

Cemeteries

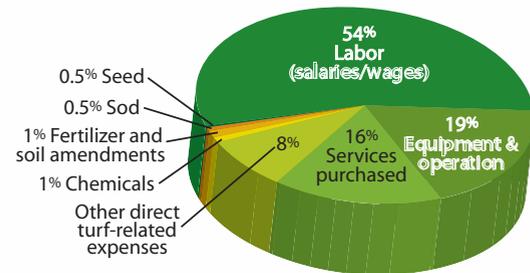
New Jersey's 1,100 cemeteries maintained a total land area of 23,650 acres in 2001, of which 22,000 acres was turfgrass. In terms of expenditures, New Jersey cemeteries spent \$42,235 per cemetery on turf-related expenses in 2001. This equates to a total of \$46.5 million in turf-related



expenses for all New Jersey cemeteries. The average expense per acre of turf was \$2,112. Labor accounted for more than half of all expenditures for New Jersey cemeteries. The total impact (including indirect impacts) on the state's

economy generated from those expenditures totaled \$60.8 million.

Distribution of New Jersey Cemetery Turfgrass Expenditures



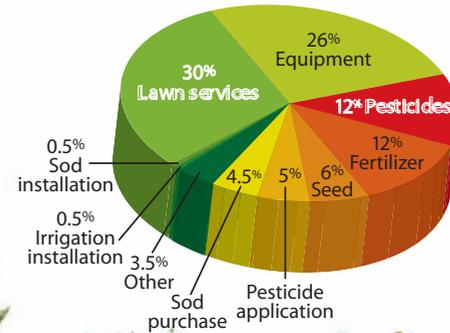
- ▶ **Top 3 issues: weeds, labor availability and water restrictions**
- ▶ **80% of cemeteries surveyed do not irrigate turf or collect grass clippings**
- ▶ **Cemeteries in New Jersey employed 5,500 workers in 2001**

Homeowners

In 2001, New Jersey's single-family homeowners maintained a total of 665,675 acres of turf. The average lot size for a single-family home was 0.70 acres, while the average turf area per home was 0.32 acres. New Jersey homeowners spent approximately \$1 billion on turf maintenance during 2001. Professional lawn-care services accounted for the largest share of this expense, followed by turf-related equipment. On average, single-family homeowners spent approximately \$506 on turf maintenance each year. The total impact (including indirect impacts on other industries) generated from turf maintenance expenditures on home lawns totaled \$1.7 billion. New Jersey homeowners spent an additional \$1.2 billion annually on ornamental plantings and maintenance. The economic cost of the last major drought (1999) to homeowners in New Jersey was \$212 million.



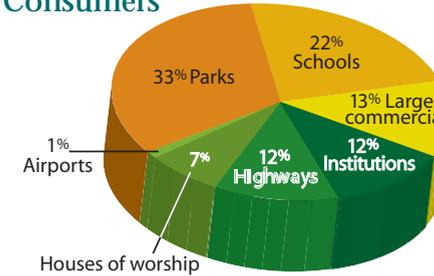
Distribution of Turf-Related Expenses for Single Family Homes in New Jersey



Other Turfgrass Consumers

This group of turfgrass consumers includes parks, schools, houses of worship, institutions, airports, highways/road-sides, and all commercial establishments. The turf area maintained by this sector was 160,533 acres in 2001 and the total annual turf-related maintenance costs were \$272 million. Schools and parks accounted for the majority of turf acreage for this group. Including the indirect and induced impacts of turfgrass expenditures, the total economic impact of this sector was \$429.1 million.

Distribution of Turfgrass Area by Sector for Other Consumers



The area covered by turfgrass in New Jersey has remained relatively constant since the last economic study was conducted in 1984; increasing by approximately 15,000 acres (2%). However, revenues and expenditures on turfgrass maintenance by the various turfgrass sectors have grown by 334% over the same period of time. Even after accounting for inflation, real turf-grass expenditures have grown by more than 130%. Therefore, it is apparent from the results of this study that the New Jersey turfgrass industry has grown significantly over the past 20 years and currently plays a very important role in the State's economy.

This project was supported by the New Jersey Turfgrass Foundation, Golf Course Superintendents Assoc. of New Jersey, New Jersey Landscape Contractors Assoc., Cultivated Sod Assoc. of New Jersey, Rutgers Center for Turfgrass Science (CTS), Rutgers Cooperative Extension, and by the New Jersey Agricultural Experiment Station (NJAES). Research Investigators were: Dr. Ramu Govindasamy, Assoc. Professor, Dept. of Agricultural, Food & Resource Economics; Kevin Sullivan, Institutional Research Analyst, NJAES; Margaret Brennan, Associate Director, NJAES; Dr. Venkata Puduri, Post-Doctoral Research Assoc., Dept. of Agricultural, Food & Resource Economics; Dr. Bruce Clarke, Director CTS; and Dr. Adesoji Adelaja, John A. Hannah Distinguished Professor in Land Policy, Michigan State University. All of the statistics cited in this pamphlet are estimates based on data collected in 2001.

RUTGERS

New Jersey Agricultural Experiment Station

THE NEW JERSEY TURFGRASS INDUSTRY ECONOMIC SURVEY

Executive Summary

The Center for Turfgrass Science

Additional information is available at www.turf.rutgers.edu

Executive Summary

Cultivated turfgrass is a widespread feature of the suburban and urban landscape throughout New Jersey and the United States, yet few people understand the nature and importance of the turfgrass industry. The benefits of turfgrass are abundant, including erosion prevention, groundwater recharge, cleaner air, cooler ambient temperatures, glare reduction, and a healthy playing surface for recreational activities.

The turfgrass industry also makes a significant contribution to the state economy. This study revealed that the turf industry contributed \$3.2 billion to the New Jersey economy and provided 53,588 jobs in 2001. Moreover, turfgrass is a major land cover in New Jersey, accounting for 880,542 acres and making up 18% of the State's total land area. Six turf industry sectors are highlighted in this report to demonstrate the magnitude of the New Jersey turfgrass industry. Those sectors include service providers, sod producers, golf courses, cemeteries, homeowners, and other turfgrass consumers. Of these areas, the homeowner sector accounted for 76% of the total turfgrass acreage in New Jersey.

Distribution of Economic Impacts from Turfgrass Expenditures on the New Jersey Economy**



**Note: To avoid double counting, the economic impact of sod farms and service providers has been accounted for within the four turfgrass consumer sectors in this pie chart.

| Sector | Turf Area (acres) | % |
|----------------|-------------------|-----|
| Households | 665,675 | 76 |
| Other Sectors* | 160,533 | 18 |
| Golf Courses | 23,374 | 3 |
| Cemeteries | 22,000 | 2 |
| Sod Farms | 8,960 | 1 |
| Total | 880,542 | 100 |

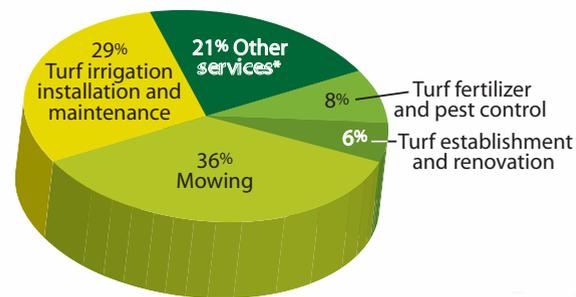
* Includes parks, schools, houses of worship, airports, highways, and businesses.

Service Providers

In 2001, New Jersey turfgrass service providers serviced 239,633 acres of turf, directly employed 21,335 workers, provided \$400 million in payroll and benefits, and generated an additional 5,741 jobs in related industries. New Jersey turfgrass service providers spent \$691 million on cash expenses (i.e., labor, equipment, fertilizers, chemicals, etc) in 2001.

In terms of revenue, service providers generated \$1.3 billion in turf-related output (\$727 million was created directly by turfgrass service providers, while \$586 million was generated indirectly through related industries and households). Mowing and the installation and maintenance of turf irrigation systems accounted for the largest portion of gross sales. Sixty-nine percent of service providers' business originated from residential properties, while 25% came from commercial accounts. Furthermore, 70% of service providers indicated that residential properties were the fastest growing part of their business. The drought in 1999 adversely affected service providers resulting in \$150 million in lost revenue and temporary layoffs of approximately 4,000 full time employees.

Distribution of New Jersey Service Provider Sales



*not related to the care or installation of plants (e.g. design services, hardscaping, etc.)



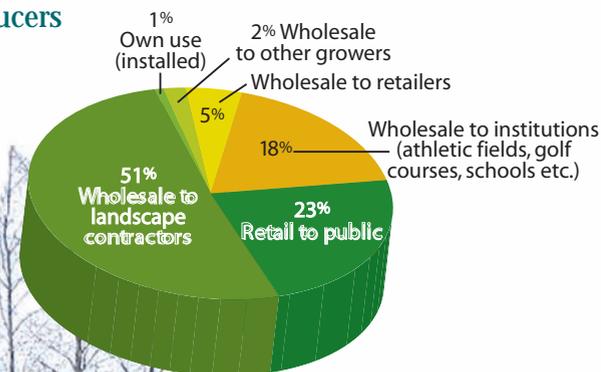
Sod Producers

New Jersey's sod producers grew 8,960 acres of turf and spent \$34.7 million on sod production in 2001. Sod producers employed 364 workers, providing \$13.2 million in payroll and benefits. The majority of sales by New Jersey sod producers were wholesale to landscape contractors, retailers, and institutions.



In terms of revenue, New Jersey sod producers generated \$46.4 million in sod sales in 2001. The overall economic impact of New Jersey sod farms (including indirect impacts through related industries and households) was \$66.2 million and 537 additional jobs. The most common species of turfgrass grown by New Jersey sod producers were Kentucky bluegrass and tall fescue; 82% of sod produced in New Jersey was Kentucky bluegrass. Moreover, eighty-nine percent of sod growers utilized non-municipal water sources for irrigation.

Distribution of Sod Sales by New Jersey Sod Producers



Golf Courses

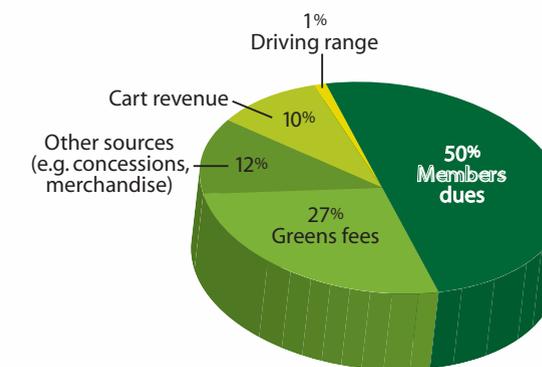
New Jersey's golf courses maintained a total land area of 38,093 acres in 2001, of which approximately 61% was covered with turfgrass. Of the 289 golf courses in the State, the average area per golf course was 131.8 acres. In 2001, just under 9 million rounds of golf were played in New Jersey; an average of 31,108 rounds per course.

In terms of expenditures, New Jersey golf courses spent \$237 million on turf maintenance during 2001. The average expense per golf course was \$821,319. Labor accounted for the largest share of the total expenses at 53%. Equipment costs made up approximately 16% of the total, while services purchased accounted for 10%, chemicals 8.5%, and fertilizer and soil amendments 3.3% of the total maintenance expenses.

Golf course revenues were \$573 million or \$1.9 million per course. Membership dues accounted for 50% of this total, whereas greens fees provided 27% of the total revenue. Economic impact analysis estimated an additional \$409 million of indirect impacts (i.e., revenue generated in other related industries). Therefore, the overall impact of golf courses on the economy of the State totaled \$982 million. This represents almost 30% of the total economic impact for all end users within the turfgrass industry in New Jersey.



Revenue Sources for New Jersey Golf Courses



- \$20 Million in total revenue lost due to drought in 1999
- 91% of golf courses use non-municipal water sources
- Top 3 issues: water restrictions, labor availability, and turf diseases
- NJ golf courses employed 14,450 workers in 2001