



**Department of
Environmental
Conservation**

Division of Materials Management

**FINAL ANNUAL REPORT
FOR
NEW YORK STATE
PESTICIDE SALES AND
APPLICATIONS
2013**

ACKNOWLEDGMENTS

The Department wishes to acknowledge the cooperation and assistance of Cornell University 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 report on the final 2013 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 7.3 million “records” of applications and sales reported for 2013, totaling over 633 million keystrokes of data. The total amount of pesticides reported as applied by commercial applicators in 2013 was 2,946,607 gallons and 24,345,487 pounds. This compares to 2,893,707 gallons and 25,791,635 pounds in 2012.

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 2013 report year, the total number of applicators, technicians and permittees reporting on time was:

16,333 Commercial Applicators and Technicians
297 Commercial Permittees (Sales)

These figures indicate 96.5 percent of the 16,926 certified applicators and technicians, and 97.4 percent of the 305 commercial permittees reported on time for 2013. 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 2013 increased by 5.0%, compared with 2012. These submissions contained 6,205,118 records compared to 6,135,008 records in 2012, a 1.1% 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 2013. An Order on Consent was sent to approximately 879 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for the year 2013. 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.

The following totals are those most frequently requested:

Total amount of pesticides applied by commercial applicators in New York State in 2013:

- 2,946,607 Gallons
- 24,345,487 Pounds

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

- Andersons Prof. Turf Products Fertilizer with Barricade Herbicide (EPA Registration No. 9198-124) *
- Lesco Stonewall/Barricade 0.43% plus Fertilizer (EPA Registration No. 10404-89) *
- Lesco Allectus 0.225 Insecticide plus Fertilizer (EPA Registration No. 432-1417-10404) *

*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)
- Ortho Max Pro / Talstar P Professional Insecticide (EPA Registration No. 279-3206)

Total amount of pesticides sold to private applicators for agricultural use in New York State in 2013:

- 910,765 Gallons
- 3,965,855 Pounds

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

- Captan 80 WDG (EPA Registration No. 42750-231)
- Roper DF Rainshield (EPA Registration No: 34704-1063)
- 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)
- Lumax EZ Herbicide (EPA Registration No: 100-1442)

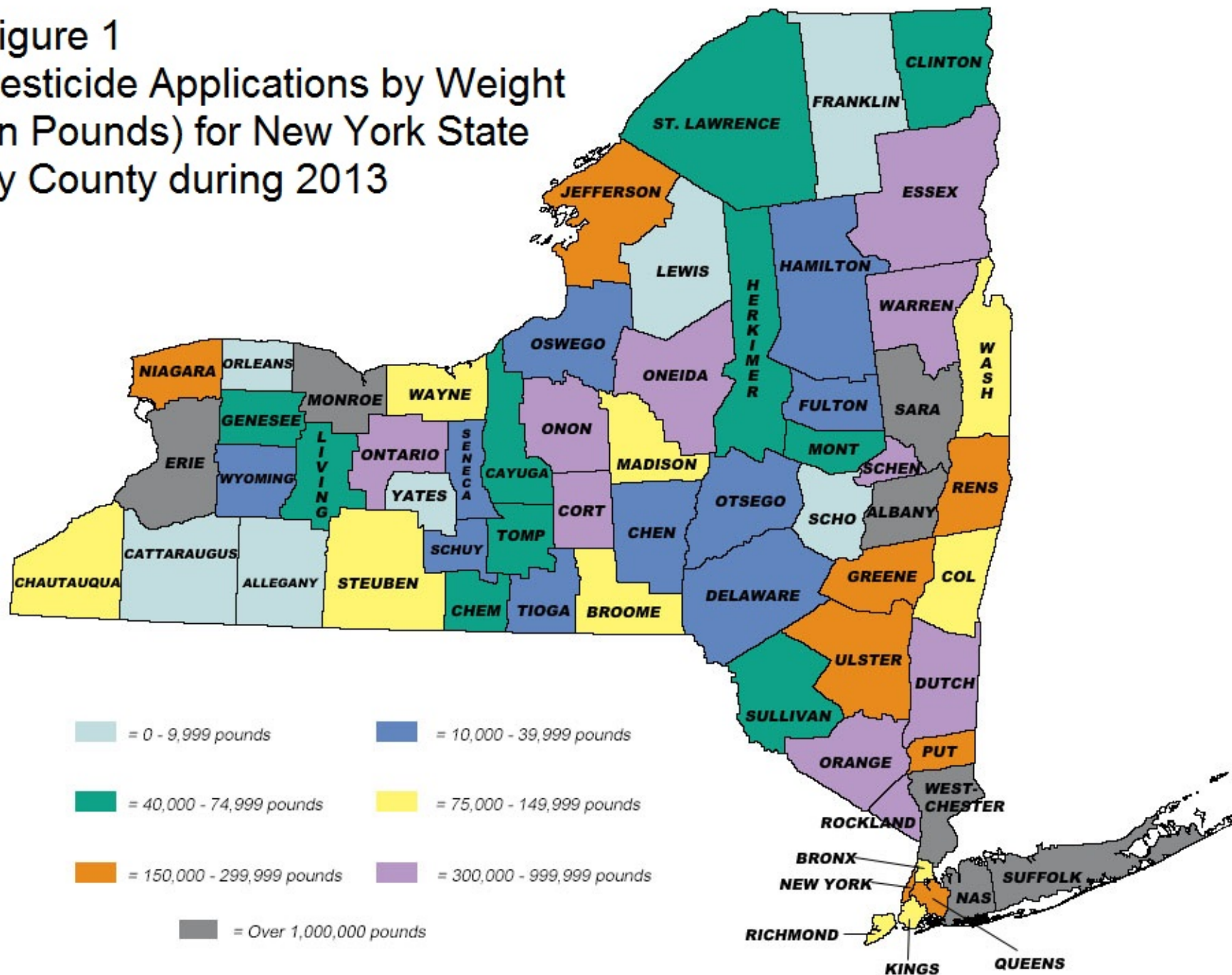
Total amount of pesticides sold to distributors for resale in New York State in 2013 was:

- 1,253,563 Gallons
- 20,696,548 Pounds

Total amount of restricted use pesticides sold to applicators for end use in New York State in 2013 was:

- 269,542 Gallons
- 20,850,186 Pounds

Figure 1



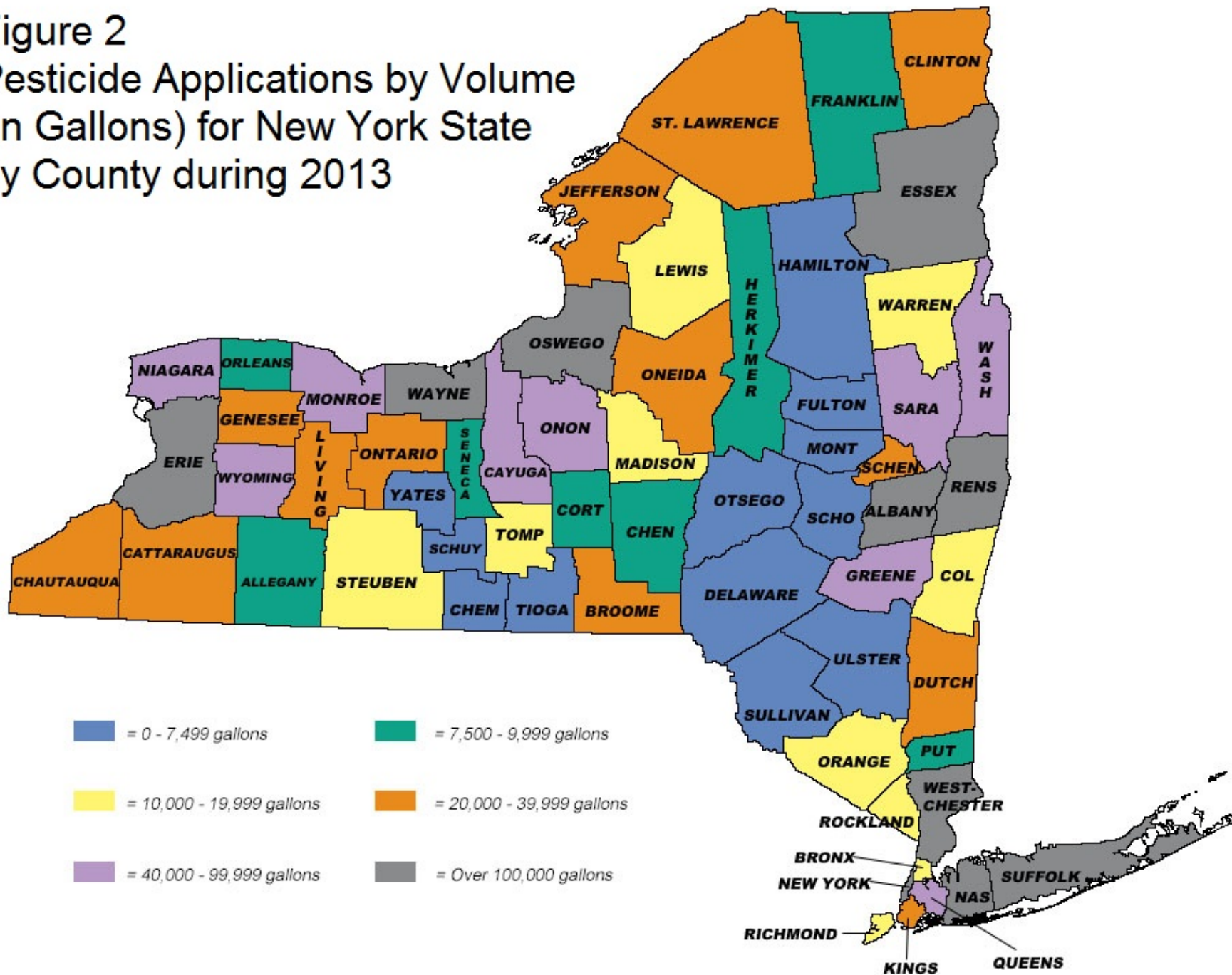
**Pesticide Applications by Weight (in Pounds) for
New York State by County during 2013**

County	Amount*
ALBANY	1,016,819.48
ALLEGANY	10,667.52
BRONX	147,690.24
BROOME	133,306.75
CATTARAUGUS	10,476.82
CAYUGA	40,810.19
CHAUTAUQUA	145,199.44
CHEMUNG	47,286.44
CHENANGO	27,431.90
CLINTON	55,395.92
COLUMBIA	93,388.93
CORTLAND	339,980.49
DELAWARE	21,350.75
DUTCHESS	614,152.98
ERIE	1,561,564.92
ESSEX	840,846.55
FRANKLIN	14,455.63
FULTON	38,125.91
GENESEE	44,065.64
GREENE	228,205.18
HAMILTON	15,070.82
HERKIMER	56,674.57
JEFFERSON	178,489.47
KINGS	145,214.58
LEWIS	14,522.78
LIVINGSTON	69,087.40
MADISON	79,063.61
MONROE	2,208,602.24
MONTGOMERY	46,735.90
NASSAU	1,750,701.36
NEW YORK	283,359.61
NIAGARA	250,156.55
ONEIDA	439,927.75
ONONDAGA	886,998.68
ONTARIO	332,881.98
ORANGE	591,116.70
ORLEANS	13,964.54
OSWEGO	33,347.24
OTSEGO	19,779.21
PUTNAM	253,016.37

QUEENS	174,802.62
RENSSELAER	194,527.97
RICHMOND	84,063.99
ROCKLAND	815,943.33
SARATOGA	1,127,432.16
SCHENECTADY	371,191.42
SCHOHARIE	4,905.44
SCHUYLER	15,143.47
SENECA	16,418.83
ST. LAWRENCE	61,837.32
STEUBEN	77,275.36
SUFFOLK	5,041,535.17
SULLIVAN	47,659.46
TIOGA	31,420.75
TOMPKINS	74,912.04
ULSTER	222,575.29
WARREN	442,975.16
WASHINGTON	136,066.93
WAYNE	144,579.71
WESTCHESTER	2,112,349.56
WYOMING	27,566.86
YATES	14,318.29

*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 2013



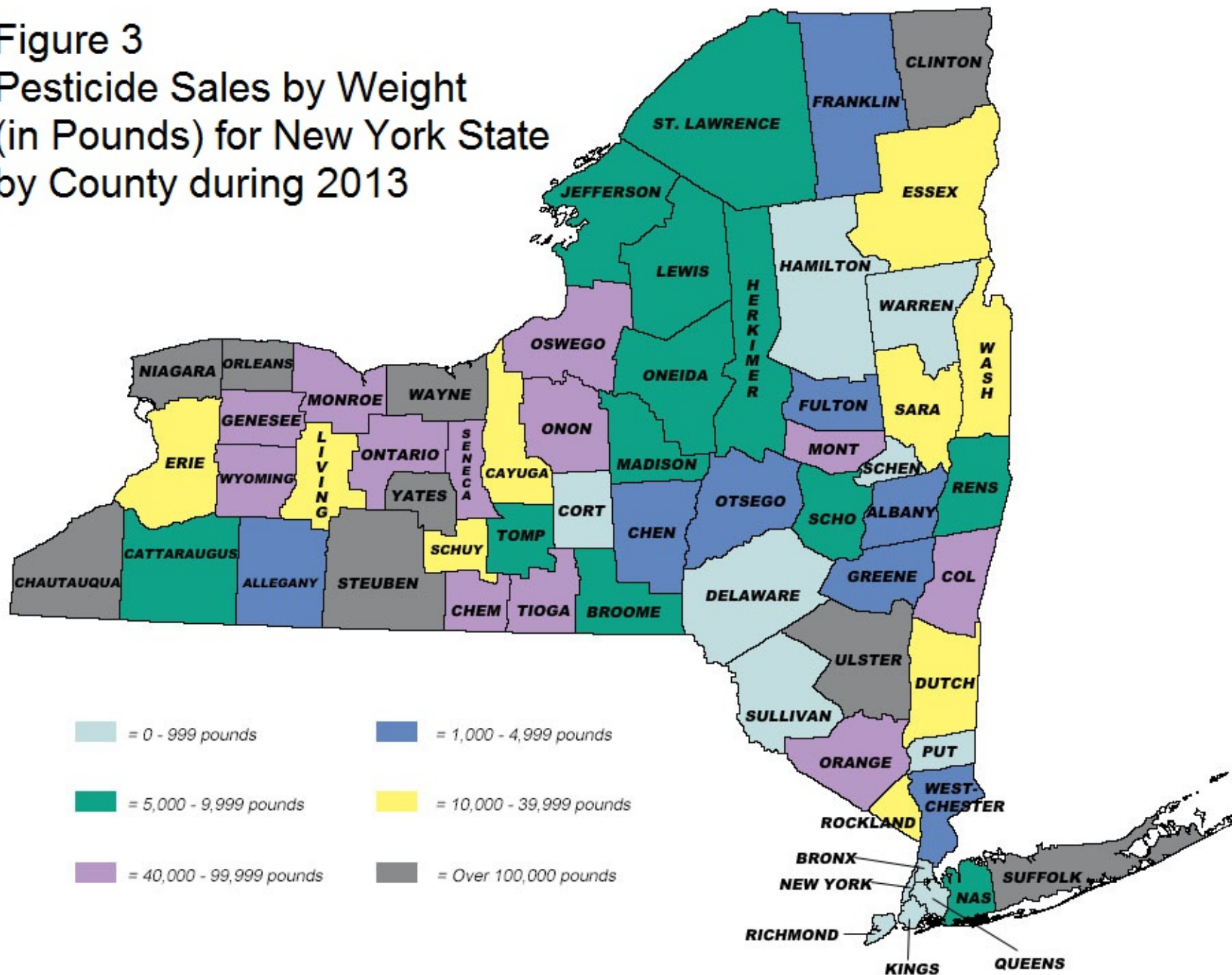
**Pesticide Applications by Volume (in Gallons)
for New York State by County during 2013**

County	Amount*
ALBANY	163,714.53
ALLEGANY	8,213.07
BRONX	17,634.44
BROOME	37,573.58
CATTARAUGUS	32,748.15
CAYUGA	56,859.47
CHAUTAUQUA	22,116.06
CHEMUNG	2,271.83
CHENANGO	8,321.85
CLINTON	22,438.72
COLUMBIA	10,897.81
CORTLAND	8,729.91
DELAWARE	6,234.92
DUTCHESS	35,682.42
ERIE	100,892.25
ESSEX	249,012.37
FRANKLIN	8,318.51
FULTON	1,852.97
GENESEE	22,663.82
GREENE	42,174.81
HAMILTON	3,224.45
HERKIMER	8,414.08
JEFFERSON	30,885.67
KINGS	25,639.76
LEWIS	14,968.84
LIVINGSTON	22,174.25
MADISON	11,436.10
MONROE	42,043.06
MONTGOMERY	6,308.46
NASSAU	126,620.49
NEW YORK	156,117.45
NIAGARA	52,725.78
ONEIDA	23,716.96
ONONDAGA	64,864.48
ONTARIO	25,369.61
ORANGE	13,672.67
ORLEANS	9,372.16
OSWEGO	109,212.58
OTSEGO	6,193.57
PUTNAM	8,560.84
QUEENS	68,878.56
RENSSELAER	187,699.65

RICHMOND	11,518.87
ROCKLAND	12,630.04
SARATOGA	52,723.93
SCHENECTADY	23,201.48
SCHOHARIE	5,286.93
SCHUYLER	2,602.01
SENECA	8,184.40
ST. LAWRENCE	26,518.07
STEUBEN	10,805.45
SUFFOLK	279,464.09
SULLIVAN	3,692.22
TIOGA	2,551.80
TOMPKINS	10,662.95
ULSTER	6,773.10
WARREN	10,693.24
WASHINGTON	49,171.65
WAYNE	106,489.74
WESTCHESTER	394,909.68
WYOMING	45,180.87
YATES	4,570.72

*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 2013



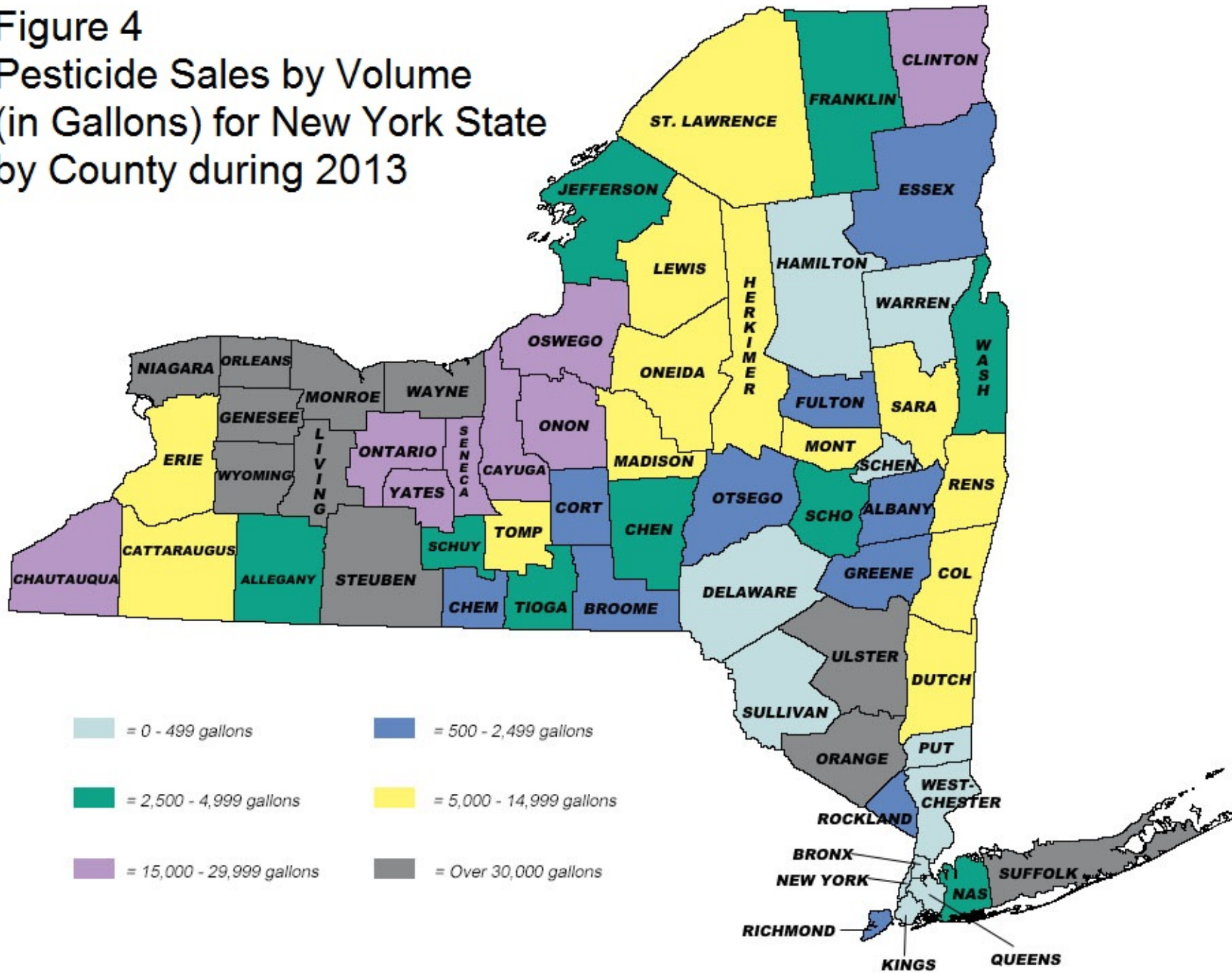
**Pesticide Sales by Weight (in Pounds) for
New York State by County during 2013**

County	Amount*
ALBANY	4,508.39
ALLEGANY	4,356.44
BROOME	6,437.98
CATTARAUGUS	6,179.04
CAYUGA	21,443.15
CHAUTAUQUA	142,886.17
CHEMUNG	45,799.24
CHENANGO	1,863.27
CLINTON	192,030.22
COLUMBIA	78,810.94
CORTLAND	540.53
DELAWARE	380.13
DUTCHESS	23,197.32
ERIE	32,725.94
ESSEX	13,227.37
FRANKLIN	1,901.13
FULTON	3,992.64
GENESEE	70,305.68
GREENE	3,039.29
HAMILTON	82.38
HERKIMER	9,302.48
JEFFERSON	8,206.77
KINGS	2.15
LEWIS	6,636.43
LIVINGSTON	13,500.31
MADISON	6,617.61
MONROE	63,245.49
MONTGOMERY	45,361.62
NASSAU	8,217.36
NIAGARA	213,390.07
ONEIDA	9,915.03
ONONDAGA	49,270.06
ONTARIO	41,446.34
ORANGE	93,967.17
ORLEANS	190,280.50
OSWEGO	62,164.87
OTSEGO	1,295.26
PUTNAM	738.80
QUEENS	
RENSSELAER	6,360.34
RICHMOND	
ROCKLAND	20,620.26

SARATOGA	13,332.17
SCHENECTADY	672.23
SCHOHARIE	8,713.21
SCHUYLER	21,580.07
SENECA	45,139.58
ST. LAWRENCE	7,266.97
STEUBEN	110,820.17
SUFFOLK	226,612.45
SULLIVAN	335.88
TIOGA	40,739.45
TOMPKINS	5,220.59
ULSTER	294,975.31
WARREN	68.00
WASHINGTON	19,001.41
WAYNE	576,507.66
WESTCHESTER	3,942.76
WYOMING	59,962.11
YATES	126,222.38

*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 2013



**Pesticide Sales by Volume (in Gallons) for
New York State by County during 2013**

County	Amount*
ALBANY	1,490.73
ALLEGANY	3,659.51
BROOME	2,184.22
CATTARAUGUS	10,469.21
CAYUGA	27,477.90
CHAUTAUQUA	29,801.82
CHEMUNG	2,388.87
CHENANGO	3,229.98
CLINTON	16,746.85
COLUMBIA	8,438.58
CORTLAND	2,111.30
DELAWARE	482.70
DUTCHESS	6,926.03
ERIE	13,324.33
ESSEX	621.82
FRANKLIN	4,206.00
FULTON	1,189.77
GENESEE	76,222.00
GREENE	985.69
HAMILTON	365.00
HERKIMER	6,317.56
JEFFERSON	4,914.82
KINGS	10.00
LEWIS	5,042.73
LIVINGSTON	47,855.54
MADISON	7,597.40
MONROE	32,897.10
MONTGOMERY	11,446.71
NASSAU	3,321.46
NIAGARA	37,695.07
ONEIDA	14,040.75
ONONDAGA	25,088.92
ONTARIO	28,395.05
ORANGE	46,279.09
ORLEANS	61,933.33
OSWEGO	19,207.07
OTSEGO	2,364.72
PUTNAM	317.67
QUEENS	40.00
RENSSELAER	7,294.60
RICHMOND	591.00
ROCKLAND	1,114.50

SARATOGA	5,453.47
SCHENECTADY	322.25
SCHOHARIE	2,745.26
SCHUYLER	4,380.75
SENECA	18,189.47
ST. LAWRENCE	7,754.07
STEUBEN	36,107.91
SUFFOLK	60,039.39
SULLIVAN	123.75
TIOGA	3,592.06
TOMPKINS	5,064.63
ULSTER	32,951.05
WARREN	18.25
WASHINGTON	4,586.53
WAYNE	74,886.96
WESTCHESTER	243.59
WYOMING	55,933.00
YATES	22,440.34

*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 2013***

EPA Registration Number‡	Weight Quantity (pounds)**	Percentage of All Products	Active Ingredients
9198-124	1,015,071.03	4.169%	◇ Prodiamine
10404-89	968,067.58	3.976%	◇ Prodiamine
432-1417-10404	877,720.51	3.605%	◇ Bifenthrin ◇ Imidacloprid
10404-85	871,404.55	3.579%	◇ Dithiopyr
432-1349-9198	844,918.32	3.471%	◇ Imidacloprid
34704-776	820,352.91	3.370%	◇ Prodiamine
10404-86	740,790.69	3.043%	◇ Dithiopyr
9198-120	730,088.29	2.999%	◇ Dithiopyr
432-1417-34704	618,216.74	2.539%	◇ Bifenthrin ◇ Imidacloprid
1706-240	593,245.00	2.437%	◇ Ammonium Sulfate
Top 10 Products - Total Quantity (pounds) Used:	9,575,812.87		
All Products - Total Quantity (pounds) Used:	24,345,486.20		
Top 10 Products as a Percentage of Total Quantity (pounds):		39.33%	

* 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 2013***

EPA Registration Number‡	Volume Quantity (gallons)**	Percentage of All Products	Active Ingredients
9359-2	602,756.26	20.456%	◇ Sodium Hypochlorite
59074-20001	420,730.00	14.278%	◇ Sodium Hypochlorite
279-3206	94,369.50	3.203%	◇ Bifenthrin
9613-20001	94,006.00	3.190%	◇ Sodium Hypochlorite
100-1152	59,627.24	2.024%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
34704-879	42,601.78	1.446%	◇ Propiconazole
100-1442	41,724.26	1.416%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
75506-12	37,066.00	1.258%	◇ Copper Carbonate, Basic ◇ Propiconazole ◇ Tebuconazole
5905-368	36,688.70	1.245%	◇ Aliphatic Petroleum Solvent
1706-179	34,666.85	1.177%	◇ Sodium Bromide ◇ Sodium Hypochlorite
Top 10 Products - Total Quantity (gallons) Used:	1,775,747.44		
All Products - Total Quantity (gallons) Used:	2,946,605.44		
Top 10 Products as a Percentage of Total Quantity (gallons):		60.26%	

* 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 2013***

EPA Registration Number‡	Weight Quantity (pounds)**	Percentage of All Products	Active Ingredients
42750-231	255,363.75	8.331%	◇ Captan
34704-1063	173,550.00	5.662%	◇ Mancozeb
70506-234	167,445.00	5.462%	◇ Mancozeb
70506-185	163,043.00	5.319%	◇ Mancozeb
70506-187	156,980.00	5.121%	◇ Sulfur
74267-1	146,415.00	4.776%	◇ Bacillus Subtilis MBI 600
85678-14	122,032.50	3.981%	◇ Captan
100-1075	113,954.00	3.717%	◇ Tefluthrin
61282-49	102,051.00	3.329%	◇ Zinc Phosphide (ZN3P2)
6325-13-34704	100,720.00	3.286%	◇ Sulfur
Top 10 Products - Total Quantity (pounds) Sold:	1,501,554.25		
All Products - Total Quantity (pounds) Sold:	3,065,357.43		
Top 10 Products as a Percentage of Total Quantity (pounds):		48.98%	

* 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 2013***

EPA Registration Number[‡]	Volume Quantity (gallons)^{**}	Percentage of All Products	Active Ingredients
100-1152	51,280.88	5.629%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
524-549	48,652.31	5.341%	◇ Glycine, N-(Phosphonomethyl)-Potassium Salt
100-1442	32,628.24	3.582%	◇ Metolachlor ◇ Mesotrione ◇ Glyphosate
100-1282	30,475.82	3.345%	◇ Metolachlor ◇ Mesotrione ◇ Glyphosate
5481-468	25,567.00	2.807%	◇ Metam-Sodium
34704-805	24,142.50	2.650%	◇ Kerosene (Petroleum) Hydrodesulfurized
34704-890	22,524.46	2.473%	◇ Glyphosate-Isopropylammonium
42750-61	21,097.85	2.316%	◇ Glyphosate-Isopropylammonium
524-454-534	18,999.70	2.086%	◇ Glyphosate-Isopropylammonium
100-1169	18,916.74	2.077%	◇ Glyphosate-Isopropylammonium
Top 10 Products - Total Quantity (gallons) Sold:	523,055.38		
All Products - Total Quantity (gallons) Sold:	910,958.26		
Top 10 Products as a Percentage of Total Quantity (gallons):		57.42%	

* 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>).

