

ket for many of the ornamental commodities. The production of large foliage plants (20-gallon containers and larger) under shade structures is concentrated along the coast in the southeastern corner of the state. These large foliage plants are primarily utilized by the interiorscaping industry. Increased urbanization means more construction and the need for interior plantscaping.

Another important benefactor of urbanization has been the turf industry. A major industry that does not appear in most production figures is turf and landscape maintenance. There are more than 800 golf courses in the state of Florida and numerous developments, including condominiums and resorts that contract for landscape maintenance. The three county area of Dade, Broward and Palm Beach alone has over 2000 landscape and foliage production nurseries, over 200 golf courses and thousands of landscape installation and

maintenance firms and retail outlets, indicating the enormous potential of ornamental horticulture in Florida.

Off-campus teaching programs such as the one established by the University of Florida at the Fort Lauderdale Research and Education Center allows the needs of place-bound students to be met. It also allows the University to strengthen educational efforts serving the agricultural community.

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FLORIDA YARDS AND NEIGHBORHOODS PROGRAM

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Abstract. The Florida Yards and Neighborhoods program promotes efficient and practical landscaping techniques for homeowners while encouraging the protection of Florida's natural environment. The program mission includes: 1) reducing stormwater pollution (including excess nutrients), 2) improving shoreline management, 3) conserving water and energy, and 4) providing wildlife and fisheries habitat.

To date, three versions of the Florida Yards and Neighborhoods program serve the residents of Pinellas, Hillsborough, Manatee, Sarasota, and Charlotte counties. The "Florida Neighborhoods" program in Tampa Bay emphasizes group instruction through selected neighborhood associations. The "Florida Yards" program in Sarasota Bay works with individual homeowners throughout the bay region. The "Florida Yards and Neighborhoods" program in Charlotte county is an approach that combines both versions.

The Sarasota Bay and Charlotte County programs utilize Cooperative Extension Service Master Gardeners as Florida Yard Advisors. The Florida Yards and Neighborhoods program will build environmental awareness, and then in conjunction with other elements of the Master Gardener program, will provide the information and advise necessary to make time- and money-saving adjustments to home landscape practices.

The Florida Yards and Neighborhoods (FYN) program began in 1992 and now encompasses Pasco, Pinellas, Hillsborough, Manatee, Sarasota, and Charlotte counties. It addresses non-point source pollution affecting bays, harbors, retention areas and other waterbodies. Over the past few decades, government policies and regulations have addressed the problem of point source pollution, that is, those pollutants that have identifiable sources such as municipal sewage treatment

plants, and industrial facilities. Recently, the focus has shifted to non-point source pollution which includes atmospheric deposition by acid rain, agricultural runoff, and residential stormwater runoff. It is this last category that is the focus of Florida Yards and Neighborhoods.

Fertilizers, pesticides, heavy metals, animal wastes, litter, oils and greases are washed off the land by heavy rainfall and are carried by stormwater through our swales and ditches, into our canals and streams, and eventually to rivers, harbors and bays. There they can affect natural ecosystem processes. This pollution results in ecological problems such as algal blooms from excessive nitrogen availability, the shading and decline of seagrasses by algal overgrowth, and the depletion of dissolved oxygen available to marine animals when masses of algae decay.

The mission of the Florida Yards and Neighborhoods program is to improve water quality, estuarine habitat, and promote water and energy conservation. It is designed as a community education and action program to:

- improve home and landscape design and maintenance,
- improve and protect water quality by reducing nutrient and pollutant loading and by increasing fish and wildlife habitat, and
- provide a way for each resident to play a substantial, active role in water resource protection, by involving residents in the "Florida Yard" and "Florida Neighborhood" process.

The program goals will be pursued by providing instruction on the following activities:

1. Environmental landscape design and landscape maintenance—including water conservation, integrated pest management, zoning plants away from the shoreline according to fertilizer requirements, carefully

managed fertilizer applications, composting and use of salt- and drought-tolerant plants.

2. Stormwater retention—including contouring, downspout placement and use of cisterns where appropriate.
3. Fish and wildlife habitat enhancement—including use of native and beneficial plants along shorelines and in landscapes.
4. Shoreline treatments—including alternatives to seawalls, mangrove and freshwater wetland plant aquascaping and care, and use of artificial habitat modules to enhance fisheries productivity.
5. Residential energy and water conservation, and residential waste—including proper disposal of pesticides, household cleaning products, and automotive and marine products.

During the past year educational materials have been written and reviewed by University of Florida Institute of Food and Agricultural Science (IFAS) faculty and by coordinators of the Sarasota and Tampa Bay National Estuary Programs (NEP). These include the “Florida Yard and Neighborhoods Handbook” and “Florida Yardstick” being developed for use by all counties participating in the FYN program.

The “Florida Yard and Neighborhoods Handbook,” a design guide for program participants, describes recommended landscaping and landscape maintenance practices and lists reference materials available for use in planning an environmentally-compatible landscape.

The “Florida Yardstick,” a poster to be used by program participants, will allow homeowners to evaluate their progress toward obtaining Florida Yard Certification by personally implementing the prescribed Florida Yards and Neighborhoods practices.

Different sources of funding for the FYN program, covering a six-county area on Florida’s west coast, have resulted in the development of three related versions of the program: “Florida Neighborhoods,” “Florida Yards,” and “Florida Yards and Neighborhoods.” All three program versions utilize “Florida Yards and Neighborhoods” as a common name.

- “*Florida Neighborhoods*” (Pasco, Pinellas, Manatee and Hillsborough Counties), in the Tampa Bay area, emphasizes group instruction through selected neighborhood associations. “Florida Neighborhoods” is a partnership between the Florida Neighborhoods Team and the participating neighborhoods. It utilizes the services of volunteer Block Captains. The Block Captains act as liaisons between the Florida Neighborhoods professionals and the residents of the neighborhood. The neighborhoods receive hands-on instruction and materials for landscape design and maintenance practices that can improve water quality in the Tampa Bay area.

“Florida Neighborhoods” is administered through the County Cooperative Extension Service offices of Hillsborough, Manatee, Pinellas and Pasco counties. Other partners in the program include: Hillsborough, Manatee, Pasco, and Pinellas counties, the Tampa Bay National Estuary Program and the West Coast Regional Water Supply Authority. Many other organizations are involved with the FYN program through representative membership on advisory committees.

- “*Florida Yards*” (Manatee and Sarasota Counties), in the Sarasota Bay area, works with individual homeowners throughout the bay region to improve landscape design and landscape maintenance. This program utilizes volunteer Mas-

ter Gardener/Florida Yard Advisors who can provide on-site advice and will administer the Florida Yard Certification program utilizing the Florida Yardstick. The Florida House Learning Center in Sarasota, which opened in April, 1994, is one of the sites utilized by the program as a public demonstration area. This particular site includes both the residence and surrounding landscape as a model for Florida Yards & Neighborhoods.

“Florida Yards” involves a partnership between the following: Manatee and Sarasota Cooperative Extension Services; Sarasota Bay National Estuary Program; the Southwest Florida Water Management District; the Florida Department of Environmental Protection; and the Florida Sea Grant College.

- “*Florida Yards & Neighborhoods*” (Charlotte County) in the Charlotte Harbor area offers services to both individual residents and to neighborhoods through their homeowner associations. A three-part lecture series will introduce the FYN program to neighborhoods and associations, while public workshops will be available for individual homeowners. All those wishing to participate in FYN will complete the IFAS Environmental Landscape Management (ELM) survey at the initial lecture, and the follow-up survey at the point of individual Florida Yard certification. Master Gardener/Florida Yard Advisors will administer in the Florida Yards Certification process, confirming residents’ progress as measured by the Florida Yardstick.

“Florida Yards & Neighborhoods” in Charlotte County is administered through Charlotte County Extension in partnership with the following: the Southwest Florida Water Management District; the Charlotte Harbor Environmental Center; and the Charlotte County Board of County Commissioners.

Currently the Indian River Lagoon region comprised of Brevard, St. Lucie, Volusia, Martin, Palm Beach, and Indian River counties is in the process of reviewing proposals for a Florida Yards & Neighborhoods program.

NEP’s through research, have identified non-point source pollution as the most substantial category of nutrient enrichment of estuarine waters. Implementing corrective actions at the local government level is called for in the action plan developed by each NEP. Education is the only reasonable alternative to expensive infrastructure and, at least, should be a major component of the solution.

IFAS faculty can assist local government with the educational component of solving our baywater pollution problems from residential stormwater runoff. University Extension oversees the coordination of existing programs in environmental landscape management and estuarine management for fisheries habitat and productivity. The Cooperative extension service has been selected as the logical organization to develop the new FYN program which addresses both sides of the land/water interaction in our urban waterfront communities.

The very nature of University Extension allows for program flexibility, encouraging programming tailored to meet the needs of the individual county. IFAS has experience in managing complex, long-term educational programs, with research capabilities in environmental horticulture, water resources, fisheries and wildlife science, marine science, waste management and energy conservation. In addition, IFAS faculty have experience in managing volunteer systems, as the case with the highly successful Master Gardener program.

The six counties (Pasco, Pinellas, Hillsborough, Manatee, Sarasota, and Charlotte) Cooperative Extension Service faculties currently are discussing long- and short-term strategic plans and FYN program goals. Among topics being discussed are research needs, funding, integration of FYN into the statewide IFAS program, development of educational materials, and roles and responsibilities of program coordinators and agents. Standardization of basic program promotional and educational materials would help ensure a lasting, recognized and successful state-wide program.

With statewide focus to the program and with adequate funding, Florida Yards & Neighborhoods has the potential for enormous impact upon Florida's water resources, wildlife habitat including shorelines, and energy conservation. Furthermore, the program can be adapted and expanded from Florida's coastal communities to residents who live along lakes and rivers. Florida Yards & Neighborhoods can be a state inter-agency partnership, with an IFAS inter-disciplinary program at its core, utilizing both professionals and volunteers to address the major water, energy and wildlife issues confronting our growing Florida urban population.

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"MY YARD DOESN'T GROW TRASH"

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A yard waste reduction project was conducted in the City of DeLand from December 1993 through May 1994 with cooperation between the City and its waste management contractor, Industrial Waste Service, Inc. A section of the city consisting of about 180 residences was selected for its history of heavy contribution to the yard waste stream.

The specific objectives of the project were: (1) to test the effectiveness of an educational campaign designed to greatly reduce the amount of yard waste placed at curbside and (2) to test the feasibility of curbside grinding of yard waste materials as a means of reducing energy consumed in hauling, processing, and disposing of such materials. These objectives were to contribute to the goal of reducing resources spent on handling yard wastes by significantly reducing the amount of plant material hauled from residential landscapes.

Project Activities and Results

Surveys. At the beginning and end of the project, we conducted a direct-mail survey of personal attitudes about yard waste management. Business reply envelopes were included with the questionnaires. Results are presented in Tables 1 and 2. Out of 157 surveys distributed, 123 residents responded to the initial survey and 62 to the second. The 78% return rate for the initial survey indicated a significant level of citizen awareness in the project area. We sent follow-up reminders for the initial survey but did not send follow-up reminders on the final survey due to project completion time constraints. Lack of follow-up was the primary reason for the lower response rate in the final survey. The 78% return rate for the initial survey was considered excellent, and the 39% return rate for the final survey was considered acceptable for a mail survey.

The following conclusions were drawn from analysis of the response data.

- The population was quite concerned with local waste management issues.
- The majority were interested in learning ways to use their yard debris on-site to decrease their contribution to the waste stream.
- The population preferred to get their information by reading (e.g., direct mail, utility bill inserts, newspaper articles).
- People were unlikely to go to meetings to learn about yard trash handling options but might visit a demonstration site.
- About a third of the people were already keeping over three-quarters of their yard wastes on-site, but another third were discarding over three-quarters of their yard debris.
- Respondents indicated that they discarded a major portion of their tree branches and shrubbery trimmings. While over half indicated they did not discard grass clippings, almost a quarter indicated that they regularly did discard them.

The final survey asked for responses to four questions (Table 2). As a result of the project, 37% of the respondents said they had decreased the amount of yard waste that they placed at the curb, a third of those claiming great decreases in amounts. Of the 61% that noted no effect of the project on their behavior, there were several notes that indicated those respondents were people who generally did not generate yard waste material. About half of the respondents noted that they had put material out for curbside shredding at least once during the 6 months of the project. About one third indicated they would be very likely to use curbside shredding, another third would be likely or somewhat likely, and the other third would be unlikely to use it.

Written comments volunteered on the survey forms gave additional insights into the attitudes of residents to the project. The comments showed the normal range of human beliefs and opinions but were generally favorable and contained good suggestions for improvement. Several noted that the shredded material needed to be finer for them to consid-