

New York State Department of Environmental Conservation



Division of Materials Management

**FINAL ANNUAL REPORT
FOR
NEW YORK STATE
PESTICIDE SALES AND
APPLICATIONS
2009**

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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 2009 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 million "records" of applications and sales reported for 2009, totaling over 371 million keystrokes of data. The total amount of pesticides reported as applied by commercial applicators in 2009 was 2,273,319 gallons and 25,836,419 pounds. This compares to 3,116,212 gallons and 22,261,956 pounds in 2008.

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 to review information regarding data information.

For the 2009 report year, the total number of applicators, technicians and permittees reporting was:

16,387 Commercial Applicators and Technicians
293 Commercial Permittees (Sales)

These figures indicate 95 percent of the 17,185 certified applicators and technicians, and 92 percent of the 332 commercial permittees reported for 2009. 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 2009 increased by 4.1%, compared with 2008. These submissions contained data for 10,690 applicators/technicians and 193 commercial permit holders, compared to 10,278 applicators/technicians and 173 commercial permit holders in 2008. The total number of 2009 records was 5,349,496 compared to 5,054,442 records in 2008, a 5.8% 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 supercede 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 2009. An Order on Consent was sent to approximately 817 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for the year 2009. 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 13,793 registered products in New York State. Of these, approximately 6,173 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 2009 as required by ECL §33-1205.1 and reported using the Applicator/Technician Annual Report Form 44-15-26 was:

- 2,273,319 Gallons
- 25,836,419 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) *
- Dimension 0.10% PLUS FERTILIZER (EPA Registration No: 10404-85)*
- Lesco Merit Plus Turf Fertilizer (EPA Registration No. 432-1349-10404) *

*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:

- Sur-Shock/Surchlor Plus Disinfectant (EPA Registration No. 9359-2)
- Superchlor Disinfectant (EPA Registration No. 59074-20001)
- Omni Supreme Spray (EPA Registration No: 5905-368)

Total amount of pesticides sold to private applicators for agricultural use in New York State in 2009 as required by ECL §33-1205.2 and reported using the Annual Report for Pesticide Sales to Certified Private Applicators Form 44-15-27 was:

- 761,450 Gallons
- 3,594,419 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: 66222-58-51036)
- Drexel Captan 80 WDG Fungicide (EPA Registration No: 66222-58-19713)

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

- Lumax Selective Herbicide (EPA Registration No. 100-1152)
- Rascal Plus/ Agrisolutions Cornerstone Plus (EPA Registration No: 1381-192)

- Four Power Plus/ Kleenup Pro/ Mad Dog Plus/ Makaze (EPA Registration No: 34704-890)

Total amount of restricted use pesticides sold to distributors for resale to commercial and private applicators in New York State in 2009 as required by ECL §33-1207 and reported using the Annual Report for Restricted Pesticide Sales Form 44-15-25 was:

- 582,568 Gallons
- 5,608,922 Pounds

Total amount of restricted use pesticides sold to commercial and private applicators for end use in New York State in 2009 as required by ECL §33-1207 and reported using the Annual Report for Restricted Pesticide Sales Form 44-15-25 was:

- 118,585 Gallons
- 5,915,660 Pounds

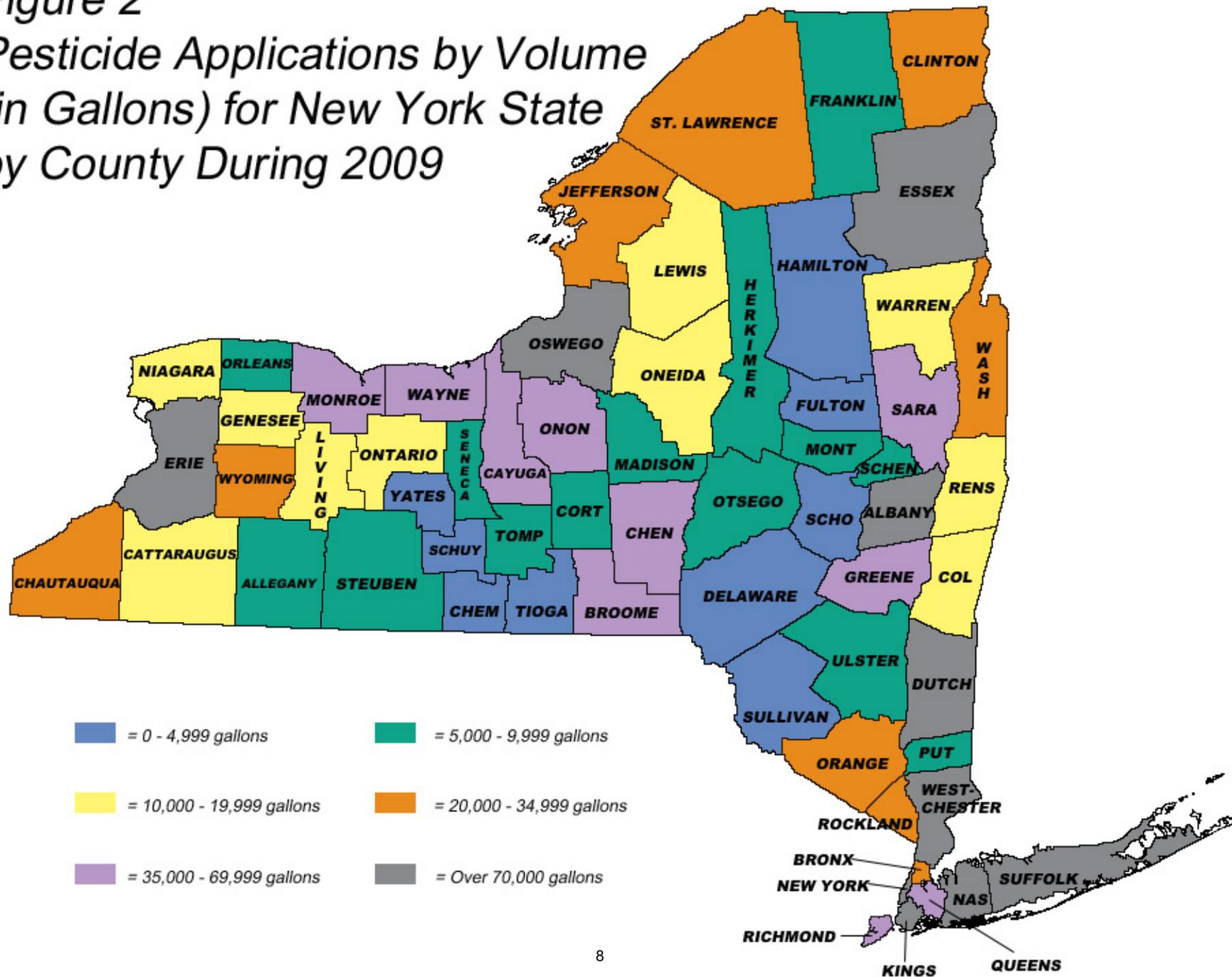
**Pesticide Applications by Weight (in Pounds)
for New York State by County During 2009**

County	Amount*
Albany	1,352,606
Allegany	31,333
Bronx	127,187
Broome	148,285
Cattaraugus	78,079
Cayuga	
Chautauqua	79,858
Chemung	85,245
Chenango	220,547
Clinton	37,587
Columbia	56,164
Cortland	289,661
Delaware	27,445
Dutchess	715,964
Erie	1,642,899
Essex	1,186,980
Franklin	25,671
Fulton	24,461
Genesee	48,324
Greene	435,277
Hamilton	21,627
Herkimer	65,002
Jefferson	192,590
Kings	145,227
Lewis	14,737
Livingston	77,084
Madison	96,817
Monroe	2,286,449
Montgomery	42,488
Nassau	1,781,012
New York	304,128
Niagara	387,308
Oneida	204,075
Onondaga	1,145,450
Ontario	251,765
Orange	621,230
Orleans	24,835
Oswego	56,942

County	Amount*
Otsego	42,117
Putnam	197,061
Queens	178,417
Rensselaer	164,066
Richmond	92,024
Rockland	946,168
St. Lawrence	155,795
Saratoga	1,231,987
Schenectady	376,259
Schoharie	3,993
Schuyler	36,580
Seneca	10,892
Steuben	73,348
Suffolk	4,571,782
Sullivan	37,046
Tioga	34,782
Tompkins	84,894
Ulster	220,107
Warren	262,573
Washington	79,060
Wayne	140,375
Westchester	2,406,826
Wyoming	34,045
Yates	8,867

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

Figure 2
Pesticide Applications by Volume
(in Gallons) for New York State
by County During 2009



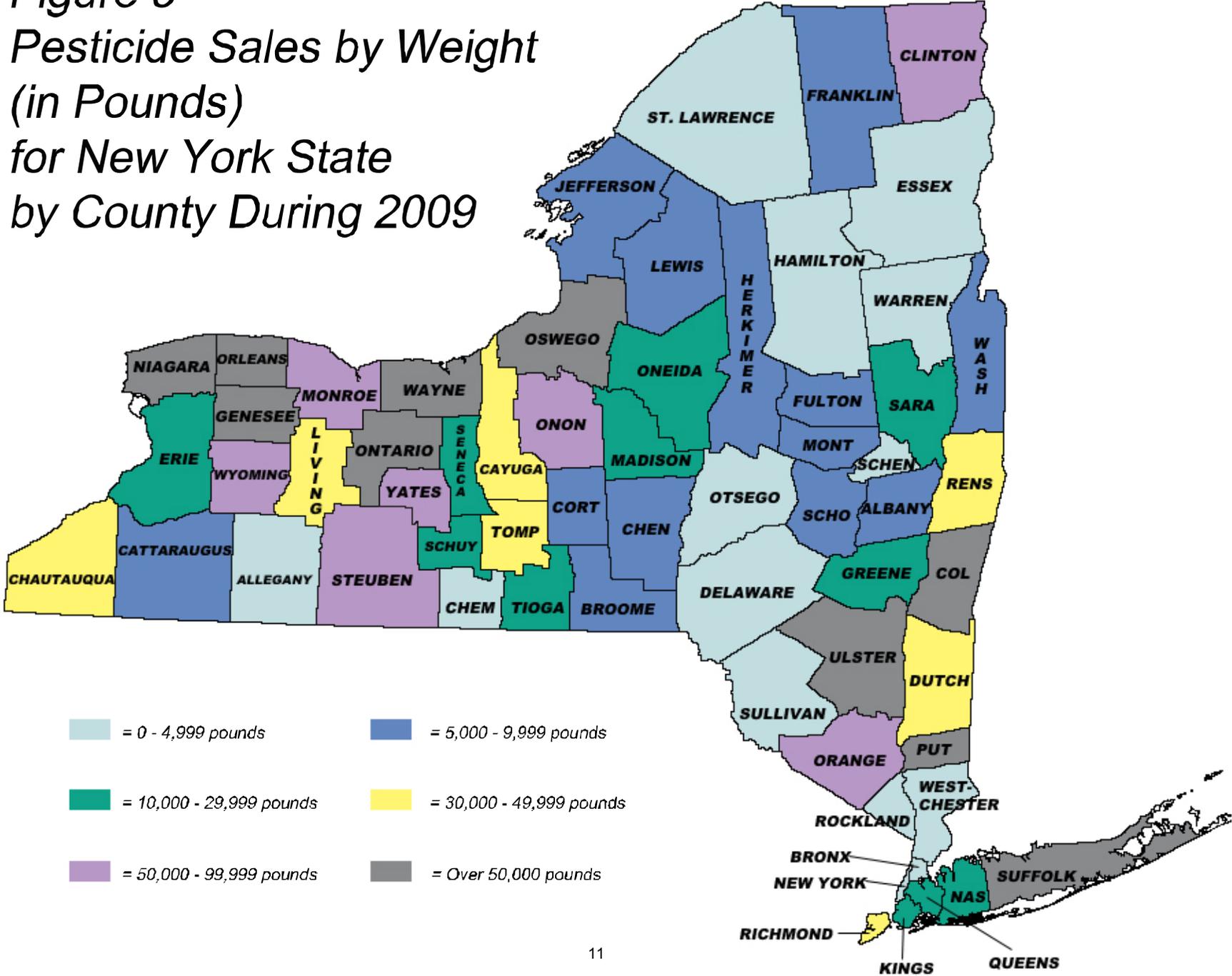
**Pesticide Applications by Volume (in Gallons)
for New York State by County During 2009**

County	Amount*
Albany	96,790
Allegany	7,403
Bronx	35,375
Broome	55,498
Cattaraugus	12,701
Cayuga	0
Chautauqua	25,084
Chemung	4,068
Chenango	47,278
Clinton	20,416
Columbia	13,147
Cortland	6,646
Delaware	4,785
Dutchess	26,159
Erie	72,717
Essex	98,321
Franklin	9,688
Fulton	1,977
Genesee	13,887
Greene	35,199
Hamilton	393
Herkimer	7,025
Jefferson	24,735
Kings	26,407
Lewis	15,105
Livingston	14,325
Madison	8,748
Monroe	35,786
Montgomery	6,121
Nassau	133,213
New York	155,868
Niagara	18,299
Oneida	14,802
Onondaga	37,324
Ontario	17,235
Orange	25,336
Orleans	6,371
Oswego	138,105
Otsego	6,375

County	Amount*
Putnam	6,263
Queens	65,036
Rensselaer	14,863
Richmond	36,017
Rockland	24,137
St. Lawrence	29,454
Saratoga	35,973
Schenectady	9,296
Schoharie	3,118
Schuyler	2,494
Seneca	8,281
Steuben	9,961
Suffolk	219,224
Sullivan	3,185
Tioga	2,116
Tompkins	9,535
Ulster	6,946
Warren	13,513
Washington	31,672
Wayne	61,167
Westchester	316,836
Wyoming	22,406
Yates	1,815

*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 2009



**Pesticide Sales by Weight (in Pounds)
for New York State by County During 2009**

County	Amount*
Albany	6,824
Allegany	4,723
Bronx	0
Broome	9,187
Cattaraugus	8,341
Cayuga	0
Chautauqua	49,623
Chemung	2,588
Chenango	6,453
Clinton	82,058
Columbia	134,138
Cortland	6,682
Delaware	430
Dutchess	34,648
Erie	18,426
Essex	1,127
Franklin	7,352
Fulton	5,291
Genesee	128,801
Greene	20,022
Hamilton	0
Herkimer	6,206
Jefferson	6,550
Kings	28,377
Lewis	5,833
Livingston	30,534
Madison	13,627
Monroe	58,519
Montgomery	9,704
Nassau	21,815
New York	60
Niagara	165,333
Oneida	23,155
Onondaga	55,199
Ontario	121,558
Orange	90,274
Orleans	224,241
Oswego	104,587
Otsego	3,376

County	Amount*
Putnam	101,355
Queens	10,174
Rensselaer	38,878
Richmond	34,287
Rockland	2,611
St. Lawrence	751
Saratoga	29,088
Schenectady	1,182
Schoharie	5,083
Schuyler	12,059
Seneca	24,338
Steuben	87,798
Suffolk	142,309
Sullivan	230
Tioga	21,438
Tompkins	42,804
Ulster	313,874
Warren	444
Washington	6,713
Wayne	1,015,735
Westchester	3,067
Wyoming	73,937
Yates	83,442

*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 2009**

County	Amount*
Albany	1,534
Allegany	3,260
Bronx	5
Broome	788
Cattaraugus	4,724
Cayuga	0
Chautauqua	10,121
Chemung	2,835
Chenango	2,197
Clinton	9,244
Columbia	12,899
Cortland	2,614
Delaware	665
Dutchess	7,308
Erie	10,866
Essex	342
Franklin	2,769
Fulton	1,573
Genesee	63,853
Greene	9,102
Hamilton	2
Herkimer	3,232
Jefferson	3,540
Kings	9,742
Lewis	4,791
Livingston	33,163
Madison	6,267
Monroe	20,493
Montgomery	9,299
Nassau	6,339
New York	0
Niagara	18,803
Oneida	11,518
Onondaga	18,742
Ontario	34,557
Orange	40,820
Orleans	43,244
Oswego	17,470
Otsego	1,613

County	Amount*
Putnam	13,800
Queens	10,365
Rensselaer	10,681
Richmond	3,760
Rockland	874
St. Lawrence	4,871
Saratoga	4,732
Schenectady	318
Schoharie	3,040
Schuyler	2,916
Seneca	15,107
Steuben	27,336
Suffolk	18,109
Sullivan	72
Tioga	4,548
Tompkins	6,931
Ulster	32,379
Warren	20
Washington	3,374
Wayne	72,326
Westchester	1,820
Wyoming	28,765
Yates	14,935

*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 (in Pounds) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators - 2009*

EPA Registration Number‡	Weight Quantity (pounds)**	Percentage of All Products	Active Ingredients
9198-124	1,848,582.34	7.154%	PRODIAMINE
9359-2	1,758,126.00	6.804%	SODIUM HYPOCHLORITE
10404-85	1,053,713.86	4.078%	DITHIOPYR
432-1349-9198	1,042,776.83	4.036%	IMIDACLOPRID
432-1349-10404	821,121.15	3.178%	IMIDACLOPRID
2217-795-9198	756,396.03	2.927%	<ul style="list-style-type: none"> • DICAMBA • DICHLOROPHEOXYACETIC ACID • MECOPROP
10404-86	717,725.99	2.777%	DITHIOPYR
9198-173	662,116.90	2.562%	PENDIMETHALIN
34704-776	450,974.97	1.745%	PRODIAMINE
432-1349-34704	450,241.08	1.742%	IMIDACLOPRID
Top 10 Products - Total Quantity (pounds) Used:	9,561,775.15		
All Products - Total Quantity (pounds) Used:	25,836,419.24		
Top 10 Products as a Percentage of Total Quantity (pounds):		37.003%	

* 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](#).

Figure 6

Relative Use (in Gallons) of the Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators During 2009*

EPA Registration Number‡	Volume Quantity (gallons)**	Percentage of All Products	Active Ingredients
9359-2	179,561.56	7.898%	SODIUM HYPOCHLORITE
59074-20001	150,811.60	6.633%	SODIUM HYPOCHLORITE
5905-368	99,382.08	4.371%	ALIPHATIC PETROLEUM SOLVENT
100-1152	99,134.46	4.360%	<ul style="list-style-type: none"> • ATRAZINE • MESOTRIONE • METOLACHLOR
15300-24	47,569.90	2.092%	<ul style="list-style-type: none"> • CHLORO-2-METHYL-3(2H)-ISOTHIAZOLONE • METHYL-3(2H)-ISOTHIAZOLONE
9613-20001	46,671.60	2.053%	SODIUM HYPOCHLORITE
81927-34	38,235.00	1.681%	GLYPHOSATE-ISOPROPYLAMMONIUM
2217-656	37,840.53	1.664%	<ul style="list-style-type: none"> • DICAMBA, DIMETHYLAMINE SALT • DIMETHYLAMINE 2,4-DICHLOROPHENOXYACETATE • DIMETHYLAMINE (R)-2-(2-METHYL-4-CHLOROPHENOXY) PROPIONATE
1706-179	37,783.82	1.662%	<ul style="list-style-type: none"> • SODIUM BROMIDE • SODIUM HYPOCHLORITE
100-1218	33,779.92	1.485%	CYPERMETHRIN
Top 10 Products - Total Quantity (gallons) Used:	770,770.46		
All Products - Total Quantity (gallons) Used:	2,273,319.28		

Top 10 Products as a Percentage of Total Quantity (gallons):		33.899%	
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* 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](#).

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 During 2009*

EPA Registration Number‡	Weight Quantity (pounds)**	Percentage of All Products	Active Ingredients
70506-185	378,273.25	10.523%	MANCOZEB
66222-58-51036	338,746.64	9.424%	CAPTAN
66222-58-19713	238,590.00	6.637%	CAPTAN
100-1075	160,879.00	4.475%	TEFLUTHRIN
4581-370	140,508.00	3.909%	MANCOZEB
70506-187	128,980.41	3.588%	SULFUR
10163-169	118,714.56	3.302%	PHOSMET
61282-49	114,128.00	3.175%	ZINC PHOSPHIDE (ZN3P2)
2393-522-61282	100,250.00	2.789%	ZINC PHOSPHIDE (ZN3P2)
66222-58-66330	74,710.99	2.078%	CAPTAN
Top 10 Products - Total Quantity (pounds) Sold:	1,793,780.85		
All Products - Total Quantity (pounds) Sold:	3,594,419.50		
Top 10 Products as a Percentage of Total Quantity (pounds):		49.9%	

* 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](#).

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 During 2009*

EPA Registration Number‡	Volume Quantity (gallons)**	Percentage of All Products	Active Ingredients
100-1152	81,127.05	10.654%	<ul style="list-style-type: none"> • ATRAZINE • MESOTRIONE • METOLACHLOR
1381-192	25,782.73	3.386%	GLYPHOSATE-ISOPROPYLAMMONIUM
34704-890	22,748.27	2.987%	GLYPHOSATE-ISOPROPYLAMMONIUM
34704-805	19,678.00	2.584%	KEROSENE (PETROLEUM) HYDRODESULFURIZED
100-1282	18,642.84	2.448%	<ul style="list-style-type: none"> • GLYPHOSATE • MESOTRIONE • METOLACHLOR
50534-188-100	15,747.62	2.068%	CHLOROTHALONIL
100-1182	15,644.07	2.054%	GLYCINE, N-(PHOSPHONOMETHYL)-POTASSIUM SALT
34704-881	15,536.99	2.040%	CHLOROTHALONIL
100-1217	13,029.01	1.711%	PARAQUAT DICHLORIDE
241-418	12,987.30	1.705%	PENDIMETHALIN
Top 10 Products - Total Quantity (gallons) Sold:	240,923.88		
All Products - Total Quantity (gallons) Sold:	761,450.83		
Top 10 Products as a Percentage of Total Quantity (gallons):		31.637%	

* 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](#).