



**Department of
Environmental
Conservation**

Division of Materials Management

**FINAL ANNUAL REPORT
FOR
NEW YORK STATE
PESTICIDE SALES AND
APPLICATIONS
2011**

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

EXECUTIVE SUMMARY1

List of Figures:

Figure 1: Pesticide Applications by Weight (in Pounds) for New York State by County During 2011.....5

Figure 2: Pesticide Applications by Volume (in Gallons) for New York State by County During 2011.....8

Figure 3: Pesticide Sales by Weight (in Pounds) for New York State by County During 2011.....11

Figure 4: Pesticide Sales by Volume (in Gallons) for New York State by County During 2011.....14

Figure 5: Relative Use (in Pounds) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 2011.....17

Figure 6: Relative Use (in Gallons) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 201118

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 - 2011.....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 - 2011.....20

Executive Summary

The New York State Department of Environmental Conservation (Department), in conjunction with Cornell University, presents this report on the final 2011 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 7.0 million “records” of applications and sales reported for 2011, totaling over 606 million keystrokes of data. The total amount of pesticides reported as applied by commercial applicators in 2011 was 2,978,003 gallons and 25,304,246 pounds. This compares to 2,685,661 gallons and 24,457,634 pounds in 2010.

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 2011 report year, the total number of applicators, technicians and permittees reporting on time was:

15,959 Commercial Applicators and Technicians
296 Commercial Permittees (Sales)

These figures indicate 92 percent of the 17,309 certified applicators and technicians, and 96 percent of the 308 commercial permittees reported for 2011. 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 2011 increased by only 0.06%, compared with 2010. These submissions contained 5,884,164 records compared to 5,482,481 records in 2010, a 7.3% 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 2011. An Order on Consent was sent to approximately 1,359 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for the year 2011. 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 2011:

- 2,994,418 Gallons
- 24,446,098 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) *
- Andersons Turf Products Fertilizer with 0.2% Merit Insecticide (EPA Registration No. 432-1349-9198) *
- 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)
- Pettit Unepoxy Plus Antifouling Paint (Various Colors) (EPA Registration No. 60061-63)

Total amount of pesticides sold to private applicators for agricultural use in New York State in 2011:

- 841,670 Gallons
- 3,654,419 Pounds

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

- Captan 80 WDG (EPA Registration No: 66222-58-66330)
- Drexel Captan 80 WDG (EPA Registration No: 66222-58-19713)
- Penncozeb 75 DF Fungicide (EPA Registration No. 70506-185)

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

- Lumax Selective Herbicide (EPA Registration No. 100-1152)

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

Total amount of pesticides sold to distributors for resale in New York State in 2011 was:

- 621,499 Gallons
- 6,986,710 Pounds

Total amount of pesticides sold to applicators for end use in New York State in 2011 was:

- 630,552 Gallons
- 6,979,743 Pounds

**Pesticide Applications by Weight (in Pounds)
for New York State by County During 2011**

County	Amount*
Albany	1,074,781.97
Allegany	28,732.09
Bronx	128,580.33
Broome	174,873.20
Cattaraugus	66,735.64
Cayuga	33,676.14
Chautauqua	140,839.40
Chemung	62,905.79
Chenango	32,135.45
Clinton	88,441.30
Columbia	75,392.19
Cortland	256,275.37
Delaware	12,714.46
Dutchess	579,448.08
Erie	1,641,775.49
Essex	933,052.53
Franklin	75,765.16
Fulton	33,028.35
Genesee	56,740.05
Greene	394,803.65
Hamilton	16,633.55
Herkimer	79,626.90
Jefferson	125,279.19
Kings	137,681.19
Lewis	16,178.69
Livingston	62,850.49
Madison	63,283.24
Monroe	2,353,250.22
Montgomery	44,453.10
Nassau	1,646,198.71
New York	394,718.86
Niagara	285,074.99
Oneida	385,809.17
Onondaga	795,889.76
Ontario	282,150.86
Orange	502,035.64
Orleans	21,004.57
Oswego	64,690.78

County	Amount*
Otsego	25,734.05
Putnam	214,128.59
Queens	168,006.03
Rensselaer	217,117.38
Richmond	154,672.07
Rockland	962,967.30
St. Lawrence	188,685.38
Saratoga	1,020,259.83
Schenectady	416,702.07
Schoharie	8,079.65
Schuyler	1,052.71
Seneca	11,983.56
Steuben	63,795.26
Suffolk	4,647,345.32
Sullivan	31,847.69
Tioga	28,273.39
Tompkins	78,483.40
Ulster	245,638.84
Warren	328,208.28
Washington	95,426.92
Wayne	141,619.34
Westchester	2,136,485.77
Wyoming	34,443.77
Yates	22,447.24

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

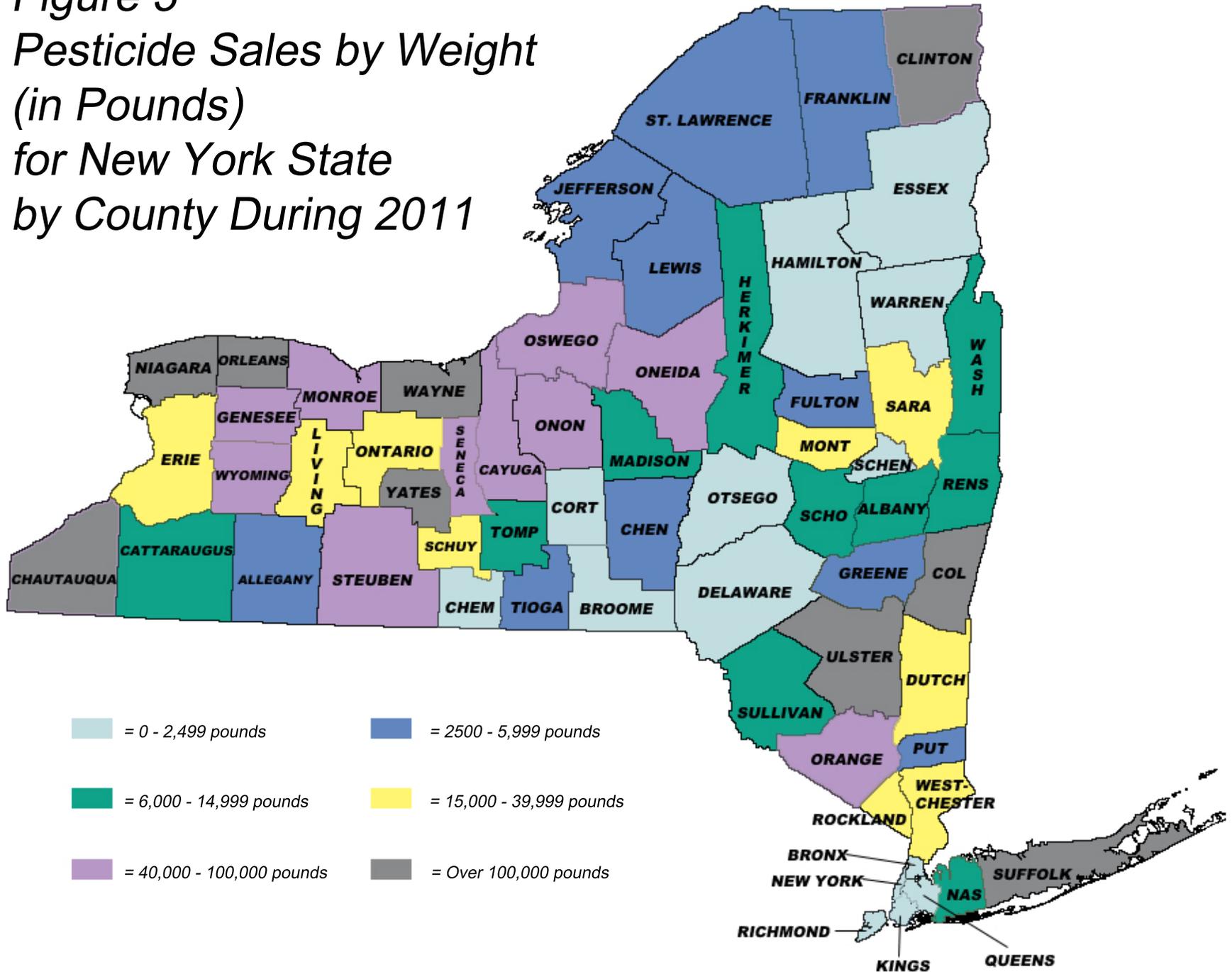
**Pesticide Applications by Volume (in Gallons)
for New York State by County During 2011**

County	Amount*
Albany	162,299.29
Allegany	3,176.54
Bronx	21,443.55
Broome	12,239.49
Cattaraugus	8,832.37
Cayuga	59,882.38
Chautauqua	17,912.77
Chemung	4,562.51
Chenango	7,585.98
Clinton	17,535.97
Columbia	10,536.46
Cortland	7,705.79
Delaware	26,460.09
Dutchess	33,932.74
Erie	106,909.28
Essex	115,039.54
Franklin	10,496.20
Fulton	3,528.39
Genesee	21,749.65
Greene	52,039.56
Hamilton	1,747.42
Herkimer	6,661.23
Jefferson	22,865.01
Kings	28,969.06
Lewis	14,625.20
Livingston	23,580.57
Madison	11,156.48
Monroe	111,336.65
Montgomery	6,465.70
Nassau	127,374.04
New York	151,486.67
Niagara	50,714.67
Oneida	15,755.13
Onondaga	76,775.37
Ontario	25,795.27
Orange	22,324.22
Orleans	8,355.42
Oswego	63,353.52
Otsego	3,717.90

County	Amount*
Putnam	13,413.73
Queens	71,809.00
Rensselaer	388,113.65
Richmond	37,592.18
Rockland	14,515.65
St. Lawrence	34,126.64
Saratoga	46,000.39
Schenectady	11,549.73
Schoharie	3,477.34
Schuyler	1,856.58
Seneca	7,269.29
Steuben	9,881.05
Suffolk	313,750.14
Sullivan	10,584.15
Tioga	2,863.66
Tompkins	12,726.61
Ulster	11,486.20
Warren	12,844.44
Washington	20,028.62
Wayne	73,317.10
Westchester	386,204.43
Wyoming	28,098.36
Yates	4,439.97

*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 2011*



**Pesticide Sales by Weight (in Pounds)
for New York State by County During 2011**

County	Amount*
Albany	11,198.73
Allegany	5,221.19
Bronx	0
Broome	2,454.43
Cattaraugus	6,458.49
Cayuga	40,565.06
Chautauqua	131,203.77
Chemung	2,133.13
Chenango	5,555.74
Clinton	142,885.83
Columbia	140,786.95
Cortland	2,345.31
Delaware	131.76
Dutchess	37,344.91
Erie	29,245.79
Essex	2,342.50
Franklin	4,889.07
Fulton	5,667.41
Genesee	66,700.00
Greene	3,464.06
Hamilton	323.50
Herkimer	9,692.52
Jefferson	3,693.02
Kings	90.00
Lewis	3,778.71
Livingston	23,733.08
Madison	8,911.16
Monroe	89,940.73
Montgomery	24,379.97
Nassau	6,725.10
New York	73.20
Niagara	207,756.95
Oneida	40,828.21
Onondaga	59,967.29
Ontario	38,863.47
Orange	98,822.58
Orleans	293,082.69
Oswego	60,302.79
Otsego	1,547.82

County	Amount*
Putnam	3,034.00
Queens	12.00
Rensselaer	14,998.21
Richmond	0
Rockland	23,086.45
St. Lawrence	3,858.19
Saratoga	46,817.87
Schenectady	785.66
Schoharie	8,892.75
Schuyler	31,419.46
Seneca	52,947.46
Steuben	84,013.87
Suffolk	117,656.75
Sullivan	8,663.75
Tioga	3,798.27
Tompkins	8,517.43
Ulster	333,116.43
Warren	139.98
Washington	8,276.05
Wayne	1,106,099.10
Westchester	19,967.14
Wyoming	44,031.92
Yates	120,744.28

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

**Pesticide Sales by Volume (in Gallons)
for New York State by County During 2011**

County	Amount*
Albany	1,280.96
Allegany	3,428.11
Bronx	15.00
Broome	1,105.15
Cattaraugus	3,998.86
Cayuga	36,793.70
Chautauqua	28,233.59
Chemung	3,213.32
Chenango	4,406.57
Clinton	8,792.30
Columbia	16,361.45
Cortland	2,339.59
Delaware	1,048.50
Dutchess	5,596.34
Erie	15,534.95
Essex	469.00
Franklin	3,356.08
Fulton	1,329.27
Genesee	65,678.78
Greene	1,375.57
Hamilton	1,240.05
Herkimer	5,944.77
Jefferson	6,081.08
Kings	7.56
Lewis	3,875.29
Livingston	35,625.85
Madison	10,147.80
Monroe	26,443.37
Montgomery	10,509.65
Nassau	239.40
New York	41.50
Niagara	36,195.92
Oneida	16,321.38
Onondaga	27,099.47
Ontario	25,708.86
Orange	48,426.87
Orleans	54,366.42
Oswego	19,158.18
Otsego	1,648.69

County	Amount*
Putnam	372.62
Queens	90.00
Rensselaer	8,149.15
Richmond	235.00
Rockland	540.50
St. Lawrence	7,443.96
Saratoga	2,943.62
Schenectady	279.16
Schoharie	3,834.44
Schuyler	3,837.61
Seneca	17,932.62
Steuben	31,569.32
Suffolk	42,473.12
Sullivan	37.50
Tioga	3,569.46
Tompkins	6,429.47
Ulster	28,947.99
Warren	16.56
Washington	3,678.68
Wayne	80,634.62
Westchester	870.66
Wyoming	42,463.41
Yates	21,746.32

*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 2011*

EPA Registration Number‡	Weight Quantity (pounds)**	Percentage of All Products	Active Ingredients
9198-124	1,667,724.73	6.822%	◇ Prodiamine
432-1349-9198	1,391,537.41	5.692%	◇ Imidacloprid
10404-85	987,206.45	4.038%	◇ Dithiopyr
10404-86	856,384.34	3.503%	◇ Dithiopyr
9198-120	819,691.59	3.353%	◇ Dithiopyr
34704-776	653,212.53	2.672%	◇ Prodiamine
432-1349-10404	586,883.93	2.401%	◇ Imidacloprid
432-1417-10404	584,085.60	2.389%	◇ Bifenthrin ◇ Imidacloprid
10404-89	575,640.91	2.355%	◇ Prodiamine
53883-246-538	470,895.39	1.926%	◇ Prodiamine
Top 10 Products - Total Quantity (pounds) Used:	9,177,348.48		
All Products - Total Quantity (pounds) Used:	24,446,096.98		
Top 10 Products as a Percentage of Total Quantity (pounds):		37.54%	

* 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 2011*

EPA Registration Number‡	Volume Quantity (gallons)**	Percentage of All Products	Active Ingredients
9359-2	657,323.96	22.073%	◇ Sodium Hypochlorite
59074-20001	294,165.59	9.878%	◇ Sodium Hypochlorite
60061-63	159,627.49	5.360%	◇ Cuprous Oxide
100-1152	98,539.56	3.309%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
10404-66	76,000.57	2.552%	◇ Aliphatic Petroleum Solvent
279-3206	66,827.96	2.244%	◇ Bifenthrin
228-513	64,202.87	2.156%	◇ Methylamine 2,4-Dichlorophenoxyacetate ◇ Dimethylamine Salt of (+)-R-2-(2,4-Dichlorophenoxy) Propanoic Acid ◇ Dimethylamine ®-2-(2-Methyl-4-Chlorophenoxy) Propionate
9613-20001	60,629.50	2.036%	◇ Sodium Hypochlorite
499-304	55,270.17	1.856%	◇ Cyfluthrin
228-366	54,477.71	1.829%	◇ Glyphosate-Isopropylammonium
Top 10 Products - Total Quantity (gallons) Used:	1,912,550.24		
All Products - Total Quantity (gallons) Used:	2,978,002.15		
Top 10 Products as a Percentage of Total Quantity (gallons):		64.22%	

* 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 2011*

EPA Registration Number‡	Weight Quantity (pounds)**	Percentage of All Products	Active Ingredients
66222-58-66330	390,783.75	10.693%	◇ Captan
66222-58-19713	329,251.25	9.010%	◇ Captan
70506-185	318,319.00	8.711%	◇ Mancozeb
352-704	254,968.00	6.977%	◇ Mancozeb
70506-234	128,166.00	3.507%	◇ Mancozeb
61282-49	126,854.00	3.471%	◇ Zinc Phosphide (ZN3P2)
70506-187	98,190.00	2.687%	◇ Sulfur
4581-370	96,384.00	2.637%	◇ Mancozeb
100-1075	96,061.30	2.629%	◇ Tefluthrin
70506-201	92,280.00	2.525%	◇ Basic Copper Sulfate
Top 10 Products - Total Quantity (pounds) Sold:	1,931,257.30		
All Products - Total Quantity (pounds) Sold:	3,654,419.10		
Top 10 Products as a Percentage of Total Quantity (pounds):		52.85%	

* 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 2011*

EPA Registration Number‡	Volume Quantity (gallons)**	Percentage of All Products	Active Ingredients
100-1152	81,382.32	9.669%	◇ Atrazine ◇ Metolachlor ◇ Mesotrione
34704-890	40,494.05	4.811%	◇ Glyphosate-Isopropylammonium
524-549	38,163.78	4.534%	◇ Glycine, N-(Phosphonomethyl)-Potassium Salt
5481-468	25,219.86	2.996%	◇ Metam-Sodium
1381-192	24,803.60	2.947%	◇ Glyphosate-Isopropylammonium
100-1282	21,793.79	2.589%	◇ Metolachlor ◇ Mesotrione ◇ Glyphosate
241-418	20,668.42	2.456%	◇ Pendimethalin
34704-881	17,958.50	2.134%	◇ Chlorothalonil
100-1182	17,280.64	2.053%	◇ Glycine, N-(Phosphonomethyl)-Potassium Salt
71368-20	17,005.97	2.021%	◇ Glyphosate-Isopropylammonium
Top 10 Products - Total Quantity (gallons) Sold:	511,123.15		
All Products - Total Quantity (gallons) Sold:	841,670.65		
Top 10 Products as a Percentage of Total Quantity (gallons):		60.73%	

* 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>).