



**Department of  
Environmental  
Conservation**

---

Division of Materials Management

---

**FINAL ANNUAL REPORT  
FOR  
NEW YORK STATE  
PESTICIDE SALES AND  
APPLICATIONS  
2012**

---

## **ACKNOWLEDGMENTS**

The Department wishes to acknowledge the cooperation and assistance of Cornell University in the preparation and development of this annual report.

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
--------------------------------	----------

### List of Figures:

Figure 1: Pesticide Applications by Weight (in Pounds) for New York State by County During 2012.....	5
Figure 2: Pesticide Applications by Volume (in Gallons) for New York State by County During 2012.....	8
Figure 3: Pesticide Sales by Weight (in Pounds) for New York State by County During 2012.....	11
Figure 4: Pesticide Sales by Volume (in Gallons) for New York State by County During 2012.....	14
Figure 5: Relative Use (in Pounds) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 2012.....	17
Figure 6: Relative Use (in Gallons) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 2012 .....	18
Figure 7: Relative Amount (in Pounds) of Reported Top Ten Restricted and General Use Agricultural Pesticide Products Sold by Commercial Permit Holders to Certified Private Applicators - 2012.....	19
Figure 8: Relative Amount (in Gallons) of Reported Top Ten Restricted and General Use Agricultural Pesticide Products Sold by Commercial Permit Holders to Certified Private Applicators - 2012.....	20
Figure 9: Trends in the Amount of Pesticides Applied Commercially.....	21

## Executive Summary

The New York State Department of Environmental Conservation (Department), in conjunction with Cornell University, presents this report on the final 2012 pesticides sales and application data submitted under Environmental Conservation Law Article 33, Title 12, known as the Pesticide Reporting Law (PRL). 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 final data show there were greater than 7.2 million “records” of applications and sales reported for 2012, totaling over 626 million keystrokes of data. The total amount of pesticides reported as applied by commercial applicators in 2012 was 2,712,022 gallons and 25,527,689 pounds. This compares to 2,978,003 gallons and 25,304,246 pounds in 2011.

**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 the validity of the data received from the regulated community. Users of this data are strongly cautioned about limitations of the data. Users of the data are advised to go to the PRL Annual Reports page (<http://www.dec.ny.gov/chemical/96898.html>) to review information regarding data information.

For the 2012 report year, the total number of applicators, technicians and permittees reporting on time was:

15,735 Commercial Applicators and Technicians  
270 Commercial Permittees (Sales)

These figures indicate 94.5 percent of the 16,651 certified applicators and technicians, and 96.4 percent of the 308 commercial permittees reported for 2012. The Department will continue to provide outreach and education to the regulated community in an attempt to achieve maximum compliance with the reporting requirement.

The Department, in conjunction with Cornell, continues to operate a website for regulated entities to report their sales and applications data. The electronic reporting programs enable users to keep their pesticide records on a computer and to report their sales and applications to the Department. The data can be submitted to the Department via e-mail, floppy disk, zip disk, CD ROM, or FTP (File Transfer Protocol). This user-friendly approach to submission improves the quality of the data received. It is also a more cost effective method of reporting for both the regulated community and the Department.

Electronic submissions of PRL sales and applications reports for 2012 increased by only 2.9%, compared with 2011. These submissions contained 6,135,008 records compared to 5,884,164 records in 2011, a 4.3% increase.

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. The corrected data were forwarded to Cornell to replace the original reports in the database.

The Department's long-term goal is to continually improve the reporting rate and data quality by raising the threshold for report acceptance each year. The Department continues to refine its front-line quality control program where Department staff evaluate incoming reports to ensure basic criteria were met. The criteria were established to maximize the volume of data that would 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.

The above procedures helped eliminate some of the constraints on data quality identified in previous annual reports; however, some constraints remain. The Department intends to eliminate as many constraints as possible by expanding the list of acceptance criteria. In this way, the acceptance threshold will rise continuously but gradually, paralleling the learning curve for the regulated community, the Department and Cornell. The goal is to maximize the quantity and quality of data available to health researchers and other users of the data.

The Department took enforcement actions against those entities who failed to report for the year 2012. A Notice of Violation was sent to approximately 929 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for the year 2012. As a result of this action, many of those entities were assessed a civil penalty. Many other applicators and technicians elected to voluntarily surrender their certification instead of paying a penalty. The result of this surrender is they are no longer certified to make commercial pesticide applications. Those entities who did not settle the violation will not be granted renewal privileges until their violation is resolved.

To make the information presented more easily understood and in response to recommendations, the Department is moving toward translating the volume (gallons) of pesticides reported into pounds. In order to convert the volume of a liquid into pounds, the specific gravity of the liquid must be known. The Department changed its product registration practices to capture the specific gravity of each liquid pesticide product as it is registered for sale or use in New York State. There are currently 14,150 registered products in New York State. Of these, approximately 7,970 are liquid formulations. To date, the specific gravity data for most of those products has been obtained. We expect to complete this transition within the coming months and at that point, will be able to provide the information as pounds only.

**The following totals are those most frequently requested:**

Total amount of pesticides applied by commercial applicators in New York State in 2012:

- 2,712,022 Gallons
- 25,527,689 Pounds

The three largest total amounts of pesticide products applied by commercial applicators, by weight, were:

- Andersons Turf Products Fertilizer with 0.2% Merit Insecticide (EPA Registration No. 432-1349-9198) \*
- Andersons Prof. Turf Products Fertilizer with Barricade Herbicide (EPA Registration No. 9198-124) \*
- Dimension 0.10% PLUS FERTILIZER (EPA Registration No: 10404-85)\*

\*This product contains small amounts of pesticides combined with large amounts of fertilizer and other ingredients. The weight reported here is the weight of all ingredients, not the weight of pesticides alone.

The three largest total amounts of pesticide products applied by commercial applicators, by volume, were:

- Surchlor Disinfectant (EPA Registration No. 9359-2)
- Superchlor Disinfectant (EPA Registration No. 59074-20001)
- Lumax Selective Herbicide (EPA Registration No. 100-1152)

Total amount of pesticides sold to private applicators for agricultural use in New York State in 2012:

- 902,312 Gallons
- 3,804,638 Pounds

The three largest total amounts of pesticide products sold to private applicators, by weight, were:

- Penncozeb 75 DF Fungicide (EPA Registration No. 70506-185)
- Captan 80 WDG (EPA Registration No: 66222-58-66330)
- Manzate Pro-Stick Fungicide (EPA Registration No: 70506-234)

The three largest total amounts of pesticide products sold to private applicators, by volume, were:

- Lumax Selective Herbicide (EPA Registration No. 100-1152)
- Roundup Powermax Herbicide (EPA Registration No: 524-549)
- Four Power Plus/ Kleenup Pro/ Mad Dog Plus/ Makaze (EPA Registration No: 34704-890)

Total amount of pesticides sold to distributors for resale in New York State in 2012 was:

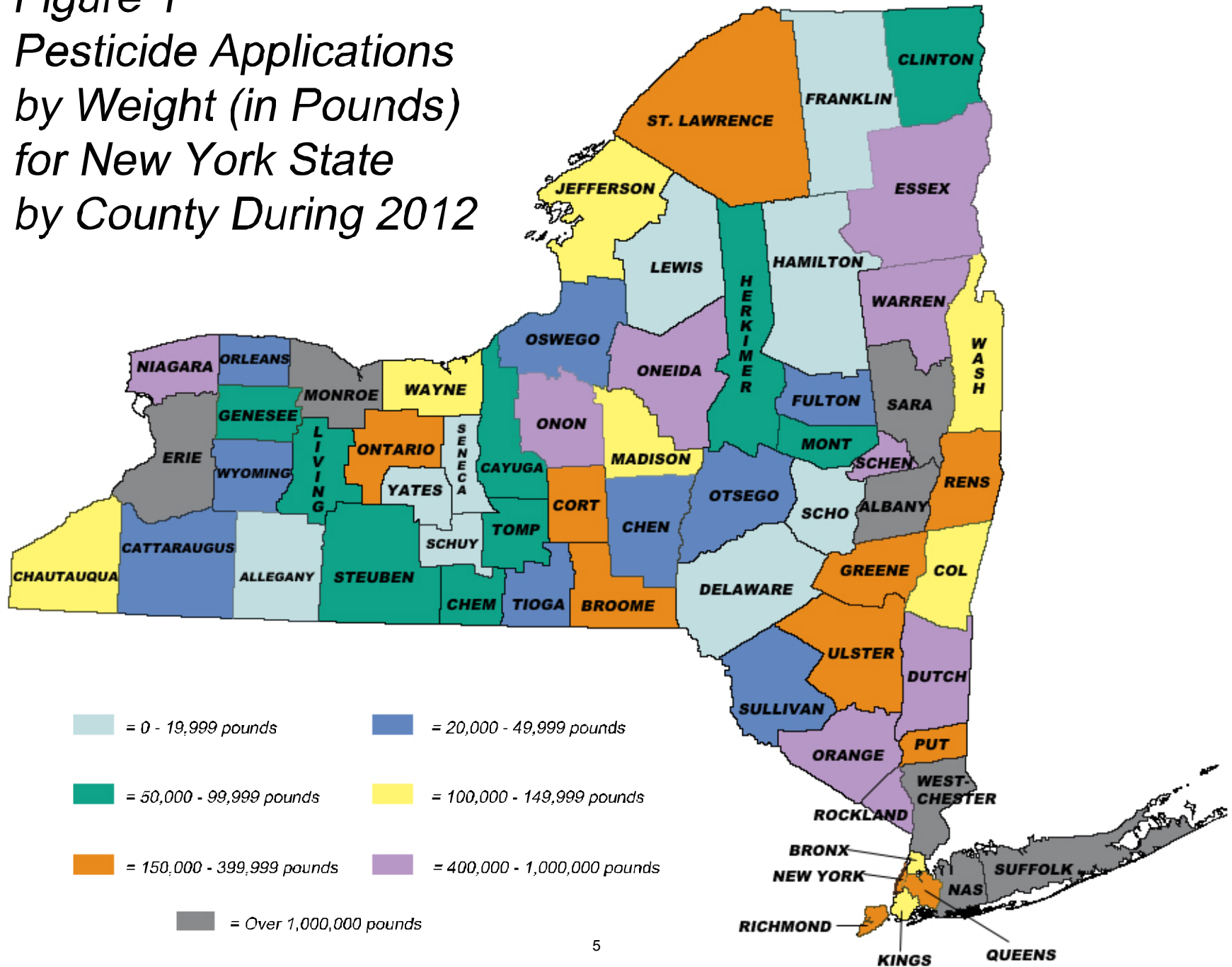
- 700,194 Gallons
- 7,952,965 Pounds

Total amount of pesticides sold to applicators for end use in New York State in 2012 was:

- 776,886 Gallons
- 6,861,204 Pounds

Also, for this year's report we have added charts showing the amount of commercial pesticide applications by volume and weight over the last 10 years.

**Figure 1**  
**Pesticide Applications**  
**by Weight (in Pounds)**  
**for New York State**  
**by County During 2012**





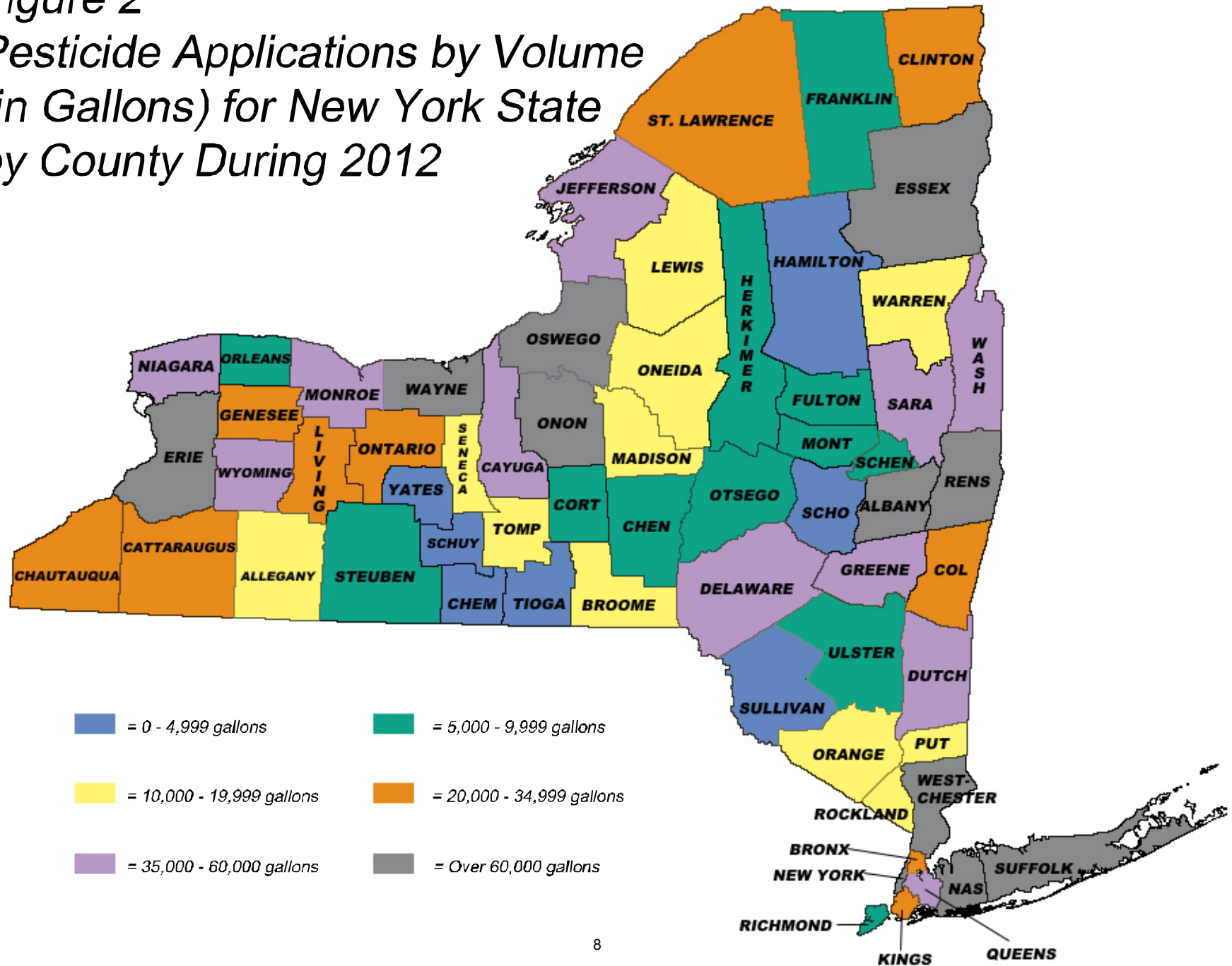
**Pesticide Applications by Weight (in Pounds)  
for New York State by County During 2012**

<b>County</b>	<b>Amount*</b>
Albany	1,061,324.91
Allegany	11,704.28
Bronx	135,883.93
Broome	255,548.56
Cattaraugus	26,839.66
Cayuga	67,659.05
Chautauqua	114,509.32
Chemung	70,580.51
Chenango	36,822.39
Clinton	67,303.95
Columbia	101,545.83
Cortland	341,501.14
Delaware	13,123.96
Dutchess	695,588.70
Erie	1,512,597.18
Essex	827,005.12
Franklin	18,508.34
Fulton	36,841.29
Genesee	95,238.80
Greene	378,972.55
Hamilton	15,425.32
Herkimer	76,949.75
Jefferson	117,828.93
Kings	143,475.12
Lewis	19,740.71
Livingston	60,589.89
Madison	114,538.22
Monroe	2,243,302.58
Montgomery	54,779.92
Nassau	1,744,795.04
New York	288,925.80
Niagara	478,932.14
Oneida	413,508.33
Onondaga	874,279.41
Ontario	196,256.29
Orange	501,226.23
Orleans	40,877.17
Oswego	43,745.30

<b>County</b>	<b>Amount*</b>
Otsego	23,166.11
Putnam	225,431.85
Queens	190,574.03
Rensselaer	241,001.04
Richmond	150,543.20
Rockland	854,423.22
St. Lawrence	188,022.37
Saratoga	1,177,035.45
Schenectady	455,492.51
Schoharie	8,108.26
Schuyler	8,306.41
Seneca	9,263.03
Steuben	51,576.64
Suffolk	5,093,453.61
Sullivan	40,869.26
Tioga	23,403.78
Tompkins	63,658.65
Ulster	229,377.85
Warren	543,714.51
Washington	112,618.15
Wayne	106,720.12
Westchester	2,357,998.00
Wyoming	23,766.93
Yates	14,140.89

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

# *Pesticide Applications by Volume (in Gallons) for New York State by County During 2012*



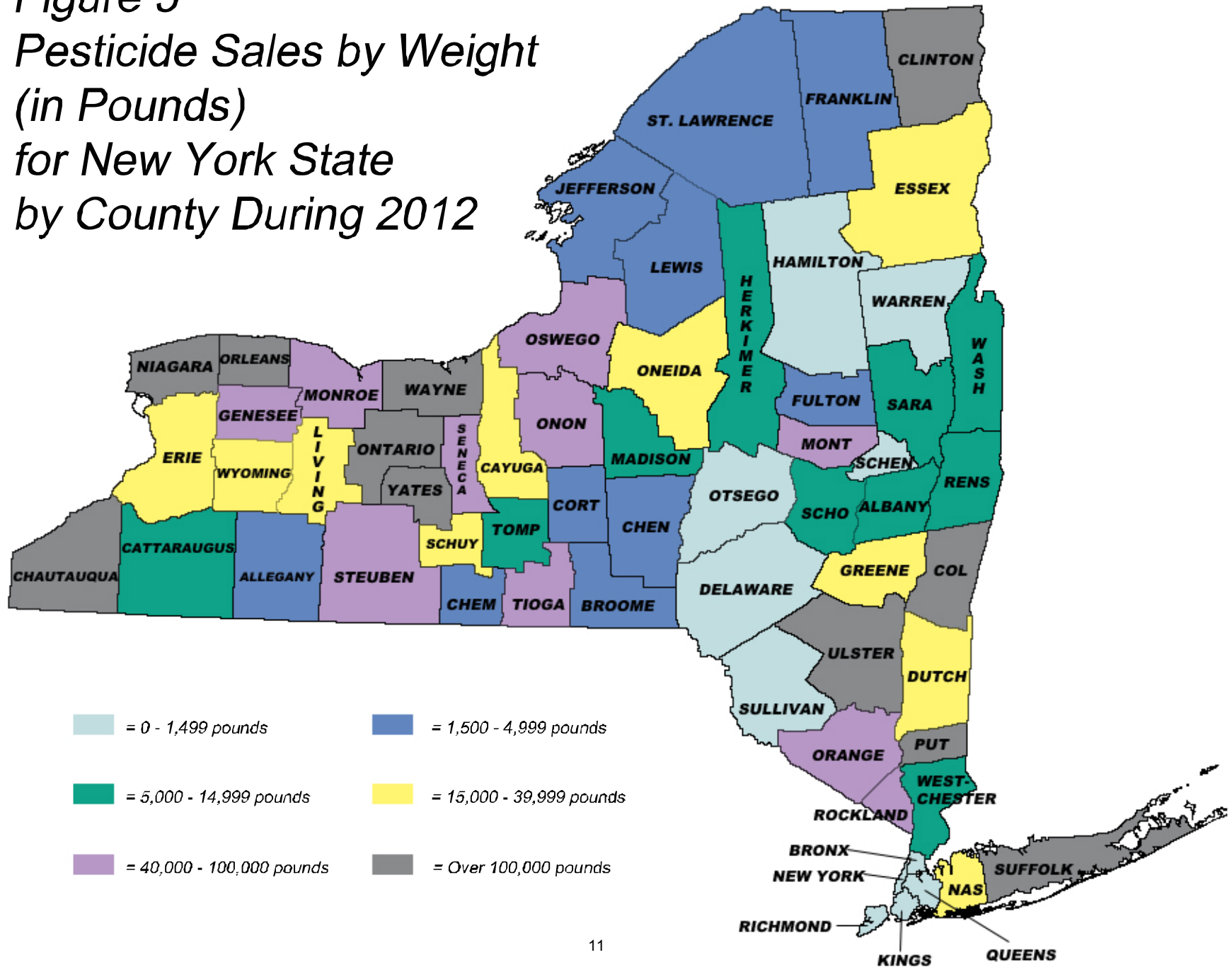
**Pesticide Applications by Volume (in Gallons)  
for New York State by County During 2012**

<b>County</b>	<b>Amount*</b>
Albany	171,185.62
Allegany	11,333.64
Bronx	20,521.40
Broome	11,484.96
Cattaraugus	27,134.27
Cayuga	45,401.46
Chautauqua	22,043.88
Chemung	2,484.36
Chenango	7,575.11
Clinton	21,564.86
Columbia	22,016.98
Cortland	9,287.56
Delaware	37,339.41
Dutchess	37,214.21
Erie	96,373.08
Essex	240,751.31
Franklin	9,398.97
Fulton	5,576.40
Genesee	21,423.46
Greene	43,194.20
Hamilton	820.58
Herkimer	8,738.72
Jefferson	37,992.62
Kings	26,903.53
Lewis	10,906.37
Livingston	20,116.93
Madison	11,297.88
Monroe	53,105.87
Montgomery	6,979.44
Nassau	149,436.46
New York	155,064.33
Niagara	35,763.67
Oneida	16,673.78
Onondaga	67,229.14
Ontario	24,598.96
Orange	12,756.43
Orleans	8,287.34
Oswego	105,029.02
Otsego	6,307.05

<b>County</b>	<b>Amount*</b>
Putnam	12,932.35
Queens	47,782.24
Rensselaer	155,143.66
Richmond	6,005.00
Rockland	14,927.45
St. Lawrence	32,035.97
Saratoga	50,322.69
Schenectady	9,573.63
Schoharie	4,866.34
Schuyler	2,410.00
Seneca	11,249.79
Steuben	9,220.38
Suffolk	192,194.10
Sullivan	3,234.55
Tioga	2,028.54
Tompkins	10,191.11
Ulster	8,008.51
Warren	15,614.29
Washington	52,056.04
Wayne	70,157.91
Westchester	329,150.17
Wyoming	45,225.40
Yates	4,592.00

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

**Figure 3**  
**Pesticide Sales by Weight**  
**(in Pounds)**  
**for New York State**  
**by County During 2012**



**Pesticide Sales by Weight (in Pounds)  
for New York State by County During 2012**

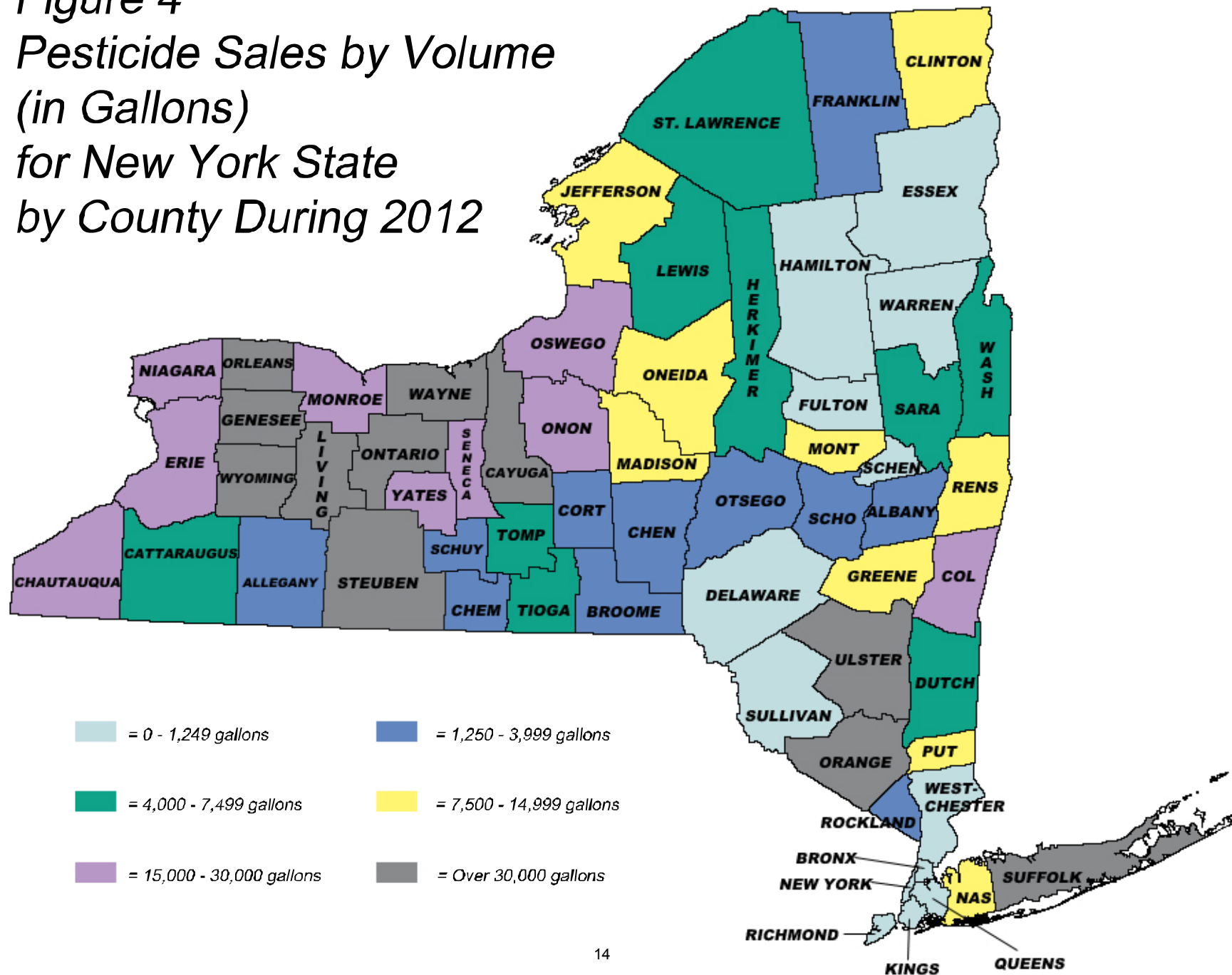
<b>County</b>	<b>Amount*</b>
Albany	5,052.22
Allegany	2,702.90
Bronx	0.00
Broome	2,093.55
Cattaraugus	5,903.11
Cayuga	39,840.02
Chautauqua	102,517.95
Chemung	1,510.06
Chenango	3,304.35
Clinton	157,772.54
Columbia	134,870.33
Cortland	1,820.17
Delaware	183.89
Dutchess	34,736.47
Erie	26,277.33
Essex	17,530.69
Franklin	3,210.43
Fulton	2,194.75
Genesee	67,646.33
Greene	17,889.17
Hamilton	0.00
Herkimer	12,860.64
Jefferson	3,610.65
Kings	491.79
Lewis	3,176.25
Livingston	27,961.09
Madison	14,522.85
Monroe	54,509.24
Montgomery	40,216.57
Nassau	34,754.23
New York	
Niagara	147,085.99
Oneida	23,168.43
Onondaga	57,598.12
Ontario	112,881.01
Orange	98,664.96
Orleans	235,667.63
Oswego	64,376.00
Otsego	1,396.90

<b>County</b>	<b>Amount*</b>
Putnam	107,274.96
Queens	653.50
Rensselaer	14,165.59
Richmond	
Rockland	45,985.75
St. Lawrence	1,577.07
Saratoga	10,446.86
Schenectady	808.60
Schoharie	7,962.54
Schuyler	21,889.68
Seneca	50,992.88
Steuben	88,718.17
Suffolk	100,336.58
Sullivan	163.00
Tioga	44,040.23
Tompkins	6,230.11
Ulster	345,792.29
Warren	21.01
Washington	6,929.10
Wayne	1,224,482.39
Westchester	8,679.31
Wyoming	38,219.19
Yates	119,252.07

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



**Figure 4**  
**Pesticide Sales by Volume**  
**(in Gallons)**  
**for New York State**  
**by County During 2012**



**Pesticide Sales by Volume (in Gallons)  
for New York State by County During 2012**

<b>County</b>	<b>Amount*</b>
Albany	1,912.30
Allegany	3,836.73
Bronx	0.00
Broome	1,769.92
Cattaraugus	5,769.62
Cayuga	42,255.07
Chautauqua	26,477.37
Chemung	1,931.02
Chenango	2,380.78
Clinton	13,770.70
Columbia	18,436.12
Cortland	2,057.72
Delaware	668.14
Dutchess	4,415.54
Erie	16,489.88
Essex	993.63
Franklin	3,796.83
Fulton	927.09
Genesee	67,781.59
Greene	14,760.94
Hamilton	0.00
Herkimer	6,400.43
Jefferson	9,872.90
Kings	259.07
Lewis	4,320.77
Livingston	41,748.51
Madison	8,959.23
Monroe	23,523.86
Montgomery	10,597.97
Nassau	12,212.07
New York	5.00
Niagara	21,015.04
Oneida	13,407.86
Onondaga	24,635.33
Ontario	39,604.23
Orange	46,963.16
Orleans	55,960.78
Oswego	17,962.58
Otsego	2,498.78

<b>County</b>	<b>Amount*</b>
Putnam	11,041.02
Queens	240.00
Rensselaer	8,248.97
Richmond	417.00
Rockland	1,471.30
St. Lawrence	5,895.44
Saratoga	4,903.76
Schenectady	575.86
Schoharie	3,813.62
Schuyler	3,658.73
Seneca	19,623.06
Steuben	33,412.74
Suffolk	42,695.05
Sullivan	64.00
Tioga	5,176.12
Tompkins	5,380.72
Ulster	32,100.32
Warren	35.75
Washington	6,029.06
Wayne	75,305.08
Westchester	677.69
Wyoming	51,209.17
Yates	19,922.15

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

**Figure 5**

**Relative Use (Pounds) of Reported Top Ten Pesticide Products  
Applied by Certified Commercial Applicators during 2012\***

<b>EPA Registration Number‡</b>	<b>Weight Quantity (pounds)**</b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>
432-1349-9198	1,441,960.28	5.649%	◇ Imidacloprid
9198-124	1,057,055.33	4.141%	◇ Prodiamine
10404-85	913,311.23	3.578%	◇ Dithiopyr
34704-776	824,769.19	3.231%	◇ Prodiamine
9198-120	790,881.24	3.098%	◇ Dithiopyr
10404-86	766,929.48	3.004%	◇ Dithiopyr
432-1349-10404	727,748.60	2.851%	◇ Imidacloprid
432-1417-10404	638,632.16	2.502%	◇ Bifenthrin ◇ Imidacloprid
1706-240	592,501.00	2.321%	◇ Ammonium Sulfate
961-365	532,189.21	2.085%	◇ Prodiamine
<b>Top 10 Products - Total Quantity (pounds) Used:</b>	<b>8,924,609.88</b>		
<b>All Products - Total Quantity (pounds) Used:</b>	<b>25,527,688.02</b>		
<b>Top 10 Products as a Percentage of Total Quantity (pounds):</b>		<b>34.96%</b>	

\* Excluding Illegible, Invalid, Irregular, and Unreported Categories.

\*\* Product quantities may be initially reported in weight-based or volume-based units of measurement. The total quantity for the product is the sum of the weight and volume totals. If no quantity is specified for a product, this indicates that the product was applied, but the reported unit of measure was invalid, or that the reported quantity was negligible (less than 0.01).

‡ See Pesticide Products by Name and EPA Registration Number for the names of the products for a given EPA Registration Number. Product information is also available from the Pesticide Sales and Use Reporting web site (URL = <http://pmep.cce.cornell.edu/psur>).

**Figure 6**

**Relative Use (Gallons) of Reported Top Ten Pesticide Products  
Applied by Certified Commercial Applicators during 2012\***

<b>EPA Registration Number‡</b>	<b>Volume Quantity (gallons)**</b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>
9359-2	594,843.47	21.934%	◇ Sodium Hypochlorite
59074-20001	340,419.77	12.552%	◇ Sodium Hypochlorite
100-1152	97,957.98	3.612%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
279-3206	95,592.86	3.525%	◇ Bifenthrin
9613-20001	60,299.50	2.223%	◇ Sodium Hypochlorite
5905-368	52,775.87	1.946%	◇ Aliphatic Petroleum Solvent
499-304	48,565.72	1.791%	◇ Cyfluthrin
75506-12	35,954.00	1.326%	◇ Copper Carbonate, Basic ◇ Propiconazole ◇ Tebuconazole
1706-179	35,524.72	1.310%	◇ Sodium Bromide ◇ Sodium Hypochlorite
432-763	26,139.04	0.964%	◇ Deltamethrin
<b>Top 10 Products - Total Quantity (gallons) Used:</b>	<b>1,691,421.61</b>		
<b>All Products - Total Quantity (gallons) Used:</b>	<b>2,712,020.86</b>		
<b>Top 10 Products as a Percentage of Total Quantity (gallons):</b>		<b>62.37%</b>	

\* Excluding Illegible, Invalid, Irregular, and Unreported Categories.

\*\* Product quantities may be initially reported in weight-based or volume-based units of measurement. The total quantity for the product is the sum of the weight and volume totals. If no quantity is specified for a product, this indicates that the product was applied, but the reported unit of measure was invalid, or that the reported quantity was negligible (less than 0.01).

‡ See Pesticide Products by Name and EPA Registration Number for the names of the products for a given EPA Registration Number. Product information is also available from the Pesticide Sales and Use Reporting web site (URL = <http://pmep.cce.cornell.edu/psur>).

## Figure 7

**Relative Amount (Pounds) of Reported Top Ten Restricted  
and General Use Agricultural Pesticide Products Sold by  
Commercial Permit Holders to Certified Private Applicators during 2012\***

<b>EPA Registration Number<sup>‡</sup></b>	<b>Weight Quantity (pounds)<sup>**</sup></b>	<b>Percentage of All Products</b>	<b>Active Ingredients</b>
70506-185	538,323.00	14.149%	◇ Mancozeb
66222-58-66330	306,277.50	8.050%	◇ Captan
70506-234	229,423.00	6.030%	◇ Mancozeb
70506-187	223,614.00	5.877%	◇ Sulfur
66222-58-19713	190,380.00	5.004%	◇ Captan
6325-13	169,100.00	4.445%	◇ Sulfur
61282-49	164,725.00	4.330%	◇ Zinc Phosphide (ZN3P2)
70506-201	141,270.88	3.713%	◇ Basic Copper Sulfate
6325-13-34704	120,060.00	3.156%	◇ Sulfur
42750-231	101,010.00	2.655%	◇ Captan
<b>Top 10 Products - Total Quantity (pounds) Sold:</b>	<b>2,184,183.38</b>		
<b>All Products - Total Quantity (pounds) Sold:</b>	<b>3,804,638.21</b>		
<b>Top 10 Products as a Percentage of Total Quantity (pounds):</b>		<b>57.41%</b>	

\* Excluding Illegible, Invalid, Irregular, and Unreported Categories.

\*\* Product quantities may be initially reported in weight-based or volume-based units of measurement. The total quantity for the product is the sum of the weight and volume totals. If no quantity is specified for a product, this indicates that the product was applied, but the reported unit of measure was invalid, or that the reported quantity was negligible (less than 0.01).

‡ See Pesticide Products by Name and EPA Registration Number for the names of the products for a given EPA Registration Number. Product information is also available from the Pesticide Sales and Use Reporting web site (URL = <http://pmep.cce.cornell.edu/psur>).

## Figure 8

### Relative Amount (Gallons) of Reported Top Ten Restricted and General Use Agricultural Pesticide Products Sold by Commercial Permit Holders to Certified Private Applicators during 2012\*

EPA Registration Number‡	Volume Quantity (gallons)**	Percentage of All Products	Active Ingredients
100-1152	76,216.48	8.447%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
524-549	44,904.56	4.977%	◇ Glycine, N-(Phosphonomethyl)-Potassium Salt
34704-890	42,020.01	4.657%	◇ Glyphosate-Isopropylammonium
100-1282	26,311.25	2.916%	◇ Metolachlor ◇ Mesotrione ◇ Glyphosate
1381-192	25,503.91	2.827%	◇ Glyphosate-Isopropylammonium
5481-468	22,886.00	2.536%	◇ Metam-Sodium
100-1169	21,347.32	2.366%	◇ Glyphosate-Isopropylammonium
100-1182	20,227.75	2.242%	◇ Glycine, N-(Phosphonomethyl)-Potassium Salt
241-418	18,636.77	2.065%	◇ Pendimethalin
34704-805	18,399.50	2.039%	◇ Kerosene (Petroleum) Hydrodesulfurized
<b>Top 10 Products - Total Quantity (gallons) Sold:</b>	<b>521,509.01</b>		
<b>All Products - Total Quantity (gallons) Sold:</b>	<b>902,312.31</b>		
<b>Top 10 Products as a Percentage of Total Quantity (gallons):</b>		<b>57.80%</b>	

\* Excluding Illegible, Invalid, Irregular, and Unreported Categories.

\*\* Product quantities may be initially reported in weight-based or volume-based units of measurement. The total quantity for the product is the sum of the weight and volume totals. If no quantity is specified for a product, this indicates that the product was applied, but the reported unit of measure was invalid, or that the reported quantity was negligible (less than 0.01).

‡ See Pesticide Products by Name and EPA Registration Number for the names of the products for a given EPA Registration Number. Product information is also available from the Pesticide Sales and Use Reporting web site (URL = <http://pmep.cce.cornell.edu/psur>).

