FLORIDA HOUSE ANNUAL SURVEY SHOWS CHANGES IN LANDSCAPE PRACTICES

MARK E. SHELBY
University of Florida Extension
Sarasota County
2900 Ringling Blvd.
Sarasota, FL 34237

Abstract. In 1994, the Florida House Learning Center was established in Sarasota as a multi-faceted teaching facility dealing with environmental considerations in residential construction and landscaping. This facility is operated by the University of Florida Extension, Sarasota County. Since 1994, over 65,000 people have been documented as visiting Florida House, and an estimated 80,000 have toured the demonstration Florida yard at Florida House. Since 1995, an Annual Survey of registered visitors to Florida House has been conducted. This survey asks for specific information concerning practice changes accomplished as a result of their visit to Florida House. From 1995 to 2000, 2,842 people have reported between 43 and 78 percent adoption of various practice changes and between 42 and 57 percent have redesigned their landscape.

The Florida House Learning Center is an educational demonstration facility for resource conservation and Florida Yards & Neighborhoods for residential properties. Florida House was established in 1994 and is operated by University of Florida Extension, Sarasota County. Since 1994, there have been over 65,000 documented visitors and over 80,000 estimated visitors.

The regional population of the Sarasota County area has expanded dramatically in the last decade, being now around one million people. The standard of living has been consistently increasing and, as a result, the landscape maintenance and pest control industries have also been growing. However, drought issues, tightening watering restrictions, and increasing pressure on County government to deal with water supply issues have also become more prominent over the past few years.

Since 1995, an annual survey has been sent to 1,000 to 2,500 first-time visitors of Florida House. This survey was redesigned in 1996 to ask more specific questions, and has remained in a similar format since. The average response rate for this survey is 25%. The survey is two pages long, usually containing 11 questions, some with multiple responses. The self-assessed knowledge gain of survey respondents increased an average of 62% as a result of visiting Florida House. Additionally, an average 85% of respondents plan to use information they learned at Florida House within the next three years.

Responses to Questions on Annual Survey

Respondents were asked to rank their primary reason for visiting Florida House and were given eight reasons (only 5 are reported here). For the first three years, “Energy-savings ideas and/or products” ranked first, and “Water-saving ideas and/or products” ranked second, third, or fourth, while “Designing a new landscape” and “Redesigning a landscape” ranked very low in the list. In 1999-2000, drought issues became more important, leading to “Designing a new landscape” becoming the top reason for visiting. “Building a new home” was ranked as second in these years, and the reasons related to water savings stayed mid-range, while energy savings dropped to low priority. “Redesigning a landscape” started to rise in priority in 1998, then fell again, maybe due to drought issues.

The question “Since your first visit to Florida House, have you incorporated any principles, products or ideas demonstrated there? If so, where?” (Fig. 1) was not on the survey the first two years. Design or redesign of landscape was consistently the area where the most changes took place, ranging between 30% and 65%.

The next question was “Have you changed your personal routine, or made physical changes in your landscape, as a result of visiting Florida House? If so, in which ways?” This set of responses relates to changes in landscape design (Fig. 2). Now, 6-14% test soil pH before choosing plants. Testing for soil drainage during the rainy season has steadily decreased, probably due to prolonged drought and decreased rainfall (12-28%). Selecting plants according to site conditions (soil, drainage, light) has stayed high (between 32-54%), but has decreased 15-20% over time. Similar results are seen for designing low-maintenance areas with groundcovers and mulch (29-52%).

Responses related to water conservation issues (Fig. 3) show some minimal adoption of installing rain barrels and/or cisterns (3-7%), probably due to low rainfall and higher expense or inconvenience. There was good adoption of grouping plants by water needs (16-28%), but poor adoption of installing micro-irrigation (4-7%), probably due to lack of knowledge and confidence in ability to retrofit existing systems to micro-irrigation. There was also good adoption of irrigating only when plants wilt (24-45%), but possibly suppressed in recent years due to drought conditions.

When looking at responses related to recycling issues (Fig. 4), beginning to compost kitchen scraps and yard wastes showed some adoption (12-26%), maybe somewhat depressed.
due to the higher economic level of many county residents and also because some communities prohibit composters. Using recycled mulches showed good adoption at first (22-24%), then the quality of County-supplied mulch declined at the same time as we see a decline in this practice; however, alternative mulch sources (such as tree services) are being taught and accepted (11-14% response). Leaving grass clippings on the lawn after mowing wasn’t asked the first 2 years, but then there was good adoption of the practice at 42%, which has declined somewhat to 30%. This result may possibly be due to increasing reliance on landscape maintenance contractors, with the increasing standard of living of residents.

In the only landscape question related to energy conservation (Fig. 4), “Shading of east and west walls of home,” there was good adoption at 18-27%.

When looking at responses related to healthy environment issues (Fig. 5) there was good adoption of all three practices (“identification of pest problems before spraying” at 14-35%; “use of least-toxic pesticides” at 18-44%; and “use of slow-release fertilizers” at 17-30%). However, serious decline occurred over the years, possibly due to increased reliance on landscape maintenance contractors and pest control operators, or on decreased concern for issues beyond the drought.

Responses to practices concerning stormwater issues (Fig. 6) showed relatively poor adoption. Adoption of proper application rates of nitrogen (1 lb per 1000 sq ft or less per application) declined most severely, from 13% to 3%. This may be due to increased reliance on landscape maintenance contractors, greater confusion about fertilizers in general, increased complacency since environmental issues are not as severe, or drought conditions. Use of swales or terraces to catch and filter stormwater ranged from 3-8%. Installation of porous materials for walkways and driveways was adopted at a rate of 6-12%.

**Observations**

The following observations can be made from these data: 1) Landscape design issues are becoming more important to Florida House visitors; 2) Florida House visitors learn a great deal about their chosen reason for visiting, then follow through with adoption of learned practices; 3) Easy, convenient practices show good adoption (better plant selection; increasing mulch and groundcover beds; irrigating when plants wilt; grouping plants by water needs; composting); 4) More difficult, inconvenient or expensive practices show less adoption (testing soil pH; installing micro-irrigation; proper...
On fertilizer application; creating swales and terraces; installing porous walks and drives); and 5) There was a general decline in adoption of improved landscape maintenance or irrigation practices, of practices requiring greater thought or attention, and in some other practices possibly due to perceived futility in the face of long-term, severe drought.

Conclusions

Obviously, practices which are inconvenient, expensive, or requiring greater knowledge and consideration are slower to be adopted. Recent economic improvements and improved environmental conditions have apparently decreased perceived needs to change practices. In addition, continued and worsening drought conditions have appeared to delay or prevent adoption of practices. However, Florida House has proven itself as a dynamic, effective teaching facility achieving significant adoption of practices by thousands of people.


FLORIDA HOUSE CHILDREN’S RESOURCE CONSERVATION TOUR PROGRAM

MARK E. SHELBY
University of Florida Extension
Sarasota County
2900 Ringling Blvd.
Sarasota, FL 34237

Abstract. The Florida House Learning Center has had over 65,000 documented visitors since opening in April 1994. In 1997, volunteers organized a program of tours of the Florida House facility and landscape to teach children the importance of natural resource conservation, demonstrating practical ways they can individually save natural resources, increasing their awareness of their relationship with the environment, and encouraging them to practice the concepts and principles learned on the tour. Prior to their visit, each student is given a pre-test, and a post-test is administered following the tour. Since October, 1997, 137 K-12 classes have participated in the tour program, with 3,221 students, total. Average pre-test scores are 48%, and post-test scores average 85%, resulting in an average knowledge gain of 37%. Many adults have visited Florida House after being persuaded by their participant children, and some indicate their children are now “teaching” them to conserve natural resources at home. With reinforcement, the next generation will conserve resources better than ourselves.

The Florida House Learning Center is an educational demonstration facility for resource conservation and Florida Yards & Neighborhoods for residential properties. Florida House was established in 1994 and is operated by University of Florida Extension, Sarasota County. Since 1994 there have been over 65,000 documented visitors and an estimated 80,000 visitors to the landscape.

In 1997, Master Gardener volunteers recognized that adults were being given tours, but that children were not actively educated when they visited. These Master Gardeners decided to create a special tour program for elementary school children called the Children’s Resource Conservation Tour Program. This tour program was created with assistance from myself and other staff and is conducted by the Master Gardeners.

Children’s Resource Conservation Tours

The ‘Tour Program’ contains two different sets of materials: the ‘Teacher’s Packet’ and the ‘Tour Guide Packet’. The Teacher’s Packet is given to the participating teacher prior to their bringing the children to Florida House. It consists of a list of ‘Tour Objectives’, an 8-question pre- and post-test (matching), an index of Florida State Science Standards addressed through the tour program, a ‘Glossary of Terms’, a checklist of activities & responsibilities, and a post-tour questionnaire.

The Tour Guide Packet is used by the tour guide to conduct the individual tours and contains the same list of objectives and glossary of terms given to the teachers, a list of suggestions for conducting the tour, a map of the Florida House grounds with tour stops highlighted, a tour outline, a copy of the ‘Water Cycle’, detailed ‘House Tour Outline’ and ‘Landscape Tour Outline’, a list of ways to save energy and water, and biographical examples of particular plants seen on the tour.

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The Objectives are the teaching objectives governing the tour program. They are as follows:

- To teach children the importance of resource conservation.
- To introduce students to native and other drought-tolerant plants.
- To demonstrate practical ways students can individually save natural resources.