,940	210	5,163	28,097
Organic fertilizer (see text) .....farms, 2017	32	16	9	2	23	15
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
acres treated, 2017	176	376	179	(D)	512	1,114
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	29	83	20	2	137	188
2012	42	137	42	1	180	206
acres, 2017	548	11,150	4,341	(D)	8,643	67,922
2012	1,220	21,123	3,888	(D)	8,449	65,157
Weeds, grass, or brush .....farms, 2017	43	257	107	2	208	444
2012	89	321	131	6	229	469
acres, 2017	1,739	86,056	18,046	(D)	19,111	225,767
2012	3,084	79,653	15,913	516	19,610	219,385
Nematodes .....farms, 2017	6	37	5	-	29	33
2012	5	33	6	-	52	39
acres, 2017	37	6,908	1,230	-	439	9,428
2012	(D)	3,784	433	-	1,464	11,480
Diseases in crops and orchards .....farms, 2017	21	37	19	-	134	74
2012	23	57	16	-	142	78
acres, 2017	92	2,612	3,812	-	6,870	17,661
2012	123	5,417	1,773	-	6,634	18,317
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	3	10	6	-	67	12
2012	4	18	5	-	97	16
acres on which used, 2017	27	93	742	-	4,199	3,357
2012	29	861	(D)	-	6,249	3,756
Item	Hillsdale	Houghton	Huron	Ingham	Ionia	Iosco
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	469	61	720	381	545	85
2012	540	71	731	417	540	106
acres treated, 2017	160,645	2,456	355,207	113,782	153,057	9,815
2012	148,098	2,401	321,755	129,050	157,333	11,051
Cropland fertilized, except cropland pasture .....farms, 2017	459	55	717	352	512	78
2012	524	66	719	391	524	97
acres treated, 2017	159,773	2,257	355,057	113,130	152,015	9,585
2012	147,141	2,258	321,372	128,311	156,340	10,837
Pastureland and rangeland fertilized .....farms, 2017	42	14	15	50	57	13
2012	59	11	30	48	45	15
acres treated, 2017	872	199	150	652	1,042	230
2012	957	143	383	739	993	214
Manure .....farms, 2017	224	59	268	204	260	45
2012	212	38	289	149	271	54
acres treated, 2017	20,346	1,255	68,857	14,116	34,080	2,877
2012	16,535	1,604	59,570	10,659	35,984	3,569
Organic fertilizer (see text) .....farms, 2017	32	9	20	29	28	10
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
acres treated, 2017	2,045	9	2,277	2,511	5,262	76
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	143	12	369	112	201	9
2012	239	31	452	145	295	24
acres, 2017	48,153	256	217,518	33,591	46,446	(D)
2012	56,064	211	189,723	31,439	58,402	1,048
Weeds, grass, or brush .....farms, 2017	401	22	673	314	459	42
2012	527	48	732	393	535	71
acres, 2017	169,872	338	396,348	128,006	170,486	8,008
2012	160,592	1,548	357,488	143,626	165,484	9,229
Nematodes .....farms, 2017	37	1	103	19	30	1
2012	64	10	107	21	43	4
acres, 2017	17,990	(D)	28,209	1,468	8,860	(D)
2012	12,454	101	24,686	1,520	9,753	12
Diseases in crops and orchards .....farms, 2017	54	3	276	59	77	8
2012	60	15	219	58	98	11
acres, 2017	18,495	3	135,769	12,738	11,623	(D)
2012	6,427	112	77,195	8,084	15,299	467
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	5	2	149	7	14	-
2012	11	7	130	14	13	3
acres on which used, 2017	104	(D)	57,427	841	1,558	-
2012	438	88	27,612	355	1,665	45

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**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012 (continued)**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Iron	Isabella	Jackson	Kalamazoo	Kalkaska	Kent
Commercial fertilizer, lime, and soil conditioners ..... farms, 2017	36	495	359	325	78	492
..... 2012	34	420	418	326	76	528
..... acres treated, 2017	2,852	112,906	93,672	85,603	5,877	94,704
..... 2012	2,516	100,308	100,468	87,688	5,472	84,666
Cropland fertilized, except cropland pasture ..... farms, 2017	33	473	329	290	71	451
..... 2012	33	403	403	301	65	487
..... acres treated, 2017	2,752	112,167	91,877	85,098	5,515	93,648
..... 2012	(D)	99,107	99,076	87,256	5,051	83,376
Pastureland and rangeland fertilized ..... farms, 2017	5	45	55	54	14	71
..... 2012	2	41	49	42	16	73
..... acres treated, 2017	100	739	1,795	505	362	1,056
..... 2012	(D)	1,201	1,392	432	421	1,290
Manure ..... farms, 2017	8	204	192	135	47	195
..... 2012	9	213	153	118	28	209
..... acres treated, 2017	87	16,677	11,608	12,843	1,071	13,110
..... 2012	215	16,929	10,156	9,560	607	15,858
Organic fertilizer (see text) ..... farms, 2017	-	26	23	24	16	21
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
..... acres treated, 2017	-	4,456	828	3,400	298	2,158
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects ..... farms, 2017	9	111	121	167	20	224
..... 2012	8	129	201	195	24	310
..... acres, 2017	555	30,399	36,583	46,499	1,554	44,268
..... 2012	583	36,639	51,671	51,042	2,065	52,283
Weeds, grass, or brush ..... farms, 2017	18	378	297	253	36	366
..... 2012	20	389	367	308	44	480
..... acres, 2017	1,453	112,743	96,713	98,491	4,659	91,612
..... 2012	1,695	109,026	104,488	95,374	4,924	89,345
Nematodes ..... farms, 2017	5	17	30	31	4	21
..... 2012	4	22	27	33	5	48
..... acres, 2017	561	1,968	15,667	5,512	833	7,048
..... 2012	262	18,228	13,536	4,196	1,714	9,479
Diseases in crops and orchards ..... farms, 2017	6	41	50	77	11	161
..... 2012	7	75	58	84	12	170
..... acres, 2017	612	11,555	15,228	18,330	2,453	17,395
..... 2012	423	15,021	9,860	23,423	2,041	19,616
Chemicals used to control growth, thin fruit, ripen, or defoliate ..... farms, 2017	4	15	-	56	3	78
..... 2012	4	10	12	52	5	85
..... acres on which used, 2017	494	2,521	-	5,410	1,661	8,142
..... 2012	262	1,873	737	3,657	1,715	9,182
Item	Keweenaw	Lake	Lapeer	Leelanau	Lenawee	Livingston
Commercial fertilizer, lime, and soil conditioners ..... farms, 2017	3	58	404	271	695	227
..... 2012	-	51	471	265	684	282
..... acres treated, 2017	54	4,482	94,323	21,021	249,992	46,613
..... 2012	-	4,645	95,096	19,024	204,988	42,737
Cropland fertilized, except cropland pasture ..... farms, 2017	-	58	368	261	674	210
..... 2012	-	42	448	253	676	252
..... acres treated, 2017	-	4,286	93,901	20,508	249,343	46,416
..... 2012	-	4,296	94,636	18,628	204,481	42,358
Pastureland and rangeland fertilized ..... farms, 2017	3	13	49	27	40	24
..... 2012	-	13	49	21	39	37
..... acres treated, 2017	54	196	422	513	649	197
..... 2012	-	349	460	396	507	379
Manure ..... farms, 2017	-	39	238	96	191	120
..... 2012	2	42	206	83	160	105
..... acres treated, 2017	-	2,475	11,535	1,871	17,932	4,103
..... 2012	(D)	2,222	12,224	2,298	18,886	5,908
Organic fertilizer (see text) ..... farms, 2017	-	-	21	41	15	14
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
..... acres treated, 2017	-	-	1,132	449	(D)	35
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects ..... farms, 2017	-	5	126	188	248	65
..... 2012	-	10	178	231	341	114
..... acres, 2017	-	786	31,532	15,248	81,523	14,107
..... 2012	-	129	21,213	15,458	88,974	12,934
Weeds, grass, or brush ..... farms, 2017	-	30	345	216	632	209
..... 2012	-	46	448	268	676	253
..... acres, 2017	-	2,506	102,809	17,537	279,504	47,991
..... 2012	-	4,095	103,406	17,731	230,121	47,199
Nematodes ..... farms, 2017	-	6	28	37	25	13
..... 2012	-	1	38	58	67	27
..... acres, 2017	-	18	6,070	3,288	13,012	515
..... 2012	-	(D)	2,594	2,599	15,753	1,951
Diseases in crops and orchards ..... farms, 2017	-	1	51	160	145	38
..... 2012	-	1	83	185	131	51
..... acres, 2017	-	(D)	9,771	12,611	55,616	2,195
..... 2012	-	(D)	9,694	12,159	27,936	3,005
Chemicals used to control growth, thin fruit, ripen, or defoliate ..... farms, 2017	-	1	7	103	22	11
..... 2012	-	2	27	152	7	7
..... acres on which used, 2017	-	(D)	541	9,706	2,338	221
..... 2012	-	(D)	2,224	12,085	1,761	29

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**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012 (continued)**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Luce	Mackinac	Macomb	Manistee	Marquette	Mason
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	18	23	227	124	55	213
2012	10	28	244	122	58	193
acres treated, 2017	680	2,845	44,384	8,013	3,948	43,184
2012	1,023	2,704	42,932	8,385	3,918	36,761
Cropland fertilized, except cropland pasture .....farms, 2017	14	20	218	103	51	199
2012	10	20	240	116	49	186
acres treated, 2017	662	2,606	44,217	7,791	3,859	42,576
2012	1,023	2,344	42,801	8,197	3,621	36,352
Pastureland and rangeland fertilized .....farms, 2017	4	6	15	23	9	28
2012	-	12	13	13	17	19
acres treated, 2017	18	239	167	222	89	608
2012	-	360	131	188	297	409
Manure .....farms, 2017	9	30	57	84	41	91
2012	10	28	52	60	31	74
acres treated, 2017	87	2,545	1,347	4,115	3,469	11,178
2012	198	1,727	1,458	1,172	1,427	8,546
Organic fertilizer (see text) .....farms, 2017	1	7	11	20	7	20
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
acres treated, 2017	(D)	31	38	2,610	14	1,339
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	3	4	87	47	3	103
2012	5	3	127	22	22	108
acres, 2017	(D)	155	12,338	4,991	3	21,492
2012	(D)	25	16,118	2,243	467	18,024
Weeds, grass, or brush .....farms, 2017	7	18	193	70	17	178
2012	8	23	239	114	30	181
acres, 2017	572	1,140	57,835	8,470	2,492	38,913
2012	894	1,823	48,877	7,326	1,584	36,573
Nematodes .....farms, 2017	1	4	18	5	1	13
2012	-	2	39	16	9	16
acres, 2017	(D)	26	3,680	81	(D)	501
2012	-	(D)	5,091	201	25	639
Diseases in crops and orchards .....farms, 2017	6	4	50	18	1	56
2012	4	2	74	29	12	55
acres, 2017	(D)	150	6,234	593	(D)	8,917
2012	(D)	(D)	3,987	1,122	229	9,596
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	-	-	18	12	-	13
2012	-	-	19	13	-	13
acres on which used, 2017	-	-	554	701	-	2,093
2012	-	-	1,114	622	-	2,959
Item	Mecosta	Menominee	Midland	Missaukee	Monroe	Montcalm
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	301	149	236	170	585	479
2012	318	167	248	171	647	525
acres treated, 2017	48,302	22,621	47,671	58,294	157,471	146,507
2012	49,243	29,046	44,054	48,620	156,596	135,536
Cropland fertilized, except cropland pasture .....farms, 2017	281	141	217	158	573	453
2012	306	165	235	157	632	503
acres treated, 2017	46,469	21,988	47,024	58,048	157,276	145,585
2012	48,150	28,252	43,652	47,559	156,361	134,373
Pastureland and rangeland fertilized .....farms, 2017	55	24	31	22	26	56
2012	34	21	25	27	32	60
acres treated, 2017	1,833	633	647	246	195	922
2012	1,093	794	402	1,061	235	1,163
Manure .....farms, 2017	224	92	95	114	99	235
2012	178	97	66	117	83	225
acres treated, 2017	15,280	9,902	2,421	28,190	1,975	18,923
2012	11,415	10,771	2,489	25,803	5,582	19,973
Organic fertilizer (see text) .....farms, 2017	20	12	15	13	20	23
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
acres treated, 2017	695	(D)	706	780	861	656
2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	42	17	75	55	207	163
2012	75	26	90	79	344	207
acres, 2017	17,347	2,891	21,055	15,168	45,329	77,358
2012	15,564	3,745	18,402	22,630	68,166	60,506
Weeds, grass, or brush .....farms, 2017	219	102	184	129	526	369
2012	287	136	226	162	663	463
acres, 2017	42,887	13,936	53,326	39,417	174,248	148,422
2012	42,831	22,401	52,152	37,788	179,572	139,887
Nematodes .....farms, 2017	6	3	15	8	62	26
2012	19	5	12	9	96	41
acres, 2017	5,635	(D)	1,235	691	17,695	23,026
2012	5,396	70	153	1,694	20,956	18,629
Diseases in crops and orchards .....farms, 2017	29	8	46	25	120	76
2012	33	11	29	26	133	86
acres, 2017	9,349	(D)	12,557	3,638	26,589	33,432
2012	5,653	147	6,224	4,636	28,008	30,474
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	5	-	12	-	19	25
2012	9	1	11	4	21	41
acres on which used, 2017	6,611	-	645	-	5,442	24,758
2012	2,345	(D)	84	(D)	11,101	19,371

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**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012 (continued)**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Montmorency	Muskegon	Newaygo	Oakland	Oceana	Ogemaw
Commercial fertilizer, lime, and soil conditioners ..... farms, 2017	55	194	373	133	280	117
..... 2012	42	210	399	113	327	125
..... acres treated, 2017	7,034	25,208	67,948	7,376	65,046	28,756
..... 2012	5,831	34,121	55,083	8,696	58,263	25,986
Cropland fertilized, except cropland pasture ..... farms, 2017	52	178	345	110	265	112
..... 2012	36	199	377	84	314	123
..... acres treated, 2017	6,989	24,915	67,158	6,920	64,662	28,558
..... 2012	5,628	33,874	54,408	8,183	57,862	25,641
Pastureland and rangeland fertilized ..... farms, 2017	3	24	60	27	18	7
..... 2012	10	23	39	34	30	5
..... acres treated, 2017	45	293	790	456	384	198
..... 2012	203	247	675	513	401	345
Manure ..... farms, 2017	30	97	235	68	114	95
..... 2012	28	97	223	73	134	73
..... acres treated, 2017	892	6,509	20,667	1,249	16,914	9,948
..... 2012	1,302	6,437	19,187	3,122	11,010	9,600
Organic fertilizer (see text) ..... farms, 2017	3	21	36	18	15	3
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
..... acres treated, 2017	(D)	590	1,354	74	655	106
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects ..... farms, 2017	1	82	118	46	182	12
..... 2012	14	108	134	61	229	28
..... acres, 2017	(D)	10,236	22,724	1,841	41,148	5,780
..... 2012	1,551	13,723	20,382	2,633	41,243	7,989
Weeds, grass, or brush ..... farms, 2017	43	125	243	108	225	93
..... 2012	31	175	312	108	305	92
..... acres, 2017	6,869	27,878	55,784	7,487	60,575	21,062
..... 2012	5,154	35,593	50,593	8,973	58,707	20,182
Nematodes ..... farms, 2017	-	10	11	1	40	7
..... 2012	-	23	23	11	62	2
..... acres, 2017	-	839	738	(D)	3,768	833
..... 2012	-	1,004	4,209	156	5,851	(D)
Diseases in crops and orchards ..... farms, 2017	1	60	51	19	132	8
..... 2012	2	53	54	23	155	10
..... acres, 2017	(D)	6,184	12,060	521	26,752	5,433
..... 2012	(D)	5,508	7,572	777	22,089	2,578
Chemicals used to control growth, thin fruit, ripen, or defoliate ..... farms, 2017	1	10	14	6	53	1
..... 2012	2	14	23	6	87	5
..... acres on which used, 2017	(D)	1,469	1,730	256	9,006	(D)
..... 2012	(D)	2,134	3,103	(D)	15,422	(D)
Item	Ontonagon	Osceola	Oscoda	Otsego	Ottawa	Presque Isle
Commercial fertilizer, lime, and soil conditioners ..... farms, 2017	13	209	56	69	624	130
..... 2012	18	242	45	65	738	125
..... acres treated, 2017	1,033	27,914	2,917	6,510	104,657	19,804
..... 2012	761	26,034	3,845	5,436	107,013	23,612
Cropland fertilized, except cropland pasture ..... farms, 2017	12	194	37	67	595	127
..... 2012	16	237	40	55	713	114
..... acres treated, 2017	(D)	27,167	2,237	6,365	104,062	19,008
..... 2012	(D)	25,223	3,552	4,982	106,254	23,178
Pastureland and rangeland fertilized ..... farms, 2017	2	42	22	5	62	11
..... 2012	3	35	17	13	74	16
..... acres treated, 2017	(D)	747	680	145	595	796
..... 2012	(D)	811	293	454	759	434
Manure ..... farms, 2017	16	150	59	38	294	64
..... 2012	14	165	45	35	319	66
..... acres treated, 2017	1,464	12,885	2,561	692	27,150	3,618
..... 2012	632	13,461	2,121	905	29,282	3,467
Organic fertilizer (see text) ..... farms, 2017	-	8	18	12	19	6
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
..... acres treated, 2017	-	247	1,243	76	480	111
..... 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects ..... farms, 2017	5	29	19	21	322	39
..... 2012	6	56	9	20	460	48
..... acres, 2017	252	5,480	37	2,627	57,814	6,855
..... 2012	111	3,828	(D)	1,509	52,046	10,094
Weeds, grass, or brush ..... farms, 2017	7	111	23	41	476	109
..... 2012	12	170	34	52	659	115
..... acres, 2017	276	22,993	1,031	5,819	95,309	21,015
..... 2012	293	16,632	1,681	4,604	108,677	25,167
Nematodes ..... farms, 2017	-	3	-	1	41	1
..... 2012	4	17	3	7	106	6
..... acres, 2017	-	(D)	-	(D)	6,317	(D)
..... 2012	46	918	23	(D)	8,765	(D)
Diseases in crops and orchards ..... farms, 2017	-	17	2	7	185	10
..... 2012	4	24	3	14	239	18
..... acres, 2017	-	(D)	(D)	749	13,500	838
..... 2012	46	618	23	1,373	21,343	3,476
Chemicals used to control growth, thin fruit, ripen, or defoliate ..... farms, 2017	-	1	-	-	65	4
..... 2012	1	7	1	5	90	11
..... acres on which used, 2017	-	(D)	-	-	4,499	(D)
..... 2012	(D)	(D)	(D)	(D)	5,598	1,650

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**Table 40. Fertilizers and Chemicals Applied: 2017 and 2012 (continued)**

[For meaning of abbreviations and symbols, see introductory text.]

Item	Roscommon	Saginaw	St. Clair	St. Joseph	Sanilac	Schoolcraft
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	6	735	499	498	800	26
.....farms, 2012	11	748	488	530	850	17
.....acres treated, 2017	56	230,925	103,699	169,751	294,598	1,111
.....acres treated, 2012	435	217,849	112,784	154,109	292,965	929
Cropland fertilized, except cropland pasture .....farms, 2017	3	728	476	477	783	26
.....farms, 2012	8	741	477	502	829	16
.....acres treated, 2017	(D)	230,821	102,983	169,355	293,610	1,079
.....acres treated, 2012	341	217,736	112,285	153,338	291,803	(D)
Pastureland and rangeland fertilized .....farms, 2017	3	7	44	52	49	7
.....farms, 2012	4	17	37	77	56	2
.....acres treated, 2017	(D)	104	716	396	988	32
.....acres treated, 2012	94	113	499	771	1,162	(D)
Manure .....farms, 2017	12	134	174	251	402	14
.....farms, 2012	13	114	153	207	355	8
.....acres treated, 2017	203	7,674	4,384	24,506	58,068	260
.....acres treated, 2012	280	7,816	4,763	18,672	45,165	251
Organic fertilizer (see text) .....farms, 2017	-	13	14	38	64	-
.....farms, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
.....acres treated, 2017	-	1,461	378	2,817	3,642	-
.....acres treated, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	-	261	116	255	301	7
.....farms, 2012	3	305	171	302	384	16
.....acres, 2017	-	103,999	15,089	117,057	95,479	90
.....acres, 2012	6	65,338	24,436	109,006	132,792	527
Weeds, grass, or brush .....farms, 2017	2	673	456	395	720	24
.....farms, 2012	6	748	490	449	800	21
.....acres, 2017	(D)	263,375	129,701	188,298	332,766	1,872
.....acres, 2012	91	241,146	125,533	166,024	333,894	1,290
Nematodes .....farms, 2017	1	77	23	55	78	-
.....farms, 2012	1	112	45	55	70	4
.....acres, 2017	(D)	27,561	8,588	17,875	20,139	-
.....acres, 2012	(D)	11,912	9,948	15,706	10,481	19
Diseases in crops and orchards .....farms, 2017	-	185	62	119	198	7
.....farms, 2012	3	152	73	128	151	6
.....acres, 2017	-	67,012	10,884	53,469	50,322	1,296
.....acres, 2012	34	26,791	7,105	47,154	48,620	278
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	-	29	13	48	91	3
.....farms, 2012	2	30	11	32	52	3
.....acres on which used, 2017	-	2,833	150	20,899	18,995	357
.....acres on which used, 2012	(D)	4,327	196	12,656	6,613	134

  

Item	Shiawassee	Tuscola	Van Buren	Washtenaw	Wayne	Wexford
Commercial fertilizer, lime, and soil conditioners .....farms, 2017	457	700	514	526	104	91
.....farms, 2012	524	676	577	521	125	120
.....acres treated, 2017	138,576	202,147	82,807	112,116	5,976	11,296
.....acres treated, 2012	149,166	200,882	98,375	99,657	7,350	8,926
Cropland fertilized, except cropland pasture .....farms, 2017	441	675	484	495	94	84
.....farms, 2012	512	653	559	497	117	115
.....acres treated, 2017	138,304	201,058	82,216	110,985	5,878	11,050
.....acres treated, 2012	148,998	199,703	97,790	99,211	7,292	8,683
Pastureland and rangeland fertilized .....farms, 2017	26	65	48	50	10	15
.....farms, 2012	29	72	46	38	12	19
.....acres treated, 2017	272	1,089	591	1,131	98	246
.....acres treated, 2012	168	1,179	585	446	58	243
Manure .....farms, 2017	180	280	133	237	21	61
.....farms, 2012	178	240	116	234	48	69
.....acres treated, 2017	14,916	38,057	5,035	10,922	129	1,822
.....acres treated, 2012	8,496	20,317	5,227	8,598	355	1,816
Organic fertilizer (see text) .....farms, 2017	11	76	18	56	14	11
.....farms, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
.....acres treated, 2017	801	13,044	417	1,897	19	750
.....acres treated, 2012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Acres treated to control--						
Insects .....farms, 2017	91	248	380	208	39	26
.....farms, 2012	227	298	460	295	66	55
.....acres, 2017	26,344	83,628	59,436	41,908	2,329	4,211
.....acres, 2012	45,537	95,406	64,113	48,089	2,377	3,430
Weeds, grass, or brush .....farms, 2017	427	563	443	411	61	58
.....farms, 2012	517	630	569	503	107	96
.....acres, 2017	157,933	233,012	94,298	119,409	6,087	10,240
.....acres, 2012	161,846	231,974	100,058	107,766	8,736	6,550
Nematodes .....farms, 2017	28	31	76	43	5	-
.....farms, 2012	34	59	139	68	19	6
.....acres, 2017	4,960	9,044	17,073	11,488	300	-
.....acres, 2012	6,506	8,164	20,949	8,167	598	32
Diseases in crops and orchards .....farms, 2017	45	150	240	96	25	11
.....farms, 2012	76	157	305	128	35	18
.....acres, 2017	10,930	37,699	26,434	9,536	785	303
.....acres, 2012	9,769	39,904	22,745	12,991	716	356
Chemicals used to control growth, thin fruit, ripen, or defoliate .....farms, 2017	11	71	55	8	9	3
.....farms, 2012	18	59	143	14	9	8
.....acres on which used, 2017	1,216	21,725	7,581	321	62	(D)
.....acres on which used, 2012	1,662	11,525	8,092	206	94	117