



Division of Materials Management

**FINAL ANNUAL REPORT
FOR
NEW YORK STATE
PESTICIDE SALES AND
APPLICATIONS
2006**

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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 2006 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 just under 6 million “records” of applications and sales reported for 2006, totaling over 496 million keystrokes of data. The total amount of pesticides reported as applied by commercial applicators in 2006 was 3,116,212 gallons and 22,261,956 pounds. This compares to 2,818,640 gallons and 17,560,974 pounds in 2005.

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 quality limitations (<http://www.dec.ny.gov/chemical/97535.html>).

For the 2006 report year, the total number of applicators, technicians and permittees reporting was:

16,438 Commercial Applicators and Technicians

272 Commercial Permittees (Sales)

These figures indicate 94 percent of the 17,483 certified applicators and technicians, and 86 percent of the 317 commercial permittees reported for 2006. 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 2006 increased by 0.5%, compared with 2005. These submissions contained data for 8,793 applicators/technicians and 155 commercial permit holders, compared to 8,740 applicators/technicians and 161 commercial permit holders in 2005. The total number of 2006 records was 3,865,774 compared to 3,897,655 records in 2005, a 0.8% decrease.

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 2006. An Order on Consent was sent to approximately 1,090 certified commercial pesticide applicators and technicians and commercial permit holders who did not report for the year 2006. 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 2006:

- 3,116,212 Gallons
- 22,261,956 Pounds

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

- Lesco Pre-M Plus Fertilizer Insecticide (EPA Registration No. 10404-82) *
- Lesco Merit Plus Turf Fertilizer (EPA Registration No. 432-1349-10404) *
- Andersons Fertilizer with Barricade Herbicide (EPA Registration No. 9198-123) *

*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 2006:

- 777,184 Gallons
- 5,421,896 Pounds

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

- Force 3G Insecticide (EPA Registration No. 100-1075)
- Penncozeb 75 DF Fungicide (EPA Registration No. 4581-370)

- Signature Dimension 0.10 Plus Fertilizer (EPA Registration No. 62719-486-65783)

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

- Lumax Selective Herbicide (EPA Registration No. 100-1152)
- Credit 41 Non-Selective Herbicide (EPA Registration No. 71368-20)
- Roundup Original Max Herbicide (EPA Registration No. 524-539)

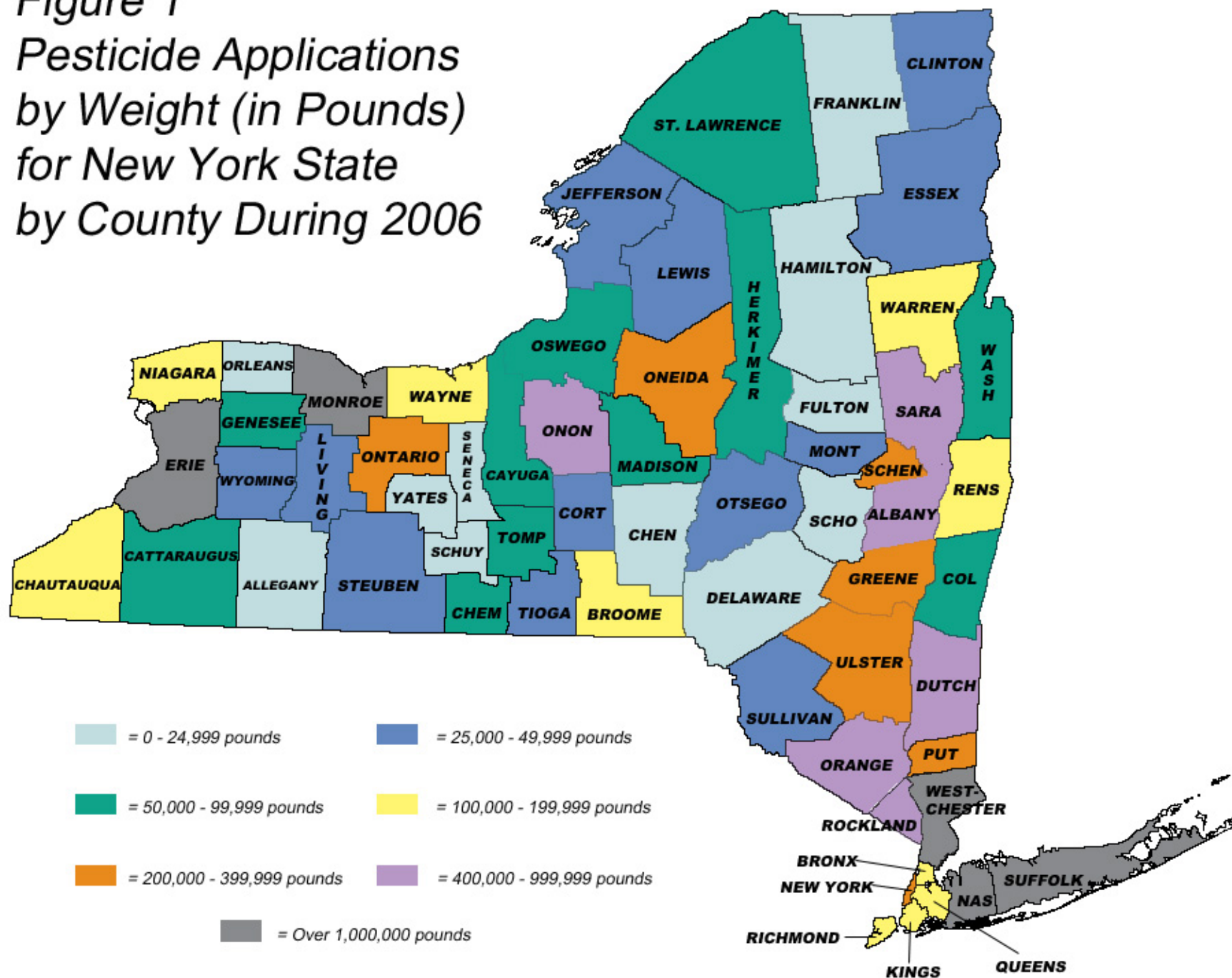
Total amount of pesticides sold to distributors for resale in New York State in 2006 was:

- 456,511 Gallons
- 4,865,925 Pounds

Total amount of pesticides sold to applicators for end use in New York State in 2006 was:

- 113,283 Gallons
- 1,184,359 Pounds

Figure 1
Pesticide Applications
by Weight (in Pounds)
for New York State
by County During 2006



2006 Figure 1 Text

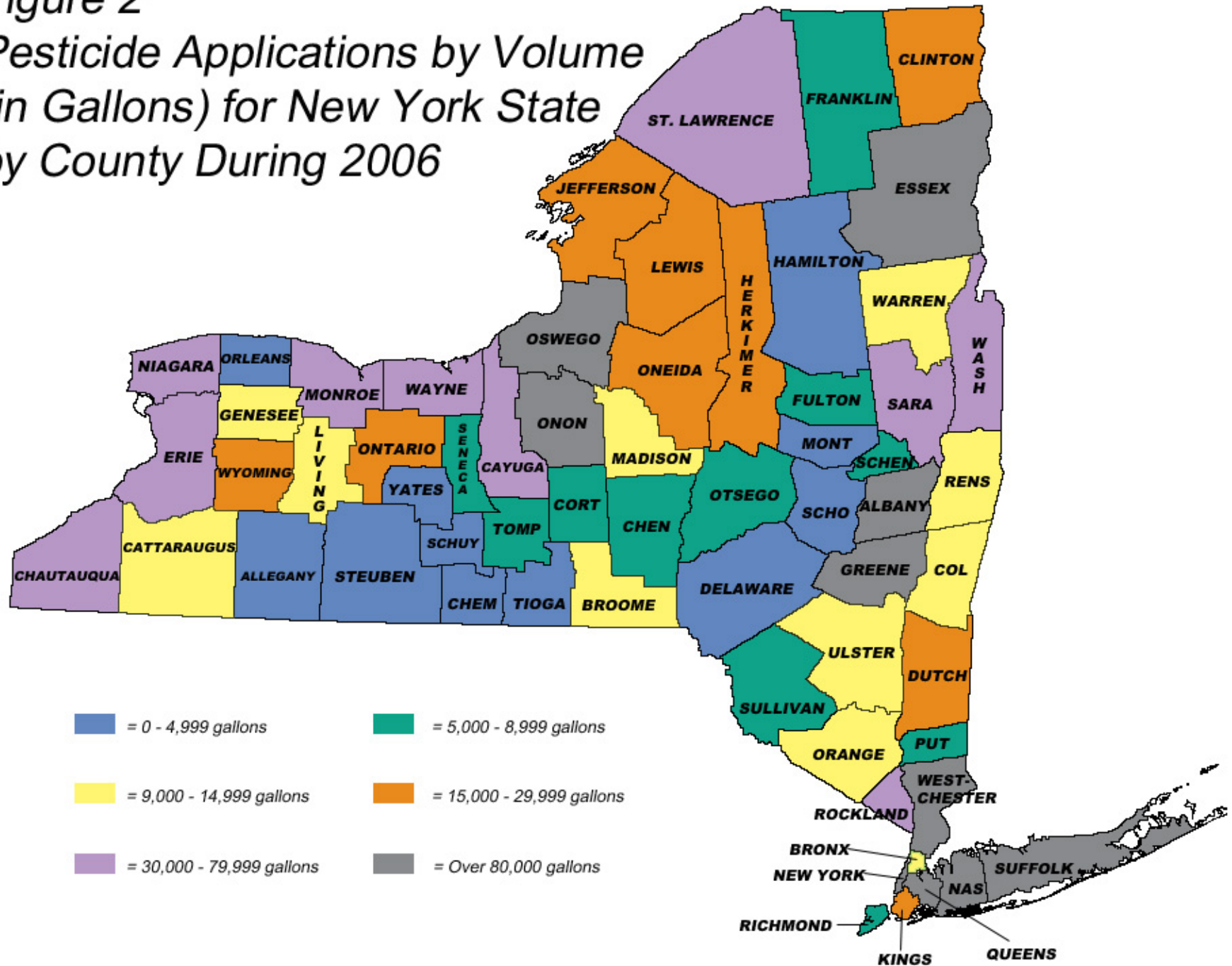
Pesticide Applications by Weight (in Pounds) for New York State by County During 2006

County	Amount*
Albany	926,717
Allegany	16,196
Bronx	140,989
Broome	151,481
Cattaraugus	51,185
Cayuga	79,320
Chautauqua	153,326
Chemung	66,472
Chenango	16,008
Clinton	26,843
Columbia	68,134
Cortland	42,238
Delaware	22,822
Dutchess	544,656
Erie	1,860,402
Essex	28,698
Franklin	24,103
Fulton	19,921
Genesee	62,084
Greene	348,977
Hamilton	19,924
Herkimer	52,428
Jefferson	49,241
Kings	169,535
Lewis	28,524
Livingston	40,437
Madison	82,539
Monroe	2,311,953
Montgomery	41,527
Nassau	1,943,997
New York	310,087
Niagara	198,898
Oneida	265,119
Onondaga	804,406
Ontario	261,908
Orange	612,650

County	Amount*
Orleans	16,741
Oswego	54,131
Otsego	34,089
Putnam	218,219
Queens	184,405
Rensselaer	148,076
Richmond	168,843
Rockland	905,386
St. Lawrence	60,273
Saratoga	657,527
Schenectady	416,867
Schoharie	7,423
Schuyler	3,380
Seneca	17,557
Steuben	47,210
Suffolk	3,871,713
Sullivan	32,097
Tioga	33,376
Tompkins	68,233
Ulster	346,205
Warren	182,536
Washington	55,058
Wayne	137,868
Westchester	2,634,225
Wyoming	44,896
Yates	5,482

*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 2006



2006 Figure 2 Text

Pesticide Applications by Volume (in Gallons) for New York State by County During 2006

County	Amount*
Albany	120,637
Allegany	4,739
Bronx	11,006
Broome	11,933
Cattaraugus	10,088
Cayuga	57,070
Chautauqua	31,101
Chemung	2,758
Chenango	5,571
Clinton	21,925
Columbia	11,452
Cortland	7,218
Delaware	4,506
Dutchess	26,383
Erie	69,651
Essex	324,222
Franklin	8,635
Fulton	6,878
Genesee	13,144
Greene	137,023
Hamilton	287
Herkimer	21,759
Jefferson	28,493
Kings	19,511
Lewis	15,352
Livingston	11,244
Madison	9,307
Monroe	49,428
Montgomery	4,406
Nassau	150,399
New York	108,728
Niagara	59,651
Oneida	16,195
Onondaga	90,643
Ontario	18,486
Orange	14,670

County	Amount*
Orleans	3,365
Oswego	214,483
Otsego	6,141
Putnam	7,256
Queens	92,224
Rensselaer	14,192
Richmond	8,473
Rockland	36,802
St. Lawrence	34,634
Saratoga	69,966
Schenectady	8,242
Schoharie	3,204
Schuyler	1,327
Seneca	8,691
Steuben	4,601
Suffolk	271,450
Sullivan	8,425
Tioga	2,050
Tompkins	7,096
Ulster	9,842
Warren	10,364
Washington	34,767
Wayne	74,696
Westchester	650,392
Wyoming	23,860
Yates	1,063

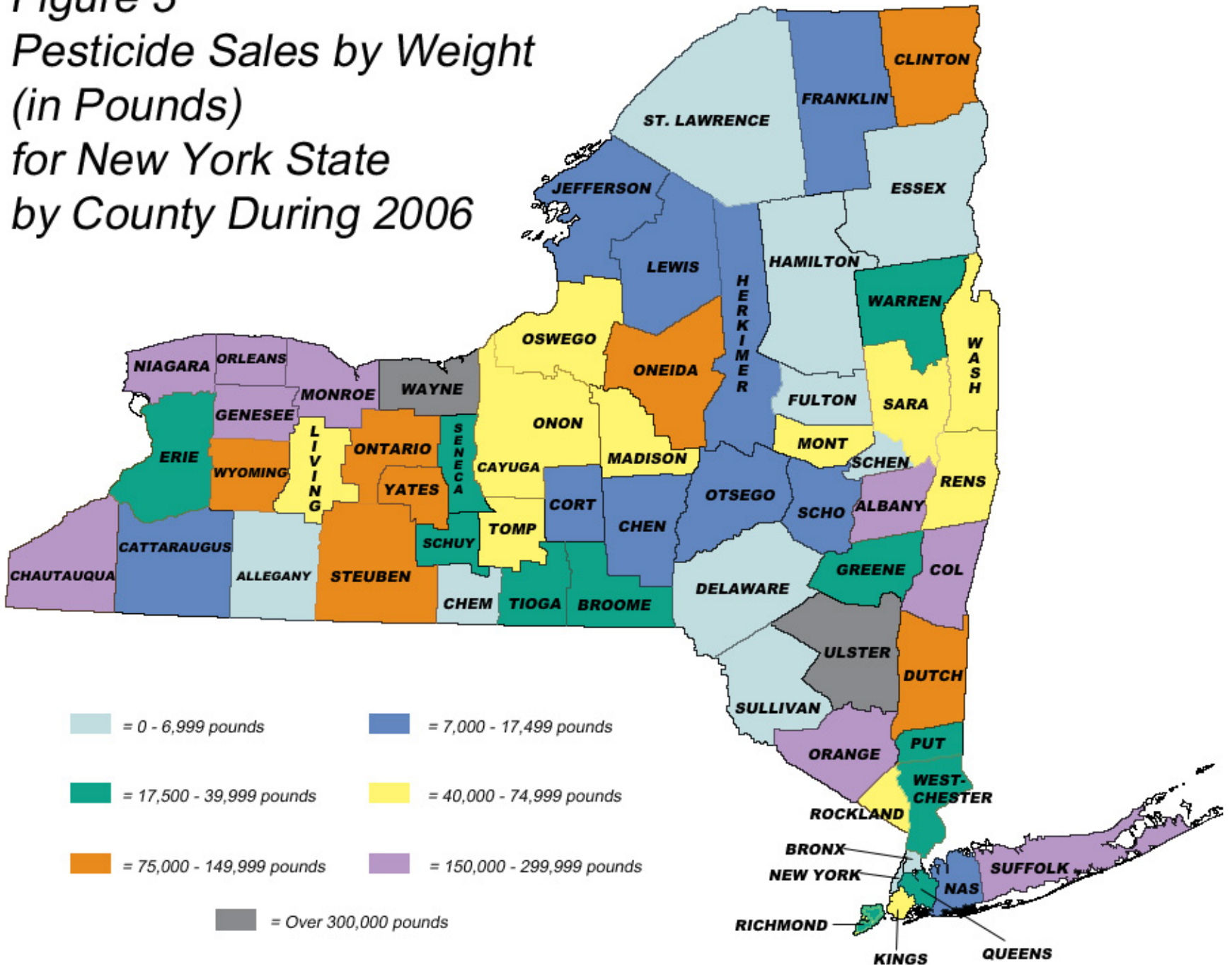
*Note: The above table does not include quantities which were reported where the county information was either missing, invalid or illegible.

Figure 3
Pesticide Sales by Weight
(in Pounds)
for New York State
by County During 2006

The map displays the following color-coded categories for pesticide sales by weight:

- Light Blue: = 0 - 6,999 pounds
- Dark Blue: = 7,000 - 17,499 pounds
- Teal/Green: = 17,500 - 39,999 pounds
- Yellow: = 40,000 - 74,999 pounds
- Orange: = 75,000 - 149,999 pounds
- Purple: = 150,000 - 299,999 pounds
- Grey: = Over 300,000 pounds

The map shows counties colored according to these ranges. Notable high-sales areas (grey) include Wayne and Ulster counties. Other counties like Oneida and Dutch are in the orange range (75,000 - 149,999 pounds). Many counties fall into the lower weight categories.



2006 Figure 3 Text

Pesticide Sales by Weight (in Pounds) for New York State by County During 2006

County	Amount*
Albany	230,047
Allegany	6,434
Bronx	144
Broome	27,785
Cattaraugus	16,339
Cayuga	64,225
Chautauqua	166,988
Chemung	4,762
Chenango	12,143
Clinton	108,790
Columbia	156,845
Cortland	10,523
Delaware	1,649
Dutchess	126,215
Erie	36,279
Essex	2,557
Franklin	10,814
Fulton	5,668
Genesee	224,322
Greene	18,423
Hamilton	
Herkimer	7,403
Jefferson	16,430
Kings	43,713
Lewis	16,979
Livingston	46,983
Madison	40,995
Monroe	188,687
Montgomery	40,992
Nassau	16,186
New York	711
Niagara	179,577
Oneida	102,889
Onondaga	73,553
Ontario	122,515

County	Amount*
Orange	174,178
Orleans	272,224
Oswego	72,396
Otsego	11,941
Putnam	31,612
Queens	21,155
Rensselaer	48,249
Richmond	39,171
Rockland	40,569
St. Lawrence	6,579
Saratoga	49,108
Schenectady	6,851
Schoharie	9,273
Schuyler	23,510
Seneca	35,589
Steuben	137,379
Suffolk	156,555
Sullivan	1,202
Tioga	36,820
Tompkins	43,590
Ulster	619,765
Warren	25,913
Washington	50,448
Wayne	1,121,578
Westchester	22,504
Wyoming	130,847
Yates	103,871

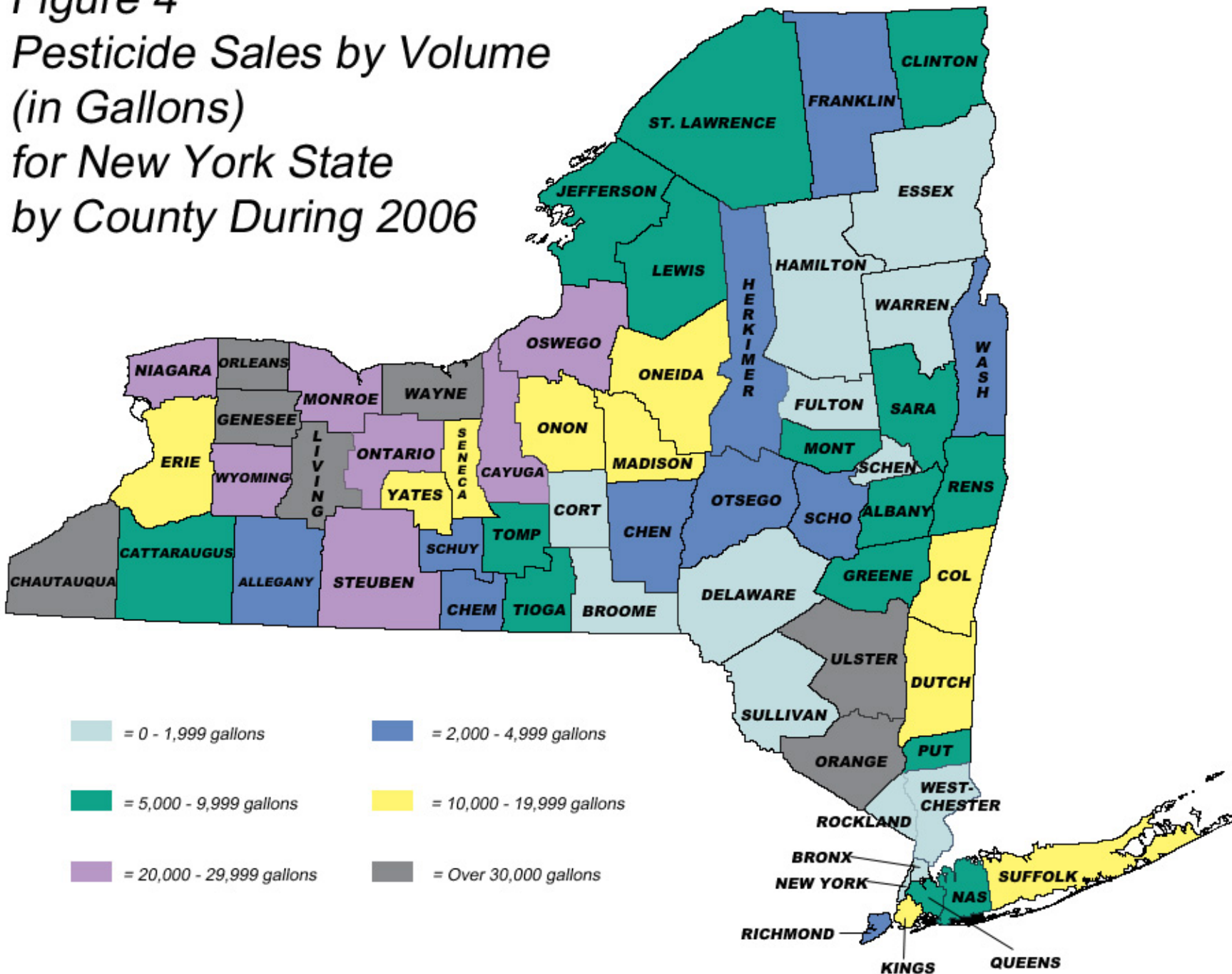
*Note: The above table does not include quantities which were reported where the county information was either missing, invalid or illegible.

Figure 4
Pesticide Sales by Volume
(in Gallons)
for New York State
by County During 2006

Legend:

- 0 - 1,999 gallons
- 2,000 - 4,999 gallons
- 5,000 - 9,999 gallons
- 10,000 - 19,999 gallons
- 20,000 - 29,999 gallons
- Over 30,000 gallons

Counties labeled on the map: ST. LAWRENCE, FRANKLIN, CLINTON, JEFFERSON, LEWIS, HAMILTON, ESSEX, WARREN, OSWEGO, ONEIDA, MADISON, ONONDAGA, CORT, CHEN, OTSEGO, SCHOENBERG, ALBANY, RENSSELAIRE, CATTARAUGUS, ALLEGANY, STEUBEN, CHEMUNG, TIOGA, BROOME, DELAWARE, SULLIVAN, ULSTER, ORANGE, PUTNAM, DUTCH, COLLEGE, GREENE, MONTGOMERY, FULTON, WASHINGTON, SARA, SCHENECTADY, CAYUGA, SENECA, YATES, ONTARIO, LIVINGSTON, WYOMING, GENESSEE, MONROE, WAYNE, NIAGARA, ORLEANS, CHAUTAUQUE, ROCKLAND, WEST-CHESTER, SUFFOLK, QUEENS, KINGS, RICHMOND, NEW YORK, BRONX.



2006 Figure 4 Text

Pesticide Sales by Volume (in Gallons) for New York State by County During 2006

County	Amount*
Albany	5,467
Allegany	2,426
Bronx	0
Broome	1,055
Cattaraugus	6,106
Cayuga	23,190
Chautauqua	30,318
Chemung	2,175
Chenango	3,264
Clinton	9,022
Columbia	14,969
Cortland	1,885
Delaware	708
Dutchess	18,244
Erie	14,923
Essex	387
Franklin	2,541
Fulton	1,761
Genesee	61,850
Greene	7,533
Hamilton	
Herkimer	3,562
Jefferson	7,277
Kings	12,053
Lewis	7,080
Livingston	32,591
Madison	10,021
Monroe	24,944
Montgomery	8,579
Nassau	5,138
New York	285
Niagara	23,572
Oneida	17,393
Onondaga	10,758
Ontario	21,566

County	Amount*
Orange	33,889
Orleans	55,098
Oswego	22,162
Otsego	2,379
Putnam	8,470
Queens	9,883
Rensselaer	9,773
Richmond	2,716
Rockland	1,481
St. Lawrence	6,258
Saratoga	7,392
Schenectady	1,830
Schoharie	2,509
Schuyler	2,274
Seneca	11,025
Steuben	27,814
Suffolk	12,305
Sullivan	971
Tioga	6,853
Tompkins	5,363
Ulster	38,400
Warren	34
Washington	4,436
Wayne	66,857
Westchester	1,385
Wyoming	26,339
Yates	14,077

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

Final 2006 PRL Annual Report - Figure 5

**Relative Use (Pounds) of Reported Top Ten Pesticide Products
Applied by Certified Commercial Applicators during 2006***

EPA Registration Number [‡]	Weight Quantity (pounds) ^{**}	Percentage of All Products	Active Ingredients
10404-82	1,967,200.88	8.837%	PENDIMETHALIN
432-1349-10404	1,878,552.30	8.438%	IMIDACLOPRID
9198-123	1,645,835.64	7.393%	TOLUENE-2,4-DIAMINE, ALPHA,ALPHA,ALPHA-TRIFLUORO-3,5-DINITRO-N4,N4-DIPROPYL-
228-281-10404	1,265,109.39	5.683%	<ul style="list-style-type: none"> DIMETHYLAMINE 2-(2-METHYL-4-CHLOROPHENOXY)PROPIONATE DIMETHYLAMINE 2-(2,4-DICHLOROPHENOXY)PROPIONATE ACETIC ACID, (2,4-DICHLOROPHENOXY)-, COMPD. WITH N-METHYLMETHANAMINE (1:1)
10404-85	1,207,055.18	5.422%	DITHIOPYR
279-3216-10404	746,697.46	3.354%	BIFENTHRIN
9198-173	700,517.76	3.147%	PENDIMETHALIN
279-3168	555,734.49	2.496%	BIFENTHRIN
3125-474-10404	508,955.23	2.286%	IMIDACLOPRID
8378-39	383,098.25	1.721%	TOLUENE-2,4-DIAMINE, ALPHA,ALPHA,ALPHA-TRIFLUORO-3,5-DINITRO-N4,N4-DIPROPYL-
Top 10 Products - Total Quantity (pounds) Used:	13,388,975.36		
All Products - Total Quantity (pounds) Used:	22,261,956.13		
Top 10 Products as a Percentage of Total Quantity (pounds):		60.14%	

* 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>).

Final 2006 PRL Annual Report – Figure 6

Relative Use (Gallons) of Reported Top Ten Pesticide Products Applied by Certified Commercial Applicators during 2006*

EPA Registration Number [‡]	Volume Quantity (gallons) ^{**}	Percentage of All Products	Active Ingredients
9359-2	416,039.72	13.351%	SODIUM HYPOCHLORITE
59074-20001	191,787.27	6.154%	SODIUM HYPOCHLORITE
5905-368	152,610.52	4.897%	ALIPHATIC PETROLEUM HYDROCARBONS
75506-4	131,313.00	4.214%	<ul style="list-style-type: none"> 1H-1,2,4-TRIAZOLE-1-ETHANOL, .ALPHA.-(2-(4-CHLOROPHENYL)ETHYL)-.ALPHA.-(1,1-DIMETHYLETHYL)-, (+-), BORIC ACID COPPER CARBONATE
69526-5	118,726.57	3.810%	ALIPHATIC PETROLEUM HYDROCARBONS
100-1152	87,256.05	2.800%	<ul style="list-style-type: none"> MESOTRIONE ATRAZINE S-METOLACHLOR
9613-20001	72,240.36	2.318%	SODIUM HYPOCHLORITE
52483-1	50,886.00	1.633%	SODIUM HYPOCHLORITE
19713-123	45,397.07	1.457%	ALIPHATIC PETROLEUM HYDROCARBONS
73049-46	41,280.00	1.325%	BACTUR
Top 10 Products - Total Quantity (gallons) Used:	1,744,674.66		
All Products - Total Quantity (gallons) Used:	3,116,212.22		
Top 10 Products as a Percentage of Total Quantity (gallons):		55.99%	

* 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>).

Final 2006 PRL Annual Report – 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 2006***

EPA Registration Number[‡]	Weight Quantity (pounds)^{**}	Percentage of All Products	Active Ingredients
100-1075	338,219.90	6.238%	TEFLUTHRIN
4581-370	334,483.00	6.169%	MANCOZEB
62719-486-65783	222,115.00	4.097%	DITHIOPYR
62719-34	205,911.00	3.798%	CHLORPYRIFOS
432-1349-65783	200,900.00	3.705%	IMIDACLOPRID
51036-166	166,850.00	3.077%	CAPTAN
66222-58-51036	162,598.75	2.999%	CAPTAN
62719-402	155,572.00	2.869%	MANCOZEB
6325-13	153,390.00	2.829%	SULFUR
7969-105-34704	145,407.64	2.682%	METIRAM
Top 10 Products - Total Quantity (pounds) Sold:	2,085,447.29		
All Products - Total Quantity (pounds) Sold:	5,421,896.81		
Top 10 Products as a Percentage of Total Quantity (pounds):		38.46%	

*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>).

Final 2006 PRL Annual Report – 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 2006***

EPA Registration Number [‡]	Volume Quantity (gallons) ^{**}	Percentage of All Products	Active Ingredients
100-1152	77,263.05	9.941%	<ul style="list-style-type: none"> • MESOTRIONE • ATRAZINE • S-METOLACHLOR
71368-20	28,926.89	3.722%	GLYPHOSATE-ISOPROPYLAMMONIUM
524-539	27,693.61	3.563%	GLYCINE, N-(PHOSPHONOMETHYL)-POTASSIUM SALT
1812-416	21,195.70	2.727%	MANCOZEB
69526-1	20,344.00	2.618%	MINERAL OIL - INCLUDES PARAFFIN OIL FROM 063503
19713-123	19,177.10	2.468%	ALIPHATIC PETROLEUM HYDROCARBONS
50534-188-100	18,740.50	2.411%	CHLOROTHALONIL
241-337	16,757.10	2.156%	PENDIMETHALIN
34704-868	14,243.06	1.833%	PENDIMETHALIN
524-344	13,950.98	1.795%	ALACHLOR
Top 10 Products - Total Quantity (gallons) Sold:	412,818.09		
All Products - Total Quantity (gallons) Sold:	777,184.15		
Top 10 Products as a Percentage of Total Quantity (gallons):		53.12%	

*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>).