MARYLAND PESTICIDE SURVEY STATISTICS

2022 REPORT

INTRODUCTION

This publication contains estimates for specific pesticides used in Maryland during calendar year 2022. Published estimates include the combined pesticide usage of farm operators, certified private pesticide applicators, and commercially licensed businesses and public agencies.

All data were compiled by the Maryland Field Office of the National Agricultural Statistics Service (NASS) in cooperation with the Pesticide Regulation Section of the Maryland Department of Agriculture. Staff of the Pesticide Regulation Section provided technical assistance in survey planning and analysis of final summary tabulations. NASS completed data collection and summarization, with access to record level data limited to NASS office personnel. All record-level data collected by NASS are confidential and protected by Title 7 of the U.S. Code.

Methodology

A survey was conducted in 2023 to estimate the amounts and types of pesticides applied in calendar year 2022 by Maryland farm operators, certified private pesticide applicators, commercially licensed businesses, and public agencies. The survey consisted of a sample of 1,500 farmers, 2,798 certified private applicators, 1,368 commercially licensed businesses, and 264 public agencies permitted to apply pesticides. Lists of certified applicators, businesses, and public agencies were provided by the Pesticide Regulation Section of the Maryland Department of Agriculture. The farm operator sample was selected from a comprehensive list of farm operators maintained by NASS.

Questionnaires were mailed to all sampled operations, businesses, and agencies, with a reminder postcard mailing and second questionnaire mailing to non-respondents occurring in June 2023. Responses were received from 656 (43.7%) of the sampled farmers, 277 (20.2 %) certified private applicators, 883 (31.6%) commercially licensed businesses, and 101 (38.3%) public agencies. Response was voluntary and not required by law.

Data were reviewed for completeness and accuracy and all amounts reported were converted to pounds of active ingredient. Following questionnaire review, data were keyed and summarized utilizing SAS statistical software and data analysis was conducted by NASS statisticians. Active ingredients were totaled and expanded to the State level based solely on the population of each sector, final sample sizes and survey response. The population assumed to represent total usage of the target populations.

Results

Pesticide active ingredient estimates are published only when there were a sufficient number of reports and/or amounts applied. Active ingredients reported without sufficient number of reports or amounts less than one pound is listed on a separate table with a total amount estimated. Published data are listed in descending order by pounds of active ingredient and in alphabetical order. The top 20 pesticides (in terms of total pounds), the top 10 pesticides by county, the top 10 pesticides by season, the top 10 pesticides for certain targeted crops, the top 10 by class (insecticides, herbicides, fungicides, and other) are provided in separate tables. Common formulation and type for pesticides published comparisons tables are also provided.

STATE PESTICIDE USAGE PUBLISHABLE ESTIMATES - ALPHABETICAL					
Rank	Pesticide Common Name	lbs	Rank	Pesticide Common Name	lbs
1	All Glyphosate	896,040	43	Carbaryl	4,518
2	Prodiamine	634,508	44	Piperonyl butoxide	4,051
3	All 2;4-D	244,985	45	Cyfluthrin	4,022
4	Atrazine	231,956	46	Copper hydroxide	3,969
5	S-Metolachlor	134,481	47	Clopyralid mono salt	3,947
6	Metolachlor	66,529	48	Dimethoate	3,722
7	Mesotrione	60,799	49	Dipot. endothall	3,695
8	Chlorothalonil	60,292	50	Flumioxazin	3,489
9	Paraquat	58,310	51	Fluazinam	3,461
10	Fipronil	57,646	52	Triethylamine triclo	3,181
11	Lambda-cyhalothrin	54,937	53	Pyraclostrobin	2,991
12	Mineral oil	53,672	54	Acetamiprid	2,934
13	Pendimethalin	23,015	55	Propamocarb hydroch.	2,922
14	Azoxystrobin	21,866	56	Fosetyl-al	2,755
15	Glufosinate-ammonium	20,646	57	Difenoconazole	2,722
16	Simazine	20,225	58	Abamectin	2,673
17	MCPP-P; DMA Salt	18,195	59	Dimethenamid-P	2,502
18	Captan	17,636	60	Aminocyclopyrachlor	2,475
19	Acetochlor	17,490	61	Mono-potassium salt	2,463
20	Metribuzin	16,077	62	Tebuconazole	2,408
21	Copper sulfate	15,279	63	Rimsulfuron	2,407
22	Mancozeb	15,162	64	Chlorfenapyr	2,273
23	Propiconazole	14,151	65	Ethephon	2,167
24	MCPA; dimethyl. salt	13,241	66	Fluroxypyr 1-MHE	2,046
25	Imidacloprid	12,185	67	Trinexapac-ethyl	1,903
26	Dicamba; dimet. salt	11,104	68	Dicamba; sodium salt	1,880
27	Dithiopyr	8,892	69	Mandipropamide Techn	1,824
28	Sulfentrazone	8,852	70	Calcium polysulfide	1,755
29	Permethrin	8,661	71	Dicamba	1,748
30	MCPA; 2-ethylhexyl	7,832	72	Sulfometuron methyl	1,593
31	Bifenthrin	7,690	73	Malathion	1,464
32	Prothioconazole	6,821	74	Chlorantraniliprole	1,449
33	Sulfur	6,617	75	Butoxyethyl triclopy	1,405
34	Pydiflumetofen	6,205	76	Mefentrifluconazole	1,401
35	Dicamba; digly. salt	5,803	77	Isoxaben	1,309
36	Iprodione	5,736	78	Fluxapyroxad	1,210
37	All 2;4-DB	5,591	79	Thifensulfuron	1,190
37	Fomesafen Sodium	5,591	80	Novaluron	1,160
38	Thiophanate-methyl	5,477	81	Indoxacarb	1,142
39	Trifluralin	5,353	82	Oryzalin	1,121
40	Clethodim	4,769	83	Saflufenacil	1,107
41	Quinclorac	4,578	84	Isoxaflutole	1,095
42	Pyroxasulfone	4,531	85	Indaziflam	1,094

STATE PESTICIDE USAGE PUBLISHABLE ESTIMATES - ALPHABETICAL					
Rank	Pesticide Common Name	lbs	Rank	Pesticide Common Name	lbs
86	Bentazon	1,055	127	Imazapyr; iso. salt	223
87	Imazethapyr	1,048	128	Paclobutrazol	216
88	Mandestrobin	1,010	129	Acephate	214
89	Trifloxystrobin	946	129	Potassium salts	214
89	Penthiopyrad	946	130	Cyazofamid	212
90	Halosulfuron	867	131	Reynoutria sachaline	208
91	Methomyl	852	132	Fenpyroximate	199
92	Basic copper sulfate	828	133	Myclobutanil	197
93	Deltamethrin	812	134	Boric acid	195
94	Chlorsulfuron	806	135	Imazosulfuron	194
95	Bensulide	766	135	Tembotrione	194
96	Cyprodinil	765	136	Streptomycin sulfate	190
97	Diflufenzopyr-sodium	746	137	S-Methoprene	169
98	Ziram	704	138	Spinetoram	157
99	Acifluorfen; sodium	689	139	Prosulfuron	153
100	Diphacinone	684	140	Prohexadione calcium	144
101	Fludioxonil	647	141	Oxadiazon	138
102	Picoxystrobin	646	142	Ethalfluralin	136
103	Diquat dibromide	626	143	Fenoxaprop-p-ethyl	131
103	Benzovindiflupyr	626	144	(7S)-Hydroprene	124
104	Copper ethanolamine	598	145	Silica gel	121
105	Dinotefuran	537	146	Pyriproxyfen	116
106	Triadimefon	531	147	Zeta-cypermethrin	110
107	Hydrogen peroxide	521	148	Clopyralid	108
108	Bicyclopyrone	514	149	Cyproconazole	104
109	Thiencarbazone-methy	474	150	Polyoxin D zinc salt	102
110	Fluopyram	461	151	Propanoic acid	92
111	Esfenvalerate	460	152	Copper chloride hyd.	91
112	Beta-cyfluthrin	458	152	Napropamide	91
113	Flutriafol	442	153	Ethofenprox	83
114	Phosmet	413	154	Famoxadone	79
115	Alk. dim. benzyl 60%	406	154	Cymoxanil	79
116	Chlorimuron-ethyl	392	155	Thiamethoxam	78
117	Alk. dim. ethbz. am.	361	156	All 2;4-DP	68
118	Mefenoxam	351	157	Sethoxydim	67
119	Boscalid	339	158	Acibenzolar-S-Methyl	65
120	Fluthiacet-methyl	327	159	Clomazone	62
121	Fluridone	326	159	Topramezone	62
122	Peroxyacetic acid	315	160	Daminozide	61
123	Diuron	277	161	Spinosad	58
124	Tribenuron-methyl	273	162	Flurprimidol	56
125	Metsulfuron-methyl	245	163	Clothianidin	54
126	Nicosulfuron	233	164	Indolebutyric acid	50

STATE PESTICIDE USAGE PUBLISHABLE ESTIMATES - ALPHABETICAL					
Rank	Pesticide Common Name	lbs	Rank	Pesticide Common Name	lbs
165	Pyrethrins	45			
166	Ametoctradin	41			
167	Carfentrazone-ethyl	40			
168	Bifenazate	40			
169	Cloransulam-methyl	37			
169	Prometon	37			
170	Buprofezin	34			
170	Dimethomorph	34			
171	Imazamox	31			
172	Penoxsulam	29			
172	Fosamine	29			
172	Mesosulfuron-Methyl	29			
173	Octacide-264	27			
174	Borax decahydrate	24			
175	Flumetsulam	23			
176	Pelargonic acid	22			
177	Cyantraniliprole	20			
178	Fluazifop-P-butyl	19			
179	Diflubenzuron	17			
179	Gibberellic acid	17			
180	Quinoline	16			
181	Spirotetramat	14			
181	Pymetrozine	14			
181	Fluopicolide	14			
182	Etridiazole	11			
183	Halauxifen-methyl	10			
183	Iron phosphate	10			
184	Cytokinins	9			
185	Kantor	8			
186	Copper triethanolamine comp	7			
187	Azadirachtin	6			
188	Copper octanoate	2			
189	Bromethalin	1			
189	Brodifacoum	1			
189	Bromadiolone	1			
189	Spiromesifen	1			
189	Prallethrin	1			
			Total active ingredients publishable = 3,031,620		
			Total active ingredients non-publishable = 1,755,284		
			Total avtive ingredients reported = 4,786,904		

STATE PESTICIDE USAGE PUBLISHABLE ESTIMATES - ALPHABETICAL						
Rank	Pesticide Common Name	lbs		Rank	Pesticide Common Name	lbs
144	(7S)-Hydroprene	124		40	Clethodim	4,769
58	Abamectin	2,673		159	Clomazone	62
129	Acephate	214		148	Clopyralid	108
54	Acetamiprid	2,934		47	Clopyralid mono salt	3,947
19	Acetochlor	17,490		169	Cloransulam-methyl	37
158	Acibenzolar-S-Methyl	65		163	Clothianidin	54
99	Acifluorfen; sodium	689		152	Copper chloride hyd.	91
115	Alk. dim. benzyl 60%	406		104	Copper ethanolamine	598
117	Alk. dim. ethbz. am.	361		46	Copper hydroxide	3,969
3	All 2;4-D	244,985		188	Copper octanoate	2
37	All 2;4-DB	5,591		21	Copper sulfate	15,279
156	All 2;4-DP	68		186	Copper triethanolamine complex	7
1	All Glyphosate	896,040		177	Cyantraniliprole	20
167	Ametoctradin	41		130	Cyazofamid	212
60	Aminocyclopyrachlor	2,475		45	Cyfluthrin	4,022
4	Atrazine	231,956		154	Cymoxanil	79
187	Azadirachtin	6		149	Cyproconazole	104
14	Azoxystrobin	21,866		96	Cyprodinil	765
92	Basic copper sulfate	828		184	Cytokinins	9
95	Bensulide	766		160	Daminozide	61
86	Bentazon	1,055		93	Deltamethrin	812
103	Benzovindiflupyr	626		71	Dicamba	1,748
112	Beta-cyfluthrin	458		35	Dicamba; digly. salt	5,803
108	Bicyclopyrone	514		26	Dicamba; dimet. salt	11,104
168	Bifenazate	40		68	Dicamba; sodium salt	1,880
31	Bifenthrin	7,690		57	Difenoconazole	2,722
174	Borax decahydrate	24		179	Diflubenzuron	17
134	Boric acid	195		97	Diflufenzopyr-sodium	746
119	Boscalid	339		59	Dimethenamid-P	2,502
189	Brodifacoum	1		48	Dimethoate	3,722
189	Bromadiolone	1		170	Dimethomorph	34
189	Bromethalin	1		105	Dinotefuran	537
170	Buprofezin	34		100	Diphacinone	684
75	Butoxyethyl triclopy	1,405		49	Dipot. endothall	3,695
70	Calcium polysulfide	1,755		103	Diquat dibromide	626
18	Captan	17,636		27	Dithiopyr	8,892
43	Carbaryl	4,518		123	Diuron	277
168	Carfentrazone-ethyl	40		111	Esfenvalerate	460
74	Chlorantraniliprole	1,449		142	Ethalfluralin	136
64	Chlorfenapyr	2,273		65	Ethephon	2,167
116	Chlorimuron-ethyl	392		153	Ethofenprox	83
8	Chlorothalonil	60,292		182	Etridiazole	11
94	Chlorsulfuron	806		182	Etridiazole	11

STATE PESTICIDE USAGE PUBLISHABLE ESTIMATES - ALPHABETICAL						
Rank	Pesticide Common Name	lbs		Rank	Pesticide Common Name	lbs
154	Famoxadone	79		22	Mancozeb	15,162
143	Fenoxaprop-p-ethyl	131		88	Mandestrobin	1,010
132	Fenpyroximate	199		69	Mandipropamide Techn	1,824
10	Fipronil	57,646		118	Mefenoxam	351
178	Fluazifop-P-butyl	19		76	Mefentrifluconazole	1,401
51	Fluazinam	3,461		172	Mesosulfuron-Methyl	29
101	Fludioxonil	647		7	Mesotrione	60,799
175	Flumetsulam	23		91	Methomyl	852
50	Flumioxazin	3,489		6	Metolachlor	66,529
181	Fluopicolide	14		20	Metribuzin	16,077
110	Fluopyram	461		125	Metsulfuron-methyl	245
121	Fluridone	326		12	Mineral oil	53,672
66	Fluroxypyr 1-MHE	2,046		61	Mono-potassium salt	2,463
162	Flurprimidol	56		133	Myclobutanil	197
120	Fluthiacet-methyl	327		152	Napropamide	91
113	Flutriafol	442		126	Nicosulfuron	233
78	Fluxapyroxad	1,210		80	Novaluron	1,160
37	Fomesafen Sodium	5,591		173	Octacide-264	27
172	Fosamine	29		82	Oryzalin	1,121
56	Fosetyl-al	2,755		141	Oxadiazon	138
179	Gibberellic acid	17		128	Paclobutrazol	216
15	Glufosinate-ammonium	20,646		9	Paraquat	58,310
183	Halauxifen-methyl	10		176	Pelargonic acid	22
90	Halosulfuron	867		13	Pendimethalin	23,015
107	Hydrogen peroxide	521		172	Penoxsulam	29
171	Imazamox	31		89	Penthiopyrad	946
127	Imazapyr; iso. salt	223		29	Permethrin	8,661
87	Imazethapyr	1,048		122	Peroxyacetic acid	315
135	Imazosulfuron	194		114	Phosmet	413
25	Imidacloprid	12,185		102	Picoxystrobin	646
85	Indaziflam	1,094		44	Piperonyl butoxide	4,051
164	Indolebutyric acid	50		150	Polyoxin D zinc salt	102
81	Indoxacarb	1,142		129	Potassium salts	214
36	Iprodione	5,736		189	Prallethrin	1
183	Iron phosphate	10		2	Prodiamine	634,508
77	Isoxaben	1,309		140	Prohexadione calcium	144
84	Isoxaflutole	1,095		169	Prometon	37
185	Kantor	8		55	Propamocarb hydroch.	2,922
11	Lambda-cyhalothrin	54,937		151	Propanoic acid	92
30	MCPA; 2-ethylhexyl	7,832		23	Propiconazole	14,151
24	MCPA; dimethyl. salt	13,241		139	Prosulfuron	153
17	MCPP-P; DMA Salt	18,195		32	Prothioconazole	6,821
73	Malathion	1,464		34	Pydiflumetofen	6,205

STATE PESTICIDE USAGE PUBLISHABLE ESTIMATES - ALPHABETICAL						
Rank	**Pesticide Common Name**	**lbs**		**Rank**	**Pesticide Common Name**	**lbs**
181	Pymetrozine	14				
53	Pyraclostrobin	2,991				
165	Pyrethrins	45				
146	Pyriproxyfen	116				
42	Pyroxasulfone	4,531				
41	Quinclorac	4,578				
180	Quinoline	16				
131	Reynoutria sachaline	208				
63	Rimsulfuron	2,407				
137	S-Methoprene	169				
5	S-Metolachlor	134,481				
83	Saflufenacil	1,107				
157	Sethoxydim	67				
145	Silica gel	121				
16	Simazine	20,225				
138	Spinetoram	157				
161	Spinosad	58				
189	Spiromesifen	1				
181	Spirotetramat	14				
136	Streptomycin sulfate	190				
28	Sulfentrazone	8,852				
72	Sulfometuron methyl	1,593				
33	Sulfur	6,617				
62	Tebuconazole	2,408				
135	Tembotrione	194				
155	Thiamethoxam	78				
109	Thiencarbazone-methy	474				
79	Thifensulfuron	1,190				
38	Thiophanate-methyl	5,477				
159	Topramezone	62				
106	Triadimefon	531				
124	Tribenuron-methyl	273				
52	Triethylamine triclo	3,181				
89	Trifloxystrobin	946				
39	Trifluralin	5,353				
67	Trinexapac-ethyl	1,903				
147	Zeta-cypermethrin	110				
98	Ziram	704				
	Total active ingredients publishable = 3,031,620					

PESTICIDES REPORTED BUT NOT PUBLISHABLE [1]	
Name	**Type**
(S)-S 3307	O
1-Octanol	O
2-Phenylethyl propionate	O
Acifluorfen; sodium	H
Alkyl. dim. benz. am	O
Aluminum phosphide	I
Amitraz	I
Amm. Soap Fatty Acid	O
Ammonium pelargonate	H
Ancymidol	O
Arsenic pentoxide	I
Aureobasidium pullulans DSM 14940	O
Aureobasidium pullulans DSM 14941	O
Azadirachtin	I
Bacillus amyloliquefaciens strain D747	F
Bacillus mycoides Isolate J	I
Bacillus subtilis	F
Bacillus thuringiensis CryIA(b)	I
Basic copper sulfate	F
Beauveria bassiana	I
Bentazon	H
Benzyladenine	O
Bifenazate	I
Bixafen	F
Brodifacoum	O
Bromacil	H
Bromadiolone	O
Bromoxynil octanoate	H
Bt israelen BMP 144; sol;spor;insect tox	O
Bt israelensis AM 65-52	O
Bt kurstaki ABTS-351	I
Bt kurstaki SA-12; sol;spor;insect tox	O
Burkholderia A396 cells & media	I
Busan 77	O
Calcium hypochlorite	O
Canola oil	I
Capric acid	O
Caprylic acid	O
Capsaicin	O
Carbon dioxide	O
Chlorethoxyfos	I
Chlormequat chloride	O

Name	Type
Chloropicrin	O
Chromic acid	I
Cinnamaldehyde	I
Citric acid	O
Clopyralid	H
Clopyralid; triethanolamine	O
Clothianidin	I
Copper carbonate	F
Copper ethylenediamine complex	H
Copper oxide	F
Cresol	F
Cupric oxide	I
Cyantraniliprole	I
Cyclanilide	O
Cyclaniliprole	I
Cycloate	H
Cyflumetofen	I
Cyhalofop-butyl	H
Cypermethrin	I
Cyromazine	I
D - Limonene	H
DCPA	H
Daminozide	O
Decanol	O
Decyldimethyloctyl	O
Dialkyl meth. benzy.	O
Diazinon	I
Dicamba; BAPMA salt	H
Dicamba; iso salt	H
Dichlobenil	H
Dichloropropene	O
Dichlorvos	I
Dicrotophos	I
Didecyl dim. ammon.	O
Difethialone	O
Dikegulac-sodium	O
Dimethyldioctyl	O
Diphacinone	O
Disod. Octa. tetra.	I
Diuron	H
Dodecadien-1-ol	O
E-8-Dodecenyl acetat	O
Egg solids	O

Name	Type
Emamectin benzoate	I
Endosulfan	I
Endothall; mono(N;N-dimethylcocoam) salt	O
Ethofumesate	H
Ethyl (2E;4Z) - decadienoate	I
Ethylene oxide	I
Etoxazole	I
Fenazaquin	I
Fenbuconazole	F
Fenhexamid	F
Fenpropathrin	I
Flonicamid	I
Fluazifop-P-butyl	H
Flucarbazone-sodium	H
Flumiclorac-pentyl	H
Fluoxastrobin	F
Flupyradifurone	I
Flutolanil	F
Fluvalinate	I
Fomesafen	H
Foramsulfuron	H
Fosetyl-al	F
Garlic oil	O
Gibberellic acid	O
Gibberellins A4A7	O
Hexazinone	H
Hexythiazox	I
Hydramethylnon	I
Imazamox	H
Imazapic-ammonium	H
Imazethapyr; ammon.	H
Iron phosphate	O
Isofetamid	F
Kresoxim-methyl	F
Linuron	H
MCPA; sodium salt	H
MSMA	H
Maleic hydrazide	O
Mandestrobin	F
Mefluidide; diet.	O
Mepiquat chloride	O
Metaldehyde	O
Metconazole	F
Methiocarb	I

Name	Type
Methoxyfenozide	I
Methyl anthranilate	O
Methyl bromide	O
Metiram	F
Metrafenone	O
NAA; Potassium salt	O
Naled	I
Neem oil; clar. hyd.	I
Nitrapyrin	O
Oxadiazon	H
Oxalic acid	I
Oxamyl	I
Oxathiapiprolin	F
Oxyfluorfen	H
Penthiopyrad	F
Peroxyacetic acid	O
Petroleum distillate	I
Phenothrin	I
Phorate	I
Phosphoric acid	O
Phosphorous acid	F
Picloram; triisoprop	H
Pinoxaden	H
Polyoxin D zinc salt	F
Potassium Phosphate	F
Potassium bicarbon.	F
Potassium salts	I
Prometon	H
Prometryn	H
Propanil	H
Propionic acid	O
Propoxycarbazone-sod	H
Prosulfuron	H
Pseudo. fluores A506	F
Pseudomonas chlororaphis strain AFS009	F
Pymetrozine	I
Pyraflufen-ethyl	H
Pyridaben	I
Pyrifluquinazon	I
Pyrimethanil	F
Pyroxsulam	H
Quillaja saponins	O
S-Methoprene	I
Silicon dioxide	I

Name	Type
Sodium chlorate	O
Sodium hypochlorite	O
Sodium metaborate	H
Spirodiclofen	O
Spiromesifen	I
Streptomyces lydicus	F
Strychnine	O
Sulfoxaflor	I
Sulfuryl fluoride	O
Tebufenozide	I
Tefluthrin	I
Terbacil	H
Tetraconazole	F
Tetradecen-1-OL (Z)	O
Tetradecen-1-yl (E)	O
Tetramethrin	I
Thidiazuron	O
Thiodicarb	I
Thiram	F
Triclopyr	H
Tricosene	I
Trifloxysulfuron-sod	H
Triflumizole	F
Triisopropanolamine	H
Tritconazole	F
Xylenol	F
Z-8-Dodecanol	O
Z-8-Dodecen acetate	O
Zinc chloride	F
Zinc phosphide	O
Zoxamide	F
[1] **Not publishable due to disclosure or less than 1 pound reported.**	
	F = Fungicide
	H = Herbicide
	I = Insecticide
	O = Other

TOP 20 PUBLISHABLE PESTICIDES IN 2022 COMPARED TO 2020, AND 2014					
			2022	2020	2014
Rank	Pesticide Common Name	Type	Total Amount Applied (lbs)	Total Amount Applied (lbs)	Total Amount Applied (lbs)
1	All Glyphosate	H	896,040	565,481	634,954
2	Prodiamine	H	634,508	2,374	218,432
3	All 2;4-D	H	244,985	121,509	171,077
4	Atrazine	H	231,956	270,656	256,548
5	S-Metolachlor	H	134,481	186,824	144,532
6	Metolachlor	H	66,529	21,767	40,030
7	Mesotrione	H	60,799	17,611	14,606
8	Chlorothalonil	F	60,292	77,692	119,158
9	Paraquat	H	58,310	83,095	103,654
10	Fipronil	I	57,646	52,740	216,180
11	Lambda-cyhalothrin	I	54,937	10,917	8,750
12	Mineral oil	I	53,672	33,140	60,981
13	Pendimethalin	H	23,015	25,659	154,511
14	Azoxystrobin	F	21,866	13,046	4,480
15	Glufosinate-ammonium	H	20,646	5,496	455
16	Simazine	H	20,225	76,660	229,855
17	MCPP-P; DMA Salt	H	18,195	2,503	12,251
18	Captan	F	17,636	5,296	13,481
19	Acetochlor	H	17,490	8,331	5,033
20	Metribuzin	H	16,077	20,198	6,027

F = Fungicide
H = Herbicide
I = Insecticide
O = Other

TOP 10 PUBLISHABLE PESTICIDE USAGE BY COUNTY IN 2022			
County	Pesticide Common Name	Type	Pounds of Active Ingredient
ALLEGANY	All 2;4-D	H	4,331
	Dithiopyr	H	1,312
	Permethrin	I	1,270
	All Glyphosate	H	845
ANNE ARUNDEL	All Glyphosate	H	14,279
	Lambda-cyhalothrin	I	4,597
	Mineral oil	I	2,388
	All 2;4-D	H	1,868
	Chlorothalonil	F	890
	Pendimethalin	H	724
	Dicamba; dimet. salt	H	367
	Fipronil	I	299
	Bifenthrin	I	264
	Dicamba	H	187
BALTIMORE	All Glyphosate	H	73,190
	All 2;4-D	H	7,799
	Chlorothalonil	F	6,692
	Pendimethalin	H	4,015
	Atrazine	H	3,348
	S-Metolachlor	H	2,175
	Iprodione	F	2,052
	Thiophanate-methyl	F	1,903
	Imidacloprid	I	1,797
	Glufosinate-ammonium	H	1,675
CALVERT	Lambda-cyhalothrin	I	39,196
	Mesotrione	H	22,909
	All Glyphosate	H	7,941
	Atrazine	H	3,470
	All 2;4-D	H	1,079
	Prodiamine	H	989
	Bifenthrin	I	853
	MCPA; 2-ethylhexyl	H	575
	Propiconazole	F	426
	Azoxystrobin	F	184
CAROLINE	All Glyphosate	H	22,393
	Atrazine	H	12,415
	S-Metolachlor	H	10,164
	All 2;4-D	H	6,413
	Permethrin	I	1,086
	Imidacloprid	I	1,014
	Bifenthrin	I	726
	Mesotrione	H	661
	Buprofezin	I	33

TOP 10 PUBLISHABLE PESTICIDE USAGE BY COUNTY IN 2022			
County	**Pesticide Common Name**	**Type**	**Pounds of Active Ingredient**
	Fipronil	I	32
CARROLL	All Glyphosate	H	53,062
	Atrazine	H	28,992
	All 2;4-D	H	25,255
	Paraquat	H	23,496
	S-Metolachlor	H	12,967
	Pendimethalin	H	12,592
	Metribuzin	H	4,895
	Dicamba; dimet. salt	H	3,065
	Sulfentrazone	H	2,849
	Glufosinate-ammonium	H	2,313
CECIL	All Glyphosate	H	14,498
	All 2;4-D	H	2,554
	Atrazine	H	674
	S-Metolachlor	H	543
	Propiconazole	F	244
	Indaziflam	O	163
	Lambda-cyhalothrin	I	126
	Oryzalin	H	106
	Clopyralid mono salt	H	88
	Mesotrione	H	54
CHARLES	All 2;4-D	H	17,586
	All Glyphosate	H	12,559
	Chlorothalonil	F	1,539
	Dicamba; dimet. salt	H	1,139
	Bifenthrin	I	541
	Imidacloprid	I	51
	Paclobutrazol	O	34
	Tebuconazole	F	27
DORCHESTER	All Glyphosate	H	12,846
	Atrazine	H	7,321
	All 2;4-D	H	2,190
FREDERICK	All Glyphosate	H	30,292
	Mesotrione	H	23,456
	All 2;4-D	H	13,613
	Atrazine	H	10,304
	Chlorothalonil	F	9,472
	S-Metolachlor	H	7,195
	Mancozeb	F	5,986
	Paraquat	H	4,367
	Trifluralin	H	3,507
	Iprodione	F	2,303
GARRETT	All Glyphosate	H	10,103

TOP 10 PUBLISHABLE PESTICIDE USAGE BY COUNTY IN 2022			
County	**Pesticide Common Name**	**Type**	**Pounds of Active Ingredient**
	Atrazine	H	5,229
	Metolachlor	H	2,925
	S-Metolachlor	H	1,492
	All 2;4-D	H	1,468
	Bifenthrin	I	363
	Mesotrione	H	344
	Rimsulfuron	H	18
	Nicosulfuron	H	11
HARFORD	Fipronil	I	50,209
	All Glyphosate	H	38,938
	S-Metolachlor	H	19,891
	All 2;4-D	H	9,391
	Atrazine	H	6,220
	Chlorothalonil	F	1,933
	Prodiamine	H	680
	Propiconazole	F	529
	Thiophanate-methyl	F	411
	MCPP-P; DMA Salt	H	249
HOWARD	All Glyphosate	H	18,728
	Azoxystrobin	F	5,447
	Chlorothalonil	F	5,363
	All 2;4-D	H	4,075
	Indoxacarb	I	1,036
	Bifenthrin	I	177
	Imidacloprid	I	169
	Acetamiprid	I	146
	Acibenzolar-S-Methyl	O	48
	Piperonyl butoxide	I	33
KENT	All Glyphosate	H	46,248
	All 2;4-D	H	21,838
	Atrazine	H	16,479
	Lambda-cyhalothrin	I	4,900
	Bifenthrin	I	764
	Pyroxasulfone	H	764
	Dicamba; sodium salt	H	469
	Diflufenzopyr-sodium	H	188
MONTGOMERY	All Glyphosate	H	5,435
	All 2;4-D	H	2,862
	Chlorothalonil	F	2,804
	Mineral oil	I	2,569
	Sulfentrazone	H	1,661
	Glufosinate-ammonium	H	1,546
	Fipronil	I	1,358

TOP 10 PUBLISHABLE PESTICIDE USAGE BY COUNTY IN 2022			
County	**Pesticide Common Name**	**Type**	**Pounds of Active Ingredient**
	Trifluralin	H	1,353
	Propiconazole	F	1,007
	Mancozeb	F	807
PRINCE GEORGE'S	All 2;4-D	H	10,166
	All Glyphosate	H	7,511
	MCPP-P; DMA Salt	H	2,578
	Dicamba; dimet. salt	H	1,486
	Chlorothalonil	F	993
	Imidacloprid	I	607
	Triethylamine triclo	H	589
	Piperonyl butoxide	I	366
	Fipronil	I	359
	Prodiamine	H	208
QUEEN ANNE'S	All Glyphosate	H	40,574
	Atrazine	H	20,246
	S-Metolachlor	H	13,580
	All 2;4-D	H	6,478
	Simazine	H	2,947
	Pyroxasulfone	H	1,214
	Captan	F	1,094
	Carbaryl	I	1,030
	Mesotrione	H	900
	Metribuzin	H	884
SOMERSET	All Glyphosate	H	58,673
	All 2;4-D	H	3,394
	Bifenthrin	I	406
	Flumioxazin	H	266
	Lambda-cyhalothrin	I	215
ST. MARY'S	All Glyphosate	H	13,376
	Atrazine	H	4,654
	Lambda-cyhalothrin	I	3,903
	S-Metolachlor	H	1,907
	All 2;4-D	H	1,813
	Paraquat	H	1,800
	Chlorothalonil	F	992
	Sulfur	F	775
	Tebuconazole	F	589
	Captan	F	454
TALBOT	All Glyphosate	H	24,489
	All 2;4-D	H	2,255
	Propanoic acid	H	91
	Dicamba; dimet. salt	H	33
	Dicamba	H	27

TOP 10 PUBLISHABLE PESTICIDE USAGE BY COUNTY IN 2022			
County	**Pesticide Common Name**	**Type**	**Pounds of Active Ingredient**
WASHINGTON	All 2;4-D	H	83,535
	All Glyphosate	H	60,980
	Atrazine	H	53,721
	Metolachlor	H	30,309
	Paraquat	H	12,277
	S-Metolachlor	H	5,035
	Mancozeb	F	4,747
	Mesotrione	H	4,449
	Abamectin	I	2,612
	Clopyralid mono salt	H	2,496
WICOMICO	All Glyphosate	H	265,639
	S-Metolachlor	H	18,794
	Atrazine	H	15,840
	All 2;4-D	H	8,869
	Permethrin	I	4,141
	Mesotrione	H	1,255
	Novaluron	I	597
	Dinotefuran	I	426
	Flumioxazin	H	425
	Bifenthrin	I	325
WORCESTER	All Glyphosate	H	62,998
	Atrazine	H	17,677
	S-Metolachlor	H	9,572
	All 2;4-D	H	6,156
	Chlorothalonil	F	2,314
	Bifenthrin	I	876
	Mesotrione	H	869
	Pyroxasulfone	H	353
	Fluazinam	F	299
	Flumioxazin	H	148
			F = Fungicide
			H = Herbicide
			I = Insecticide
			O = Other

TOP 10 PUBLISHABLE PESTICIDES BY SEASONS IN 2022			
Season	**Active Ingredient**	**Class**	**Total Amount Applied (lbs)**
All Four Seasons	Fipronil	I	51,663
	All Glyphosate	H	20,403
	All 2;4-D	H	6,001
	Lambda-cyhalothrin	I	4,539
	Clopyralid mono salt	H	2,637
	Imidacloprid	I	1,959
	Chlorothalonil	F	1,842
	Isoxaben	H	667
	Fluroxypyr 1-MHE	H	641
	Novaluron	I	595
Fall	All Glyphosate	H	18,575
	Trifluralin	H	3,366
	Chlorothalonil	F	2,566
	All 2;4-D	H	1,906
	Imidacloprid	I	850
	Triethylamine triclo	H	668
	Thiophanate-methyl	F	454
	Bifenthrin	I	369
	Pyroxasulfone	H	326
	Iprodione	F	308
Spring	All Glyphosate	H	374,502
	Atrazine	H	210,163
	S-Metolachlor	H	108,899
	Metolachlor	H	58,750
	Paraquat	H	51,916
	All 2;4-D	H	45,952
	Mesotrione	H	35,103
	Simazine	H	19,701
	Acetochlor	H	16,784
	Metribuzin	H	10,700
Spring and Fall	All 2;4-D	H	38,504
	MCPP-P; DMA Salt	H	8,076
	All Glyphosate	H	4,630
	Dicamba; dimet. salt	H	3,173
	Butoxyethyl triclopy	H	194
	Dicamba	H	148
	Fluroxypyr 1-MHE	H	138
	Fludioxonil	F	105
	Fipronil	I	58
	Imidacloprid	I	31
Spring, Summer, and Fall	All Glyphosate	H	274,401
	All 2;4-D	H	106,001
	Chlorothalonil	F	33,846

TOP 10 PUBLISHABLE PESTICIDES BY SEASONS IN 2022			
Season	**Active Ingredient**	**Class**	**Total Amount Applied (lbs)**
	Lambda-cyhalothrin	I	25,830
	Captan	F	14,968
	Glufosinate-ammonium	H	12,587
	S-Metolachlor	H	8,371
	Atrazine	H	8,219
	Mancozeb	F	6,818
	Sulfur	F	5,885
Summer	All Glyphosate	H	203,523
	All 2;4-D	H	46,593
	Mesotrione	H	25,176
	Chlorothalonil	F	19,248
	Lambda-cyhalothrin	I	18,621
	S-Metolachlor	H	17,124
	Copper sulfate	F	15,239
	Azoxystrobin	F	14,896
	Atrazine	H	13,557
	Pendimethalin	H	12,815
Winter	Permethrin	I	4,136
	Mineral oil	I	2,567
	Bifenthrin	I	319
	Fipronil	I	21

F = Fungicide
H = Herbicide
I = Insecticide
O = Other

TOP 10 PUBLISHABLE PESTICIDES USRAGE BY CROP/SITE IN 2022

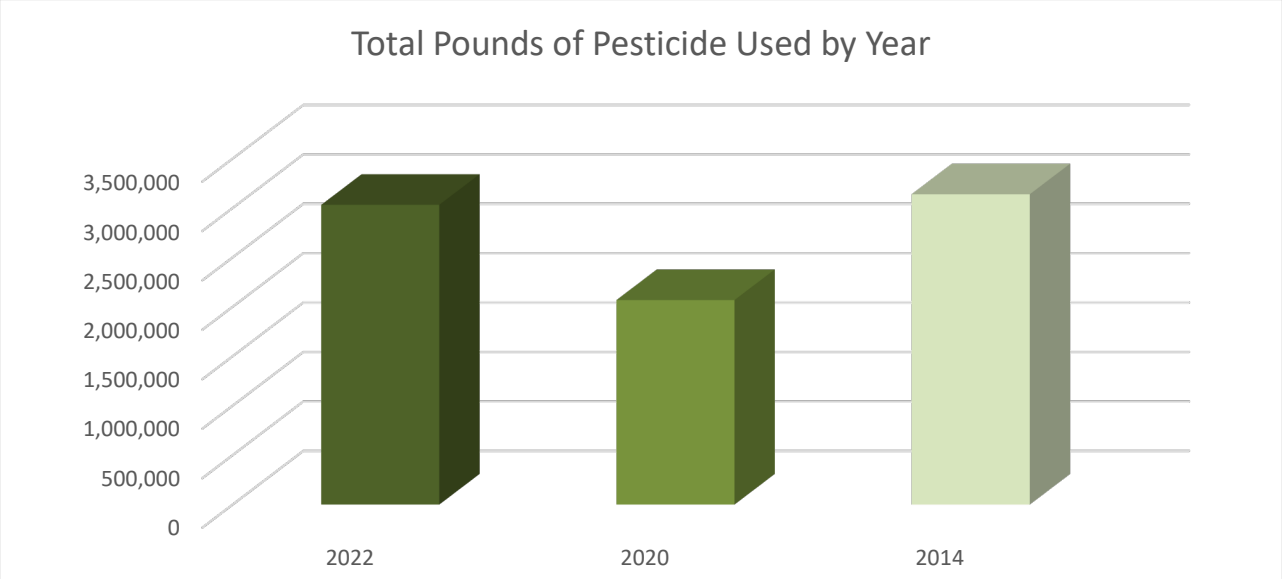
ANIMAL				
Rank		Pesticide Common Name	Type	Pounds Active Ingredient
1		Permethrin	I	228

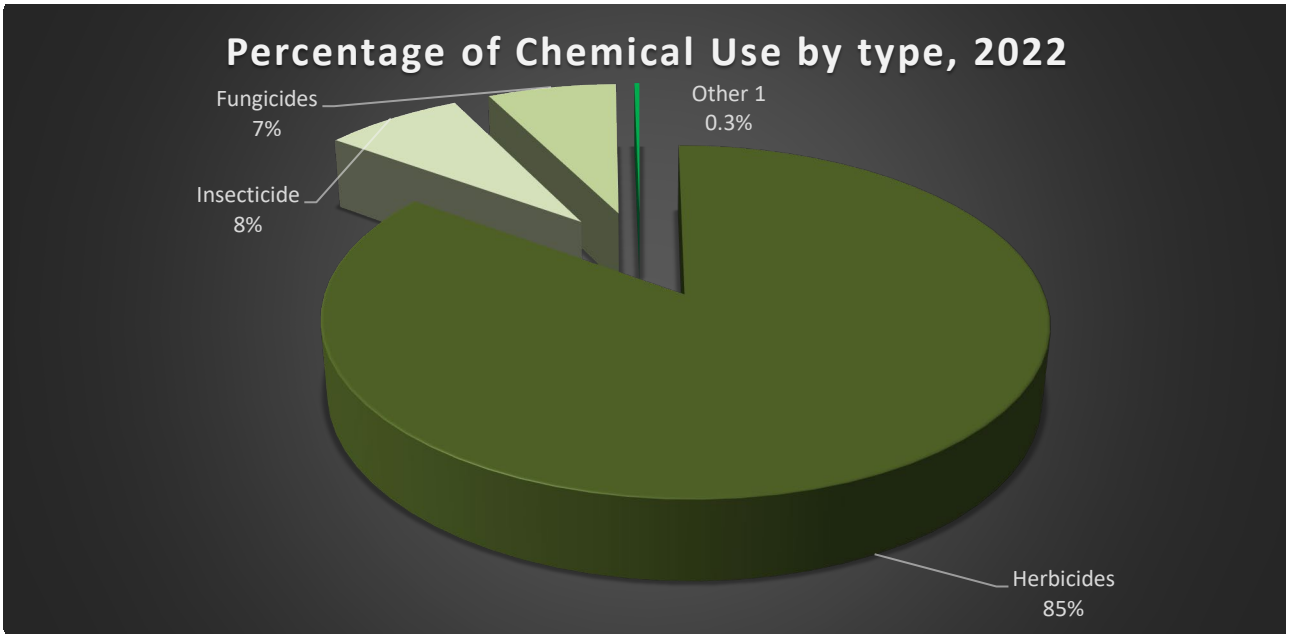
AQUATIC				
1		Copper sulfate	F	15,217
2		Dipot. endothall	H	3,591
3		All Glyphosate	H	1,435
4		Flumioxazin	H	1,420
5		Chlorothalonil	F	765
6		Copper ethanolamine	H	528
7		Diquat dibromide	H	428
8		Fluridone	H	326
9		Triethylamine triclo	H	134
10		Copper triethanolamine complex	O	6
FIELD CROPS				
1		All Glyphosate	H	746,980
2		Atrazine	H	227,766
3		All 2;4-D	H	151,881
4		S-Metolachlor	H	130,413
5		Metolachlor	H	66,529
6		Paraquat	H	54,385
7		Simazine	H	20,045
8		Pendimethalin	H	19,335
9		Glufosinate-ammonium	H	18,202
10		Acetochlor	H	17,384
FOREST				
1		All Glyphosate	H	483
2		All 2;4-D	H	274
3		Butoxyethyl triclopy	H	245
4		Triethylamine triclo	H	76
FRUIT				
1		Captan	F	16,179
2		All Glyphosate	H	10,846
3		Mancozeb	F	8,545
4		Sulfur	F	6,022
5		Chlorothalonil	F	5,360
6		Paraquat	H	3,652
7		Copper hydroxide	F	2,739
8		Calcium polysulfide	F	1,626
9		Carbaryl	I	1,479
10		Mono-potassium salt	F	1,137

TOP 10 PUBLISHABLE PESTICIDES USRAGE BY CROP/SITE IN 2022				
INDUSTRIAL				
1		Lambda-cyhalothrin	I	4,537
2		All Glyphosate	H	4,519
3		Imidacloprid	I	2,218
4		Fipronil	I	2,062
5		Indoxacarb	I	1,092
6		Dinotefuran	I	489
7		Piperonyl butoxide	I	457
8		Esfenvalerate	I	429
9		Bifenthrin	I	251
10		Deltamethrin	I	250
NURSERY/GREENHOUSE				
1		All Glyphosate	H	13,880
2		Chlorothalonil	F	845
3		Thiophanate-methyl	F	435
4		Bifenthrin	I	230
5		Imidacloprid	I	229
6		Paclobutrazol	O	132
7		All 2;4-D	H	107
8		Daminozide	O	61
9		Acephate	I	52
10		Copper sulfate	F	40
ORNAMENTAL AND LAWNS				
1		All 2;4-D	H	69,845
2		Fipronil	I	50,235
3		Lambda-cyhalothrin	I	39,233
4		All Glyphosate	H	29,765
5		Mesotrione	H	23,898
6		MCPP-P; DMA Salt	H	15,910
7		Azoxystrobin	F	12,167
8		MCPA; dimethyl. salt	H	11,743
9		Dithiopyr	H	7,894
10		Prodiamine	H	6,808
OTHER				
1		All Glyphosate	H	87
PUBLIC HEALTH				
1		Bifenthrin	I	548
REGULATORY				
1		All 2;4-D	H	6
2		Dicamba; dimet. salt	H	2

TOP 10 PUBLISHABLE PESTICIDES USRAGE BY CROP/SITE IN 2022				
RIGHT OF WAY				
1		All Glyphosate	H	80,792
2		All 2;4-D	H	6,811
3		Aminocyclopyrachlor	H	2,469
4		Sulfometuron methyl	H	1,591
5		Clopyralid mono salt	H	1,185
6		Oryzalin	H	1,057
7		Indaziflam	O	810
8		Chlorsulfuron	H	760
9		Butoxyethyl triclopy	H	166
10		Fosamine	H	29
TURF				
1		Chlorothalonil	F	31,827
2		All 2;4-D	H	13,666
3		Iprodione	F	5,487
4		All Glyphosate	H	3,528
5		Thiophanate-methyl	F	2,734
6		Propiconazole	F	2,505
7		MCPP-P; DMA Salt	H	1,998
8		Imidacloprid	I	1,790
9		Fluazinam	F	1,727
10		Dicamba; dimet. salt	H	1,458
VEGETABLES				
1		Chlorothalonil	F	14,474
2		S-Metolachlor	H	3,890
3		Atrazine	H	3,368
4		All Glyphosate	H	3,007
5		Pendimethalin	H	1,888
6		All 2;4-D	H	1,017
7		Carbaryl	I	989
8		Bifenthrin	I	848
9		Copper hydroxide	F	530
10		Mancozeb	F	518

COMPARISON OF PESTICIDES USE CLASSES REPORTED IN 2022, 2020 AND 2014				
		2022	2020	2014
Pesticide Class		lbs	lbs	lbs
Herbicides		2,577,856	1,545,036	2,282,397
	%of total lbs	85%	75%	73%
Insecticide		229,759	268,011	591,989
	%of total lbs	8%	13%	19%
Fungicides		215,119	235,235	256,820
	%of total lbs	7%	11%	8%
Other [1]		8,886	19,272	7,480
	%of total lbs	0.3%	1%	0.2%
Total Usage		**3,031,620**	**2,067,554**	**3,138,686**





Top 10 Publishable Pesticide Usage by Type in 2022

FUNGICIDES

Rank	Pestcide Name	Total Amount Applied (lbs)
1	Chlorothalonil	60,292
2	Azoxystrobin	21,866
3	Captan	17,636
4	Copper sulfate	15,279
5	Mancozeb	15,162
6	Propiconazole	14,151
7	Prothioconazole	6,821
8	Sulfur	6,617
9	Pydiflumetofen	6,205
10	Iprodione	5,736

HERBICIDES

Rank	Pestcide Name	Total Amount Applied (lbs)
1	All Glyphosate	896,040
2	Prodiamine	634,508
3	All 2;4-D	244,985
4	Atrazine	231,956
5	S-Metolachlor	134,481
6	Metolachlor	66,529
7	Mesotrione	60,799
8	Paraquat	58,310
9	Pendimethalin	23,015
10	Glufosinate-ammonium	20,646

INSECTICIDES

Rank	Pestcide Name	Total Amount Applied (lbs)
1	Fipronil	57,646
2	Lambda-cyhalothrin	54,937
3	Mineral oil	53,672
4	Imidacloprid	12,185
5	Permethrin	8,661
6	Bifenthrin	7,690
7	Carbaryl	4,518
8	Piperonyl butoxide	4,051
9	Cyfluthrin	4,022
10	Dimethoate	3,722

Top 10 Publishable Pesticide Usage by Type in 2022

OTHER

Rank	Pestcide Name	Total Amount Applied (lbs)
1	Ethephon	2,167
2	Trinexapac-ethyl	1,903
3	Indaziflam	1,094
4	Diphacinone	684
5	Hydrogen peroxide	521
6	Flutriafol	442
7	Alk. dim. benzyl 60%	406
8	Alk. dim. ethbz. am.	361
9	Peroxyacetic acid	315
10	Paclobutrazol	216

FORMS, QUESTIONNAIRE AND, SURVEY RELATED MATERIALS

Maryland
Department of Agriculture

Agriculture | Maryland's Leading Industry

Office of Plant Industries and Pest Management

Pesticide Regulation

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Joseph Bartenfelder, Secretary
Steven A. Connelly, Deputy Secretary

The Wayne A. Cawley, Jr. Building
50 Harry S Truman Parkway
Annapolis, Maryland 21401
mda.maryland.gov

410.841.5710 Baltimore/Washington
410.841.2765 Fax

Dear Reporter:

I am writing to request your participation in the enclosed Maryland Department of Agriculture (MDA)/USDA National Agricultural Statistics Service (NASS) - Maryland Field Office 2022 Pesticide Usage Survey. MDA and NASS have conducted nine similar pesticide surveys between 1985 and 2020. This survey is the only comprehensive measure of pesticide use in Maryland and helps MDA develop the most appropriate programs for Maryland farmers and pest control operators.

With your cooperation, this survey will also provide information necessary for rational decisions regarding pesticide usage, laws, and regulations. The survey results provide a reliable source of public information for all members of our industry, as well as for industry representatives working with policy makers at the State and national levels.

Please complete the enclosed survey and the recertification for credit information form and return it to NASS according to the instructions provided. Pesticides are a major input in the production of agricultural commodities; however, to keep the costs of using pesticides from exceeding the benefits, knowledge of the extent of their application is of utmost importance. Eligible applicators that complete the Pesticide Survey will obtain full credit towards their pesticide applicator certification.

If we do not hear from you by March 10, 2023, we will attempt to contact you to arrange a telephone interview.

Your participation is crucial, and your responses are confidential. We will never share your name or the name of your operation. The results of this survey will be available in aggregate form only, ensuring that no individual operation or producer can be identified, as required by federal law.

Thank you for your time and your assistance with this important project. If you have any questions about this survey, please contact Shareefah Williams at shareefah.williams@usda.gov or 301-347-8179.

Sincerely,

Joseph Bartenfelder

Joseph Bartenfelder, Secretary
Maryland Department of Agriculture

A REMINDER ABOUT YOUR
2022 PESTICIDE USE SURVEY

USDA

AGRICULTURE COUNTS

United States Department of Agriculture
National Agricultural Statistics Service

Make your voice heard!

The Maryland Department of Agriculture's Pesticide Regulation Section, in cooperation with USDA's National Agricultural Statistics Service (NASS), has been periodically conducting a voluntary pesticide use survey since 1983. We are conducting a survey for calendar year 2022. Although this is a voluntary survey, we urge everyone to participate. By completing this survey, you will help the Department to collect valuable information on the pesticide products used in Maryland. This will help the Department to ensure your pesticide products are registered for use in Maryland, to better target water quality surveys, and to inform sound regulatory decisions about pesticide products. Please complete the survey and mail it back by March 10, 2023.

Thank you for your participation.

OMB Number: 0535-0273
OMB Expiration Date: 05/31/2025

USDA-NASS
NATIONAL OPERATIONS CENTER
9700 PAGE AVENUE SUITE 400
ST LOUIS MO 63132-1547

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MARYLAND PESTICIDE USAGE SURVEY - 2022

OMB No. 0535-0273
Approval Expires: 5/31/2025
Project Code: 970
Survey ID: 3785

United States Department of Agriculture

NATIONAL AGRICULTURAL STATISTICS SERVICE

USDA/NASS
National Operations Division
9700 Page Avenue, Suite 400
St. Louis, MO 63132-1547
Phone: 1-888-424-7828
Fax: 1-855-415-3687
Email: nass@usda.gov

Please make corrections to name, address, and ZIP Code, if necessary.

The information you provide will be used for statistical purposes only. Your responses will be kept confidential and any person who willfully discloses ANY identifiable information about you or your operation is subject to a jail term, a fine, or both. This survey is conducted in accordance with the Confidential Information Protection and Statistical Efficiency Act of 2018, Title III of Pub. L. No.115-435, codified in 44 U.S.C. Ch. 35 and other applicable Federal laws. For more information on how we protect your information please visit: https://www.nass.usda.gov/confidentiality. Response is voluntary.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB number is 0535-0273. The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Please refer to the "Instruction Sheet" on Page 2 to aid in the completion of this survey.

1. Did you or your business or your agency apply pesticides in 2022?

   0001 1 ☐ Yes - Go to Question 2.
   3 ☐ No - Go to Page 11, Question 5.

2. Are you a commercial business?

   0002 1 ☐ Yes - Go to Page 2 and complete the table for all pesticides that THE PUBLIC business applied in 2022 by you or a designated applicator within your your agency.
   3 ☐ No - Go to Question 3.

3. Are you a public agency?

   0003 1 ☐ Yes - Go to Page 2 and complete the table for all pesticides that your business applied in 2022 for your customers.
   3 ☐ No - Go to Question 4.

4. Are you a farmer?

   0004 1 ☐ Yes - Go to Page 2 and complete the table for all pesticides you personally applied in 2022 on property that you own or lease.
   3 ☐ No - Go to Page 11, Question 5.

Pesticides Instructions

Pesticide: An herbicide, insecticide, fungicide, growth regulator, nematicide, fumigant, rodenticide, repellent, wood preservative, or any other material used to manage pests.

- Please report the pesticides you, the public business, or your agency **applied in 2022** in the tables. Record the EPA number or chemical product name.
- Record the county where each pesticide was applied.
- Include only the pesticide portions of a tank mix.
- Report each chemical on a separate line, even if two chemicals were applied in combination. **Specify the total quantity and unit of measurement for each pesticide**.
- **Maryland Pesticide Re-certification credit is available for completing this questionnaire. Remember to include your completed form with the questionnaire to receive credit.**

PLEASE EXCLUDE ANY PESTICIDES APPLIED BY A CONTRACTOR.

Column 3 - - County Code	
1	Allegany
3	Ann Arundel
5	Baltimore
6	Baltimore City
9	Calvert
11	Caroline
13	Carroll
15	Cecil
17	Charles
19	Dorchester
21	Frederick
23	Garrett
25	Harford
27	Howard
29	Kent
31	Montgomery
33	Prince George's
35	Queen Anne's
37	St. Mary's
39	Somerset
41	Talbot
43	Washington
45	Wicomico
47	Worcester

Column 11 - - Target Crop or Site Code	
1	Field Crops
2	Fruit
3	Vegetables
4	Nursery/greenhouse - commercial
5	Animal - Livestock and poultry
6	Stored grain
7	Forest
8	Ornamental & lawns - interior and exterior landscapes
9	Turf - production
10	Seed treatment
11	Aquatic
12	Rights of way roads
13	Industrial/Structural - incl. structural household pests, birds, rodents, industrial weed
14	Fumigation - commodities, structures, grains
15	Public Health
16	Regulatory - PUBLIC AGENCIES ONLY
17	Demonstration/Research
18	Other - wood preservatives, sewer root control

2022 Maryland Pesticide Usage Survey Pesticide Use

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OFFICE USE LINES IN TABLE
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5. Were any pesticides applied for you by a contractor in 2022?

0005 1 ☐ Yes
3 ☐ No

6. **SURVEY RESULTS**: To receive the complete results of this survey on the release date, go to https://www.nass.usda.gov/results

To have a brief summary emailed to you, please enter your email address:
1095

Operation Email (if different from above)	Operation Phone:	
9937 _____	9936 ( ) _____	check if cell phone ☐

Respondent Name:	Respondent Phone (if different from above)		
9912 _____	9911 ( ) _____	check if cell phone ☐	9910 MM DD YY Date: __ __ __ __ __ __

This completes the survey. Thank you for your help.

OFFICE USE ONLY												
Response		Respondent		Mode		Enum.	Eval.	Change	Office Use for POID			
1-Comp 2-R 3-Inac 4-Office Hold 5-R – Est 6-Inac – Est 7-Off Hold – Est	9901	1-Op/Mgr 2-Spouse 3-Acct/Bkpr 4-Partner 9-Other	9902	1-PASI (Mail) 2-PATI (Tel) 3-PAPI (Face-to-Face) 6-Email 7-Fax 19-Other	9903	9998	9900	9985	9989 __ __ __ - __ __ __ - __ __ __			
							R. Unit		Optional Use			
							9921		9907	9908	9906	9916
S/E Name												

MARYLAND PESTICIDE STATISTICS for 2022

Issued cooperatively by

Maryland Department of Agriculture
Kevin Atticks, Secretary
Steve Connelly, Deputy Secretary

U. S. Department of Agriculture
National Agricultural Statistics Service
Hubert Hamer, Administrator

U.S. Department of Agriculture National Agricultural Statistics Service
Maryland Field Office Shareefah Williams, State Statistician

Survey Conducted and Compiled by: Northeastern Regional staff,
and phone enumerators.

Questionnaire Design by: Quonda Fayorsey.

Edit and summary conducted by: Northeastern Regional staff, Kim Nielsen,
Jennifer Rhorer, and Edward Bulliner.

In consultation with Maryland Department of Agriculture
Pesticide Regulation Section Rob Hofstetter, Program Manager, Tom Phillips, Program
Manager and Kelly Love.

PUBLISHED December 2023

Maryland Pesticide Regulation Section

The Pesticide Regulation Section administers Maryland's Pesticide Applicator's Law, approves training courses in the handling, storage, and use of pesticides, conducts examinations to determine that pesticide applicators are competent to follow prescribed pest control practices, enforces federal laws on the sale and use of pesticides, and investigates pesticide accidents or incidents and consumer complaints on pesticide misuse. To find out more, call Pesticide Regulation at (410) 841-5710.

WHY SHOULD I RESPOND TO THIS SURVEY?

The Maryland Pesticide Survey has been conducted since 1985, this survey is the only comprehensive measure of pesticide use in Maryland. The results from the survey helps the Maryland Department of Agriculture (MDA) develop appropriate programs for Maryland farmers and pest control operators. This survey also provides information necessary for rational decisions regarding pesticide usage, laws, and regulations. The survey results provide a reliable, source of public information for all members of our industry, as well as for industry representatives working with policy makers at the State and national levels.

Eligible applicators that completed the 2022 Pesticide Survey obtained full credit towards their pesticide applicator certification. Plans are in place to offer this incentive again for the next survey cycle. The National Agricultural Statistics Service (NASS) is committed to preserving the confidentiality of respondent's identities by protecting information that could be used to identify individual respondents. The results of this survey will be available in aggregate form only, ensuring that no individual operation or producer can be identified, as required by federal law. For more information about NASS's confidentiality Pledge please go to the following website (USDA - National Agricultural Statistics Service - About NASS - Confidentiality Pledge).