

Summary Report
For
New York State
Pesticide Sales and
Applications
2014

### **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.

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#### **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 2014. 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 16,122 certified applicators and technicians, which is 95% of the 16,977 applicators and technicians required to submit a report for 2014.

The following is the total amount of pesticide products applied in New York State by certified commercial applicators and technicians in 2014:

- 2,970,290 Gallons of liquid formulation products
- 25,917,109 Pounds of solid formulation products
- Number of Products: 4,459

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 2014:

- 945,335 Gallons
- 4,245,340 Pounds
- Number of Products: 1,285

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:

- 1,179,124 Gallons
- 10,916,352 Pounds

• Number of Products: 727

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:

• 765,523 Gallons

• 6,652,272 Pounds

• Number of Products: 476

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 2014. 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 <a href="https://www.dec.ny.gov/chemical/96898.html">https://www.dec.ny.gov/chemical/96898.html</a> 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 resubmission where necessary.

For more information about the 2014 data and to use the searchable database, users can access this information at Cornell's Pesticide Sales and Use Reporting website: <a href="https://psur.cce.cornell.edu/">https://psur.cce.cornell.edu/</a>.

#### 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 2014 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. 2014 Pesticide Reporting Program**

#### A. Reports Received

As of April 17, 2015 the Department received reports from 16,122 of the 16,977 commercial applicators and technicians required to report for the calendar year 2014. The Department also received reports from 296 of the 306 commercial permittees required to report for 2014. These figures indicate that 95% of commercial applicators and technicians and 97% 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 (<a href="http://dec.ny.gov/chemical/96898.html">http://dec.ny.gov/chemical/96898.html</a>) 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. 2014 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 2014
Summary of Total Quantities Statewide

Category	Number of Pesticide Products	Quantity (Gallons)**	Quantity (Pounds)**
Applied by Commercial Applicators and Technicians	4,459	2,970,290	25,917,109
Sold to Private Applicators	1,285	945,335	4,245,340
Sold for End Use*	727	1,179,124	10,916,352
Sold for Resale*	476	765,523	6,652,272

<sup>\*</sup> Restricted use pesticides only

#### **B. County Data Summary Tables and Maps**

The following tables and maps summarize commercial pesticide applications and sales for 2014 by county:

<sup>\*\*</sup> 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.

**Table 2**Calendar Year 2014
Summary of Commercial Pesticide Applications by County\*

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Albany	774	132,899	1,040,293
Allegany	272	11,604	21,666
Bronx	765	26,055	141,082
Broome	485	14,459	164,644
Cattaraugus	378	32,919	15,028
Cayuga	554	43,735	39,203
Chautauqua	514	22,300	160,055
Chemung	340	11,414	97,464
Chenango	299	9,688	55,631
Clinton	303	20,430	92,573
Columbia	490	15,687	110,580
Cortland	319	17,492	387,053
Delaware	324	12,423	22,590
Dutchess	825	36,483	852,981
Erie	985	91,526	2,031,507
Essex	320	240,966	172,908
Franklin	217	9,621	22,260
Fulton	285	2,603	30,163
Genesee	492	26,202	64,186
Greene	332	20,891	266,446
Hamilton	145	415	14,008
Herkimer	317	8,133	61,617
Jefferson	430	31,661	92,774
Kings	720	114,023	148,885
Lewis	242	14,389	21,784
Livingston	481	29,129	61,563
Madison	418	10,266	119,927
Monroe	1,014	47,878	2,419,385
Montgomery	318	8,016	53,849
Nassau	1,248	158,359	2,134,937
New York	828	146,423	223,087
Niagara	561	55,759	447,925

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Oneida	577	17,728	468,593
Onondaga	796	64,792	975,206
Ontario	906	21,613	311,266
Orange	745	12,992	742,857
Orleans	390	9,763	22,564
Oswego	416	114,893	47,450
Otsego	303	6,949	32,096
Putnam	509	6,412	256,636
Queens	781	64,775	188,374
Rensselaer	553	171,713	251,885
Richmond	461	11,450	93,826
Rockland	734	11,590	937,680
Saratoga	684	59,576	1,359,297
Schenectady	533	11,160	421,431
Schoharie	256	6,569	4,336
Schuyler	171	10,951	22,348
Seneca	355	11,570	24,637
St Lawrence	283	31,319	49,323
Steuben	384	22,292	90,173
Suffolk	1,570	239,133	11,118,509
Sullivan	344	3,433	69,285
Tioga	311	5,658	24,287
Tompkins	642	19,219	112,213
Ulster	600	8,671	261,265
Warren	422	31,059	335,420
Washington	379	44,517	81,027
Wayne	461	69,521	155,076
Westchester	1,292	377,545	2,095,838
Wyoming	464	44,046	50,711
Yates	248	6,680	11,447

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

<sup>\*\*</sup> 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 2014

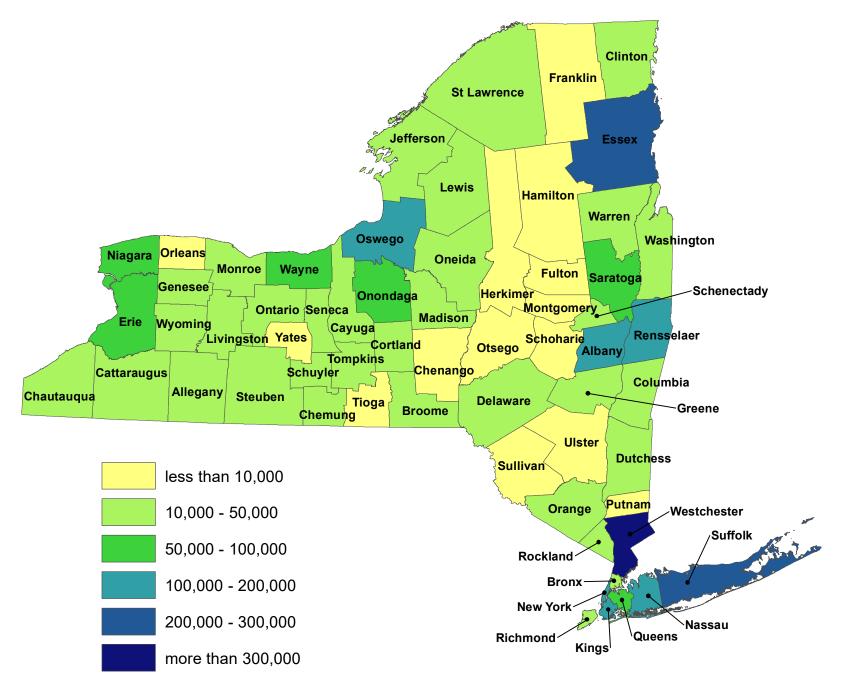
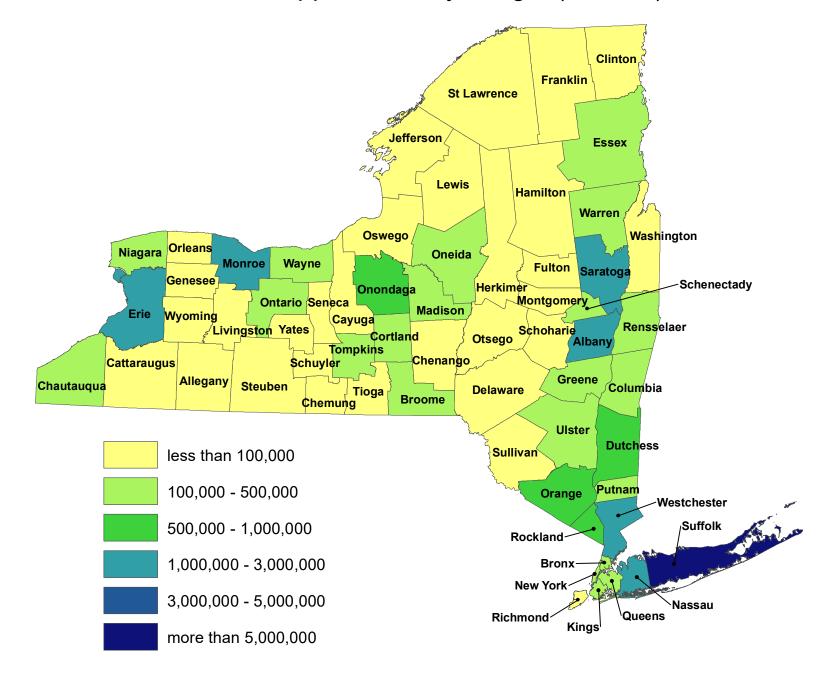


Figure 2
Commercial Pesticide Applications by Weight (Pounds) in 2014



**Table 3**Calendar Year 2014
Summary of Pesticide Sales to Private Applicators by County

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Albany	183	2,393	4,869
Allegany	88	4,212	3,474
Bronx	0	0	0
Broome	106	1,886	5,423
Cattaraugus	188	6,204	7,745
Cayuga	321	28,979	34,255
Chautauqua	279	29,551	141,835
Chemung	53	492	22,205
Chenango	100	2,705	3,556
Clinton	182	37,804	170,400
Columbia	261	19,640	143,640
Cortland	39	1,795	4,221
Delaware	37	752	269
Dutchess	254	5,214	23,667
Erie	401	16,800	33,318
Essex	75	1,555	8,474
Franklin	67	3,898	4,188
Fulton	83	1,544	4,424
Genesee	327	86,408	170,694
Greene	138	1,156	3,005
Hamilton	1	0	10
Herkimer	102	9,112	8,139
Jefferson	97	6,264	3,344
Kings	17	224	534
Lewis	59	6,505	9,710
Livingston	219	34,487	27,392
Madison	188	8,861	15,760
Monroe	423	31,806	125,072
Montgomery	166	12,257	13,589
Nassau	37	343	396
New York	10	178	1,231
Niagara	356	31,893	158,075

County	Number of Pesticide Products	Amount (Gallons)**	Amount (Pounds)**
Oneida	230	17,594	18,192
Onondaga	358	21,331	49,617
Ontario	353	26,998	33,179
Orange	381	46,313	115,635
Orleans	365	69,469	252,401
Oswego	250	23,790	53,057
Otsego	110	2,121	1,125
Putnam	55	369	4,308
Queens	3	0	240
Rensselaer	218	7,661	19,250
Richmond	2	412	5
Rockland	68	1,755	6,754
Saratoga	181	5,399	8,579
Schenectady	80	1,041	2,816
Schoharie	166	2,346	8,534
Schuyler	174	5,334	27,693
Seneca	231	23,590	50,810
St Lawrence	94	6,733	18,298
Steuben	280	29,164	115,917
Suffolk	477	57,940	733,173
Sullivan	14	150	55
Tioga	95	3,669	45,948
Tompkins	140	4,671	4,979
Ulster	308	35,021	312,736
Warren	30	120	159
Washington	158	4,959	9,895
Wayne	425	87,823	1,053,701
Westchester	93	989	15,237
Wyoming	159	43,409	48,538
Yates	332	18,038	77,734

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

<sup>\*\*</sup> 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 3
Pesticide Sales to Private Applicators by Volume (Gallons) in 2014

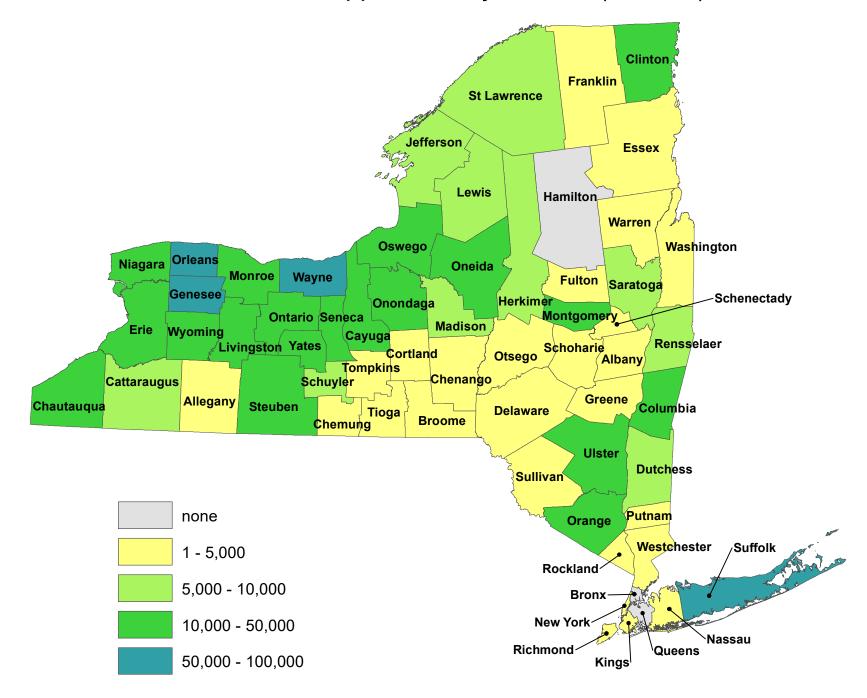
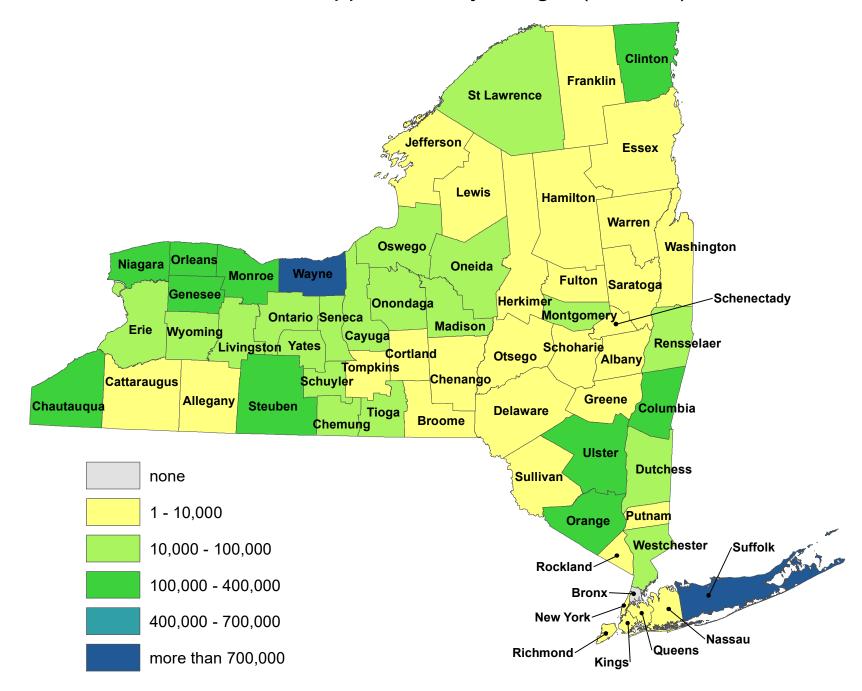


Figure 4
Pesticide Sales to Private Applicators by Weight (Pounds) in 2014



#### 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 2014
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
9359-2	550,827	18.5%	sodium hypochlorite	12.50%	antimicrobial
59074-20001	400,804	13.5%	sodium hypochlorite	12.50%	antimicrobial
279-3206	103,347	3.5%	bifenthrin	7.90%	insecticide
100-1442	99,355	3.4%	atrazine mesotrione s-metolachlor	10.20% 2.71% 27.10%	herbicide
9613-20001	60,776	2.1%	sodium hypochlorite	12.50%	antimicrobial
			imidacloprid octyl bicycloheptene dicarboximide	0.05% 1.00%	
1021-2569	44,437	1.5%	sumithrin	0.40%	insecticide
8033-96-279	41,871	1.4%	acetamiprid bifenthrin	22.73% 27.27%	insecticide
5905-368	39,878	1.3%	mineral oil	98.00%	insecticide, nematicide
75506-12	37,702	1.3%	copper carbonate, basic propiconazole tebuconazole	43.40% 0.50% 0.50%	wood preservative
524-549	36,336	1.2%	potassium salt of glyphosate	48.70%	herbicide
Top 10 Products	1,415,333	47.7%			
All Products	2,970,290				

# Table 5 Calendar Year 2014 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
9198-124	1,635,775	6.3%	prodiamine	0.28%	herbicide
10404-89	1,368,840	5.3%	prodiamine	0.43%	herbicide
34704-776	1,108,572	4.3%	prodiamine	0.375%	herbicide
432-1349-9198	912,971	3.5%	imidacloprid	0.20%	insecticide
10404-85	854,710	3.3%	dithiopyr	0.10%	herbicide
			bifenthrin	0.10%	
432-1417-10404	805,667	3.1%	imidacloprid	0.125%	insecticide
			bifenthrin	0.10%	
432-1417-34704	772,400	3.0%	imidacloprid	0.125%	insecticide
432-1349-34704	730,624	2.8%	imidacloprid	0.20%	insecticide
9198-121	694,779	2.7%	dithiopyr	0.164%	herbicide
9198-120	682,783	2.6%	dithiopyr	0.103%	herbicide
Top 10 Products	9,567,121	36.9%			
All Products	25,917,109				

# Table 6 Calendar Year 2014 Top Ten Pesticide Products by Volume (Gallons)

## Sold by Commercial Permit Holders to Certified Private Applicators

EPA	Quantity	Percentage		Percentage	
Registration	(GL)	of All	Active Ingredients	of Active	Product Type
Number	(GL)	Products		Ingredient	
			potassium salt of		
524-549	81,507	8.6%	glyphosate	48.70%	herbicide
			atrazine	10.20%	
			mesotrione	2.71%	
100-1442	49,608	5.3%	s-metolachlor	27.10%	herbicide
			isopropylamine salt of		
34704-890	44,141	4.7%	glyphosate	41.00%	herbicide
			isopropylamine salt of		
71368-20	39,725	4.2%	glyphosate	41.00%	herbicide
					insecticide,
					miticide,
34704-805	25,438	2.7%	mineral oil	98.00%	fungicide
			dimethylammonium		
62719-556	21,969	2.3%	salt of glyphosate	50.20%	herbicide
			s-metolachlor	20.50%	
		/	mesotrione	2.05%	
100-1282	20,920	2.2%	glyphosate	20.50%	herbicide
	40.004	0.40/	aviglycine	4= 000/	growth
73049-45	19,981	2.1%	hydrochloride	15.00%	regulator
74500 40	40.000	0.004	ammonium	40.500/	,
74530-43	19,039	2.0%	carbamate	19.50%	antimicrobial
241-418	17,707	1.9%	pendimethalin	38.70%	herbicide
Top 10	0.40.00=	00.001			
Products	340,035	36.0%			
All	0.45.00-				
Products	945,335				

# Table 7 Calendar Year 2014 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	350,048	8.3%	captan	78.20%	fungicide
66222-58-66330	315,995	7.4%	captan	78.20%	fungicide
70506-185	307,590	7.3%	mancozeb	75.00%	fungicide
34704-1063	285,170	6.7%	mancozeb	75.00%	fungicide
			trifluralin	0.50%	
62719-289-961	178,000	4.2%	benefin	0.50%	herbicide
70506-187	172,040	4.1%	sulfur	80.00%	fungicide
61282-49	160,000	3.8%	zinc phosphide (ZN3P2)	2.00%	rodenticide
74267-1	157,745	3.7%	Bacillus subtilis MBI 600	0.001%	fungicide
70506-234	141,772	3.3%	mancozeb	75.00%	fungicide
	·				fungicide, herbicide, insecticide,
87994-6	109,560	2.6%	chloropicrin	85.70%	nematicide
Top 10 Products	2,177,920	51.3%			
All Products	4,245,340				

#### D. The Pesticide Sales and Use Reporting Website

The summarized data from the 2014 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: <a href="https://psur.cce.cornell.edu/">https://psur.cce.cornell.edu/</a>