



**Department of
Environmental
Conservation**

**Summary Report
For
New York State
Pesticide Sales and
Applications
2020**

ACKNOWLEDGMENTS

The Department wishes to acknowledge the cooperation and assistance of Cornell University, and specifically the Pesticide Sales and Use Reporting unit within the Pesticide Management Education Program in the College of Agriculture and Life Sciences, in the preparation and development of this annual report.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iv
I. INTRODUCTION	1
II. 2020 PESTICIDE REPORTING PROGRAM	
A. Reports Received	1
B. Quality Control.....	1
C. Data Qualifications	2
III. 2020 REPORTING DATA	
A. General Synopsis of Data.....	3
B. County Data Summary Tables and Maps.....	3
C. Summary of Top Ten Pesticide Products Applied or Sold.....	12
D.The Pesticide Sales and Use Reporting Website.....	16

List of Figures

Figure 1: Commercial Pesticide Applications by Volume	6
Figure 2: Commercial Pesticide Applications by Weight.....	7
Figure 3: Pesticide Sales to Private Applicators by Volume.....	10
Figure 4: Pesticide Sales to Private Applicators by Weight.....	11

List of Tables

Table 1: Summary of Total Quantities Statewide	3
Table 2: Summary of Commercial Pesticide Applications by County.....	4
Table 3: Summary of Pesticide Sales to Private Applicators by County	8
Table 4: Top Ten Pesticide Products by Volume Applied by Commercial Applicators or Technicians.....	13
Table 5: Top Ten Pesticide Products by Weight Applied by Commercial Applicators or Technicians.....	14
Table 6: Top Ten Pesticide Products by Volume Sold by Commercial Permit Holders to Certified Private Applicators	15
Table 7: Top Ten Pesticide Products by Weight Sold by Commercial Permit Holders to Certified Private Applicators	16

Executive Summary

The New York State Department of Environmental Conservation (Department), in conjunction with Cornell University, presents this summary report to the Governor and Legislature under Environmental Conservation Law Article 33, Title 12, known as the Pesticide Reporting Law (PRL). This report summarizes the pesticide sales and application data submitted to the Department for the calendar year 2020. The finalized data have been incorporated into a master database maintained by Cornell University. This database is accessible by the public and is an information source for health researchers or other users of the data.

The department received reports from 15,397 certified applicators and technicians, which is 93% of the 16,489 applicators and technicians required to submit a report for 2020.

The following is the total amount of pesticide products applied in New York State by certified commercial applicators and technicians in 2020:

- 3,286,089 Gallons of liquid formulation products
- 29,729,052 Pounds of solid formulation products
- Number of Products: 4,675

A summary of the quantity of pesticide products applied for each county can be found in Table 2 on pages 4 – 5 and in Figures 1 and 2 on pages 6 – 7.

The following is the total amount of pesticide products sold to private applicators for agricultural use in New York State in 2020:

- 1,062,895 Gallons
- 4,125,594 Pounds
- Number of Products: 1,477

The total quantity of pesticide products sold to private applicators reflects the sales of restricted use and general use pesticide products by commercial permit holders to private applicators to use for the purposes of producing an agricultural commodity. A summary of the quantity of pesticide products sold to private applicators by county can be found in Table 3 on pages 8 - 9 and in Figures 3 and 4 on pages 10 – 11.

The following is the total amount of restricted use pesticide products sold to commercial applicators for end use in New York State:

- 277,756 Gallons
- 14,254,389 Pounds

- Number of Products: 738

These numbers reflect sales by commercial permit holders to certified commercial applicators that intend to apply the pesticides.

The following is the total amount of restricted use pesticide products sold to distributors for resale in New York State:

- 810,371 Gallons
- 1,465,810 Pounds
- Number of Products: 576

These numbers reflect sales to commercial permit holders that intend to resell the pesticide product. Some or all of these quantities are also reflected in the quantities of products mentioned above that are sold to private or commercial applicators or used by commercial applicators and technicians.

Also provided in this report are summaries of the top ten pesticide products used and sold in New York State during 2020. See pages 12 – 16 for these summaries which include information such as the amount of the product used or sold, the product's active ingredients and the type of product.

Please note: Although the Department and Cornell University have gone to great lengths to assure the quality of the data, there are still significant concerns regarding potential inaccuracies in the data received from the regulated community. Users of this data are strongly cautioned about limitations of the data and are advised to go to the PRL Annual Reports page <https://www.dec.ny.gov/chemical/96898.html> to review information regarding data quality. The Department continues to reach out to regulated entities and provide information and technical assistance to them, and many times even works one on one with them to ensure they are accurately complying with the reporting requirements of the PRL. The Department also takes actions to hold entities accountable for any identifiable inaccuracies in reports provided and requires correction and re-submission where necessary.

For more information about the 2020 data and to use the searchable database, users can access this information at Cornell's Pesticide Sales and Use Reporting website: <https://psur.cce.cornell.edu/>.

I. INTRODUCTION

The New York State Department of Environmental Conservation (Department), in conjunction with work conducted by Cornell University, presents this summary report of the final pesticide sales and application data for calendar year 2020 submitted under Environmental Conservation Law Article 33, Title 12, known as the Pesticide Reporting Law (PRL). This report summarizes the data as submitted to the Department, with some corrections as noted below. The finalized data have been incorporated into a master database maintained by Cornell University. This database is accessible to the public and is an information source for health researchers and other users of the data.

II. 2020 Pesticide Reporting Program

A. Reports Received

As of May 14, 2021, the Department received reports from 15,397 of the 16,489 commercial applicators and technicians required to report for the calendar year 2020. The Department also received reports from 273 of the 289 commercial permittees required to report for 2020. These figures indicate that 93% of commercial applicators and technicians and 95% of commercial permittees were in compliance with the PRL. The Department will continue to provide outreach and education to the regulated community to achieve maximum compliance with the reporting requirement.

B. Quality Control

The Department continues to enhance and streamline the process for reporting, as well as the system for managing the 16,000 reports that are received annually.

Department staff continue to use a system of front-line quality control procedures to evaluate incoming reports to ensure basic criteria are met, regardless of whether the report was submitted on paper or electronically. Paper reports are checked for certain criteria to maximize the volume of data that will be transferrable into Cornell's master database. If a report did not meet these criteria, Department staff sought to correct the report with the person filing the report. If the errors were too numerous, the report was rejected and returned to the business or applicator to be corrected and resubmitted. Electronic reports are subjected to several validation processes including validating file format and certain data values. This process enables staff to contact report submitters for corrections in a timely manner.

As part of our standard quality assurance processes, the Department and Cornell identified reports that contained quantities that appeared to fall outside of accepted parameters. Staff reviewed reports containing these “out-of-range” quantities and the responsible applicators and businesses were contacted. Reporting errors were corrected by staff with the approval of the applicator or business. These corrected data were forwarded to Cornell to replace the original reports in the database.

C. Data Qualifications

The reporting community, the Department and Cornell University work together to provide the best information possible for health researchers. However, the data is neither perfectly accurate nor complete. Although the Department and Cornell have gone to great lengths to assure the quality of the data, there are still significant concerns regarding potential inaccuracies in the data received from the regulated community. Users of this data are advised to go to the PRL Annual Reports page (<http://dec.ny.gov/chemical/96898.html>) to review information regarding data quality.

The Department continues to reach out to regulated entities and provide information and technical assistance to them, and many times even works one on one with them to ensure they are accurately complying with the reporting requirements of the PRL. The Department also takes actions to hold entities accountable for any identifiable inaccuracies in reports provided and requires correction and re-submission where necessary.

III. 2020 Reporting Data

A. General Synopsis of Data

The following table provides a summary of pesticide sales and use reported by commercial applicators and technicians and commercial permit holders:

Table 1
Calendar Year 2020
Summary of Total Quantities Statewide

Category	Number of Pesticide Products	Quantity (Gallons)**	Quantity (Pounds)**
Applied by Commercial Applicators and Technicians	4,675	3,286,089	29,729,052
Sold to Private Applicators	1,477	1,062,895	4,125,594
Sold for End Use*	738	277,756	14,254,389
Sold for Resale*	576	810,371	1,465,810

* Restricted use pesticides only

** The total quantity of pesticides commercially applied and sold is a combination of the amount expressed in gallons and the amount expressed in pounds reported above. In other words, the quantity in gallons is separate from the quantity in pounds.

B. County Data Summary Tables and Maps

The following tables and maps summarize commercial pesticide applications and sales for 2020 by county:

Table 2
Calendar Year 2020
Summary of Commercial Pesticide Applications by County*

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Albany	789	132,359	1,102,174
Allegany	264	3,908	33,362
Bronx	719	33,563	126,843
Broome	426	8,912	184,009
Cattaraugus	327	11,172	86,043
Cayuga	538	59,310	71,371
Chautauqua	486	11,855	164,096
Chemung	340	4,715	90,835
Chenango	301	8,377	39,668
Clinton	263	19,945	40,905
Columbia	514	5,907	136,350
Cortland	325	112,874	43,891
Delaware	314	4,182	8,516
Dutchess	844	33,651	1,485,621
Erie	907	61,247	2,047,472
Essex	315	124,592	51,561
Franklin	254	10,626	15,092
Fulton	322	3,004	48,897
Genesee	513	18,508	82,142
Greene	334	4,173	374,995
Hamilton	138	531	2,890
Herkimer	310	12,615	39,529
Jefferson	433	68,762	88,439
Kings	694	43,977	152,153
Lewis	211	15,197	174,799
Livingston	530	25,005	68,147
Madison	392	19,861	92,505
Monroe	1351	63,567	2,222,401
Montgomery	336	10,224	80,239
Nassau	1270	210,810	2,004,396
New York	747	313,765	263,206
Niagara	622	301,392	453,883

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Oneida	555	20,306	481,900
Onondaga	828	117,998	1,082,644
Ontario	899	23,182	323,069
Orange	800	20,161	995,400
Orleans	463	13,817	44,418
Oswego	420	176,508	73,370
Otsego	294	6,133	23,684
Putnam	566	14,065	374,446
Queens	746	72,317	293,591
Rensselaer	573	153,223	246,823
Richmond	500	83,639	111,210
Rockland	684	21,010	873,831
Saratoga	740	69,935	1,957,525
Schenectady	574	11,020	556,622
Schoharie	258	5,509	8,749
Schuyler	197	2,810	5,620
Seneca	325	5,778	20,414
St Lawrence	294	54,679	45,615
Steuben	440	18,225	76,679
Suffolk	1683	270,212	6,260,336
Sullivan	360	3,513	78,485
Tioga	284	2,541	20,758
Tompkins	572	9,413	90,762
Ulster	644	7,202	262,100
Warren	416	26,783	487,742
Washington	348	62,051	101,123
Wayne	546	107,579	205,529
Westchester	1270	113,160	2,691,918
Wyoming	401	30,325	24,161
Yates	313	3,002	26,899

* The above table does not include quantities which were reported where the county information was either missing, invalid or illegible.

** The total quantity of pesticides sold in a county is a combination of the gallons and pounds reported above. In other words, the quantity in gallons is separate from the quantity in pounds.

Figure 1
Commercial Pesticide Applications by Volume (Gallons) in 2020

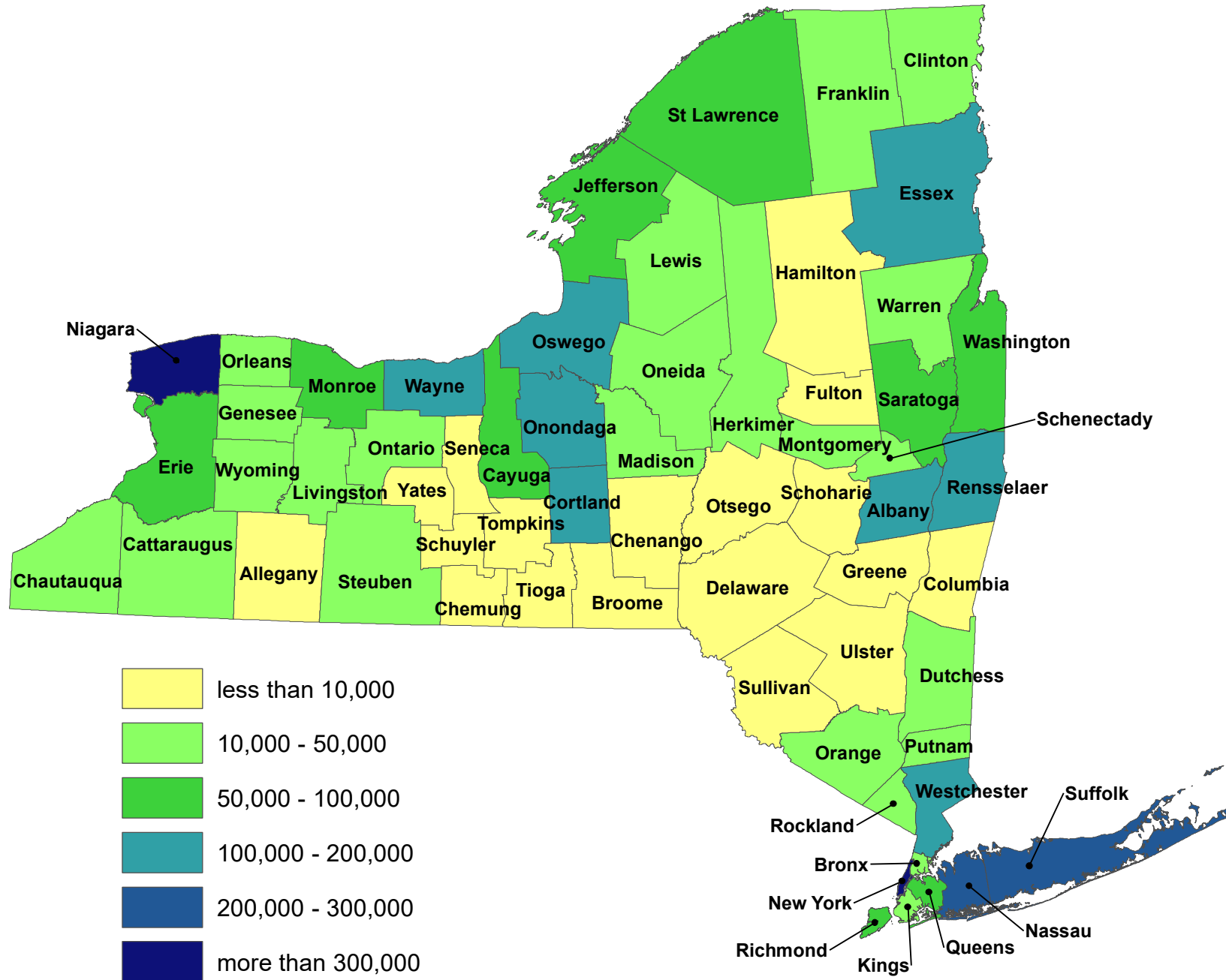


Table 3
Calendar Year 2020
Summary of Pesticide Sales to Private Applicators by County

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Albany	180	3,319	10,141
Allegany	63	2,990	1,514
Bronx	2	20	0
Broome	94	2,987	1,948
Cattaraugus	143	4,682	4,972
Cayuga	369	37,106	52,771
Chautauqua	226	24,822	113,868
Chemung	58	1,168	423
Chenango	89	2,026	19,346
Clinton	160	21,099	104,961
Columbia	280	16,599	89,989
Cortland	56	2,693	3,439
Delaware	60	1,154	1,591
Dutchess	284	11,333	116,183
Erie	381	17,210	38,301
Essex	70	1,795	11,440
Franklin	90	7,337	4,643
Fulton	82	1,033	3,078
Genesee	355	91,868	63,781
Greene	120	3,973	3,469
Hamilton	0	0	0
Herkimer	107	6,478	597
Jefferson	116	17,930	14,422
Kings	20	248	28
Lewis	80	6,013	21,694
Livingston	219	54,184	35,300
Madison	158	9,474	7,675
Monroe	450	36,535	169,158
Montgomery	189	13,600	8,906
Nassau	15	404	40,210
New York	69	1,324	5,530
Niagara	372	38,803	137,807

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Oneida	303	26,458	44,491
Onondaga	339	27,691	52,257
Ontario	470	27,992	40,065
Orange	345	47,681	102,118
Orleans	416	68,339	333,550
Oswego	241	16,125	58,609
Otsego	121	3,838	27,904
Putnam	34	134	4,774
Queens	11	88	1,215
Rensselaer	184	4,722	8,750
Richmond	2	584	0
Rockland	59	1,519	2,962
Saratoga	155	3,923	13,430
Schenectady	112	926	4,494
Schoharie	120	2,531	2,146
Schuyler	202	7,763	24,447
Seneca	292	26,120	75,997
St Lawrence	94	21,781	6,996
Steuben	284	36,350	114,427
Suffolk	505	52,430	270,292
Sullivan	35	70	8,607
Tioga	101	5,266	3,714
Tompkins	164	4,344	7,698
Ulster	333	23,355	240,785
Warren	172	17,184	47,914
Washington	149	5,564	229,670
Wayne	499	114,167	1,085,246
Westchester	125	878	24,990
Wyoming	199	47,737	40,399
Yates	404	27,129	160,458

* The above table does not include quantities which were reported where the county information was either missing, invalid or illegible.

** The total quantity of pesticides sold in a county is a combination of the gallons and pounds reported above. In other words, the quantity in gallons is separate from the quantity in pounds.

C. Summary of Top Ten Pesticide Products Applied and Sold

The following tables summarize the top ten pesticide products applied by certified commercial applicators or technicians and the top ten pesticide products sold by commercial permit holders to certified private applicators. Each table presents information about each top ten product including the EPA registration number for each product, the quantity sold or the quantity applied, the percentage that the product quantity represents compared with the total quantities all products sold or all products applied, the active ingredients in each product, the percentage of that active ingredient in the product as well as the product's main type of use.

These summaries are product based. The amount of product applied or sold is the quantity reported for the product(s) with the corresponding EPA registration number. These products contain different amounts of active ingredients. The weight or volume reported here is the amount of all ingredients, not the amount of active ingredients alone.

Table 4
Calendar Year 2020
Top Ten Pesticide Products by Volume (Gallons)
Applied by Commercial Applicators or Technicians

EPA Registration Number	Quantity (GL)	Percentage of All Products	Active Ingredients	Percentage of Active Ingredient	Product Type
59074-20001	421,463	12.8%	sodium hypochlorite	12.50%	antimicrobial
9359-2	261,737	8.0%	sodium hypochlorite	12.50%	antimicrobial
1448-433	201,281	6.1%	ammonia	7.59%	antimicrobial
1706-179	97,756	3.0%	sodium bromide sodium hypochlorite	9.23% 6.36%	antimicrobial, fungicide
75506-12	90,113	2.7%	copper carbonate, basic propiconazole tebuconazole	43.40% 0.50% 0.50%	wood preservative
74655-34	69,606	2.1%	ammonium carbamate	19.5%	antimicrobial
19713-123	56,431	1.7%	mineral oil	98%	insecticide
1706-153	49,569	1.5%	5-Chloro-2-methyl-4- isothiazolin-3-one 2-Methyl-4-isothiazolin- 3-one	1.11% 0.39%	cooling tower antimicrobial
100-1466	44,059	1.3%	bicyclopyrone atrazine s-metolachlor mesotrione	0.65% 10.93% 23.40% 2.60%	herbicide
1448-104- 75341	43,630	1.3%	dazomet	98.00%	wood preservative
Top 10 Products	1,335,645	40.7%			
All Products	3,286,089				

Table 5
Calendar Year 2020
Top Ten Pesticide Products by Weight (Pounds)
Applied by Commercial Applicators and Technicians

EPA Registration Number	Quantity (LB)	Percentage of All Products	Active Ingredients	Percentage of Active Ingredient	Product Type
100-1456-82757	2,844,180	9.6%	prodiamine	0.29%	herbicide
432-1349-82757	1,640,324	5.5%	imidacloprid	0.20%	insecticide
432-1349-10404	846,612	2.9%	imidacloprid	0.20%	insecticide
75341-20	833,805	2.8%	dazomet	91.14%	wood preservative
60063-43-41124	823,617	2.8%	prodiamine	0.42%	herbicide
10404-89	792,225	2.7%	prodiamine	0.43%	herbicide
432-1417-34704	745,654	2.5%	bifenthrin	0.10%	insecticide
62719-504-34704	651,487	2.2%	imidacloprid	0.125%	
62719-504-34704	651,487	2.2%	dithiopyr	0.15%	herbicide
53883-207-47956	628,115	2.1%	dithiopyr	0.13%	herbicide
10404-85	601,741	2.0%	dithiopyr	0.10%	herbicide
Top 10 Products	10,407,760	35.0%			
All Products	29,729,052				

Table 6
Calendar Year 2020
Top Ten Pesticide Products by Volume (Gallons)
Sold by Commercial Permit Holders to Certified Private Applicators

EPA Registration Number	Quantity (GL)	Percentage of All Products	Active Ingredients	Percentage of Active Ingredient	Product Type
524-549	78,305	7.4%	potassium salt of glyphosate	48.70%	herbicide
100-1466	63,773	6.0%	bicyclopyrone atrazine s-metolachlor mesotrione	0.65% 10.93% 23.40% 2.60%	herbicide
34704-890	43,756	4.1%	isopropylamine salt of glyphosate	41.00%	herbicide
71368-20	41,262	3.9%	isopropylamine salt of glyphosate	41.00%	herbicide
62719-556	31,923	3.0%	dimethylammonium salt of glyphosate	50.20%	herbicide
34704-69	22,416	2.1%	atrazine	42.60%	insecticide
62719-693	20,857	2.0%	clopyralid acetochlor mesotrione	2.70% 31.00% 3.30%	herbicide
19713-11	20,644	1.9%	atrazine	42.2%	herbicide
241-418	19,438	1.8%	pendimethalin	38.70%	herbicide
34704-805	16,773	1.6%	mineral oil	98.00%	insecticide miticide fungicide
Top 10 Products	359,146	33.8%			
All Products	1,062,895				

Table 7
Calendar Year 2020
Top Ten Pesticide Products by Weight (Pounds)
Sold by Commercial Permit Holders to Certified Private Applicators

EPA Registration Number	Quantity (LB)	Percentage of All Products	Active Ingredients	Percentage of Active Ingredient	Product Type
66222-58	621,035	15.1%	captan	78.20%	fungicide
74267-4	539,581	13.1%	bacillus pumilus, strain GHA 180	0.01%	fungicide
70506-185	281,520	6.8%	mancozeb	75.00%	fungicide
279-3580	240,690	5.8%	mancozeb	75.00%	fungicide
34704-1063	227,527	5.5%	mancozeb	75.00%	fungicide
70506-234	195,640	4.7%	mancozeb	75.00%	fungicide
61282-49	151,751	3.7%	zinc phosphide (ZN3P2)	2.00%	rodenticide
62719-486- 34704	138,200	3.4%	dithiopyr	0.10%	herbicide
34704-1075	110,900	2.7%	captan	80.00%	fungicide
70506-187	94,530	2.3%	Sulfur	80.00%	fungicide
Top 10 Products	2,601,374	63.1%			
All Products	4,125,594				

D. The Pesticide Sales and Use Reporting Website

The summarized data from the 2020 reporting year, as well as previous years dating back to 1997, can be accessed using the Pesticide Sales and Use Reporting Program's website provided by Cornell University. Users of this website can generate summarized data by performing searches of the pesticide sales and use database. Users can generate reports by product or active ingredient and can filter their searches by county, zip code, sales, or applications. Results of these searches can be viewed online or downloaded to a computer. Cornell's Pesticide Sales and Use Reporting Website can be accessed at this link: <https://psur.cce.cornell.edu/>