



New York

Turfgrass Survey

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New York Turfgrass Survey

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George E. Pataki
Governor

Nathan L. Rudgers
Commissioner

November 2004

Dear Friends:

I would like to thank New York's green industry for working with the New York State Department of Agriculture and Markets to develop the first comprehensive survey of New York's turf industry.

In recent years, the turf industry has become an increasingly important sector of New York's agricultural industry. As a result of this survey, we are better able to understand the actual impact of this industry on our businesses, our homes and on our State's economy.

Turf production not only generates a significant number of jobs, revenue, and demand for support services, but it is also beneficial to our environment. When properly managed, turf helps control water runoff and erosion along our roadsides and waterways, and reduces fertilizer runoff into our streams and rivers, helping New York maintain its natural resources and clean water supplies. Turf grass adds value to our homes and businesses and gives us places to play on athletic fields, parks and golf courses.

The turf industry plays an important role in New York's economy and way of life. Economically, environmentally, and aesthetically, the turf industry is important to all New Yorkers. Thank you for your continued interest in New York agriculture and for keeping our landscape green and growing.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nathan L. Rudgers'.

Nathan L. Rudgers
Commissioner

Summary

For the sectors included in this report, a total of 3.43 million turf acres were maintained in 2003. Private residences, lawn care and golf courses accounted for 93 percent of the total acres. These sectors established 843,323 new turf acres in New York at a cost of nearly \$1.56 billion.

General Statistics, All Sectors, 2003

Sector	Number	Turf Area (Acres)	New Turf Acres	Cost of New Turf
Golf Courses	860	101,480	3,557	\$27,330,600
Sod Farms	14	8,148	2,962	\$3,616,602
Lawn Care Service Companies	1,950	278,850	21,450	\$43,457,700
Schools	675	54,675	4,050	\$33,210,000
Parks	350	65,100	2,695	\$25,872,000
Private Residences	3,670,000	2,825,900	807,400	\$1,421,024,000
Churches	9,770	24,425	490	\$2,249,100
Cemeteries	570	14,250	274	\$697,330
Apartment Complexes	2,420	26,620	121	\$273,460
Correctional Facilities	118	2,242	47	\$9,400
Airports	144	13,968	187	\$1,309,000
Corporate Sites	720	10,584	72	\$103,320
Fairgrounds/Racetracks	65	2,080	18	\$5,751
Total	-	3,428,322	843,323	\$1,559,158,263

For the sectors included in this report, New York employed 43,148 employees in 2003 who had turf maintenance as their primary responsibility. The total payroll for these employees was nearly \$467 million. The value of turf equipment owned by these sectors was over \$6.3 billion in 2003.

General Statistics, All Sectors, 2003

Sector	Total Employees	Total Payroll	Value of Equipment
Golf Courses	11,180	\$229,362,000	\$472,570,000
Sod Farms	140	\$4,160,800	\$8,981,000
Lawn Care	13,650	\$154,245,000	\$174,127,200
Schools	3,781	\$13,027,500	\$80,057,700
Parks	8,750	\$38,710,000	\$86,555,000
Private Residences	<u>1/</u>	<u>1/</u>	\$5,468,300,000
Churches	2,931	\$3,908,000	\$15,338,900
Cemeteries	1,322	\$14,478,000	\$5,529,000
Apartment Complexes	726	\$7,502,000	\$14,520,000
Correctional Facilities	114	\$23,600	\$2,950,000
Airports	389	\$820,800	\$3,744,000
Corporate Sites	101	\$360,000	\$374,400
Fairgrounds/Racetracks	64	\$292,500	\$539,500
Total	43,148	\$466,890,200	\$6,333,586,700

1/ Insufficient data to publish.

Turf Maintenance Expenses

The sectors included in this report spent over \$5 billion on turf maintenance expenses in 2003. These sectors spent \$1.81 billion on paid labor, \$1.96 billion on equipment, \$0.72 billion on supplies and \$0.56 billion on miscellaneous expenses.

Turf Maintenance Expenses, All Sectors, 2003

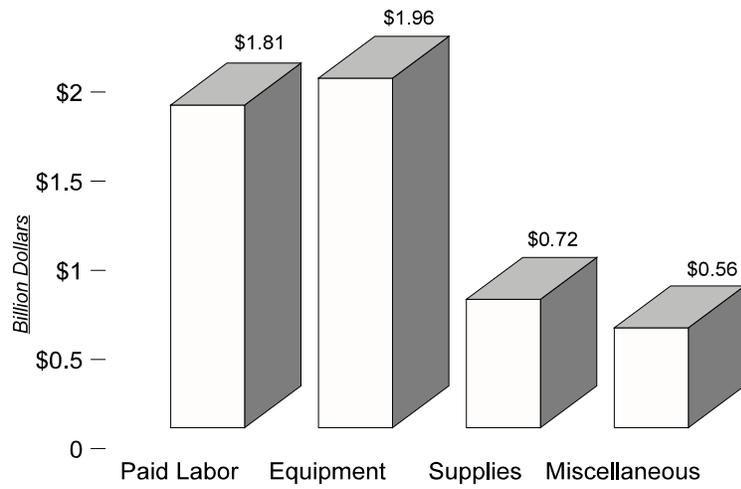
Sector	Labor	Equipment	Supplies	Misc.	Total	Percent
	<i>1,000 Dollars</i>					
Golf Courses	\$237,214	\$71,182	\$62,985	\$190,963	\$562,344	11.1
Sod Farms	\$4,500	\$3,575	\$2,394	\$2,800	\$13,269	0.0
Lawn Care Service Companies	\$304,760	\$73,476	\$76,518	\$82,249	\$537,003	10.6
Schools	\$76,064	\$32,501	\$8,620	\$82,601	\$199,786	4.0
Parks	\$62,649	\$24,343	\$10,147	\$27,157	\$124,296	2.5
Private Residences	\$965,210	\$1,724,900	\$550,500	<u>1/</u>	\$3,240,610 <u>2/</u>	64.0
Churches	\$63,202	\$13,190	\$4,543	\$156,300	\$237,235	4.7
Cemeteries	\$35,084	\$6,441	\$3,072	\$8,248	\$52,845	1.0
Apartment Complexes	\$37,510	\$8,107	\$3,388	<u>1/</u>	\$49,005	1.0
Correctional Facilities	\$1,369	\$1,251	\$378	\$333	\$3,330	0.0
Airports	\$1,613	\$1,958	\$158	\$6,624	\$10,353	0.0
Corporate Sites	\$19,364	\$2,090	\$1,926	<u>3/</u>	\$23,380 <u>2/</u>	0.0
Fairgrounds/Racetracks	\$2,036	\$390	\$134	\$2,392	\$4,952	0.0
Total	\$1,810,575	\$1,963,404	\$724,763	\$559,667	\$5,058,408	100%

1/ Not applicable.

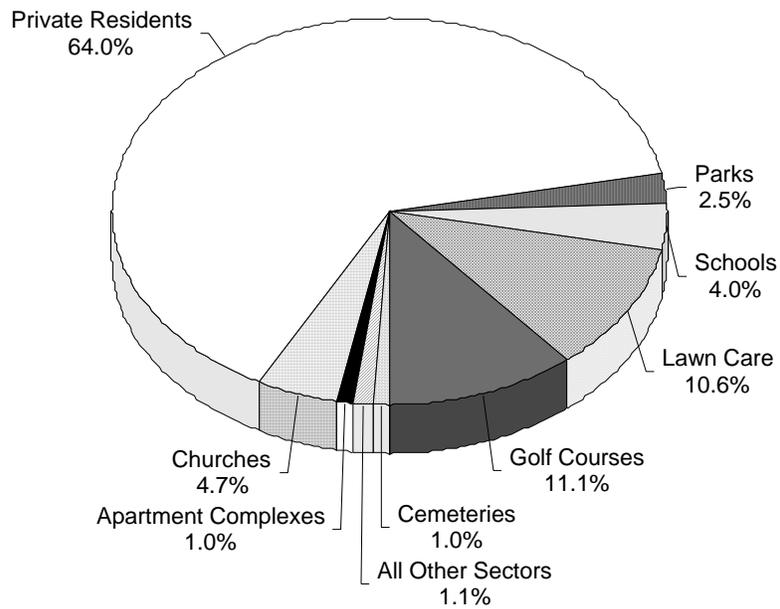
2/ Total excludes miscellaneous expenses.

3/ Insufficient data to publish.

Turf Maintenance Expenses, All Sectors, 2003



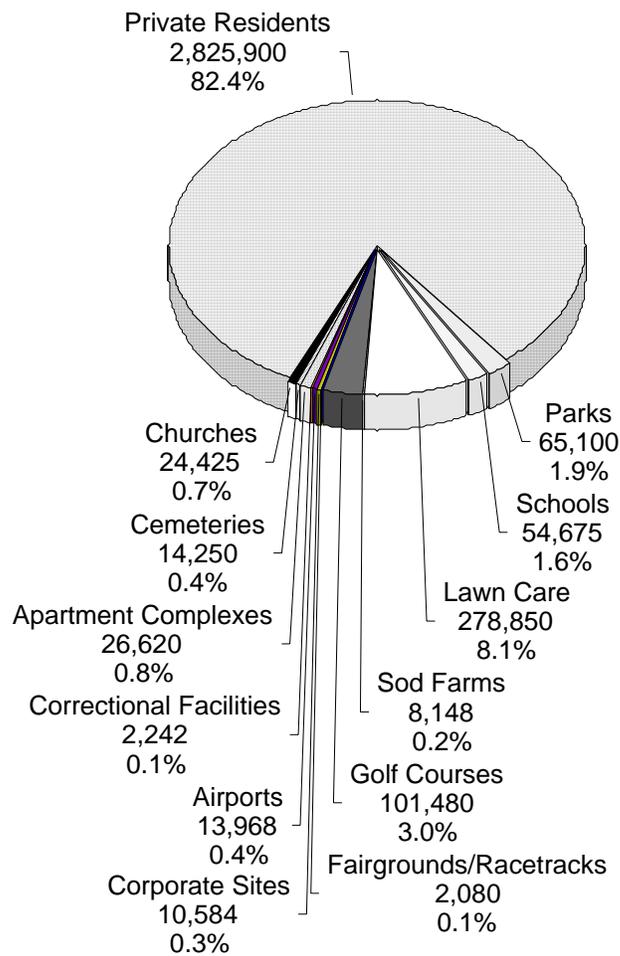
Turf Maintenance Expenses, All Sectors, 2003 Percent of Total



WHO HAS TURFGRASS?

There were nearly 3.43 million turf acres in New York in 2003. This acreage is slightly larger than the state of Connecticut and is equal to 10 percent of the total area in the Empire State. Private residences maintained over 2.8 million acres, 82.4 percent of the total acres. Lawn care service companies maintained 278,850 acres, 8.1 percent of the total. Golf courses maintained 101,480 acres, 3 percent of the total acres.

Turf Acres, All Sectors, 2003
Total Acres - 3,428,322



Golf Courses

General Statistics

New York's 860 golf courses maintained 101,480 turf acres, an average of 118 acres per course. Golf courses owned a total of 181,215 acres, an average of 220 property acres per course in 2003. There were nearly 21 million rounds played on New York's golf courses, an average of 24,071 rounds per course. Golf courses established 3,557 acres of new turf at a cost of \$27.3 million. Golf courses employed 3,440 full time and 7,740 part time employees for a total of 11,180 employees in 2003. Total payroll for these employees was over \$229 million in 2003. Golf courses owned nearly \$473 million dollars worth of equipment in 2003.



General Statistics, Golf Courses, 2003

Item	Unit	Average per Course	Total
Number of Golf Courses	Number	-	860
Total Turf Area	Acres	118	101,480
Property Acres	Acres	220	189,215
Rounds Played	Number	24,071	20,701,180
New Turf Acres Established	Acres	4.1	3,557
Cost of Establishing New Turf	Dollars	\$7,945 per acre	\$27,330,600
<u>Paid Labor:</u>			
Full Time Employees	Number	4 per golf course	3,440
Part Time Employees	Number	9 per golf course	7,740
Payroll	Dollars	\$266,700	\$229,362,000
Value of Turf Equipment	Dollars	\$549,500	\$472,570,000

General Statistics, Golf Courses by Type, 2003

Sectors	9-Hole		18-Hole		27-Hole	
	Average Per Course	Total	Average Per Course	Total	Average Per Course	Total
Number of Golf Courses	-	224	-	516	-	43
Total Turf Area	54	12,096	118	60,888	150	6,450
Property Acres	136	30,464	196	101,136	313	13,349
Rounds Played	15,800	3,539,200	22,330	11,522,280	41,900	1,801,700
New Turf Acres Established (<i>acres</i>) . .	5	1,097	3	1,548	2	103
Cost of Establishing New Turf (<i>total</i>) . .	\$29,100	\$6,518,400	\$32,600	\$16,812,600	\$12,000	\$516,000
<u>Paid Labors:</u>						
Full Time Employees	1.8	398	4	2,103	5.5	238
Part Time Employees	3.3	728	9.3	4,776	14.7	630
Value of Equipment	\$437,500	\$98,000,000	\$537,400	\$277,298,400	\$805,500	\$34,636,500

Sectors	36-Hole		Other		All Courses	
	Average Per Course	Total	Average Per Course	Total	Average Per Course	Total
Number of Golf Courses	-	34	-	43	-	860
Total Turf Area	190	6,460	362	15,586	118	101,480
Property Acres	404	13,736	710	30,530	220	189,215
Rounds Played	37,000	1,258,000	60,000	2,580,000	24,071	20,701,180
New Turf Acres Established (<i>acres</i>) . .	14	465	8	344	4.1	3,557
Cost of Establishing New Turf (<i>total</i>) . .	\$75,900	\$2,580,600	\$21,000	\$903,000	\$31,780	\$27,330,600
<u>Paid Labor:</u>						
Full Time Employees	7	241	10.7	460	4	3,440
Part Time Employees	19.5	663	22	943	9	7,740
Value of Equipment	\$694,900	\$23,626,600	\$907,174	\$39,008,500	\$549,500	\$472,570,000

General Statistics, Golf Courses by Type, 2003

Sectors	Private		Semi-Private		Public			
	Average Per Course	Total	Average Per Course	Total	Average Per Course	Total		
Number of Golf Courses	-	298	-	158	-	313		
Total Turf Area	117	34,825	103	16,198	99	30,814		
Property Acres	209	62,212	172	27,204	193	60,349		
Rounds Played	21,644	6,450,012	23,875	3,772,253	21,845	6,837,386		
New Turf Acres Established (<i>acres</i>)	3	962	1	164	7	2,140		
Cost of Establishing New Turf (<i>total</i>)	\$33,059	\$9,851,463	\$12,508	\$1,976,378	\$37,279	\$11,668,199		
<u>Paid Labors:</u>								
Full Time Employees	5.8	1,723	2	373	3	843		
Part Time Employees	11.5	3,420	8	1,265	7	2,170		
Value of Equipment	\$813,265	\$242,382,840	\$8,338,986	\$53,407,986	\$443,180	\$138,715,383		
Sectors	Municipal		Resort		Other		All Courses	
	Average Per Course	Total	Average Per Course	Total	Average Per Course	Total	Average Per Course	Total
Number of Golf Courses	-	57	-	30	-	4	-	860
Total Turf Area	203	11,516	219	6,534	400	1,593	118	101,480
Property Acres	330	18,817	532	15,937	1,175	4,696	220	189,215
Rounds Played	48,131	2,743,466	25,806	774,192	30,968	123,871	24,071	20,701,180
New Turf Acres Established (<i>acres</i>) .	4	217	2	65	2	9	4.1	3,557
Cost of Establishing New Turf (<i>total</i>) .	\$64,592	\$3,681,735	\$4,906	\$147,203	\$1,405	\$5,622	\$31,780	\$27,330,600
<u>Paid Labor:</u>								
Full Time Employees	6.3	357	4.4	131	3.3	13	4	3,440
Part Time Employees	8.4	478	12.5	374	8.3	33	9	7,740
Value of Equipment	\$524,785	\$29,912,771	\$244,866	\$7,345,980	\$201,260	\$805,040	\$549,500	\$472,570,000

Turf Maintenance Expenses

Golf courses spent more than \$562 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for \$237 million, 42.1 percent of total expenses. Golf courses spent over \$71 million for equipment, almost \$63 million for supplies, and over \$190 million for miscellaneous expenses.

Turf Maintenance Expenses, Golf Courses, 2003

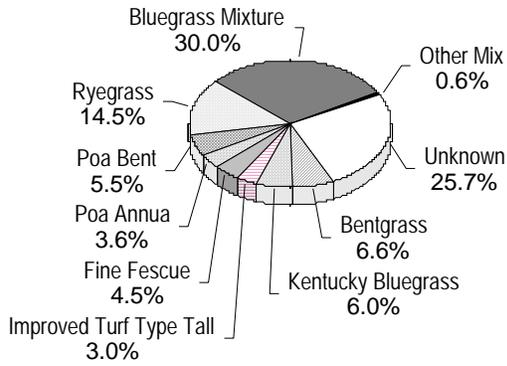
Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor:				
Mowing/Trimming		\$111,219,534	\$111,219,534	47.0
Edging		\$4,277,674	\$4,277,674	2.0
Clean-up (<i>Spring</i>)		\$8,555,350	\$8,555,350	4.0
Clean-up (<i>Fall</i>)		\$10,694,186	\$10,694,186	4.0
Disease, Weed, Insect Control	\$466,602	\$17,110,698	\$17,577,300	7.0
Wildlife Control				-
Fertilizer Application	\$466,602	\$6,416,512	\$6,883,114	3.0
Top Dressing Application		\$4,277,674	\$4,277,674	2.0
Aerification/Coring	\$2,566,310	\$4,277,674	\$6,843,984	3.0
Renovation/Overseeding/Reseeding	\$3,732,813	\$4,277,674	\$8,010,487	3.0
Dethatching/Power Raking/Verticutting		\$2,138,838	\$2,138,838	1.0
Seed/Sod Installation	\$233,300	\$4,277,674	\$4,510,974	2.0
Irrigation Installation	\$10,031,934	\$19,249,535	\$29,281,469	12.0
Irrigation Service	\$699,902	\$4,277,674	\$4,977,576	2.0
Soil and Tissue Testing/Diagnostic Services	\$933,203	-	\$933,203	1.0
Other	\$4,199,414	\$12,833,023	\$17,032,437	7.0
TOTAL Paid Labor	\$23,330,080	\$213,883,720	\$237,213,800	42.1%
Equipment: 1/				
New Equipment Purchases			\$34,736,913	48.8
Used Equipment Purchases			\$2,562,559	3.6
Irrigation Equipment Repairs			\$5,196,300	7.3
Equipment Supplies			\$4,840,390	6.8
Equipment Repairs and Maintenance			\$16,229,542	22.8
Equipment Rentals/Leasing Agreements			\$7,331,767	10.3
Other Expenses			\$284,729	0.4
TOTAL Equipment Parts and Repairs			\$71,182,200	12.7%
Supplies: 1/				
Seed			\$3,779,081	6.0
Lime			\$503,877	0.8
Sod			\$1,574,617	2.5
Top Dressing			\$4,156,990	6.6
Topsoil			\$1,070,740	1.7
Sand			\$2,141,479	3.4
Mulch (<i>straw, hay, peat moss, etc.</i>)			\$377,908	0.6
Purchased Irrigation Water			\$1,133,724	1.8
Crop Protectants:				
Herbicides			\$3,149,234	5.0
Insecticides			\$3,653,111	5.8
Fungicides			\$17,005,864	27.0
Biological Pesticides			\$1,763,571	2.8
Fertilizer			\$11,337,242	18.0
Fuel/Lubricants (<i>oil, gasoline, diesel, etc.</i>)			\$9,195,763	14.6
Other Expenses			\$2,141,479	3.4
TOTAL Supplies			\$62,984,680	11.2%
Miscellaneous Expenses 1/				
Insurance			\$15,468,003	8.1
Utilities			\$14,895,114	7.8
Travel and Meeting Expenses			\$2,100,593	1.1
Property Taxes			\$44,494,379	23.3
Sales and Use Tax			\$20,242,078	10.6
Building Maintenance			\$8,784,298	4.6
Property Rental			\$2,291,556	1.2
Capital Improvements			\$79,631,571	41.7
Training			\$763,852	0.4
Other			\$2,291,556	1.2
TOTAL Miscellaneous Expenses			\$190,963,000	34.0%
TOTAL ALL EXPENSES			\$562,343,680	100%

1/ Equipment, supplies and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Golf Courses
Total Acres - 101,480

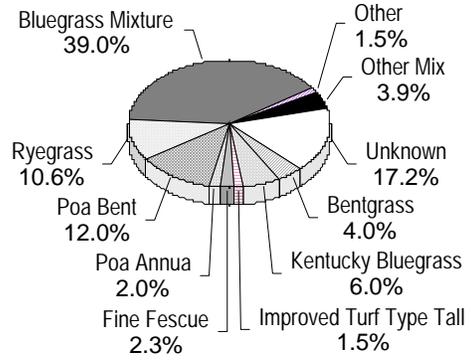
9-Hole Course

12,096 Acres



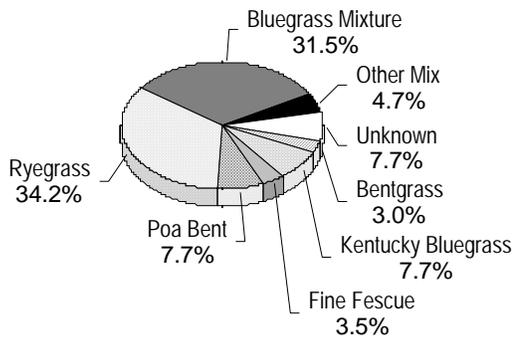
18-Hole Course

60,888 Acres



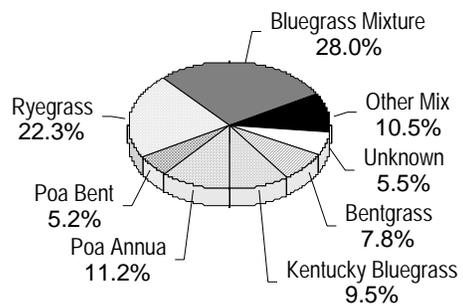
27-Hole Course

6,450 Acres



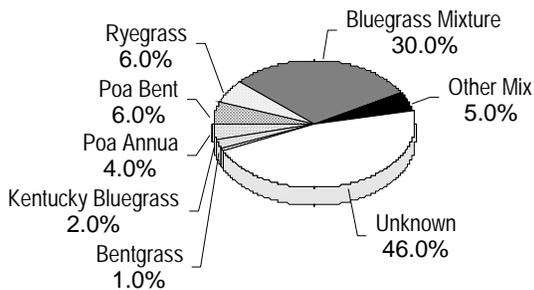
36-Hole Course

6,460 Acres



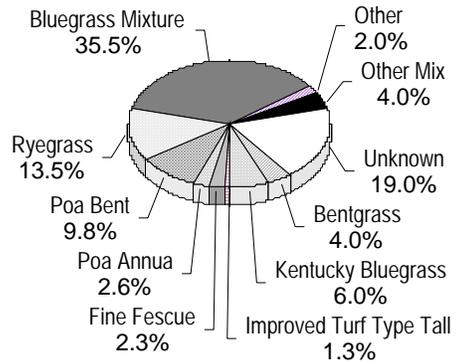
Other

15,586 Acres



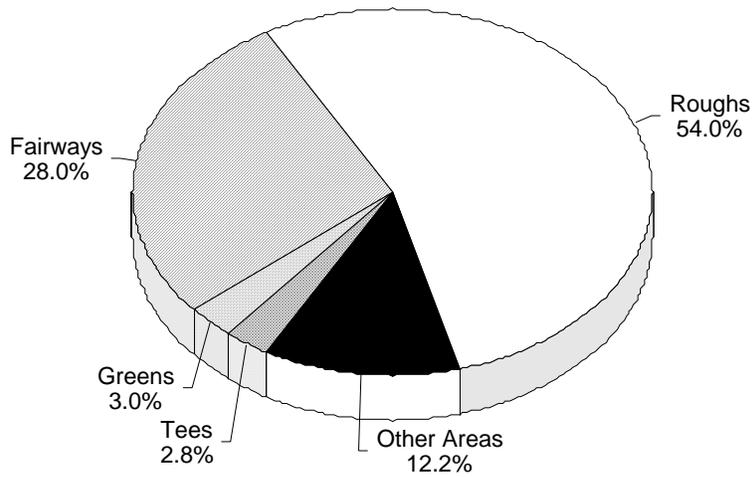
All Courses

101,480 Acres



Bluegrass mixture was the dominant grass type for most golf courses in New York in 2003. 27-hole courses reported that ryegrass was the main grass type with bluegrass mixture a close second.

Turf Acres by Use, Golf Courses, 2003
Total Turf Acres - 101,480



Irrigation

New York golf courses irrigated a total of 37,548 acres, 37 percent of all turf. The main source of irrigation was ponds and lakes.

Total Area of Turf Irrigated, Golf Courses, 2003

Information Source	Total Area Irrigated (Acres)	Percent of Irrigation
Municipal Water	4,506	12
Ponds/Lakes	15,770	42
Wells	9,387	25
Rivers/Streams	5,257	14
Other	2,628	7
TOTAL	37,548	100%

Management Problems

Golf courses reported the leading problems in turf management were disease and poor drainage. Wear and compaction and labor were also a concern.

Turf Management Problems, Golf Courses, 2003
Percent Reporting a Specific Turf Problem by Type of Course

Problem	9-Hole	18-Hole	27-Hole	36-Hole	Other	All Courses
Disease	65	64	75	62	75	65
Drought	19	2				6
Poor Drainage	36	55	62	62		49
Erosion	4	1				2
Equipment Maintenance . . .	27	15	12	25	50	20
Insects/Grubs	17	11	12	25	50	15
Nematodes						
Excessive Shade	6	9				7
Poor Soil	14	23	12			19
Thatch	21	10	25			13
Wear and Compaction	29	37	25	37		34
Water Availability/Quality . . .	4	2	12		33	4
Weeds	17	11		25		13
Labor	17	30	37	25	33	27
Moles/Voles						
Clipping Disposal						
Geese/Wildlife	8	14	12	37	50	15
Pet Waste						
Land Availability						
Other	6	6				6

Significant Future Problems for Turf Management, Golf Courses, 2003
Percent Reporting a Specific Turf Problem

Problem	9-Hole	18-Hole	27-Hole	36-Hole	Other	All Courses
Operational Expenses	70	56	62	62	50	60
Labor Availability	29	39	62	25	50	37
Government Regulation	51	58	87	62	75	58
Water Availability	21	28	12			23
Loss of Chemical Regulations	36	60	62	75	75	54
Other	12	7		12		8

Golf courses reported operational expenses as the biggest future problem for turf management. Government regulation and loss of chemical registrations were also a major concern.

Primary Information Source

Golf courses reported peers as the most important source for turf management information in 2003. Commercial technical reps were also utilized as a primary source of turf information.

Primary Information Source, Golf Courses, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	33
Peers	52
Commercial Technical Reps.	48
County Extension Service	7
Community College	-
Newspapers	-
Technical Journals	30
Private Consultant	10
TV/Radio	-
Garden Center/Nursery	-
Magazines	27
Internet	9
Product Labels	17
Lawn Care Company	3
Industry Association	14
United States Golf Association Agronomist	17
Golf Course Superintendent Association of America	30
Other	5

Training

Seventy six percent of golf courses reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Turf Maintenance Training
Golf Courses, 2003

Attended Training	76
No Training	24
TOTAL	100%

Sod

General Statistics

New York's 14 sod farms maintained 8,148 acres, an average of 582 acres per farm. There were a total of 2,226 acres of sod sold in 2003 for a total of \$14.9 million. Sod farms established 2,962 acres of new turf at a cost of \$3.6 million. These farms employed 56 full time and 84 part time employees for a total of 140 employees in 2003. Total payroll for these employees was over \$4 million. Sod farms owned nearly 9 million dollars worth of turf equipment. The total assessed land value averaged \$2,200 per acre for sod farms, a total of \$17.9 million.



General Statistics, Sod Farms, 2003

Item	Unit	Average per farm	Total
Number of Sod Farms	Number	-	14
Total Turf Area	Acres	582	8,148
Maximum Production Capacity	Acres	212	2,968
Sod Sold	Acres	159	2,226
Gross Sales from Sod	Dollars	\$.154 per sq. ft.	\$14,932,542
Gross Income from Sod Installation	Dollars	\$72,900	\$1,020,600
New Turf Acres Established	Acres	212	2,962
Cost of Establishing New Turf	Dollars	\$1,221 per acre	\$3,616,602
<u>Paid Labor</u>			
Full Time Employees	Number	4 per farm	56
Part Time Employees	Number	6 per farm	84
Payroll	Dollars	\$297,200	\$4,160,800
Value of Turf Equipment	Dollars	\$641,500 per farm	\$8,981,000
Total Assessed Land Value	Dollars	\$2,200 per acre	\$17,925,600

Turf Maintenance Expenses

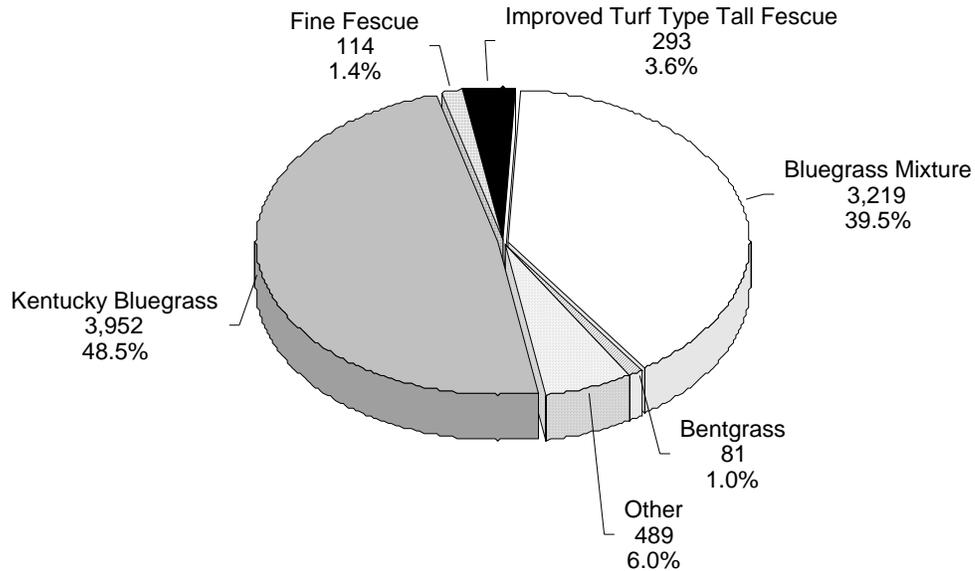
Sod farms spent more than \$13 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for \$4.5 million, 34 percent of total expenses. Sod farms spent over \$3.5 million for equipment, over \$2.3 million for supplies and \$2.8 million for miscellaneous expenses.

Turf Maintenance Expenses, Sod Farms, 2003

Type of Expenses ^{2/}	Total Expense	Percent of Total
Paid Labor:		
Mowing/Trimming	\$1,080,000	24.0
Edging	-	-
Clean-up (Spring)	\$45,000	1.0
Clean-up (Fall)	\$45,000	1.0
Disease, Weed, Insect Control	\$135,000	3.0
Wildlife Control ^{1/}	-	-
Fertilizer Application	\$180,000	4.0
Aerification/Coring	-	-
Renovation/Overseeding/Reseeding	\$90,000	2.0
Dethatching/Power Raking/Verticutting	\$45,000	1.0
Seeding	\$90,000	2.0
Irrigation Installation ^{1/}	-	-
Irrigation Service	\$90,000	2.0
Soil and Tissue Testing/Diagnostic Services	\$45,000	1.0
Harvesting	\$1,620,000	36.0
Consumer sod installation	\$765,000	17.0
Other	\$270,000	6.0
TOTAL Paid Labor	\$4,500,000	34%
Equipment:		
New Equipment Purchases	\$1,787,500	50.0
Used Equipment Purchases	\$286,000	8.0
Equipment Supplies	\$178,750	5.0
Equipment Repairs and Maintenance	\$965,250	27.0
Irrigation Equipment Repairs	\$35,750	1.0
Equipment Rentals/Leasing Agreements	\$286,000	8.0
Other Expenses	\$35,750	1.0
TOTAL Equipment Parts and Repairs	\$3,575,000	27%
Supplies:		
Seed	\$406,980	17.0
Lime	\$119,700	5.0
Sod	-	-
Top Dressing	-	-
Topsoil	-	-
Sand	-	-
Mulch (straw, hay, peat moss, etc.)	-	-
Purchased Irrigation Water	-	-
Crop Protectants:		
Herbicides	\$215,460	9.0
Insecticides	\$143,640	6.0
Fungicides	\$71,820	3.0
Biological Pesticides	\$23,940	1.0
Fertilizer	\$646,380	27.0
Fuel/Lubricants (oil, gasoline, diesel, etc.)	\$622,440	26.0
Other Expenses	\$143,640	6.0
TOTAL Supplies	\$2,394,000	18%
Miscellaneous Expenses		
Insurance	\$532,000	19.0
Utilities	\$112,000	4.0
Travel and Meeting Expenses	\$56,000	2.0
Property Taxes	\$112,000	4.0
Sales and Use Tax	\$588,000	21.0
Building Maintenance	\$84,000	3.0
Property Rental	\$756,000	27.0
Capital Improvements	\$448,000	16.0
Training	\$28,000	1.0
Other	\$84,000	3.0
TOTAL Miscellaneous Expenses	\$2,800,000	21%
TOTAL ALL EXPENSES	\$13,269,000	100%

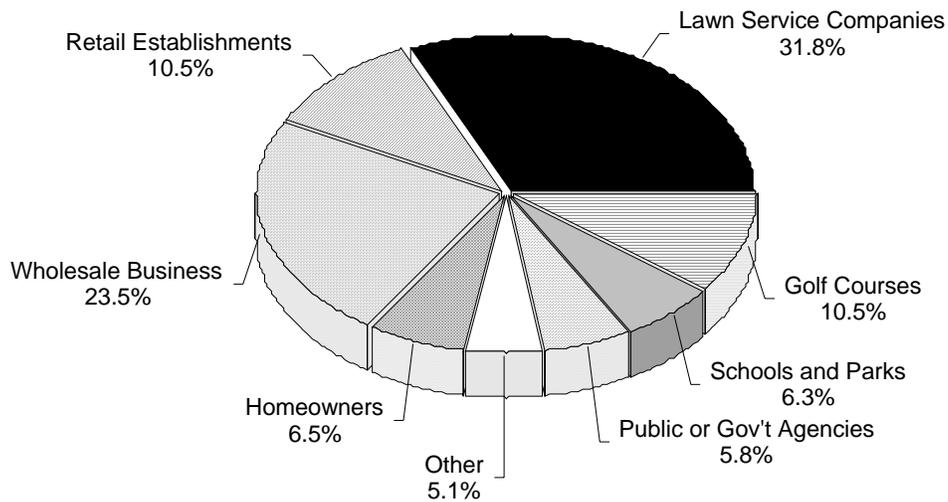
^{1/} Included in Other. ^{2/} There was insufficient data reported to publish contract vs. non-contract expenses. Only the total is reported.

Principal Types of Grass, Sod Farms, 2003
Total Acres 8,148



Bluegrass mixture was the dominant grass type for sod farms in New York in 2003. Kentucky Bluegrass and Bluegrass Mixtures comprised 88 percent of all turf acres grown in New York State.

Percent Sod Sold by Customer
Sod Farms, 2003



New York sod farms sold 31.8 percent of their production to lawn service companies. The second largest consumer of sod was wholesalers with 23.5 percent.

Irrigation

New York sod farms irrigated a total of 3,096 acres in 2003, 38 percent of all turf acres. The main source of irrigation was rivers and streams, accounting for 68 percent of the total irrigated acres. There were no sod farms using municipal water for irrigation.

Total Area of Turf Irrigated, Sod Farms, 2003

Source	Total Area Irrigated (Acres)	Percent of Irrigation
Municipal Water	-	-
Ponds/Lakes	867	28
Wells	124	4
Rivers/Streams	2,105	68
Other	-	-
Total	3,096	100%

Turf Management Problems

Poor drainage was the top turf management problem for sod farms in New York. Drought, equipment maintenance and insects/grubs were also a major concern for sod farms.

Turf Management Problems, Sod Farms, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	-
Drought	40
Poor Drainage	80
Erosion	-
Equipment Maintenance	40
Insects/Grubs	40
Nematodes	-
Excessive Shade	-
Poor Soil	-
Thatch	-
Wear and Compaction	-
Water Availability/Quality	-
Weeds	20
Labor	20
Moles/Voles	-
Clipping Disposal	-
Geese/Wildlife	-
Pet Waste	-
Land Availability	20
Other	20

Significant Future Problems for Turf Management, Sod Farms, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	40
Labor Availability	80
Government Regulation	60
Water Availability	20
Loss of Chemical Registrations	40
Other	40

Sod farms reported labor availability to be a significant future problem for turf management. Government regulation was the second major concern followed by expenses, loss of chemical registrations and water availability.

Primary Information Source

Sod farms reported university specialists as an important source for turf management information in 2003. Peers, commercial reps, garden and nursery centers and industry associations were also utilized as sources of information.

Primary Information Source, Sod Farms, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	60
Peers	40
Commercial Technical Reps.	40
County Extension Service	20
Community College	-
Newspapers	-
Technical Journals	20
Private Consultant	20
TV/Radio	-
Garden Center/Nursery	-
Magazines	40
Internet	-
Product Labels	20
Lawn Care Company	-
Industry Association	40
Other	-

Training

All sod farms reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Turf Maintenance Training
Sod Farms, 2003

Attended Training	100
No Training	-
TOTAL	100%

Lawn Care

General Statistics

New York's lawn care service companies accounted for 649,350 service accounts in 2003, an average of 333 accounts per company. These lawn care companies maintained a total of 278,850 acres in New York. A total of 21,450 new turf acres were established at a cost of over \$43 million. Lawn care service companies employed 5,850 full time and 7,800 part time employees for a total of 13,650 employees in 2003. Total payroll for these employees was over \$154 million. The value of turf equipment owned or leased by lawn care service companies totaled over \$174 million.



General Statistics, Lawn Care, 2003

Item	Unit	Average per Company	Total
Number of Lawn Care Service Companies	Number	-	1,950
Number of Service Accounts	Number	333	649,350
Total Turf Area Maintained	Acres	143	278,850
New Turf Acres Established	Acres	11	21,450
Cost of Establishing New Turf	Dollars	\$2,026 per acre	\$43,457,700
<u>Paid Labor:</u>			
Full Time Employees	Number	3 per company	5,850
Part Time Employees	Number	4 per company	7,800
Payroll	Dollars	\$79,100 per company	\$154,245,000
Value of Turf Equipment owned	Dollars	\$64,858 per company	\$126,473,100
Value of Turf Equipment Rented/Leased	Dollars	\$24,438 per company	\$47,654,100
Total Value of All Turf Equipment	Dollars	\$89,296 per company	\$174,127,200

Turf Maintenance Expenses

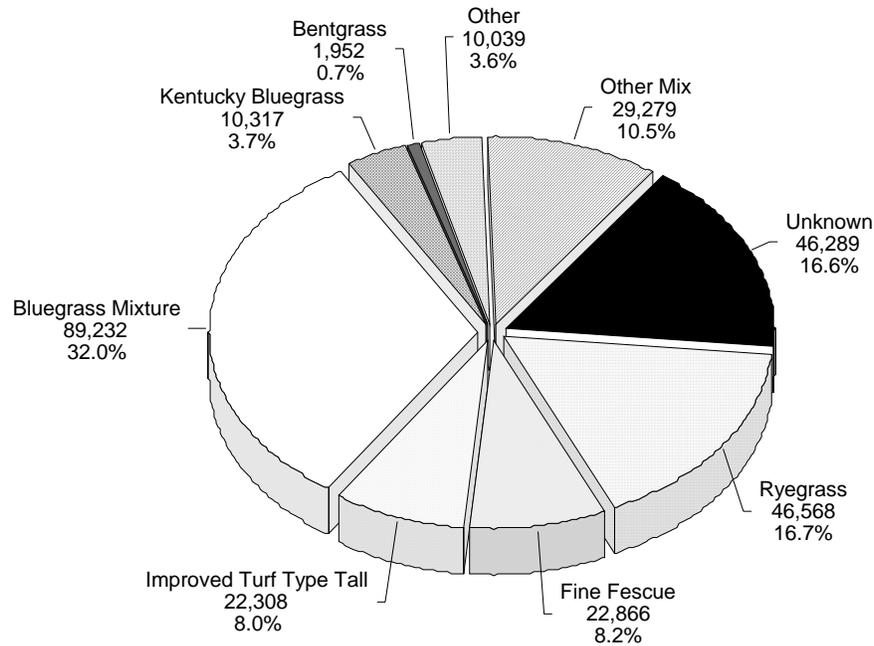
Lawn care service companies spent more than \$537 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for \$304.76 million, 56.7 percent of total expenses. Lawn care companies spent nearly \$73.48 million on equipment, over \$76.5 million for supplies and \$82.25 million for miscellaneous expenses.

Turf Maintenance Expenses, Lawn Care, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor:				
Mowing/Trimming	\$41,699,095	\$56,458,050	\$98,157,145	32.2
Edging	\$1,357,691	\$9,221,823	\$10,579,514	3.5
Clean-up (<i>Spring</i>)	\$5,310,970	\$17,009,140	\$22,320,110	7.3
Clean-up (<i>Fall</i>)	\$4,262,752	\$16,189,423	\$20,452,175	6.7
Disease, Weed, Insect Control	\$2,685,434	\$28,485,187	\$31,170,621	10.2
Wildlife Control	-	\$758,239	\$758,239	0.3
Fertilizer Application	\$9,334,128	\$45,760,735	\$55,094,863	18.0
Aerification/Coring	\$2,146,350	\$3,914,152	\$6,060,502	2.0
Renovation/Overseeding/Reseeding	\$1,936,707	\$6,065,910	\$8,002,617	2.6
Dethatching/Power Raking/Verticutting	\$499,151	\$1,250,069	\$1,749,220	0.6
Seed/Sod Installation	\$9,623,636	\$10,246,470	\$19,870,106	6.5
Irrigation Installation	\$12,119,392	\$2,172,252	\$14,291,644	4.7
Irrigation Service	\$4,452,429	\$430,352	\$4,882,781	1.6
Soil and Tissue Testing/Diagnostic Services	\$708,795	\$368,872	\$1,077,667	0.4
Other	\$3,693,720	\$6,598,726	\$10,292,446	3.4
TOTAL Paid Labor	\$99,830,250	\$204,929,400	\$304,759,650	56.7%
Equipment: 1/				
New Equipment Purchases			\$41,440,464	56.4
Used Equipment Purchases			\$9,625,356	13.1
Irrigation Equipment Repairs			\$734,760	1.0
Equipment Supplies			\$6,612,840	9.0
Equipment Repairs and Maintenance			\$13,446,108	18.3
Equipment Rentals/Leasing Agreements			\$1,322,568	1.8
Other Expenses			\$293,904	0.4
TOTAL Equipment Parts and Repairs			\$73,476,000	13.7%
Supplies: 1/				
Seed			\$5,509,296	7.2
Lime			\$2,601,612	3.4
Sod			\$4,361,526	5.7
Top Dressing			\$2,448,576	3.2
Topsoil			\$5,738,850	7.5
Sand			\$765,180	1.0
Mulch (<i>straw, hay, peat moss, etc.</i>)			\$2,295,540	3.0
Purchased Irrigation Water			\$153,036	0.2
Crop Protectants:				
Herbicides			\$7,116,174	9.3
Insecticides			\$8,876,088	11.6
Fungicides			\$765,180	1.0
Biological Pesticides			\$535,626	0.7
Fertilizer			\$17,981,730	23.5
Fuel/Lubricants (<i>oil, gasoline, diesel, etc.</i>)			\$17,063,514	22.3
Other Expenses			\$306,072	0.4
TOTAL Supplies			\$76,518,000	14.3%
Miscellaneous Expenses 1/				
Insurance			\$35,860,586	43.6
Utilities			\$6,333,177	7.7
Travel and Meeting Expenses			\$1,151,487	1.4
Property Taxes			\$4,112,453	5.0
Sales and Use Tax			\$19,739,772	24.0
Building Maintenance			\$2,796,467	3.4
Property Rental			\$9,540,889	11.6
Capital Improvements			\$904,740	1.1
Training			\$1,233,736	1.5
Other			\$575,743	0.7
TOTAL Miscellaneous			\$82,249,050	15.3%
TOTAL ALL EXPENSES			\$537,002,700	100%

1/ Equipment, supplies and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Lawn Care, 2003
Total Acres - 278,850



Irrigation

New York lawn care service companies irrigated a total of 181,253 acres, 65 percent of all turf acres maintained. The main source of irrigation as municipal water, accounting for 84 percent of total irrigated acres.

Total Area of Turf Irrigated, Lawn Care, 2003

Source	Total Area Irrigated (Acres)	Percent of Irrigation
Municipal Water	152,253	84
Ponds/Lakes	1,813	1
Wells	27,187	15
Rivers/Streams	-	-
Other	-	-
Total	181,253	100%

Turf Management Problems

Weeds were the biggest turf management problem for lawn care service companies in New York. Disease and labor were also a major concern in 2003.

Turf Management Problems, Lawn Care, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	30
Drought	15
Poor Drainage	24
Erosion	-
Equipment Maintenance	15
Insects (<i>Grubs</i>)	24
Nematodes	-
Excessive Shade	24
Poor Soil	17
Thatch	5
Wear and Compaction	13
Water Availability/Quality	5
Weeds	44
Labor	27
Moles/Voles	10
Clipping Disposal	9
Geese/Wildlife	4
Pet Waste	2
Land Availability	-
Other	6

Significant Future Problems for Turf Management, Lawn Care, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	54
Labor Availability	60
Government Regulation	78
Water Availability	12
Loss of Chemical Registrations	43
Other	7

Lawn care service companies reported government regulation to be a significant future problem for turf management. Labor availability and operational expenses were also a major concern.

Primary Information Source

Lawn care service companies in New York reported county extension services as an important source for turf management information in 2003. Industry association and product labels were also utilized as sources of information.

Primary Information Source, Lawn Care, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	16
Peers	28
Commercial Technical Reps.	26
County Extension Service	48
Community College	1
Newspapers	-
Technical Journals	29
Private Consultant	3
TV/Radio	-
Garden Center/Nursery	17
Magazines	25
Internet	10
Product Labels	31
Lawn Care Company	11
Industry Association	44
Other	5

Training

Seventy two percent of lawn care service companies reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Turf Maintenance Training
Lawn Care, 2003

Attended Training	72
No Training	28
Total	100%

Schools

General Statistics

Turf acres were broken down differently for schools than other sections. Acres were broken down to include and exclude athletic fields. There were 675 school systems in New York in 2003. New York schools maintained a total of 54,675 acres, 18,900 acres were athletic fields and 35,775 were turf acres excluding athletic fields. There were a total of 4,050 new turf acres established in 2003, at a cost of \$33.2 million. New York school systems employed 2,228 full time and 1,553 part time employees for a total 3,781 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was over \$13 million. The value of turf equipment owned by schools was over \$80 million in 2003.



General Statistics, Schools, 2003

Item ^{1/}	Unit	Average per School System	Total
Number of School Systems	Number	-	675
Turf Area Excluding Athletic Fields	Acres	53	35,775
Turf Area on Athletic Fields	Acres	28	18,900
Total Turf Area	Acres	81	54,675
New Turf Acres Established	Acres	6	4,050
Cost of Establishing New Turf	Dollars	\$8,200 per acre	\$33,210,000
<u>Paid Labor</u>			
Full Time Employees	Number	3.3	2,228
Part Time Employees	Number	2.3	1,553
Payroll	Dollars	\$19,300	\$13,027,500
Value of Turf Equipment	Dollars	\$118,604	\$80,057,700

^{1/} There were 675 school systems in New York in 2003. School systems included kindergarten through high school and also colleges and universities.

Turf Maintenance Expenses

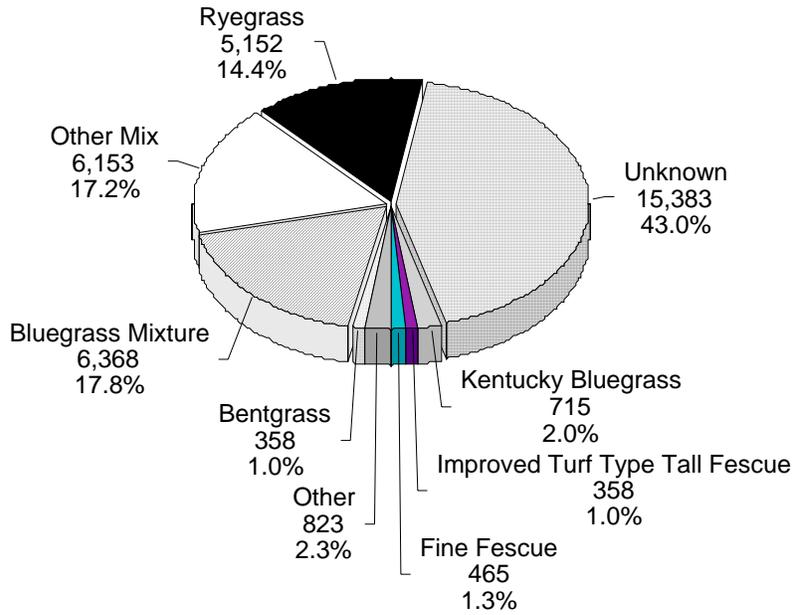
New York schools systems spent nearly \$200 million on turf maintenance expenses during 2003. Miscellaneous was the largest expense which accounted for \$82.6 million, 41.4 percent of total expenses. Capital improvements were over \$41 million which made miscellaneous the most costly expense. School systems in New York spent over \$76 million for paid labor, \$32.5 million for equipment and \$8.6 million for supplies.

Turf Maintenance Expenses, Schools, 2003

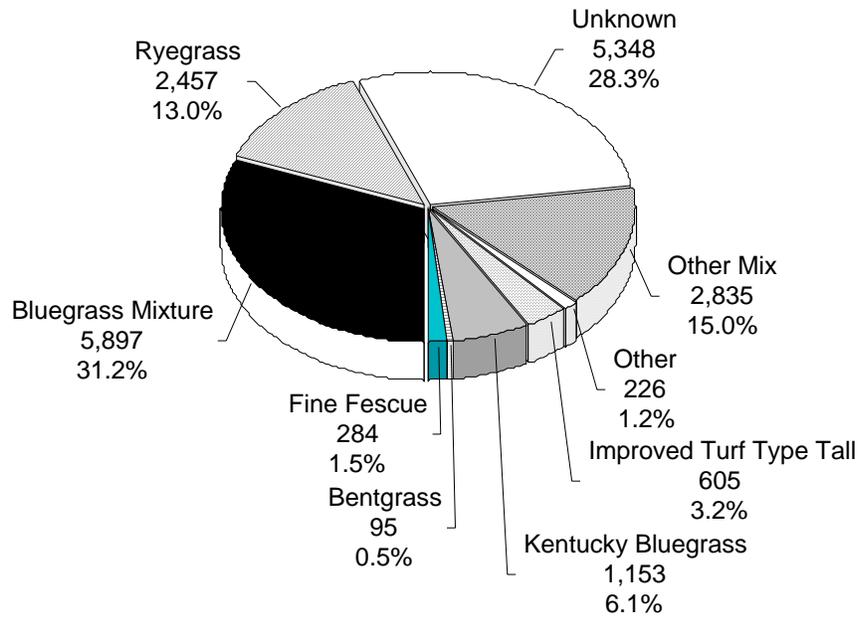
Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor:				
Mowing/Trimming	\$3,679,080	\$39,210,750	\$42,889,830	56.5
Edging	\$327,030	\$1,748,250	\$2,075,280	2.7
Clean-up (Spring)	\$708,564	\$3,683,810	\$4,392,374	5.8
Clean-up (Fall)	\$749,442	\$4,183,312	\$4,932,754	6.5
Disease, Weed, Insect Control	\$1,716,904	\$936,563	\$2,653,467	3.5
Wildlife Control	\$572,301	\$499,500	\$1,071,801	1.4
Fertilizer Application	\$2,261,953	\$2,310,188	\$4,572,141	6.0
Aerification/Coring	\$722,190	\$1,123,875	\$1,846,065	2.4
Renovation/Overseeding/Reseeding	\$844,826	\$1,685,813	\$2,530,639	3.3
Dethatching/Power Raking/Verticutting	\$218,020	\$187,313	\$405,333	0.5
Seed/Sod Installation	\$408,787	\$874,125	\$1,282,912	1.7
Irrigation Installation	\$749,442	\$874,125	\$1,623,567	2.1
Irrigation Service	\$463,292	\$811,688	\$1,274,980	1.7
Soil and Tissue Testing/Diagnostic Services	\$95,384	-	\$95,384	0.1
Turf Painting	\$109,010	\$3,996,000	\$4,105,010	5.4
Other	-	\$312,188	\$312,188	0.4
TOTAL Paid Labor	\$13,626,225	\$62,437,500	\$76,063,725	38%
Equipment: 1/				
New Equipment Purchases	-	-	\$20,963,306	64.5
Used Equipment Purchases	-	-	\$4,355,168	13.4
Irrigation Equipment Repairs	-	-	\$715,028	2.2
Equipment Supplies	-	-	\$1,300,050	4.0
Equipment Repairs and Maintenance	-	-	\$4,290,165	13.2
Equipment Rentals/Leasing Agreements	-	-	\$812,530	2.5
Other Expenses	-	-	\$65,003	0.2
TOTAL Equipment Parts and Repairs	-	-	\$32,501,250	16.3%
Supplies: 1/				
Seed	-	-	\$1,094,708	12.7
Lime	-	-	\$137,915	1.6
Sod	-	-	\$258,593	3.0
Top Dressing	-	-	\$810,256	9.4
Topsoll	-	-	\$861,975	10.0
Sand	-	-	\$129,296	1.5
Mulch (straw, hay, peat moss, etc.)	-	-	\$344,790	4.0
Purchased Irrigation Water	-	-	\$948,173	11.0
Crop Protectants:	-	-	-	-
Herbicides	-	-	\$258,593	3.0
Insecticides	-	-	\$51,719	0.6
Fungicides	-	-	\$129,296	1.5
Biological Pesticides	-	-	\$68,958	0.8
Fertilizer	-	-	\$1,577,414	18.3
Fuel/Lubricants (oil, gasoline, diesel, etc.)	-	-	\$1,767,049	20.5
Other Expenses	-	-	\$181,015	2.1
TOTAL Supplies	-	-	\$8,619,750	4.3%
Miscellaneous Expenses 1/				
Insurance	-	-	\$3,717,050	4.5
Utilities	-	-	\$19,163,455	23.2
Travel and Meeting Expenses	-	-	\$578,208	0.7
Property Taxes	-	-	-	-
Sales and Use Tax	-	-	-	-
Building Maintenance	-	-	\$15,694,208	19.0
Property Rental	-	-	\$1,404,219	1.7
Capital Improvements	-	-	\$41,300,550	50.0
Training	-	-	\$743,410	0.9
Other	-	-	-	-
TOTAL Miscellaneous Expenses	-	-	\$82,601,100	41.4%
TOTAL ALL EXPENSES	-	-	\$199,785,825	100%

1/ Equipment, supplies and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Schools, 2003
 Total Acres Excluding Athletic Fields - 35,775 Acres



Principal Types of Grass, Schools, 2003
 Total Turf Area on Athletic Fields - 18,900 Acres



Irrigation

New York school systems irrigated a total of 6,834 acres, 12.5 percent of all turf areas including athletic fields. The main source of irrigation was municipal water, accounting for 80 percent of total irrigated acres.

Total Area of Turf Irrigated, Schools, 2003

Source	Total Area Irrigated (Acres)	Percent of Irrigation
Municipal Water	5,467	80
Ponds/Lakes	137	2
Wells	1,025	15
Rivers/Streams	205	3
Other	-	-
Total	6,834	100%

Hired Lawn Care

Twenty five percent of New York school systems hired a professional lawn care service to perform turf maintenance in 2003. School systems spent an average of \$28,000 a year for this service, a total of \$4.7 million in 2003.

Lawn Care Service, Schools, 2003

	Percent	Average	Total
Hired Lawn Care Service	25	\$28,000 per school system	\$4,725,000
Did Not Hire Lawn Care Service ..	75		
Total	100%		

Athletic Fields and Playgrounds

New York school systems maintained a total of 11,475 fields and playgrounds in 2003. There were an average of 2 baseball fields, 3 softball, 2 football, 4 soccer, 4 playground and 2 other fields per school system. Playgrounds were used 9 months out of the year while baseball, softball, soccer and other fields were used 5 months out of the year. Football fields were only used 4 months out of the year. The average field was used 4.7 hours per day.

Recreational Field Usage, Schools, 2003

Field	Number of Fields		Months Used	Average hours per day
	Average per park	Total		
Baseball	2	1,350	5.0	4.3
Softball	3	2,025	5.0	4.3
Football	2	1,350	4.0	4.0
Soccer	4	2,700	5.0	4.4
Playground	4	2,700	9.0	6.3
Other	2	1,350	5.0	4.0
Total	-	11,475	5.8	4.7

Turf Management Problems

New York schools reported wear and compaction as the top management problem for turf on athletic fields and turf excluding athletic fields. Weeds were the second biggest problem for turf excluding athletic fields. Poor drainage was the second biggest problem for turf on athletic fields while weeds were the second biggest problem for turf excluding athletic fields.

Turf Management Problems, Schools, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent	
	Excluding Athletic Fields	Athletic Fields
Disease	2	5
Drought	32	26
Poor Drainage	38	43
Erosion	3	1
Equipment Maintenance	13	8
Insects/Grubs	11	10
Nematodes	-	-
Excessive Shade	2	-
Poor Soil	28	18
Thatch	2	4
Wear and Compaction	51	69
Water Availability/Quality	20	26
Weeds	45	36
Labor	23	26
Moles/Voles	2	2
Clipping Disposal	-	-
Geese/Wildlife	10	13
Pet Waste	2	-
Land Availability	1	5
Other	3	5

Significant Future Problems for Turf Management, Schools, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	67
Labor Availability	49
Government Regulation	49
Water Availability	37
Loss of Chemical Registrations	16
Other	13

New York school systems reported operational expenses as the top concern for future turf management problems. Labor availability and government regulation were the second most important concern.

Primary Information Source

Schools reported county extension services as the most important source for turf management information. Commercial technical reps were also used as a source of information.

Primary Information Source, Schools, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	14
Peers	33
Commercial Technical Reps.	42
County Extension Service	44
Community College	-
Newspapers	1
Technical Journals	28
Private Consultant	13
TV/Radio	-
Garden Center/Nursery	7
Magazines	21
Internet	12
Product Labels	8
Lawn Care Company	19
Industry Association	21
Other	7

Training

Fifty seven percent of schools reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Formal Turf Maintenance Training,
Schools, 2003

Attended Training	57
No Training	43
TOTAL	100%

Parks

General Statistics

Turf acres were broken down differently for parks than other sections. Acres were broken down to include and exclude athletic fields. There were 350 parks in New York in 2003. These parks maintained a total of 65,100 acres, an average 186 acres per park. Turf area excluding athletic fields averaged 126 acres per park, a total of 44,100 acres. Turf area on athletic fields averaged 60 acres per park, a total of 21,000 acres. Parks established a total of 2,695 new turf acres for a cost of \$25.9 million. Parks employed 4,725 full time and 4,025 part time employees for a total of 8,750 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was \$38.7 million in 2003. The value of turf equipment owned by parks was worth nearly \$86.6 million.



General Statistics, Parks, 2003

Item	Unit	Average per Park	Total
Number of Parks ^{1/}	Number	-	350
Turf Area Excluding Athletic Fields	Acres	126	44,100
Turf Area on Athletic Fields	Acres	60	21,000
Total Turf Area	Acres	186	65,100
New Turf Acres Established	Acres	7.7	2,695
Cost of Establishing New Turf	Dollars	\$9,600 per acre	\$25,872,000
<u>Paid Labor</u>			
Full Time Employees	Number	13.5	4,725
Part Time Employees	Number	11.5	4,025
Payroll	Dollars	\$110,600	\$38,710,000
Value of Turf Equipment	Dollars	\$247,300	\$86,555,000

^{1/} Some parks reported multiple sites. Total number of sites was 639 for a total of 350 parks.

Turf Maintenance Expenses

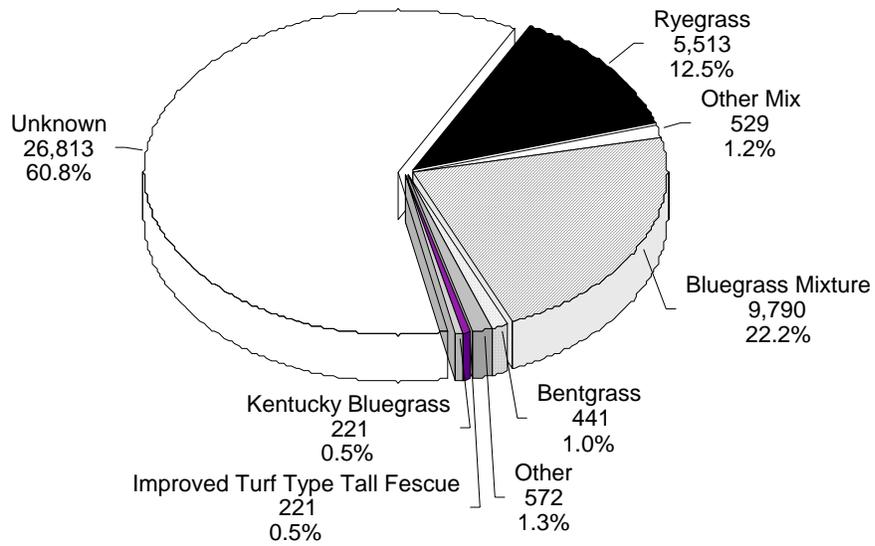
Parks spent more than \$124.2 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for \$62.6 million, 50.4 percent of total expenses. Parks spent \$24.3 million for equipment, \$10.1 million for supplies and nearly \$27.2 million for miscellaneous expenses.

Turf Maintenance Expenses, Parks, 2003

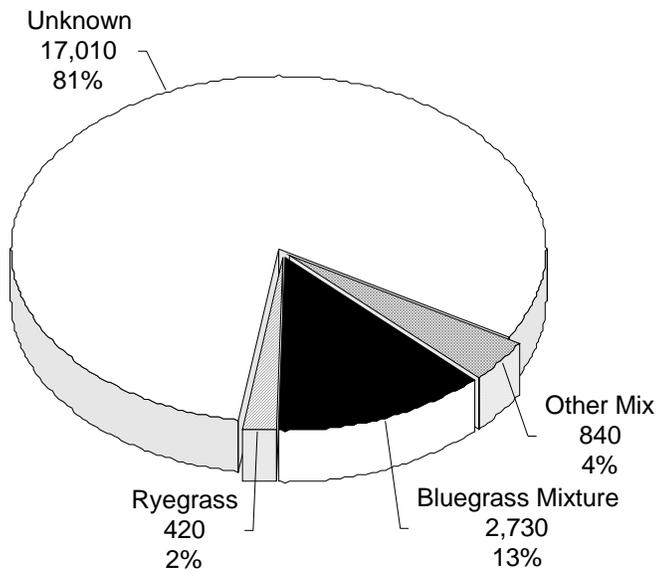
Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor:				
Mowing/Trimming	\$453,544	\$43,019,900.0	\$43,473,444	69.4
Edging	\$566,930	\$911,680	\$1,478,610	2.5
Clean-up (Spring)	\$85,040	\$4,387,460	\$4,472,500	7.1
Clean-up (Fall)	\$130,394	\$4,558,400	\$4,688,794	7.5
Disease, Weed, Insect Control	\$640,630	\$455,840	\$1,096,470	1.7
Wildlife Control	\$1,054,490	\$113,960	\$1,168,450	1.9
Fertilizer Application	\$527,245	\$398,860	\$926,105	1.5
Aerification/Coring	\$294,804	\$854,700	\$1,149,504	1.8
Renovation/Overseeding/Reseeding	\$873,072	\$683,760	\$1,556,832	2.5
Dethatching/Power Raking/Verticutting	\$124,725	\$170,940	\$295,665	0.5
Seed/Sod Installation	\$85,040	\$284,900	\$369,940	0.6
Irrigation Installation	\$527,245	-	\$527,245	0.8
Irrigation Service	\$85,040	\$683,760	\$768,800	1.2
Soil and Tissue Testing/Diagnostic Services	\$204,095	-	\$204,095	0.3
Turf Painting	-	\$455,840	\$455,840	0.7
Other	\$17,006	-	\$17,006	-
TOTAL Paid Labor	\$5,669,300	\$56,980,000	\$62,649,300	50.4%
Equipment: 1/				
New Equipment Purchases	-	-	\$11,075,838	45.5
Used Equipment Purchases	-	-	\$48,684	0.2
Irrigation Equipment Repairs	-	-	\$486,850	2.0
Equipment Supplies	-	-	\$2,823,730	11.6
Equipment Repairs and Maintenance	-	-	\$9,615,288	39.5
Equipment Rentals/Leasing Agreements	-	-	\$194,740	0.8
Other Expenses	-	-	\$97,370	0.4
TOTAL Equipment Parts and Repairs	-	-	\$24,342,500	19.6%
Supplies: 1/				
Seed	-	-	\$842,160	8.3
Lime	-	-	\$81,172	0.8
Sod	-	-	\$405,860	4.0
Top Dressing	-	-	\$324,688	3.2
Topsoll	-	-	\$649,376	6.4
Sand	-	-	\$202,930	2.0
Mulch (straw, hay, peat moss, etc.)	-	-	\$152,198	1.5
Purchased Irrigation Water	-	-	\$2,435,160	24.0
Crop Protectants:	-	-	-	-
Herbicides	-	-	\$273,955	2.7
Insecticides	-	-	\$172,490	1.7
Fungicides	-	-	\$791,427	7.8
Biological Pesticides	-	-	-	-
Fertilizer	-	-	\$1,187,140	11.7
Fuel/Lubricants (oil, gasoline, diesel, etc.)	-	-	\$2,597,504	25.6
Other Expenses	-	-	\$30,440	0.3
TOTAL Supplies	-	-	\$10,146,500	8.2%
Miscellaneous Expenses 1/				
Insurance	-	-	\$81,470	0.3
Utilities	-	-	\$1,303,512	4.8
Travel and Meeting Expenses	-	-	\$5,430	0.0
Property Taxes	-	-	-	-
Sales and Use Tax	-	-	-	-
Building Maintenance	-	-	\$760,382	2.8
Property Rental	-	-	\$10,863	0.0
Capital Improvements	-	-	\$24,983,980	92.0
Training	-	-	\$10,863	0.0
Other	-	-	-	-
TOTAL Miscellaneous Expenses	-	-	\$27,156,500	21.8%
TOTAL ALL EXPENSES	-	-	\$124,294,800	100%

1/ Equipment, supplies and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Parks, 2003
 Total Acres Excluding Athletic Fields - 44,100 Acres



Principal Types of Grass, Parks, 2003
 Total Turf Area on Athletic Fields - 21,000 Acres



Irrigation

New York parks irrigated a total of 12,369 acres, 19 percent of all turf areas including athletic fields. The main source of irrigation was municipal water, accounting for 73 percent of total irrigated acres. There were no parks using rivers or streams as a source of irrigation.

Total Area of Turf Irrigated, Parks, 2003

Source	Total Area Irrigated (Acres)	Percent of Irrigation
Municipal Water	9,029	73
Ponds/Lakes	247	2
Wells	3,093	25
Rivers/Streams	-	-
Other	-	-
Total	12,369	100%

Hired Lawn Care

Ten percent of New York parks managers hired a professional lawn care service to perform turf maintenance in 2003. Parks spent an average of \$17,000 a year on this service, a total of \$595,000.

Lawn Care Service, Parks, 2003

	Percent	Average	Total
Hired Lawn Care Service	10	\$17,000 per park	\$595,000
Did Not Hire Lawn Care Service ..	90		
Total	100%		

Athletic Fields and Playgrounds

New York parks maintained a total of 11,550 fields and playgrounds in 2003. There were an average of 8 baseball fields, 5 softball, 3 football, 5 soccer, 10 playgrounds and 2 other fields per park. Baseball, softball, soccer and other fields were used 6 months out of the year while playgrounds were used 9 months. Football fields were only used 4 months out of the year. The average field in a park was used 5.8 hours per day.

Recreational Field Usage, Parks, 2003

Field	Number of Fields		Months Used	Average hours per day
	Average per park	Total		
Baseball	8	2,800	6.0	4.8
Softball	5	1,750	6.0	4.3
Football	3	1,050	4.0	4.5
Soccer	5	1,750	6.0	4.7
Playground	10	3,500	9.0	8.5
Other	2	700	6.0	5.2
Total	-	11,550	6.7	5.8

Turf Management Problems

Wear and compaction was the top turf management problem on turf excluding athletic fields. Poor drainage and poor soil were also a major concern. Wear and compaction was also the top management problem for turf on athletic fields. Weeds were the second major problem with poor drainage also reported.

Turf Management Problems, Parks, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent	
	Excluding Athletic Fields	Athletic Fields
Disease	7	6
Drought	33	25
Poor Drainage	47	43
Erosion	4	3
Equipment Maintenance	14	12
Insects/Grubs	9	3
Nematodes	-	-
Excessive Shade	7	-
Poor Soil	38	18
Thatch	2	-
Wear and Compaction	61	71
Water Availability/Quality	7	3
Weeds	33	53
Labor	16	12
Moles/Voles	4	-
Clipping Disposal	2	-
Geese/Wildlife	26	21
Pet Waste	2	3
Land Availability	2	3
Other	2	9

Significant Future Problems for Turf Management, Parks, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	71
Labor Availability	62
Government Regulation	24
Water Availability	20
Loss of Chemical Registrations	20
Other	22

New York parks reported operational expenses as a significant future problem for turf management. Labor availability was the second most important concern.

Primary Information Source

New York parks reported peers as an important source for turf management information in 2003. County extension services were a close second.

Primary Information Source, Parks, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	8
Peers	45
Commercial Technical Reps.	15
County Extension Service	41
Community College	6
Newspapers	6
Technical Journals	26
Private Consultant	8
TV/Radio	2
Garden Center/Nursery	19
Magazines	34
Internet	15
Product Labels	15
Lawn Care Company	6
Industry Association	23
Other	2

Training

Fifty three percent of parks reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Formal Turf Maintenance Training,
Parks, 2003

Attended Training	53
No Training	47
TOTAL	100%

Private Residence

General Statistics

There were 3.67 million private residences in New York excluding New York, Kings, Queens, Bronx and Richmond counties. Private residences accounted for 2.83 million acres, an average of .77 acres per home. A total of 807,400 new turf acres were established in 2003, at a cost of \$1.42 billion. The average resident spent 13.5 hours a month mowing and 10.7 hours on other lawn maintenance activities. Private residents owned nearly \$5.5 billion of turf equipment.



General Statistics, Private Residence, 2003

Item	Unit	Average per Residence	Total
Number of New York Residences	Number	-	3,670,000
Total Turf Area	Acres	0.77	2,825,900
New Turf Acres Established	Acres	0.22	807,400
Cost of Establishing New Turf	Dollars	\$1,760 per acre	\$1,421,024,000
<u>Paid Labor</u>			
Full Time and Part Time Employees	Number	-	<u>1/</u>
Payroll	Dollars	-	<u>1/</u>
<u>Unpaid Labor:</u>			
Hours Spent on Mowing	Hours	13.5 per month	
Hours Spent on Other Lawn Maintenance	Hours	10.7 per month	
Value of Turf Equipment	Dollars	\$1,490	\$5,468,300,000

1/ Insufficient data to publish.

Turf Maintenance Expenses

Private residences spent more than \$3.24 billion on turf maintenance expenses during 2003. Paid labor accounted for \$965 million, 29.8 percent of total expenses. Equipment accounted for \$1.7 billion, 53.2 percent of the total and supplies accounted for \$550.5 million in 2003.

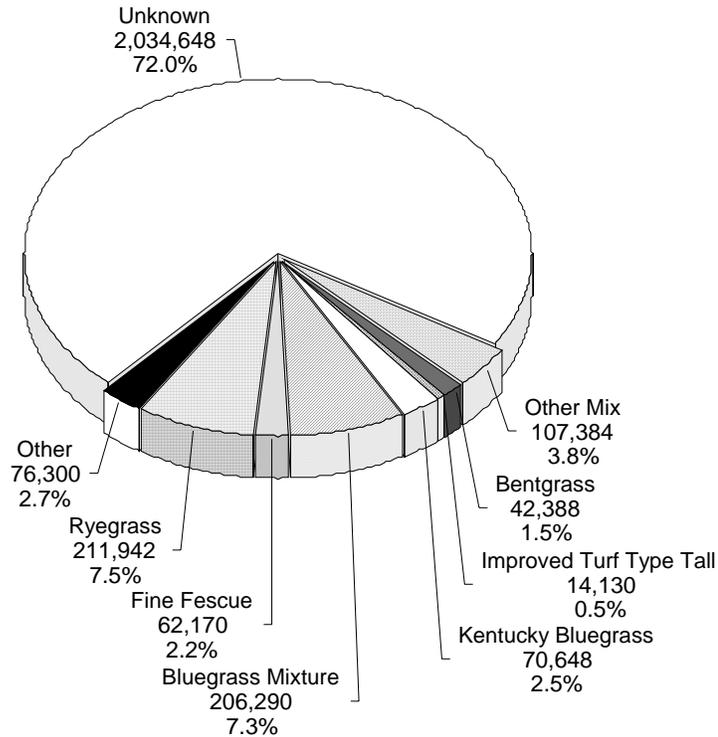
Turf Maintenance Expenses, Private Residence, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor:				
Mowing/Trimming	\$292,058,600	\$135,423,000	\$427,481,600	44.3
Edging	\$12,698,200	\$9,909,000	\$22,607,200	2.3
Clean-up (<i>Spring</i>)	\$44,443,700	\$33,030,000	\$77,473,700	8.0
Clean-up (<i>Fall</i>)	\$44,443,700	\$33,030,000	\$77,473,700	8.0
Disease, Weed, Insect Control	\$63,491,000	\$23,121,000	\$86,612,000	9.0
Wildlife Control	-	\$3,303,000	\$3,303,000	0.4
Fertilizer Application	\$63,491,000	\$36,333,000	\$99,824,000	10.4
Aerification/Coring	-	\$3,303,000	\$3,303,000	0.4
Renovation/Overseeding/Reseeding	\$19,047,300	\$9,909,000	\$28,956,300	3.0
Dethatching/Power Raking/Verticutting	-	\$3,303,000	\$3,303,000	0.4
Seed/Sod Installation	\$19,047,300	\$6,606,000	\$25,653,300	2.6
Irrigation Installation	\$50,792,800	\$19,818,000	\$70,610,800	7.3
Irrigation Service	\$12,698,200	\$9,909,000	\$22,607,200	2.3
Soil and Tissue Testing/Diagnostic Services	-	-	-	-
Other	\$12,698,200	\$3,303,000	\$16,001,200	1.6
TOTAL Paid Labor	\$634,910,000	\$330,300,000	\$965,210,000	29.8%
Equipment: 1/				
New Equipment Purchases	-	-	\$1,241,928,000	72.0
Used Equipment Purchases	-	-	\$224,237,000	13.0
Irrigation Equipment Repairs	-	-	\$17,249,000	1.0
Equipment Supplies	-	-	\$77,620,500	4.5
Equipment Repairs and Maintenance	-	-	\$137,992,000	8.0
Equipment Rentals/Leasing Agreements	-	-	\$8,624,500	0.5
Other	-	-	\$17,249,000	1.0
TOTAL Equipment Parts and Repairs	-	-	\$1,724,900,000	53.2%
Supplies: 1/				
Seed	-	-	\$60,555,000	11.0
Lime	-	-	\$11,010,000	2.0
Sod	-	-	\$11,010,000	2.0
Top Dressing	-	-	\$11,010,000	2.0
Topsoil	-	-	\$82,575,000	15.0
Sand	-	-	\$55,050,000	10.0
Mulch (<i>straw, hay, peat moss, etc.</i>)	-	-	\$44,040,000	8.0
Purchased Irrigation Water	-	-	\$22,020,000	4.0
Crop Protectants:	-	-	-	-
Herbicides	-	-	\$16,515,000	3.0
Insecticides	-	-	\$16,515,000	3.0
Fungicides	-	-	\$5,505,000	1.0
Biological Pesticides	-	-	-	-
Fertilizer	-	-	\$88,080,000	16.0
Fuel/Lubricants (<i>oil, gasoline, diesel, etc.</i>)	-	-	\$121,110,000	22.0
Other	-	-	\$5,505,000	1.0
TOTAL Supplies	-	-	\$550,500,000	17%
Miscellaneous Expenses 2/				
Insurance	-	-	-	-
Utilities	-	-	-	-
Property Taxes	-	-	-	-
Sales and Use Tax	-	-	-	-
Building Maintenance	-	-	-	-
Property Rental	-	-	-	-
Capital Improvements	-	-	-	-
Training	-	-	-	-
Other	-	-	-	-
TOTAL Miscellaneous Expenses	-	-	-	-
TOTAL ALL EXPENSES	-	-	\$3,240,610,000 3/	100%

1/ Equipment, supplies and miscellaneous expenses were not broken down by contract vs. non-contract.

2/ Not applicable. 3/ Total excludes miscellaneous expense.

Principal Types of Grass, Private Residence, 2003
Total Acres 2,825,900



Irrigation

New York's private residences irrigated a total of 423,885 acres in 2003, 15 percent of all privately owned turf acres. The main source of water for irrigation was municipal water. Irrigation using municipal water accounted for 67 percent of the total acreage irrigated. Wells were also a main source of irrigation.

Total Area of Turf Irrigated, Private Residence, 2003

Source	Total Area Irrigated (Acres)	Percent
Municipal Water	284,003	67
Ponds/Lakes	33,910	8
Wells	84,777	20
Rivers/Streams	4,240	1
Other	16,955	4
Total	423,885	100%

Turf Management Problems

Weeds were the top turf management problem for private residences in 2003. Insects/grubs and poor soil were also a major concern.

Turf Management Problems, Private Residence, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	7
Drought	16
Poor Drainage	17
Erosion	2
Equipment Maintenance	6
Insects/Grubs	36
Nematodes	-
Excessive Shade	22
Poor Soil	28
Thatch	9
Wear and Compaction	9
Water Availability/Quality	3
Weeds	58
Labor	11
Moles/Voles	20
Clipping Disposal	6
Geese/Wildlife	1
Pet Waste	7
Land Availability	-
Other	-

Significant Future Problems for Turf Management, Private Residence, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	43
Labor Availability	20
Government Regulation	13
Water Availability	27
Loss of Chemical Registrations	10
Other	16

Private residences reported operational expenses as a significant future problem for turf management. Water and labor availability were also major concerns.

Primary Information Source

New York private residences reported garden centers and nurseries as an important source for turf management information in 2003. Product labels and peers were also major sources of information.

Primary Information Source, Private Residence, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	-
Peers	35
Commercial Technical Reps.	3
County Extension Service	15
Community College	-
Newspapers	26
Technical Journals	2
Private Consultant	-
TV/Radio	17
Garden Center/Nursery	55
Magazines	24
Internet	13
Product Labels	38
Lawn Care Company	21
Industry Association	1
Other	6

Hired Lawn Care

Twenty five percent of New York's private residences hired a professional lawn care service to perform turf maintenance in 2003. The average resident spent \$900 a year on this service, a total of over \$825 million in 2003.

Lawn Care Service, Private Residence, 2003

	Percent	Average	Total
Hired Lawn Care Service	25	\$900 per residence	\$825,750,000
Did Not Hire Lawn Care Service	75		
Total	100%		

Churches

General Statistics

There were 9,770 churches in New York excluding New York, Kings, Queens, Bronx and Richmond counties. These churches maintained a total of 24,425 acres, an average of 2.5 acres per church. There were a total of 490 new turf acres established in 2003, at a cost of \$2.2 million. New York churches employed 977 full time and 1,954 part time employees, a total of 2,931 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was \$3.9 million in 2003. The value of turf equipment owned by churches was \$15.3 million in 2003. There is no irrigation table for churches due to insufficient data.



General Statistics, Churches, 2003

Item	Unit	Average per Church	Total
Number of Churches	Number	-	9,770
Total Turf Area	Acres	2.5	24,425
New Turf Acres Established	Acres	0.05	490
Cost of Establishing New Turf	Dollars	\$4,590 per acre	\$2,249,100
<u>Paid Labor:</u>			
Full Time Employees	Number	0.1	977
Part Time Employees	Number	0.2	1,954
Payroll	Dollars	\$400	\$3,908,000
Value of Turf Equipment	Dollars	\$1,570	\$15,338,900

Turf Maintenance Expenses

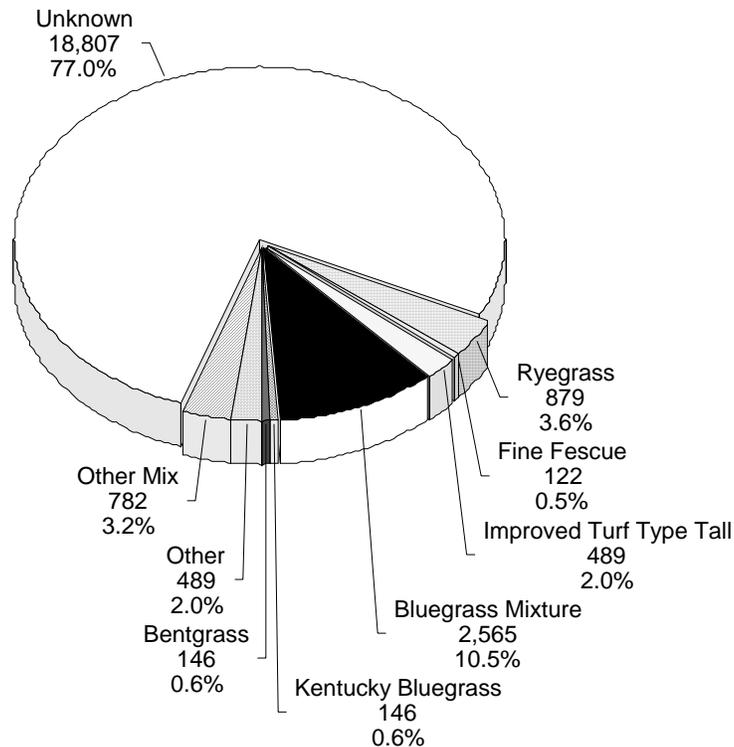
Churches spent more than \$237 million on turf maintenance expenses during 2003. Miscellaneous was the largest expense which accounted for \$156.3 million, 65.9 percent of total expenses. Churches spent over \$63 million for paid labor, over \$13 million for equipment and \$4.5 million for supplies. There was insufficient data reported to publish the detailed breakouts for expenses. Only totals were able to be published.

Turf Maintenance Expenses, Churches, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	\$33,550,180	\$29,651,950	\$63,202,130	26.6
Equipment	<u>1/</u>	<u>1/</u>	\$13,189,500	5.6
Supplies	<u>1/</u>	<u>1/</u>	\$4,543,050	1.9
Miscellaneous	<u>1/</u>	<u>1/</u>	\$156,300,000	65.9
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$237,234,680	100%

1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Churches
Total Acres - 24,425



Turf Management Problems

Churches reported weeds as the most difficult turf management problem in 2003. Poor soil was also a major problem.

Turf Management Problems, Churches, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	4
Drought	21
Poor Drainage	17
Erosion	4
Equipment Maintenance	19
Insects/Grubs	12
Nematodes	-
Excessive Shade	14
Poor Soil	33
Thatch	5
Wear and Compaction	15
Water Availability/Quality	5
Weeds	53
Labor	23
Moles/Voles	8
Clipping Disposal	8
Geese/Wildlife	1
Pet Waste	4
Land Availability	3
Other	7

Significant Future Problems for Turf Management, Churches, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	56
Labor Availability	43
Government Regulation	10
Water Availability	15
Loss of Chemical Registrations	3
Other	9

Churches reported operational expenses as the major concern for future turf management problems. Labor availability was also a significant future problem.

Primary Information Source

Churches reported peers as the most important source for turf management information. Garden centers and nurseries were also a major source of information.

Primary Information Source, Churches, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	3
Peers	49
Commercial Technical Reps.	6
County Extension Service	17
Community College	-
Newspapers	13
Technical Journals	3
Private Consultant	6
TV/Radio	7
Garden Center/Nursery	38
Magazines	12
Internet	8
Product Labels	25
Lawn Care Company	32
Industry Association	1
Other	10

Training

Only one percent of churches reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Turf Maintenance Training,
Churches, 2003

Attended Training	1
No Training	99
TOTAL	100%

Hired Lawn Care

Thirty percent of churches in New York hired a professional lawn care service to perform turf maintenance in 2003. Churches spent an average of \$3,400 a year on this service, a total of nearly \$10 million.

Lawn Care Service, Churches, 2003

	Percent	Average	Total
Hired Lawn Care Service	30	\$3,400 per church	\$9,965,400
Did Not Hire Lawn Care Service	70		
Total	100%		

CEMETERIES

General Statistics

New York's 570 cemeteries have a total turf area of 14,250 acres, an average of 25 acres per cemetery. During 2003 these cemeteries established 274 new turf acres at a cost of \$697,330. New York cemeteries employed 467 full time and 855 part time employees, a total of 1,322 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was over \$14.4 million in 2003. Turf equipment owned by all cemeteries was valued at \$5.53 million, an average of \$9,700 per cemetery. There is no irrigation table for cemeteries due to insufficient data.



General Statistics, Cemeteries, 2003

Item	Unit	Average per Cemetery	Total
Number of Cemeteries	Number	-	570
Total Turf Area	Acres	25	14,250
New Turf Acres Established	Acres	0.48	274
Cost of Establishing New Turf	Dollars	\$2,545 per acre	\$697,330
<u>Paid Labor</u>			
Full Time Employees	Number	0.82	467
Part Time Employees	Number	1.5	855
Payroll	Dollars	\$25,400	\$14,478,000
Value of Turf Equipment	Dollars	\$9,700	\$5,529,000

Turf Maintenance Expenses

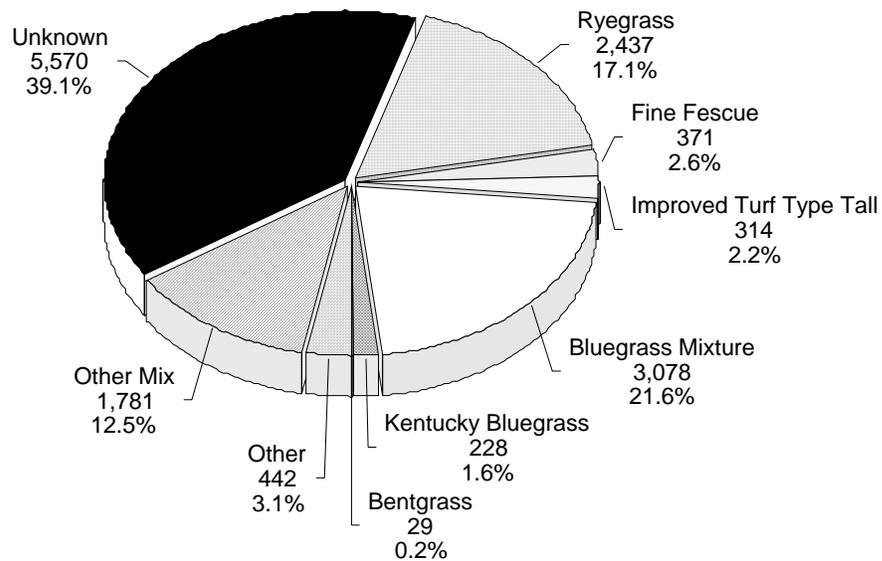
Cemeteries spent about \$53 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for \$35.1 million, 66 percent of total expenses. Over \$6.44 million was spent on equipment and repairs, over \$3.0 million for supplies, and almost \$8.25 million for miscellaneous expenses. There was insufficient data reported to publish the detailed breakouts for expenses. Only totals were able to be published.

Turf Maintenance Expenses, Cemeteries, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	\$4,104,000	\$30,980,000	\$35,084,000	66.0
Equipment	<u>1/</u>	<u>1/</u>	\$6,441,000	12.0
Supplies	<u>1/</u>	<u>1/</u>	\$3,072,000	6.0
Miscellaneous	<u>1/</u>	<u>1/</u>	\$8,248,000	16.0
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$52,845,000	100%

1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Cemeteries, 2003 Total Acres - 14,250 Acres



Turf Management Problems

Weeds were the top turf management problem for cemeteries in New York. Poor soil, labor, and equipment maintenance were also major concerns for cemeteries.

Turf Management Problems, Cemeteries, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	2
Drought	24
Poor Drainage	12
Erosion	2
Equipment Maintenance	25
Insects/Grubs	17
Nematodes	-
Excessive Shade	13
Poor Soil	38
Thatch	2
Wear and Compaction	13
Water Availability/Quality	14
Weeds	46
Labor	34
Moles/Voles	9
Clipping Disposal	4
Geese/Wildlife	2
Pet Waste	-
Land Availability	3
Other	9

Significant Future Problems for Turf Management, Cemeteries, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	78
Labor Availability	44
Government Regulation	12
Water Availability	19
Loss of Chemical Registrations	2
Other	4

Cemeteries reported operational expenses as the major concern for future turf management problems. Labor availability was the second major concern.

Primary Information Source

The primary source of turf management information used by cemeteries was peers followed closely by garden center/nursery operations. The county extension service was the third most used source for information and product labels were the fourth.

Primary Information Source, Cemeteries, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	3
Peers	45
Commercial Technical Reps.	8
County Extension Service	28
Community College	-
Newspapers	9
Technical Journals	10
Private Consultant	9
TV/Radio	1
Garden Center/Nursery	39
Magazines	16
Internet	2
Product Labels	24
Lawn Care Company	16
Industry Association	18
Other	9

Training

Ninety-two percent of cemeteries did not have anyone attend formal turf maintenance training during 2003. Eight percent had staff enrolled in a training program.

Percent Enrolled in Turf Maintenance Training,
Cemeteries, 2003

Attended Training	8
No Training	92
Total	100%

Hired Lawn Care

Forty percent of cemeteries in New York hired a professional lawn care service to perform turf maintenance in 2003. Cemeteries spent an average of \$9,000 a year on this service, a total of over \$2 million.

Lawn Care Service, Cemeteries, 2003

	Percent	Average	Total
Hired Lawn Care Service	40	\$9,000 per cemetery	\$2,052,000
Did Not Hire Lawn Care Service	60		
Total	100%		

Apartment Complexes

General Statistics

There were 2,420 apartment complexes in New York excluding New York, Kings, Queens, Bronx and Richmond counties. These complexes maintained a total of 26,620 acres, an average of 11 acres per complex. There were a total of 121 new turf acres established in 2003, at a cost of \$273,460. New York apartment complexes employed 484 full time and 242 part time employees, a total of 726 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was \$7.5 million. The value of turf equipment owned by apartment complexes was over \$14.5 million in 2003. There is no irrigation table for apartment complexes due to insufficient data.



General Statistics, Apartment Complexes, 2003

Item	Unit	Average per Complex	Total
Number of Apartment Complexes	Number	-	2,420
Total Turf Area	Acres	11	26,620
New Turf Acres Established	Acres	0.05	121
Cost of Establishing New Turf	Dollars	\$2,260 per acre	\$273,460
<u>Paid Labor</u>			
Full Time Employees	Number	0.2	484
Part Time Employees	Number	0.1	242
Payroll	Dollars	\$3,100	\$7,502,000
Value of Turf Equipment	Dollars	\$6,000	\$14,520,000

Turf Maintenance Expenses

New York apartment complexes spent more than \$49 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for \$588.5 million, 76.6 percent of total expenses. Apartment complexes spent \$8.1 million on equipment and over \$3.3 million on supplies. There was insufficient data reported to publish the detailed breakouts for expenses. Only totals were able to be published.

Turf Maintenance Expenses, Apartment Complexes, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	\$18,150,000	\$19,360,000	\$37,510,000	76.6
Equipment	<u>1/</u>	<u>1/</u>	\$8,107,000	16.6
Supplies	<u>1/</u>	<u>1/</u>	\$3,388,000	6.8
Miscellaneous	<u>1/</u>	<u>1/</u>	<u>2/</u>	-
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$49,005,000	100%

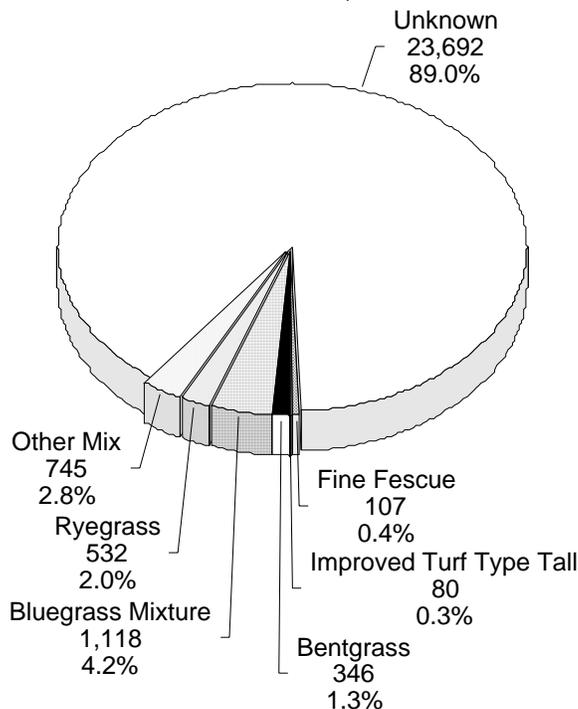
1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

2/ Not applicable.

3/ Total excludes miscellaneous expense.

Principal Types of Grass, Apartment Complexes, 2003

Total Acres - 26,620 Acres



Turf Management Problems

Weeds were the top turf management problem for apartment complexes in New York. Drought and poor soil were also major concerns.

Turf Management Problems, Apartment Complexes, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	1
Drought	31
Poor Drainage	22
Erosion	9
Equipment Maintenance	14
Insects/Grubs	20
Nematodes	-
Excessive Shade	11
Poor Soil	31
Thatch	6
Wear and Compaction	19
Water Availability/Quality	14
Weeds	52
Labor	7
Moles/Voles	4
Clipping Disposal	3
Geese/Wildlife	6
Pet Waste	1
Land Availability	6
Other	-

Significant Future Problems for Turf Management,
Apartment Complexes, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	57
Labor Availability	22
Government Regulation	16
Water Availability	20
Loss of Chemical Registrations	14
Other	12

Apartment complexes reported operational expenses as the major concern for future turf management problems. Labor and water availability were also major concerns.

Primary Information Source

Apartment complexes reported lawn care companies as the most important source of turf management information. Garden centers and nurseries were also a major source of information.

Primary Information Source, Apartment Complexes, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	1
Peers	32
Commercial Technical Reps.	19
County Extension Service	19
Community College	-
Newspapers	21
Technical Journals	1
Private Consultant	14
TV/Radio	7
Garden Center/Nursery	42
Magazines	1
Internet	8
Product Labels	25
Lawn Care Company	50
Industry Association	1
Other	1

Training

Five percent of apartment complexes reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Formal Turf Maintenance Training,
Apartment Complexes, 2003

Attended Training	5
No Training	95
Total	100%

Hired Lawn Care

Fifty percent of apartment complexes in New York hired a professional lawn care service to perform turf maintenance in 2003. Apartment complexes spent an average of \$7,500 a year for this service, a total of over \$9 million in 2003.

Lawn Care Service, Apartment Complexes, 2003

	Percent	Average	Total
Hired Lawn Care Service	50	\$7,500 per complex	\$9,075,000
Did Not Hire Lawn Care Service	50		
Total	100%		

Correctional Facilities

General Statistics

New York's 118 correctional facilities have a total turf area of 2,242 acres, an average of 19 acres per facility. During 2003 these facilities established 47 new turf acres for a cost of \$9,400. Correctional facilities hired 106 full time and 8 part time, a total of 114 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was \$23,600 in 2003. Turf equipment owned by all correctional facilities was valued at \$2.95 million. There is no irrigation table for correctional facilities due to insufficient data.



General Statistics, Correctional Facilities, 2003

Item	Unit	Average per Correctional Facility	Total
Number of Correctional Facilities	Number	-	118
Total Turf Area	Acres	19	2,242
New Turf Acres Established	Acres	0.4	47
Cost of Establishing New Turf	Dollars	\$200 per acre	\$9,400
<u>Paid Labor</u>			
Full Time Employees	Number	0.9	106
Part Time Employees	Number	0.07	8
Payroll	Dollars	\$207	\$23,600
Value of Turf Equipment	Dollars	\$25,000	\$2,950,000

Turf Maintenance Expenses

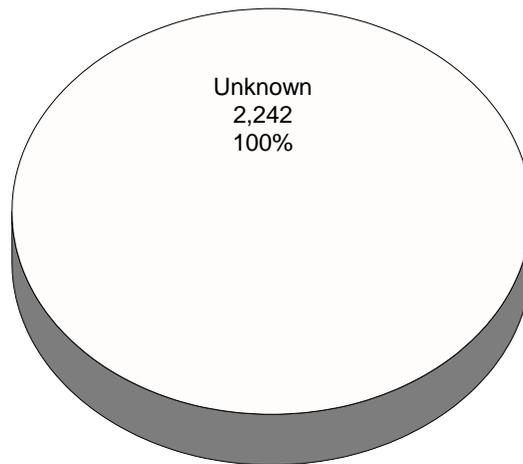
Correctional facilities spent \$3.3 million on turf maintenance expenses during 2003. Paid labor was the largest expense which accounted for over \$1.3 million, 41 percent of total expenses. Correctional facilities spent over \$1.2 million for equipment, \$377,600 for supplies and \$332,800 for miscellaneous expenses. There was insufficient data reported to publish the detailed breakouts for expenses. Only totals were able to be published.

Turf Maintenance Expenses, Correctional Facilities, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	\$41,300	\$1,327,500	\$1,368,800	41.0
Equipment	<u>1/</u>	<u>1/</u>	\$1,250,800	38.0
Supplies	<u>1/</u>	<u>1/</u>	\$377,600	11.0
Miscellaneous	<u>1/</u>	<u>1/</u>	\$332,800	10.0
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$3,330,000	100%

1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Correctional Facilities, 2003
Total Acres 2,242



Turf Management Problems

Drought and equipment maintenance were the top turf management problems for correctional facilities in New York. Only one percent reported poor soil, water availability, weeds, labor, and clipping disposal as a problem.

Turf Management Problems, Correctional Facilities, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	-
Drought	98
Poor Drainage	-
Erosion	-
Equipment Maintenance	97
Insects/Grubs	-
Nematodes	-
Excessive Shade	-
Poor Soil	1
Thatch	-
Wear and Compaction	-
Water Availability/Quality	1
Weeds	1
Labor	1
Moles/Voles	-
Clipping Disposal	1
Geese/Wildlife	-
Pet Waste	-
Land Availability	-
Other	-

Significant Future Problems for Turf Management, Correctional Facilities, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	98
Labor Availability	2
Government Regulation	-
Water Availability	-
Loss of Chemical Registrations	-
Other	-

Correctional facilities reported operational expenses as the major concern for future turf management problems. Labor availability was a minor concern. No one reported government regulation, water availability or loss of chemical registrations as a significant future problem.

Primary Information Source

The primary source of turf management information used by correctional facilities was county extension services followed closely by product labels and garden/nursery operators.

Primary Information Source, Correctional Facilities, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	-
Peers	1
Commercial Technical Reps.	-
County Extension Service	100
Community College	-
Newspapers	-
Technical Journals	-
Private Consultant	-
TV/Radio	-
Garden Center/Nursery	95
Magazines	-
Internet	1
Product Labels	98
Lawn Care Company	-
Industry Association	-
Other	-

Training

Eighty-eight percent of the correctional facilities had at least one employee enrolled in turf maintenance training during 2003. Twelve percent of the facilities had no one in training.

Percent Enrolled in Turf Maintenance Training
Correctional Facilities, 2003

Attended Training	88
No Training	12
Total	100%

Hired Lawn Care

There were no correctional facilities in New York that hired a professional lawn care service to perform turf maintenance in 2003.

Lawn Care Service, Correctional Facilities, 2003

	Percent
Hired Lawn Care Service	-
Did Not Hire Lawn Care Service	100
Total	100%

Airports

General Statistics

There were 144 airports in New York in 2003. These airports maintained a total of 13,968 acres, an average of 97 acres per airport. There were a total of 187 new turf acres established in 2003, at a cost of \$1.3 million. New York airports employed 187 full time and 202 part time employees, a total of 389 employees who had turf maintenance as their primary responsibility. The total payroll for these employees was \$820,800. The value of turf equipment owned by airports was over \$3.7 million in 2003. There is no irrigation table for airports due to insufficient data.



General Statistics, Airports, 2003

Item	Unit	Average per Airport	Total
Number of Airports	Number	-	144
Total Turf Acres	Acres	97	13,968
New Turf Acres Established	Acres	1.3	187
Cost of Establishing New Turf	Dollars	\$7,000 per acre	\$1,309,000
<u>Paid Labor</u>			
Full Time Employees	Number	1.3	187
Part Time Employees	Number	1.4	202
Payroll	Dollars	\$5,700	\$820,800
Value of Turf Equipment	Dollars	\$26,000	\$3,744,000

Turf Maintenance Expenses

New York airports spent more than \$10.3 million on turf maintenance expenses during 2003. Miscellaneous was the largest expense which accounted for \$6.6 million, 64 percent of total expenses. Airports spent \$1.6 million on paid labor, nearly \$2 million on equipment and \$158,400 on supplies. There was insufficient data reported to publish the detailed breakouts for expenses. Only totals were able to be published.

Turf Maintenance Expenses, Airports, 2003

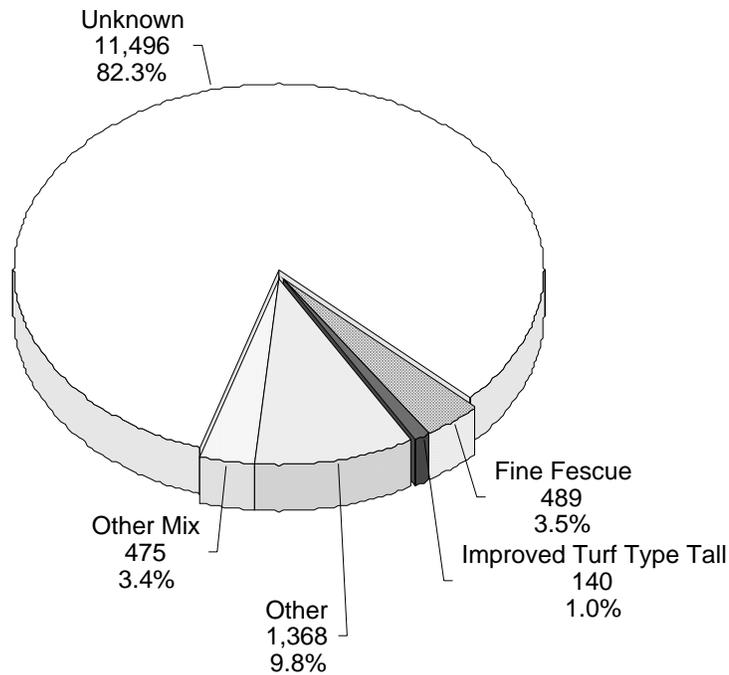
Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	<u>2/</u>	\$1,612,800	\$1,612,800	15.6
Equipment	<u>1/</u>	<u>1/</u>	\$1,958,400	18.9
Supplies	<u>1/</u>	<u>1/</u>	\$158,400	1.5
Miscellaneous	<u>1/</u>	<u>1/</u>	\$6,624,000	64.0
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$10,353,600	100%

1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

2/ Insufficient data to publish breakouts

Principal Types of Grass, Airports, 2003

Total Acres - 13,968 Acres



Turf Management Problems

Labor was the top turf management problem for airports in New York. Equipment maintenance was the second biggest problem.

Turf Management Problems, Airports, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	-
Drought	11
Poor Drainage	27
Erosion	11
Equipment Maintenance	50
Insects/Grubs	5
Nematodes	-
Excessive Shade	-
Poor Soil	16
Thatch	-
Wear and Compaction	-
Water Availability/Quality	-
Weeds	11
Labor	61
Moles/Voles	5
Clipping Disposal	5
Geese/Wildlife	33
Pet Waste	-
Land Availability	-
Other	22

Significant Future Problems for Turf Management, Airports, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	62
Labor Availability	31
Government Regulation	-
Water Availability	12
Loss of Chemical Registrations	-
Other	31

Airports reported operational expenses to be a significant future problem for turf management. Labor availability was also reported as a concern.

Primary Information Source

New York airports reported peers and county extension services as important sources for turf management information in 2003. Product labels and garden centers/nurseries were also used as sources of information.

Primary Information Source, Airports, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	7
Peers	42
Commercial Technical Reps.	7
County Extension Service	42
Community College	-
Newspapers	14
Technical Journals	7
Private Consultant	7
TV/Radio	7
Garden Center/Nursery	28
Magazines	14
Internet	7
Product Labels	35
Lawn Care Company	14
Industry Association	-
Other	21

Training

There were no airports that reported turf maintenance training for employees in 2003.

Percent Enrolled in Formal Turf Maintenance Training,
Airports, 2003

Attended Training	-
No Training	100
TOTAL	100%

Hired Lawn Care

There were no airports that reported hiring a lawn care service to perform turf maintenance in 2003.

Lawn Care Service, Airports, 2003

	Percent
Hired Lawn Care Service	-
Did Not Hire Lawn Care Service	100
Total	100%

Corporate Sites

General Statistics

There were 720 corporate sites in New York excluding New York, Kings, Queens, Bronx and Richmond counties. These corporations maintained a total of 10,584 acres, an average of 14.7 acres per site. There were a total of 72 new turf acres established in 2003, at a cost of \$103,320. New York corporate sites employed 65 full time and 36 part time employees, a total of 101 employees who had turf maintenance as their primary responsibility. Total payroll for these employees was \$360,000 in 2003. The value of turf equipment owned by corporate sites was \$374,400 in 2003. There is no irrigation table for corporate sites due to insufficient data.



General Statistics, Corporate Sites, 2003

Item	Unit	Average per Corporate Site	Total
Number of Corporate Sites	Number	-	720
Total Turf Area	Acres	14.7	10,584
New Turf Acres Established	Acres	0.1	72
Cost of Establishing New Turf	Dollars	\$1,435 per acre	\$103,320
<u>Paid Labor:</u>			
Full Time Employees	Number	0.09	65
Part Time Employees	Number	0.05	36
Payroll	Dollars	\$500	\$360,000
Value of Turf Equipment	Dollars	\$520	\$374,400

Turf Maintenance Expenses

More than \$23 million was spent on turf management expenses during 2003 by corporate sites. Paid labor was the largest expense which accounted for \$19.4 million, 83 percent of total expenses. These sites spent over \$2 million for equipment and almost \$1.93 million for supplies. There was insufficient data reported to publish the detailed breakouts for expenses. Only totals were able to be published.

Turf Maintenance Expenses, Corporate Sites, 2003

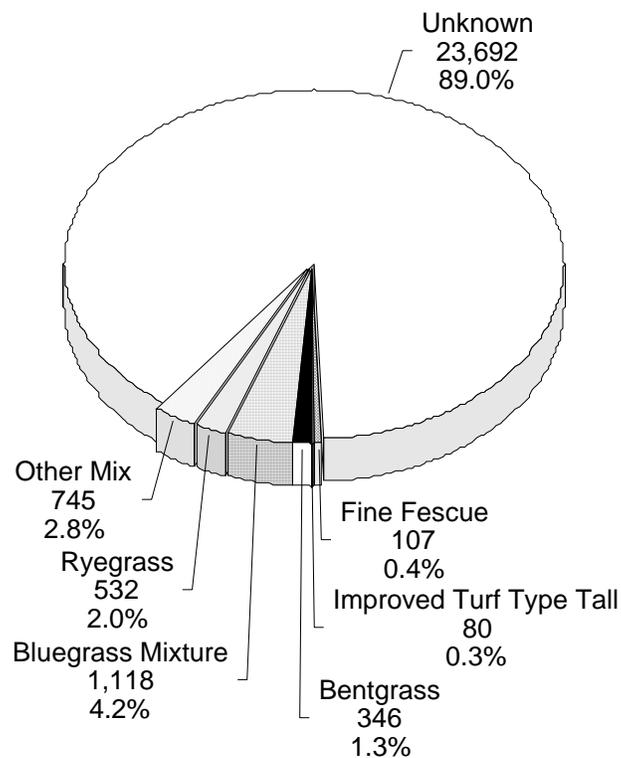
Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	\$11,144,200	\$8,219,500	\$19,363,700	83.0
Equipment	<u>1/</u>	<u>1/</u>	\$2,090,200	9.0
Supplies	<u>1/</u>	<u>1/</u>	\$1,926,000	8.0
Miscellaneous	<u>1/</u>	<u>1/</u>	<u>2/</u>	-
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$23,379,900 <u>3/</u>	100% <u>3/</u>

1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

2/ Insufficient data to publish.

3/ Total excludes miscellaneous expense.

Principal Types of Grass, Corporate Sites, 2003 Total Acres - 10,584



Turf Management Problems

Weeds were the top turf management problem for corporate sites in New York. Drought, excessive shade, and wear and compaction were also a major concern.

Turf Management Problems, Corporate Sites, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	-
Drought	31
Poor Drainage	23
Erosion	8
Equipment Maintenance	-
Insects/Grubs	8
Nematodes	-
Excessive Shade	31
Poor Soil	23
Thatch	15
Wear and Compaction	31
Water Availability/Quality	-
Weeds	54
Labor	8
Moles/Voles	-
Clipping Disposal	8
Geese/Wildlife	8
Pet Waste	8
Land Availability	-
Other	8

Significant Future Problems for Turf Management, Corporate Sites, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	31
Labor Availability	38
Government Regulation	15
Water Availability	23
Loss of Chemical Registrations	8
Other	23

Corporate sites reported labor availability as the major concern for future turf management problems. Operational expenses were the second major concern followed by water availability.

Primary Information Source

New York corporate sites reported lawn care companies as the most important source for turf management in 2003. Peers, county extension services, garden centers/nurseries and the internet were also major sources of information.

Primary Information Source, Corporate Sites, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	-
Peers	38
Commercial Technical Reps.	6
County Extension Service	38
Community College	-
Newspapers	6
Technical Journals	6
Private Consultant	-
TV/Radio	-
Garden Center/Nursery	38
Magazines	19
Internet	38
Product Labels	13
Lawn Care Company	56
Industry Association	6
Other	-

Training

Nineteen percent of corporate sites reported that at least one employee had some type of turf maintenance training in 2003.

Percent Enrolled in Turf Maintenance Training,
Corporate Sites, 2003

Attended Training	19
No Training	81
TOTAL	100%

Hired Lawn Care

Ninety one percent of corporate sites in New York hired a professional lawn care service to perform turf maintenance in 2003. They spent an average of \$30,250 a year on this service, a total of nearly \$20 million.

Lawn Care Service, Corporate Sites, 2003

	Percent	Average	Total
Hired Lawn Care Service	91	\$30,250 per site	\$19,819,800
Did Not Hire Lawn Care Service	9		
Total	100%		

Fairgrounds and Racetracks

General Statistics

There were 9 racetracks and 56 fairgrounds in New York in 2003. These facilities maintained a total of 2,080 acres, an average of 32 acres per facility. There were a total of 18 new turf acres established in 2003, at a cost of \$5,751. New York fairgrounds and racetracks employed 9 full time and 55 part time employees who had turf maintenance as their primary responsibility. Total payroll for these employees was \$292,500 in 2003. The value of turf equipment owned by these facilities was \$539,500 in 2003. There is no irrigation table for fairgrounds and racetracks due to insufficient data.



General Statistics, Fairgrounds and Racetracks, 2003

Item	Unit	Average per Facility	Total
Number of Facilities	Number	-	65
Total Turf Area	Acres	32	2,080
New Turf Acres Established	Acres	0.28	18
Cost of Establishing New Turf	Dollars	\$319 per acre	\$5,751
<u>Paid Labor</u>			
Full Time Employees	Number	0.14	9
Part Time Employees	Number	0.85	55
Payroll	Dollars	\$4,500	\$292,500
Value of Turf Equipment	Dollars	\$8,300	\$539,500

Turf Maintenance Expenses

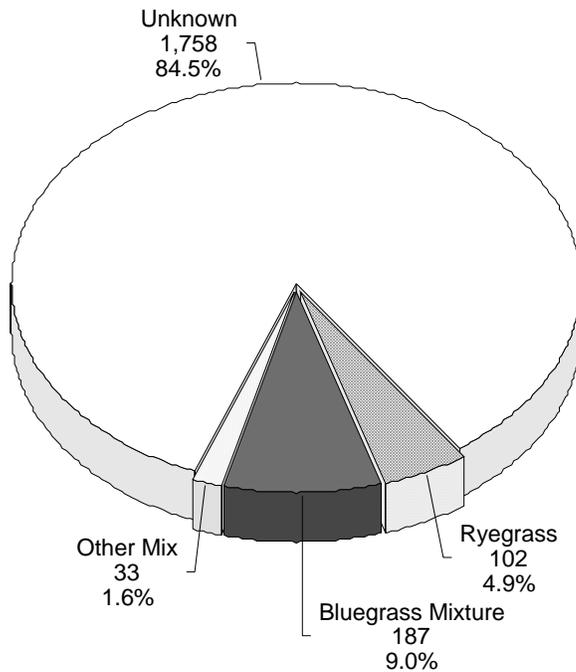
Fairgrounds and racetracks spent over \$4.9 million on turf maintenance expenses during 2003. Miscellaneous was the largest expense which accounted for \$2.39 million, 48.3 percent of total expenses. These facilities spent over \$2 million for labor, \$390,000 for equipment and \$133,900 for supplies expenses.

Turf Maintenance Expenses, Fairgrounds and Racetracks, 2003

Type of Expenses	Contract Expense	Non-Contract Expense	Total Expense	Percent of Total
Paid Labor	\$1,336,500	\$699,200	\$2,035,700	41.1
Equipment	<u>1/</u>	<u>1/</u>	\$390,000	7.9
Supplies	<u>1/</u>	<u>1/</u>	\$133,900	2.7
Miscellaneous	<u>1/</u>	<u>1/</u>	\$2,392,000	48.3
TOTAL ALL EXPENSES	<u>1/</u>	<u>1/</u>	\$4,951,600	100%

1/ Equipment, supplies, and miscellaneous expenses were not broken down by contract vs. non-contract.

Principal Types of Grass, Fairgrounds and Racetracks, 2003
Total Acres - 2,080 Acres



Turf Management Problems

Poor drainage was the top turf management problem for fairgrounds and racetracks in New York. Poor soil was the next most important problem followed by labor and erosion.

Turf Management Problems, Fairgrounds and Racetracks, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Disease	-
Drought	10
Poor Drainage	80
Erosion	20
Equipment Maintenance	10
Insects/Grubs	10
Nematodes	-
Excessive Shade	-
Poor Soil	30
Thatch	-
Wear and Compaction	-
Water Availability/Quality	-
Weeds	10
Labor	20
Moles/Voles	-
Clipping Disposal	-
Geese/Wildlife	10
Pet Waste	-
Land Availability	-
Other	10

Significant Future Problems for Turf Management,
Fairgrounds and Racetracks, 2003
Percent Reporting a Specific Turf Problem

Problem	Percent
Operational Expenses	50
Labor Availability	58
Government Regulation	8
Water Availability	8
Loss of Chemical Registrations	8
Other	33

Fairgrounds and race tracks reported labor availability as the major concern for future turf management problems. Operational expenses were also a major concern.

Primary Information Source

University specialists, county extension services and garden center/nurseries were reported as the top three most important sources for turf management for New York fairgrounds and racetracks.

Primary Information Source, Fairgrounds and Racetracks, 2003
Percent Reporting a Specific Information Source

Information Source	Percent
University Specialist	50
Peers	25
Commercial Technical Reps.	25
County Extension Service	50
Community College	-
Newspapers	12
Technical Journals	-
Private Consultant	12
TV/Radio	-
Garden Center/Nursery	50
Magazines	12
Internet	-
Product Labels	25
Lawn Care Company	12
Industry Association	-
Other	37

Training

There were no fairgrounds or racetracks that reported enrolling staff in turf maintenance training in 2003.

Percent Enrolled in Formal Turf Maintenance Training,
Fairgrounds and Racetracks, 2003

Attended Training	-
No Training	100
TOTAL	100%

Hired Lawn Care

Thirty percent of the fairgrounds and racetracks in New York hired a professional lawn care service to perform turf maintenance in 2003. They spent an average of \$20,500 a year on this service, a total of \$399,750 in 2003.

Lawn Care Service, Fairgrounds and Racetracks, 2003

	Percent	Average	Total
Hired Lawn Care Service	30	\$20,500 per facility	\$399,750
Did Not Hire Lawn Care Service ..	70		
Total	100%		

Survey Methodology and Procedures

Survey Objective

The objective of the survey was to account for the total amount of turfgrass in New York and determine the economic value of turf, turf production, services and expenditures.

Strata Identification

There were 13 different industry segments that were surveyed. There were 7 versions of the questionnaire. Golf, Sod, Lawn Care, Schools, Parks and Private Residences all received individual questionnaires. All questionnaires had the same 'core' questions but some questions were added to specific industries. There was a General questionnaire that was sent to Churches, Cemeteries, Apartment Complexes, Correctional Facilities, Airports, Corporate Sites and Fairgrounds/Racetracks. This questionnaire is included in the back of this publication. This survey design focused on these major industry segments listed above.

Data Collection

Data was collected by two methods, mail and telephone. Mailing of questionnaires began in December 2003. A reminder postcard was mailed to those who had not responded by the beginning of March 2004. A second questionnaire was sent to non respondents at the end of March. A shorter version of the questionnaire was mailed to schools, parks, churches and corporate sites at the beginning of June. Telephoning began in April and ended in June of 2004.

Survey Design

Each segment had a determined universe size (ex: total number of golf courses in New York state). Some segments were mailed to the universe while others were mailed only to a sample of the universe. A list of these segments was compiled from many different sources which included industry associations, government and state agencies and other outside sources. Listed below is a brief description of each segment.

Golf Courses

A list of golf courses was obtained from the New York State Turfgrass Association (NYSTA) and Golf Course Superintendent Associations around the state. The total universe was 860 and a questionnaire was sent to all courses.

Sod Farms

Lists from New York National Agricultural Statistic Service (NASS) and NYSTA were used. The universe was 14 and all were surveyed.

Lawn Care

A list of lawn care service companies was obtained from NYSTA, New York State Nursery/Landscape Association and New York State Department of Environmental Conservation. The universe was 1950 and all were surveyed.

Schools

A list of schools was obtained from NYSTA and the New York State Association for Superintendents of School Buildings and Grounds. There were a total of 675 school systems used as the universe. School systems are defined as a group of schools that identify themselves as one school, similar to a school district. There were multiple school sites per school system. All 675 were surveyed.

Parks

A list of parks was obtained from NYSTA and New York State Office of Parks, Recreation and Historic Preservation. The universe was 350 and all were surveyed.

Private Residences

A list of New York residences was obtained from an outside source, INFO USA. The universe was 3.67 million which excluded New York, Kings, Queens, Bronx and Richmond counties. A sample of 8000 was used.

Churches

A list of churches in New York was obtained from an outside source, INFO USA. The universe was 9770 which excluded New York, Kings, Queens, Bronx and Richmond counties. A sample of 3000 was used.

Cemeteries

A list of cemeteries was obtained from New York State Association of Cemeteries and the Metropolitan Cemetery Association. The universe was 570 and all were surveyed.

Apartment Complex

A list of apartment complex in New York was obtained from an outside source, INFO USA The universe was 2,420 which excluded New York, Kings, Queens, Bronx and Richmond counties. A sample of 750 was used.

Correctional Facilities

A list of federal, state and county correctional facilities was obtained from the internet. The universe was 118 and all were surveyed.

Airports

A list of airports in New York was obtained from an outside source, INFO USA. The universe was 144 and all were surveyed.

Corporate Sites

A list of corporations in New York was obtained from two outside sources, INFO USA and International Facility Management Association (IFMA). The universe was 720 which excluded New York, Kings, Queens, Bronx and Richmond counties. All 720 were surveyed.

Fairgrounds/Racetracks

A list of fairgrounds and racetracks in New York was provided by two sources, National Agricultural Statistics Service (NASS) and New York State Ag & Markets. There were 9 racetracks and 56 fairgrounds in New York. All were surveyed.

Data Editing and Analysis

All questionnaires were manually reviewed before being edited and summarized by Statistical Analysis Systems (SAS) software. This program checked for completeness and accuracy of data. Errors were identified by the computer edit and these errors were reviewed and then data was updated accordingly. After data were corrected, additional analysis was performed to look at extreme values or outliers and averages of all questions asked.

Data Summarization

Data from usable reports were summarized in SAS. Data were expanded to reach universe levels.



NEW YORK
AGRICULTURAL
STATISTICS
SERVICE

2003 Turfgrass Study

New York Agricultural Statistics Service
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Albany, NY 12235
1-800-821-1276
Fax: 1-800-591-3834
E-mail: nass-ny@nass.usda.gov

Project Code 460

The New York Agricultural Statistics Service needs your help with the 2003 Turfgrass Study. This study will provide accurate, timely, and unbiased statistics of the turfgrass industry. This report is voluntary and not required by law. Your individual report will remain **strictly confidential** and only be used in summary with similar reports from across the State to produce accurate statistics of the turfgrass industry in New York.

Stephen C. Ropel
Stephen C. Ropel
State Statistician

Please make corrections to name, address, and zip code if necessary

INSTRUCTIONS

Please have the person most responsible for lawn maintenance complete this questionnaire. **Base all answers on 2003 data.** The enclosed business reply envelope requires no postage.

1. How would you best describe this site?
(Enter code number)

009

CODES

Church	13	Commercial Site	23
Cemetery	14	Corporate Site	24
Apartment Complex	15	Fairground / Racetrack	25
Correctional Facility	16	Other (Specify)	26
Airport	17		

2. How many of the above sites are included in this report?

001

3. What is the total area of turf at all sites?
(1 acre = 43,560 sq. ft.)

002

acres

OR

003

sq. ft.

4. How much new turf was established in 2003?

030

acres

OR

031

sq. ft.

5. What was the total cost of establishing the new turf in 2003? (Include cost of ground preparation, soil conditioners, fertilizers, seed, sod, and all other costs incurred)
(Enter whole dollars)

032

\$

6. What is the total assessed land value of all reported sites?
(Enter whole dollars) 010
\$
7. What is the market value of all turf maintenance equipment owned?
(Enter whole dollars) 011
\$
8. Did you hire a professional lawn care service to perform maintenance service to your turf in 2003? **Yes = 1**
No = 2 034
(enter code)
9. What was the total cost in 2003 for this service?
(Enter whole dollars) 035
\$

10. How many acres of total turf area are:

102	Bentgrass	105	Improved Turf Type Tall Fescue	110	Unknown
acres		acres		acres	
103	Kentucky Bluegrass	106	Fine Fescue	111	Other Mix (<i>Specify</i>)
acres		acres		acres	
104	Bluegrass Mixture	109	Ryegrass	112	Other (<i>Specify</i>)
acres		acres		acres	

11. Which **three** of the following were the most difficult turf management problems in 2003?

(Enter a "1" for each of the three applicable problems)

250	Disease	257	Excessive Shade	264	Moles / Voles
251	Drought	258	Poor Soil	265	Clipping Disposal
252	Poor Drainage	259	Thatch	266	Geese / Wildlife
253	Erosion	260	Wear and Compaction	267	Pet Waste
254	Equipment Maintenance	261	Water Availability/Quality	268	Land Availability
255	Insects / Grubs	262	Weeds	269	Other (<i>Specify</i>)
256	Nematodes	263	Labor		_____

12. How many year-round employees had turf maintenance as their primary responsibility during 2003?

13. How many seasonal employees had turf maintenance as their primary responsibility during 2003?

14. What was your total 2003 payroll for all turf maintenance employees? (*payroll, benefits, taxes, insurance, FICA, 401k, pension*)

15. Did you or any of your staff enroll in any turf maintenance training in 2003? **Yes = 1**
No = 2 (enter code)

16. How much area of turf was irrigated in 2003? acres **OR** sq. ft.

17. What percent of irrigation water was provided by the following sources? (**Must add to 100%**)

<input type="text" value="321"/>	%	Municipal water	<input type="text" value="323"/>	%	Wells	<input type="text" value="325"/>	%	Other (<i>Specify</i>)
<input type="text" value="322"/>	%	Ponds / Lakes	<input type="text" value="324"/>	%	Rivers / Streams			_____

18. What are your **three** most important sources for turf management information?
 (Enter a "1" for each of the three applicable sources)

275	University Specialist	281	Technical Journals	287	Product Labels
276	Peers	282	Private Consultant	288	Lawn Care Company
277	Commercial Technical Reps.	283	TV / Radio	289	Industry Association
278	County Extension Service	284	Garden Center / Nursery	292	Other (Specify) _____
279	Community College	285	Magazines		
280	Newspapers	286	Internet		

19. Which of the following do you consider to be a significant future problem for turf management at this property?
 (Enter a "1" in each box that you consider a future problem)

350	Operational Expenses	353	Water Availability
351	Labor Availability	354	Loss of Chemical Registrations
352	Government Regulation	355	Other (Specify) _____

COMMENTS:

20. PAID LABOR EXPENSES

Please report the following costs for paid labor for either Contract or Non Contract expense. Please break out costs for contracted expenses and those incurred individually by you or your business. Contracted expenses are those that are incurred when hiring a contractor or outside service company that is not directly an employee of you or your business.

If details are unavailable, report total costs at bottom of column. *(Enter whole dollars)*

List Only Turf Information

	Contract Expense	Non Contract Expense (Own Payroll)
Mowing / Trimming	601 \$	501 \$
Edging	602 \$	502 \$
Clean-up (<i>Spring</i>)	603 \$	503 \$
Clean-up (<i>Fall</i>)	604 \$	504 \$
Disease, Weed, Insect Control	605 \$	505 \$
Wildlife Control	606 \$	506 \$
Fertilization Application	607 \$	507 \$
Aerification / Coring	608 \$	508 \$
Renovation / Overseeding / Reseeding	609 \$	509 \$
Dethatching / Power Raking / Verticutting	610 \$	510 \$
Seed / Sod Installation	611 \$	511 \$
Irrigation Installation	612 \$	512 \$
Irrigation Service	613 \$	513 \$
Soil and Tissue Testing / Diagnostic Services	614 \$	514 \$
Other (<i>Specify</i>)	619 \$	519 \$
TOTAL	624 \$	524 \$

21. EQUIPMENT EXPENSES

New Equipment Purchases <i>(large purchases like trucks, tractors, utility vehicles, mowers, etc.)</i>	527 \$
Used Equipment Purchases <i>(large purchases like trucks, tractors, utility vehicles, mowers, etc.)</i>	528 \$
Irrigation Equipment Repairs	529 \$
Equipment Supplies <i>(blades, trimline, etc.)</i>	530 \$
Equipment Repairs and Maintenance	531 \$
Equipment Rentals / Leasing Agreements	532 \$
Other <i>(Specify)</i>	533 \$
TOTAL	535 \$

22. SUPPLY EXPENSES

Seed	540 \$
Lime	541 \$
Sod	542 \$
Top Dressing	543 \$
Topsoil	544 \$
Sand	545 \$
Mulch <i>(straw, hay, peat moss, etc.)</i>	546 \$
Purchased Irrigation Water	547 \$
Crop Protectants	
A. Herbicides	549 \$
B. Insecticides	550 \$
C. Fungicides	551 \$
D. Biological Pesticides	552 \$
Fertilizer	553 \$
Fuel / Lubricants <i>(oil, gasoline, diesel, etc.)</i>	554 \$
Other <i>(Specify)</i>	555 \$
TOTAL	556 \$

23. MISCELLANEOUS EXPENSES

Insurance (<i>liability, building</i>)	561 \$
Utilities (<i>electric, gas, water, sewer, telephone, etc.</i>)	562 \$
Property Taxes	564 \$
Sales and Use Tax	565 \$
Building Maintenance	566 \$
Property Rental	567 \$
Capital Improvements (<i>new building, new irrigation or drainage system, etc.</i>)	568 \$
Training	569 \$
Other (<i>Specify</i>)	570 \$
TOTAL	571 \$

24. Would you like to receive a free copy of the results of this study in the mail?

Yes = 1
No = 2

099 (enter code)

(The survey results will also be available on the Internet at <http://www.nass.usda.gov/ny>)

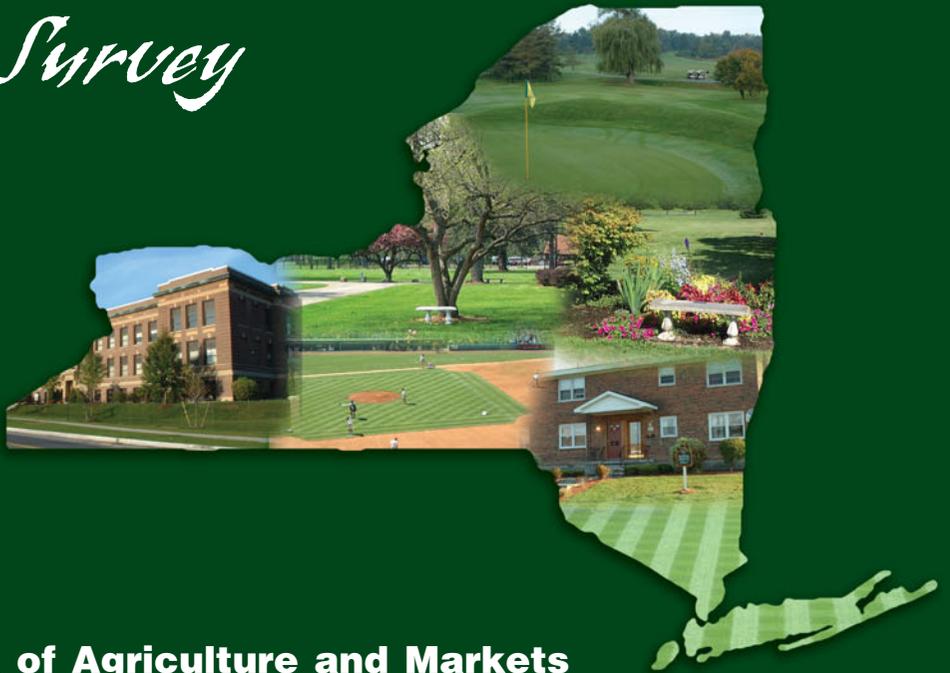
Reported by: _____ Telephone: _____ Date: _____

Office Use Only	Respondent		Response Code		Enum.	Eval.
Respondent's Name	1-Op/Ptnr 2-Sp 3-Acct/Bkpr 4-Oth 5-Est R 6-Est NR	101	1-Mail 2-Tel 3-Int 6-MailR 7-TelR 8-IR 9-Inac	910	098	100



New York

Turfgrass Survey



**New York State Department of Agriculture and Markets
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www.agmkt.state.ny.us | www.nass.usda.gov | www.nysta.org