

A NATIONAL OVERVIEW OF PLANT SELECTION/INTRODUCTION PROGRAMS
AND A STATE SURVEY OF GROWERS AND RETAILERS TO DETERMINE THE
POTENTIAL FOR AN ALABAMA PLANT SELECTION/INTRODUCTION
PROGRAM

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AND A STATE SURVEY OF GROWERS AND RETAILERS TO DETERMINE THE
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PROGRAM

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VITA

Emily Diane Harris, daughter of Danny and Diane Harris was born May 3, 1985 in Cullman, Alabama. She graduated from Fairview High School in 2003. She attended Wallace State Community College and transferred to Auburn University in 2004. She graduated with a Bachelor of Science in Horticulture in August 2006. She entered the Graduate School of Auburn University in August 2006 and finished a Master's of Science degree in December 2008.

THESIS ABSTRACT

A NATIONAL OVERVIEW OF PLANT SELECTION/INTRODUCTION PROGRAMS AND A STATE SURVEY OF GROWERS AND RETAILERS TO DETERMINE THE POTENTIAL FOR AN ALABAMA PLANT SELECTION/INTRODUCTION PROGRAM

Emily Diane Harris

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Over the past fifteen years, many states have established statewide plant selection/introduction programs for the purpose of promoting and marketing selected plants to consumers to increase sales for the Green Industry. However, little to no research has been completed to compare the programs on structure, operation, and success. The first part of this research uses an internet survey to gather information on the programs across the country. The survey asked many questions including how the programs were set up, who was involved, how the plants are selected, and how they market the selected plants to consumers. The survey determined most programs were a partnership between a green association, university, industry, botanical garden and/or

state arboretum. The majority of respondents had committee(s) to nominate and select plants. A little over half of the programs have plant trials as part of the selection process. Funding and program support were reported as problems from the beginning of the program. Programs were funded by grants, support from sponsors, royalties, and sale of promotional items.

The second part of this research surveyed Alabama growers and retailers to determine their opinion about a potential plant selection program. The survey determined what level of involvement they would like to have in a potential program, how they would like the program to be set up, and general questions about their business. Over 90% of respondents wanted to have some involvement in the potential program including growing and selling the plants, serving on a committee, nominating plants, and marketing the selected plants. Most respondents thought a plant selection program could help their business. Results indicate potential for an Alabama plant selection program.

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Style manual or journal used

American Society of Horticultural Science

Computer software used

Microsoft Word 2007, Microsoft Excel 2007, and SPSS versions 16.1 and 16.0

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CHAPTER I

LITERATURE REVIEW

Introduction

Gardening ranks as one the top three hobbies among Americans (National Gardening Association, 2007). A New England survey determined relaxation and enjoyment was the top reason consumers garden and gardeners use a variety of sources for gardening information (Brand and Leonard, 2001). The top four information sources listed by respondents were independent garden centers and nurseries, magazines, friends, and mail order catalogs. When asked to determine important features of retail stores, respondents stated healthy plants, informative plant labels, knowledgeable staff, and selection of plant materials were most important. Landscapers also use nurserymen for advice on purchasing plants and gathering plant information (Garber et al., 1995). When asked to identify how university personnel can support the installation industry, 16% expressed the need for testing and introduction of new plant varieties and cultivars, and for this information to be easily available. A state plant selection or introduction program has the possibility to influence landscape installers in selecting high quality, low maintenance plants, and keep them up to date on current research and plant trials.

In the early 1990's, many states started plant selection programs to help consumers select quality plants that perform in the landscape (Stegelin et al., 2001). Programs have been labeled as marketing, evaluation, promotional, and/or introductory programs.

After a review of the literature, very little research was found on these programs. Some plant promotion programs are successful and have benefited the local Green Industry in their state; however, some programs no longer exist due to various reasons. All programs have the same general goal, which is to recognize specific plants and advertise these plants to consumers using different marketing techniques to increase sales of selected plants for the Green Industry. Even though their goals are basically the same, program operation varies greatly.

The Programs

Most programs of significance are listed on the National Arboretum's website (<http://usna.usda.gov/>), the rest can be found through internet searches, journal articles, and links from other programs. Programs are included if plants are selected and promoted for specific states or regions and linked to a university, state green association, arboretum, or botanical garden. It is possible more programs exist than are named below; however, our extensive search located 20 programs of significance.

1. **Name:** The Cary Award- Distinctive Plants for New England.

Purpose: "To inform home gardeners which plants would be good choices in their landscape; to instill confidence in the home gardener's plant selection; to increase the diversity of plant material utilized by gardeners, landscape designers, and architects" (Cary Award, 2007).

Years active: 1997 to present.

Sponsors: Worcester County Horticultural Society, Massachusetts Horticultural Society, New England Nursery Association, Massachusetts Nursery and Landscape Association.

Type of plants selected: Trees, woody shrubs, vines, and ground covers.

Selection process: Anyone can nominate a plant but winners are selected by a committee of regional experts and members of the Worcester County Horticultural Society. To be nominated, a plant must be hardy in at least two of the four USDA Hardiness Zones in New England (3-6) and available in the industry. Plants are selected based on hardiness, uniqueness, and a long growing season.

Committee structure: The Cary Award Selection Committee consists of regional experts and members of the Worcester County Horticultural Society.

Plant Trials: Not specified.

Other information: The website lists nurseries where The Cary Award plants are available to consumers. A downloadable brochure and poster is available on the website to advertise and promote the current year's winners.

Website: www.caryaward.org.

(Cary Award, 2007).

2. **Name:** The Pennsylvania Horticultural Society's Gold Medal Plant Award

Purpose: "To recognize trees, shrubs, and woody vines of outstanding merit"

(Pennsylvania Horticultural Society, 2007).

Years active: 1978 to present.

Sponsors: The Pennsylvania Horticultural Society.

Type of plants selected: Trees, shrubs, and woody vines.

Selection process: Plants are chosen based on consumer appeal, performance, hardiness, pest and disease resistance, and ease of growing. All plants must be in a propagation program to insure availability.

Committee structure: The Gold Medal Plant Award Committee consists of selected horticulturists.

Plant trials: Not specified.

Other information: No information is listed how the plants are promoted to consumers.

Website: <http://www.goldmedalplants.org/>.

(Pennsylvania Hort. Soc., 2007).

3. **Name:** Georgia Gold Medal

Purpose: “To promote the production, sale, and use of superior ornamental plants” (Univ. of Georgia, 2007).

Years active: 1993 to present.

Sponsors: The Georgia Cooperative Extension Service and the University of Georgia.

Type of plants selected: Annuals, herbaceous perennials, shrubs and trees.

Selection process: The committee takes plant nominations from the Georgia Green Industry. Nominations are narrowed down to four or five plants in each category and the committee votes to select one winner in each category. Criteria for selection are consumer appeal, seasonal interest, survivability, low maintenance, ease of propagation, and production. Plants are selected three years

before promotion and announced to growers to insure adequate numbers when announced to the public.

Committee structure: The Georgia Plant Selections Committee consists of nurserymen, growers, garden center retailers, landscape professionals, county extension agents, and university faculty.

Plant trials: Not specified.

Other information: The Georgia Cooperative Extension Service publishes promotional literature and distributes it to growers, retailers, landscapers, county extension agents, and consumers. Media packets are sent to newspapers and trade journals to announce each year's winners. Funding comes from industry sponsors.

Website:

<http://www.caes.uga.edu/departments/hort/extension/goldmedal/index.html>.

(Univ. of Georgia, 2007).

4. **Name:** Florida Plants of the Year

Purpose: "To promote the use of superior and proven Florida plants" (Florida Nursery Growers and Landscape Association, 2007).

Years active: 1998 to present.

Sponsors: Florida Nursery Growers and Landscape Association (FNGLA).

Type of plants selected: Shrubs, trees, vines, perennials, bedding plants, ground covers, aquatic, and foliage plants.

Selection process: Plants are nominated by professionals from the green industry using a submission form located on the program's website and a committee selects the winners.

Committee structure: The selection committee consists of growers, horticulturists, retailers, landscape professionals, and University of Florida faculty.

Plant trials: Not specified.

Other information: Promotional items are available to growers and retailers by request through the website.

Website: <http://www.fngla.org/news-programs/plantsofyear.asp>.

(Florida Nursery Growers and Landscape Assn., 2007).

5. **Name:** Theodore Klein Plant Award, Kentucky

Purpose: "To promote enthusiasm for and interest in plants among gardeners; to encourage development of new cultivars and hybrids by Kentucky Nurserymen; to increase the recognition, reputation, and profitability of the Kentucky nursery and landscape industries" (Univ. of Kentucky, 2007).

Years active: 1995 to present.

Sponsors: University of Kentucky Nursery/Landscape Program, Kentucky Nursery and Landscape Association, and Yew Dell Gardens.

Type of plants selected: Woody and perennial ornamental plants.

Selection process: Plants are selected by the Theodore Plant Award Committee. Plants must have established propagation and production practices, be established in the state of Kentucky, be resistant to pests, and have at least two or more plant

specimens close to major cities of Kentucky. Plant selections occur at least two years before public promotion.

Committee structure: The Theodore Plant Award Committee consists of selected industry members.

Plant trials: Not specified.

Other information: Winners are announced to the green industry at conferences, trade shows, and through newsletters. Posters in pdfs are available on the website.

Website: <http://www.ca.uky.edu/HLA/Dunwell/TKleinPA.html>.

(Univ. of Kentucky, 2007).

6. **Name:** GreatPlants[®] for the Great Plains

Purpose: “The goal of the GreatPlants[®] Program is to bring superior ornamental landscape plants into commercial production to meet the challenging growing conditions of Nebraska and the Great Plains” (Nebraska Statewide Arboretum, 2007).

Years active: 1998 to present.

Sponsors: Nebraska Nursery and Landscape Association (NNLA) and Nebraska Statewide Arboretum.

Types of plants selected: Perennials, shrubs, conifers, grasses, and trees.

Selection process: Growers can nominate plants for consideration as long as the plant is an underutilized tree, shrub, or perennial. Plants should exhibit hardiness, adaptability, characteristics appropriate for general landscape use, and be

available in the industry. Members of the NNLA vote on nominated plants to select winners (R. Henrickson, personal communication).

Committee structure: Not specified.

Plants trialed: Not specified.

Other information: From the website, growers, and retailers can order bookmarks, tags, and banners. The GreatPlants® Program also develops and releases named drought tolerant cultivars every year.

Website: <http://arboretum.unl.edu/greatplants/>;

<http://www.nnla.org/index.cfm?fuseaction=home.greatPlants>.

(Nebraska Nursery & Landscape Assn., 2007; Nebraska Statewide Arboretum, 2007).

7. **Name:** Plants of Merit™, Missouri

Purpose: “To promote plants that are proven to be well-adapted in the lower Midwest for the purpose of increasing plant diversity in the home and commercial landscape and to raise the public’s awareness of beautiful and environmentally friendly plants for the home landscape” (Missouri Botanical Gardens, 2007).

Years active: 1998 to present.

Sponsors: Missouri Botanical Garden’s William T. Kemper Center for Home Gardening, Powell Gardens in Kansas City, University of Missouri Extension, Mizzou Botanic Garden, Missouri Landscape & Nursery Association, Illinois Green Industry Association, industry, and non-profit organizations.

Types of plants selected: Annuals, perennial, trees, shrubs, and vines.

Selection process: Horticulture industry members help in selection of new Plants of Merit™ by reviewing plant performance. Selected plants are selected based on diversity, low pesticide requirements, reliability, low maintenance, low energy use, and low water use.

Committee structure: Not specified.

Plant trials: Not specified.

Other information: New plants are added each year and remain on the list for a number of years and then are retired to emeritus status. Retired plants can be accessed from the website.

Website: <http://www.mobot.org/gardeninghelp/plantfinder/Merit.asp>.

(Missouri Botanical Gardens, 2007).

8. **Name:** Arkansas Select

Purpose: “To identify interesting and superior plants for Arkansas gardeners” (Univ. of Arkansas, 2006).

Years active: 1998 to 2005. The program was discontinued after the program director retired and his position was not filled (D. Hensley, personal communication).

Sponsors: Arkansas Cooperative Extension Service and Arkansas Green Industry Association.

Types of plants selected: Ornamental landscape plants.

Selection process: Industry leaders made plant nominations and selections.

Selected plants performed throughout the state and were generally pest free and easy to maintain.

Committee structure: Not specified.

Plant trials: Not specified.

Other information: No other information was listed.

Website: <http://www.arhomeandgarden.org/landscaping/ArkansasSelect/>.

(Univ. of Arkansas, 2006).

9. **Name:** Oklahoma Proven

Purpose: “To enhance the profitability of Oklahoma Green Industries by evaluating and promoting plant material suited to Oklahoma growing conditions” (Anella et al., 2001).

Years active: 1999 to present.

Sponsors: Oklahoma State University (OSU) Department of Horticulture and Landscape Architecture, OSU Botanical Garden, Oklahoma Botanical Garden and Arboretum, and Oklahoma Garden Industry Cooperators. Oklahoma Nursery and Landscape Association, Oklahoma Greenhouse Growers Association, OGE Energy Corporation, Oklahoma Cooperative Extension Service, Oklahoma Agricultural Experiment Station, and Oklahoma Department of Agriculture.

Types of plants selected: Trees, shrubs, perennials, and annuals.

Selection process: Criteria for selection are plants suitable for Oklahoma, available in the trade, low maintenance, tolerant of many conditions, noninvasive, and efficient propagation. Recommendations are made from the advisory committee to the executive committee. The executive committee makes the final decision about which plants are selected based on plant evaluations after they become available.

Committee structure: The Oklahoma Proven management team consists of director, plant evaluation coordinator, and marketing coordinator. The advisory committee consists of 40 extension personnel, retailers, nurserymen, growers, and members of horticultural societies. The executive committee consists of members of the Oklahoma wholesale and retail industries, and former members of the OSU Department of Horticulture and Landscape Architecture.

Plant trials: Yes, herbaceous plant materials are evaluated for at least three years, and woody plant materials are tested for at least five years.

Other information: Marketing and promotion of selected plants involves point of purchase materials, press releases, cooperative extension, newsletters, newspapers, and television. Retailers and wholesalers are asked to participate in marketing plants by displaying posters and purchasing pot stakes. Purchase of pot tags provides some funding for the program.

Website: <http://www.oklahomaproven.org/>.

(Anella et al., 2001; Oklahoma Proven, 2007).

10. **Name:** Texas Superstar™

Purpose: “To ensure that consumers have access to and use the best, most environmental responsible plant materials and products and to help the Green Industry be as profitable as possible” (Mackay et al., 2001).

Years active: 1989 to present.

Sponsors: Coordinated Educational and Marketing Program (CEMAP), Texas Nursery and Landscape Association, and Texas Department of Agriculture.

Types of plants selected: Annuals, perennials, and shrubs.

Selection process: Plants are tested statewide at least two years before selection. Professional horticulturalists evaluate potential plants on production and field performance. Plants with consistently superior performance are marketed as Texas Superstar™ plants. Many plants go through preliminary trials such as university garden trials before CEMAP trials to determine if the plant performed well enough to enter statewide testing. Growers are notified of selections at least one year in advance. Selected plants are marketed to consumers through newspapers, magazines, radio, and television.

Committee structure: The executive board consists of eight university staff including administration, extension, research, and teaching. The advisory board consists of 50 members of the Texas ornamental industry.

Plant trials: Yes, for at least two years.

Other information: All Texas Superstar™ plants are labeled with the Texas Superstar™ logo. The logo lets consumers know plants have been tested and have a proven performance.

Website: <http://www.texassuperstar.com/>.

(Arnold et al., 1998; Mackay et al., 2001; Stegelin et al., 2001; Texas Superstars, 2006).

11. **Name:** Plant Select® in Colorado

Purpose: “To seek out, identify, and distribute the very best plants for landscapes and gardens from the intermountain region to the high plains” (Plant Select, 2007).

Years active: 1997 to present.

Sponsors: Denver Botanic Gardens, Colorado State University, and horticulturalists throughout the Rocky Mountain region.

Types of plants selected: Landscape plants.

Selection process: Plants must be able to survive climatic and landscape conditions of the Rocky Mountain region; they can be old, underused plants or new introductions. Testing does occur on superior forms or hybrids.

Committee structure: Not specified.

Plant trials: Yes.

Other information: Ninety demonstration gardens in the region are open to the public which allows consumers to view Plant Select® plants in use. The website also listed where consumers can purchase Plant Select® plants in the region.

Website: <http://www.plantselect.org/>.

(Plant Select, 2007).

12. **Name:** Utah's Choice

Purpose: "To focus the regional nursery industry on producing steady supplies of (native) selections so a distinctive Intermountain landscape style can begin to emerge" (Meyer, 2005).

Years active: 2003 to present.

Sponsors: Intermountain Native Plant Growers Association (INPGA), a group of nurseries, wholesalers, retail nurseries, garden centers, and landscape companies.

Types of plants selected: Perennials, grasses, shrubs, trees, and succulents.

Selection process: All selected plants are native and require fewer resources when compared to traditional plants. Recommendations come from members of INPGA.

Committee structure: Not specified.

Plant trials: Not specified.

Other information: To market selected native plants, brochures, plant tags, and plant signs are available to growers and retailers. The program has a website and uses local newspapers to increase consumer awareness. The program is not only providing information to consumers, but also to growers about propagating native plants since many of these plants require different propagation methods than traditional landscape plants. Various organizations and associations have provided funding to assist and support the program.

Website: <http://www.utahschoice.org/choice>.

(Intermountain Native Plant Growers Assn., 2008; Meyer, 2005).

13. **Name:** Great Plant Picks, Washington

Purpose: “To build a comprehensive palette of outstanding plants for Pacific Northwest gardens” (Great Plant Picks, 2007).

Years active: 2001 to present.

Sponsors: Elisabeth Carey Miller Botanical Garden.

Type of plants selected: Perennials, bulbs, shrubs, vines, trees, and conifers.

Selection process: The selection process is done by the Great Plant Picks Selection Committee through group discussions. The group visits regional gardens for field evaluations of potential plants. Plants need to be hardy, disease

and pest resistant, adaptable, non-invasive, have prolonged season interest, be available from at least two retailers, and easy to maintain and grow.

Committee structure: Great Plant Picks Selection Committee consists of approximately 40 horticulturists from Washington, Oregon, and British Columbia. Three advisory committees exist to offer opinions in the areas of their expertise.

Plant trials: Yes.

Other information: The program is based at the Elisabeth Carey Miller Botanical Garden in Seattle, WA.

Website: <http://www.greatplantpicks.org/>.

(Great Plant Picks, 2007).

14. **Name:** Pennsylvania Gardener Select

Purpose: “To expand Pennsylvania plant markets through education, evaluation, and display gardens” (Sellmer et al., 2003).

Years active: 1999 to 2006, program was discontinued due to a loss of trial space (J.C. Sellmer, personal communication).

Sponsors: Pennsylvania Floral Industries Association, Pennsylvania Landscape and Nursery Association, Penn State Horticulture Trials Gardens, Penn State Master Gardener Program, and Penn State Cooperative Extension.

Type of plants selected: Annuals and perennials.

Selection process: Plants were selected from the Penn State Trial Garden and trained Master Gardeners conducted the plant evaluations. Plants were evaluated on flowering, uniformity, foliage, growth, vigor, pest and disease resistance, and

consumer appeal. Display garden coordinators and industry representatives chose the selected plants.

Committee structure: Not specified.

Plant trials: Yes.

Other information: Selected plants were marketed through association newsletters, newspapers, magazines, and displays at gardening events.

Website: N/A.

(Pennsylvania State Univ., 2007; Sellmer et al., 2003).

15. **Name:** Mississippi Medallion Program

Purpose: “To identify plants that perform exceptionally well throughout Mississippi for inclusions in the Medallion program and to promote the proper use of these plants in landscapes within Mississippi” (Mississippi Nursery & Landscape Assn., 2007).

Years active: 1996 to present.

Sponsors: Mississippi Nursery and Landscape Association (MNLA), Mississippi State University Extension Service, Mississippi Agricultural and Forestry Experiment Station, and the Mississippi Plant Selection Committee.

Types of plants selected: Landscape plants.

Selection process: The committee makes selections based on group discussions (P. Knight, personal communication).

Committee structure: Mississippi Plant Selection Committee.

Plant trials: Not specified.

Other information: The program uses newspaper articles, marketing campaigns by garden centers, public radio, television and point-of-sale material to advertise and promote selected plants.

Website: <http://www.msnla.org/>.

(Mississippi Nursery & Landscape Assn., 2007; Stegelin et al., 2001.).

16. **Name:** Ohio Plant Selection Program

Purpose: Not specified.

Years active: Not specified.

Sponsors: Ohio Nursery and Landscape Association.

Type of plants selected: Ornamental landscape plants.

Selection process: ONLA Plant Selection Committee selected the plants.

Committee structure: ONLA Plant Selection Committee.

Plant trials: Not specified.

Other information: No other information was listed.

Website: www.onla.org/selection.html.

(Ohio Nursery & Landscape Assn., 2007).

17. **Name:** Pride of Kansas Plants

Purpose: “To make plant selection easier” (Kansas Nursery & Landscape Assn., 2007).

Years active: 2001 to present.

Sponsors: Kansas Nursery and Landscape Association (KNLA) and Kansas State University Research and Extension.

Type of plants selected: Trees, shrubs, and perennials.

Selection process: KNLA members nominate plants in each category. A selection committee selects winning plants from nominations. All selections are trialed by Research and Extension personnel to test each plant's performance in the Kansas climate.

Committee structure: Selection committee.

Plant trials: Yes.

Other information: No other information was listed.

Website: <http://www.kansasnla.org/prod02.htm>.

(Kansas Nursery & Landscape Assn., 2007).

18. **Name:** Prairie Star Collection, also includes the Prairie Bloom Perennials

Purpose: To find “annual flowers of great vigor and spectacular bloom throughout the entire summer growing season” (Prairie Star Flowers, 2007).

Years active: Not specified.

Sponsors: Kansas State University.

Types of plants selected: Prairie Star selects annuals, and Prairie Bloom Collection selects perennials.

Selection process: Prairie Star plants are annual cultivars selected from the Kansas State University bedding plant research trials where plants have been trialed for two years or more. Plants are rated on vigor, floral display, and growth. Prairie Bloom is a collection of perennial cultivars that have been trialed in the Kansas State University bedding plants research trials for three to five years. Perennials are rated on vigor, floral display, and growth.

Committee structure: Not specified.

Plant trials: Yes, for two to five years.

Other information: No other information was listed.

Website: <http://www.prairiestarflowers.com/>.

(Prairie Star Flowers, 2007).

19. **Name:** Chicagoland Grows[®]

Purpose: “To promote the use of new plant cultivars that are well-adapted to the growing conditions of the Upper Midwest” (Chicagoland Grows, 2007).

Years active: 1986 to present.

Sponsors: Chicago Botanic Garden, the Morton Arboretum and Ornamental Grower’s Association of Northern Illinois (OGA).

Types of plants selected: Ornamental landscape plants.

Selection process: Industry professionals develop, select, evaluate, and market recommended plant cultivars. Potential plants are evaluated in different landscape and nursery conditions for up to 10 years. Plants must be adapted to upper Midwest region with proven performances for both landscape professionals and home gardeners.

Committee structure: Not specified.

Plant trials: Yes.

Other information: The program’s breeding and research effort is funded by royalties from sales of selected plants.

Website: <http://www.chicagolandgrows.org/index.php>.

(Chicagoland Grows, 2007).

20. **Name:** Louisiana Select*

Purpose: “To promote quality ornamental plants to consumers in the spring and fall” (Owings, 2000).

Years active: 1996-2000, Program was successful but was discontinued due to the lack of mass media organization to promote the program (A. Owing, personal communication).

Sponsors: LSU Agricultural Center and Louisiana Nursery and Landscape Association (LNLA)

Types of plants selected: Ornamental plants.

Selection process: A committee of extension personnel, landscapers, retailers, and wholesale growers selected plants.

Committee structure: Unknown.

Plant trials: Not specified.

Other information: Signs and banners were provided to retailers to promote Louisiana Select plants.

Website: N/A.

(Owings, 2000; A. Owings, personal communication).

*Program was found after survey was distributed and was not included in the survey sample.

Program Impacts on the Green Industry

Plant promotion programs have helped the Green Industry in many ways including increasing awareness of selected plants to consumers. Increased awareness of superior or noteworthy plants can lead to increased sales of plants and help make promotion programs successful (Stegelin et al., 2001). Some programs have had very successful promotional campaigns for selected plants and reported increases in sales. One plant that

had a successful campaign with the Mississippi Medallion program was panola (*Viola x wittrockiana x V. cornuta*). No panola were sold in Mississippi before being selected as a 2000 Mississippi Medallion winner (Winter et al., 2001). However, after being named as an award winner, consumer interest increased and most growers sold out of the panola. The amount sold was not reported. Another successful plant was Biloxi Blue verbena (*Verbena x hybrida* 'Biloxi Blue'). One grower reported selling 16,000 pots the year of promotion and 10,000 pots the following year without promotion, showing previously promoted plants can still be popular and remain in demand (Winter et al., 2001).

Mackay and others (2001) reported the success of several selected plants in the Texas Superstar™ program. Mari-mums (*Tagetes erecta* 'Antigua') is one of the successful plants. There was an increase from 1,000 to 90,374 plants sold after being promoted as a Texas Superstar™ and 96,460 plants being sold the year after, resulting in \$238,435 in sales at four selected nurseries. At a multilocation retail store, a 5000% increase in the number of plants sold, and a 6000% increase in gross sales occurred for VIP petunia (*Petunia violacea* 'VIP') compared to the previous year. The successes of programs are not limited to ornamental plants. Over 600,000 Merced tomatoes (*Lycopersicon esculentum* 'Merced') were sold in the first weekend the variety was released as a Texas Superstar™. In the first 10 years, estimates of \$10 million in new plant sales were generated as a result of Texas Superstar™ promotions (Mackay et al., 2001).

The Oklahoma Proven program has seen increased sales also. One Oklahoma nursery reported a 117% increase in number of plants sold and an 81% increase in revenue when comparing before and after sales of Oklahoma Proven plants (Anella et al., 2001). The program experienced greater sales and success with herbaceous plant material than

woody plant material. Compared to the previous year, sales of purple fountain grass (*Pennisetum setaceum* ‘Rubrum’) and ‘Powis Castle’ artemisia (*Artemisia arborescens* x *A. absinthium*) increased 116% and 228%, respectively. Sales of oak-leaf hydrangea (*Hydrangea quercifolia*) increased 53% and the sales of Chinese pistache (*Pistacia chinensis*) increased 26% compared to the previous year when no promotion occurred. Also, while in existence Louisiana Select reported increased sales ranging from 300% to 2500% for selected plants (Owings, 2000).

Evaluation and Trial Programs

Most states have university trial gardens or plant evaluation programs and many plant selection/introduction programs have incorporated or included trial gardens and evaluation programs into their promotional programs (Anella et al., 2001; Mackay et al., 2001). Trial gardens and plant evaluation programs are similar to plant selection programs in that they trial plants to determine the best performing plants; however, usually they do not have marketing campaigns to promote plants. The University of Arkansas Plant Evaluation Program evaluated plant material at different locations throughout Arkansas (Lindstrom et al., 2001). There were plans to integrate the evaluation program with Arkansas Select, the state plant selection program before it was discontinued. Trials were located in each of the three different cold hardiness zones in the state. Trees and shrubs were tested for five years on adaptability, cold hardiness, and usability in the landscape while herbaceous perennials were tested for three years. The plants were given a starter charge of fertilizer, mulched, and watered at planting. Drip irrigation was supplied as needed thereafter. Growth, flowering habits, and any problems

were recorded. Performance reports were published at the end of the year. The biggest challenge to the program was funding.

The University of Georgia trial gardens have been used to evaluate annuals and perennials marketed nationwide (Armitage and Green, 2001). In 1998, a plant introduction program, AthensSelect™ was started to nationally market selected plants from the trial gardens; this program was not included in the survey due to the fact it was an independent program and not sponsored by a state green association. Only plants that perform in heat and humidity are selected as AthensSelect™. The East Texas bedding plant pack and garden performance trials also have potential to find award-winning plants and is the preliminary trials for many plants that are entered into the Texas Superstar™ testing program (Mackay et al., 2001; Pemberton and Roberson, 2001).

Plant selection and evaluation programs are not limited to herbaceous plant material; Auburn University has a history of evaluation programs for shade trees (Blackwood et al., 2005; Williams et al., 2001). The first tree evaluation program began in 1980 with the purpose to gather and distribute information on selected shade trees and ornamental trees for the Southeast. Tree species were evaluated on annual growth rate, natural attrition, and aesthetics. The evaluation determined many of the tree species were not adapted to the southeast region while some were well adapted to high temperatures and humidity, which are present in the south. Information gained through this evaluation has been shared with industry, extension agents, master gardeners, and other agencies and organizations by publishing the reports of the study in a book (Williams et al., 1993).

Plant evaluations, selections, and introductions have been common in the horticulture industry for many years and have occurred on many levels including regional and

national levels. The National Arboretum has introduced over 650 new plant cultivars as part of its breeding program (Pooler, 2001). Initial selection and evaluation of new plants takes place at the National Arboretum. However, plants must be evaluated in a wide range of environments including different climates and different production practices. Cooperators sign agreements to evaluate test plant materials. In the past, the National Arboretum has not promoted its cultivars, but recently it has begun releasing fact sheets containing information about each plant's landscape uses and requirements, and propagation information. These fact sheets are helpful to many in the Green Industry.

Impact of Programs on Customers and Potential Customers

In order to determine potential customers for Pennsylvania Gardener Select, a survey was distributed at a flower show (Wehry et al., 2004). Respondents were divided into three distinct consumer segments: novice gardener, non-gardener, and avid gardener. The survey determined avid gardeners were likely to purchase plants from an evaluation program and were more likely to purchase plants from a local retailer. The survey concluded the avid gardener group could be the potential market for Pennsylvania Gardener Select plants and other plant selection programs.

Another survey was conducted in Pennsylvania to determine consumer preferences for the Pennsylvania Gardener Select (PGS) Program (Wehry et al., 2005). Eighty-five percent of respondents said they were interested in purchasing plant material that had been tested throughout the state. Respondents familiar with the program were likely to be members of a Master Gardener Program and/or other gardening groups. Respondents who had purchased PGS plants, all said they would purchase recommended plants again.

The majority of respondents who had purchased PGS selections became aware of the program through newspapers, gardening magazines, or Master Gardeners.

Aspects like testing and proving a plant's performance can help increase a plant's appeal to consumer, however, there are things that can hurt sales. A survey of Georgia licensed retail nurseries determined potential negative factors on plant sales and if new promotional campaigns had an impact on sales (Garber and Bondari, 1998). Individual customers make up nearly 80% of customers visiting garden centers and landscapers make 15.4% of customers. Almost two-thirds of plant material sold in garden centers came from in-state growers. Respondents were asked to list factors that have negative impacts on sales. Competition from mass merchants topped the list with bad weather and the economy tying for second place. They were also asked to list customer complaints. Price too high was the top complaint, poor plant performance was the second, and poor quality was the third greatest complaint. The survey also inquired about garden center's participation with the Georgia Gold Medal Program and its effect on the sale of other plants. About 10% reported that they did not sell Gold Medal plants, 43.6% reported the program had little to no effect on sales of other plants, and 46.1% reported Gold Medal Plants produced pull-through sales of other plant materials. Even though respondents are about split on whether the program helps sales, such a high number reporting the program does help increase sales, indicates promotional programs have potential to increase sales of selected plants and other plant sales as well. Since most mass merchants do not sell plants from state plant selection programs, plant promotion programs have potential to help retailers compete with mass merchants.

Many plant promotion programs use magazine and newspaper articles as a way to market and advertise selected plants to consumers (Garber and Bondari, 1999). Programs should continue to use these resources because garden writers can have an impact on consumers' plant purchases. However, writers have to be supplied with information. Of a survey of garden writers, 77% said the most used source of information was personal growing experience when determining which plants to write about. Respondents rated availability of information and success stories from local arboretum/botanical gardens as the second and third most important factors, respectively. When asked to predict which plant traits would be in future demand, they said multi-seasonal color/interest, pest resistant or tolerant and able to withstand periods of drought as the top three plant traits. Programs should stay in contact with garden writers by supplying garden writers with actual plant selections and supplying them with stories of the program's selections since they are a way to reach consumers and promote selected plants.

Published success stories suggest plant selection/introduction programs are significant and can have great benefit to local green industries (Anella et al., 2001; Mackay et al., 2001; Stegelin et al., 2001). Plant promotion programs all have the same basic objective: to select plants that will perform in a specific state or region as a way to help educate consumers about proper plant choices and to increase sales for growers and retailers. Little to no research evaluating plant promotion programs has been completed to determine best management practices. The question has been asked if the Alabama Green Industry would benefit from a plant selection/introduction program. Ornamental horticulture is already an important component of Alabama's economy as it the fastest growing agricultural industry in the state. When compared to other states, the Alabama

Nursery and Greenhouse industry ranked 17th in the nation in 2007 (U.S. Department of Agriculture, 2007). In 2007, there was a total of \$2.1 billion in sales for the nursery, greenhouse, floriculture, and sod industries. As of 2003, there were a total of 767 nursery and greenhouse firms and 727 retail firms in Alabama with total sales for nursery and greenhouse in Alabama of \$204.9 million. Sales for retail garden centers in 2003 were \$645 million (Bellenger, 2005).

The objectives of the research presented in this thesis were to evaluate how plant selection/promotion programs are structured, how they operate, their plant selection process, and their success or demise by surveying existing programs. Another objective was to determine the potential for a plant selection/introduction program for the state of Alabama by surveying Alabama growers and retailers for thoughts and opinions on a potential program and what level of involvement they would like to have in a potential plant selection program for Alabama. For a potential program in Alabama to be successful, the support of all of the Green Industry is important.

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CHAPTER II
SURVEY OF EXISTING STATE PLANT SELECTION/INTRODUCTION
PROGRAMS

Abstract

Many plant selection/introduction programs have been established in the United States to select and market plants to the general public. Plant promotion programs have many differences in the way they are structured. The Alabama Nursery and Landscape Association has expressed interest in creating a plant selection/introduction program due to potential positive results including increasing sales for Alabama growers and retailer garden centers, and helping consumers choose suitable plants for Alabama. Previous research has shown that several programs have been successful for growers and retailers. Texas Superstar™ reported a 5000% increase in sales and a 6000% increase in gross sales of VIP petunia (*Petunia violacea*) in 1999 following promotion efforts. The Oklahoma Proven program reported a 117% increase in sales of their promoted plants. However, no research has been conducted on the structure and operation of various plant selection/introduction programs. To understand how plant promotion programs operate, an online survey was developed and sent to seventeen operational programs across the U.S. Some of the survey questions included how the program operates, number of people involved, and how plants are selected and marketed to the public. Thirteen of seventeen programs responded to the survey resulting in a 76% response rate. Most respondents

reported that a collaboration of organizations started their program with the majority saying a university was involved in the creation of the program and over half reported that their program was at least six years old. When comparing their plant selection processes, 61% reported conducting plant trials as part of their plant selection process while 39% reported they did not conduct plant trials. Over 69% reported funding as an issue when developing plant promotion programs. Most plant promotion programs spend over 60% of their money on personnel. To help with sustainability, 39% of respondents reported generating a revenue stream for the program, 53% reported not generating revenue, and 8% were not sure. However, 69% of respondents reported the program has had a positive economic impact on the industry while only 31% were unsure. The results of this survey will be used to evaluate the potential of plant selection/introduction programs for Alabama and other states.

Index words: marketing, plant promotion, program structure

Introduction

Plant selection programs across the nation have had varying degrees of success. Programs in Oklahoma and Texas have reported significant increases in plant sales while some programs are no longer in existence for various reasons such as losing trial space and the program director retiring (Anella et al., 2001; Mackay et al., 2001, J.C. Smeller, personal communication; D. Hensley, personal communication). Oklahoma Proven reported increased sales ranging from 26% to 228% for 1999's selected plants compared to sales from the pervious year (Anella et al., 2001). Two committees exist within the Oklahoma Program: the advisory committee and the executive committee. The advisory

committee contains a broad range of professionals to recommend plants. The executive committee contains the management team, representatives from industry, and members from the Department of Horticulture and Landscape Architecture at Oklahoma State University. The management team includes the director, plant evaluation coordinator, and marketing coordinator. The executive committee makes the final decision about plant selections.

At the beginning of the Oklahoma Proven program, no evaluation reports from trials were available so selections were made based on recommendations from the advisory committee. Members of the Oklahoma Nursery and Landscape Association (ONLA) and Oklahoma Greenhouse Growers Association (OGGA) voted on the recommendations. Now evaluation reports are available, and selections are made from plant evaluations. The Oklahoma Proven program is funded by cash donations, grants, sale of pot stakes and hang tags, and the support of Oklahoma Cooperative Extension Service, ONLA, and OGGA. Oklahoma Proven markets plant selections directly to consumers through point-of-purchase materials and traditional media outlets with features on television, newspapers, and in one national publication. One recurring obstacle the Oklahoma Proven program faces is the decision to introduce new and underused plants of limited availability or established plants with supply in large numbers (Anella et al., 2001; Oklahoma Proven, 2007).

The Coordinated Educational and Marketing Assistance Program (CEMAP) selects Texas SuperStar™ plants. CEMAP consists of two boards: an executive board and an industry advisory board. The executive board contains eight university personnel from

extension, research and teaching, and two administrative personnel. The industry advisory board contains approximately 50 members from the Texas ornamentals industry. The first step in the process is for university personnel and industry leaders to identify potential plants and evaluate these plants with plant trials throughout the state. Growers are notified three to four years before promotion so they can produce adequate supply. Retailers are informed about selected plants and which growers have the selected plants in the fall before the next year's promotion. CEMAP uses newspapers, magazines, radio, and television to promote selected plants. CEMAP also uses a trademarked logo to provide some financial support back to the program (Mackay et al., 2001; Texas Superstar, 2007).

Variation occurs throughout the programs even in their names; some are labeled as a promotion, selection, introduction, evaluation, and/or marketing programs. For states, like Alabama, considering developing a program, it can be difficult to know how to establish a program and the best management practices. Since little to no research has been completed on various plant promotion programs, a survey was developed to determine the following:

- how the programs were created
- how many people are directly involved
- the committee structure each program uses
- each program's nomination process
- the criteria for selection of plants
- the number of plants chosen each year

- the economic response to the programs
- growers and retailers participation
- the marketing strategies used by programs
- the overall operation of the program.

Results of this survey will be used in the potential development of future plant selection/introduction programs.

Materials and Method:

Through the National Arboretum website (National Arboretum, 2007), fourteen state and regional plant selection and recommendation programs were identified. The fourteen programs were New England's The Cary Award, Pennsylvania's Gold Medal Plants Program, Georgia Gold Medal Plants, Florida's Plants of the Year, Kentucky's Theodore Klein Pant Award, Nebraska's GreatPlants[®] -Plants of the Year, Arkansas Select, Mississippi Medallion, Oklahoma Proven Selection, Texas Superstar[™] Plants, Colorado's Plant Select[®], Utah's Choice, and Washington's Great Plant Picks. Additional plant recognition programs were found through scientific journal articles, internet searches, and links from other plant promotion programs. The other programs were Pride of Kansas, Kansas's PrairieStar Flowers, Chicagoland Grows[®], and Ohio Plant Selection. The majority of the plant recognition programs have websites which list information about the program and contact information. Some websites contain old information, but all were included in the survey sample to determine which programs were still active, but had not updated their website.

The programs' websites, scientific articles, and online articles had varying degrees of information listed. The information or lack of information about each program helped produce many of the survey questions. Most websites listed a program director however, for the few that did not list a director, an email was sent on May 31, 2007 (Appendix A) to a person listed on the website as having an affiliation with the program. On June 4, 2007, an informational pre-contact email (Appendix A) was sent to all known program directors explaining the purpose of the upcoming survey and how results would be used. On June 21, 2007, an email containing a link to an online survey through www.surveymonkey.com was sent to all known existing programs (Appendix A).

Upon opening the survey link, respondents were taken to the introduction page of the online survey (Appendix B). The introduction page explained the survey and invited participation. If the person consented, they clicked a button and were taken to the first page of the survey (Appendix B). Respondents were asked a variety of questions about program structure, nomination and selection process, funding, marketing, and program advertising (Appendix C). The original deadline for response was set for July 15, 2007. An email expressing appreciation for participation was sent to respondents.

Due to initial low response, the survey deadline was extended to July 27, 2007. Weekly reminders were sent to each program that had not responded (Appendix A). While the sample in this survey appears to be small, seventeen programs being surveyed, this does include all the existing programs in the U.S. To help increase response rate several of Dillman's principles were followed including: pre-contact email,

personalization of each email sent to survey sample, survey was kept as short as possible, and the survey was online making it easier to respond (Dillman, 2007).

After the survey closed, the survey data were entered into an Excel spreadsheet (Microsoft, 2007) and uploaded into SPSS 16.1 (SPSS, 2007). In SPSS, each variable was labeled and given a value so frequencies and correlations could be calculated.

Results and Discussion

During the survey process, personnel familiar with two programs responded saying they were no longer functioning. Arkansas Select ended because the program director retired and no one else was able to take the responsibility (D. Hensley, personal communication). Pennsylvania Gardener Select ended because central trial space on campus was lost due to a new direction in research and extension (J. Sellmer, personal communication). After the survey was closed, a total of 13 programs had responded to the survey resulting in a 76% response rate.

When respondents were asked about origin of the plant selection program 53.8% said university, 46.2% said state association, 38.5% said industry, and 38.5% said other which include botanical garden, non-profit association, and state arboreta. Official setup time for the programs varied: 38.5% said 1-6 months, 7.7% said 7-12 months, 30.8% said 13-18 months, and 23.1% said more than 18 months. Many issues arose during the setup phase for the programs including funding for 69.2%, industry support for 53.8%, program support for 46.2%, and personnel for 30.8%. Seven percent said other issues arose involving different trial locations, doing research on recommended plants, and logistical issues. When developing the program, 61.5% were modeled after another program

already in existence including Texas Superstar™, Georgia Gold Medal, Pennsylvania's Gold Medal Program, and Nebraska's GreatPlants®.

Each plant recognition program surveyed spends their money in different ways. When asked to choose the three most expensive aspects of the program, 61.5% said personnel, 46.2% said advertising, 38.5% said other, 30.8% said promotion tags, 30.8% said travel, 23.1% said maintenance of plots, and 0% said diagnostics/analyses. Most plant promotion programs were not financially self-sustaining, 53.8% did not generate a revenue stream, 38.5% generated a revenue stream, and 7.7% were not sure. Of the programs that did generate a revenue stream only two were enough to sustain the program. Fifteen percent of plant promotion programs found granting agencies, including industry, state department of agriculture, extension, and various grants, to be supportive.

The majority of plant recognition programs were six years old or older, with none of the programs less than three years old. One program was 3-5 years old, 61.5% of the programs were 6-10 years old, 15.4% were 11-15 years old and 15.4% were over 15 years old. Each plant promotion program varied in size. Over 92% of the programs have 20 or fewer people directly involved with the program while only one program has over 25 people directly involved with the program.

The selection and nomination processes used by the programs vary greatly. Nearly 70% use committees to nominate plants. The programs select all of the nomination committee members. The nomination committees have a variety of members and most included nursery/greenhouse growers, landscapers, university faculty, extension

personnel, and botanical garden staff (Table 1). Nomination committees meet at different times and in different ways: 11.1% meet 0 times a year, 66.7% meet in person 1-2 times a year, 11.1% meet 3-4 times, and 11.1% meet 5-6 times. Of the programs that have a nomination committee, 28.6 % meet through email 1-2 times a year and 71.4% meet through email 3-4 times a year. For programs that do not use committees to nominate plants, most allow anyone, university faculty, nursery/greenhouse growers, extension personnel, and botanical garden staff to nominate plants for consideration (Table 1).

To select winning plants, 69.2% use selection committees which are selected by the program. Most selection committees include university faculty, nursery/greenhouse growers, extension personnel, landscapers, and botanical garden staff (Table 1). When asked how the selection committees meet, in person and/or by email, 77.8% meet 1-2 times a year in person, 11.1% meet 3-4 times a year, and 11.1% meet 5-6 times a year; 28.6% meet 1-2 times a year through email, 42.9% meet 3-4 times a year, and 28.6% meet over 6 times a year. One program meets 1-2 times a year through conference calls. Programs that do not use a selection committee for plant selection, use other methods to select winning plants including association members voting by ballot, research trial results, and a four-person board. Individuals or committees choose the winning plants through group discussions (50%), a judging form (25%), and other ways (25%) including trial results.

When asked about the criteria for selecting winning plants, 84.6% cited ease of maintenance, 76.9% said pest and disease resistance, 76.9% said consumer appeal, 61.5% said ease of propagation, and 61.5% said other including unique to industry, hardiness,

multiple seasons of interest, plant vigor, ‘floriferousness’, availability in the trade, non-invasive, underused, and heat and drought tolerance. When asked about the type and number of plants evaluated, programs reported the most popular plants were perennials, trees, and shrubs (Table 2). Shrubs were always selected by 53.8% of the programs, perennials were always selected by 46.2% of the programs, and trees were always selected by 46.2%. Programs do not always select the same number of plants every year; 61.5% only choose one or two plants for each category with an entry and 38.5% select the number of plants based on the number of entries or nominations that for year. As part of the selection process, some programs include plant trials to help select proven plants. Nearly 62% include plant trials while the remaining 38% do not. The number of years trialed depends on the plant (Table 3). Herbaceous plant materials like annuals and perennials are usually trialed two to five years while woody plant material is usually trialed over 10 years.

Programs face different challenges depending on support they receive. When asked to select all areas that were most challenging, 46.2% selected grower support/acceptance, 38.5% selected retailer support/acceptance, 38.5% selected consumer awareness, 30.8% selected plant selections, 15.4% selected plant nominations, 15.4% selected committee member selection, and 23.1% selected other. These other responses included having enough good plant material in supply to satisfy the demand generated, purity of plant material, and selection and promotion completed in a timely way. Getting enough support, whether funding or industry acceptance, is a problem for programs from the start.

The majority of programs have experienced a positive economic response; 69.2% said they had seen increased sales of selected plant material while the remaining 30.8% were not sure. Increases in sales have been reported by growers and retailers with nearly 54% of respondents saying growers had reported increases. The programs were not sure of the exact increase but for the programs that did know increases ranged from 10%-50%. Sixty-one percent said retailer had reported increases, which ranged from 10%-80%.

As for program marketing, 92.3% said they had directly contacted retailers and growers to make them aware of the plant selection program. The number of retail garden centers marketing the program varied: 46.2% had 0-20 garden centers involved, 7.7% had 21-40 garden centers, 23.1% had 41-60 garden centers, 0% had 61-80 or 81-100 garden centers, and 23.1% had over 100 garden centers. Numbers are more evenly distributed for growers involved with the programs: 38.5% had 0-20, 23.1% had 21-40, 7.7% had 41-60, 7.7% had 61-80, 0% had 81-100, and 23.1% had over 100 growers. Over 92% of plant selection programs offer promotional items to retailers. Promotional items include signs (91.7%), brochures/flyers (77.8%), pot tag/labels (70.0%), advertisement material (62.5%), bookmarks (12.5%), and other (20%) including websites. Some programs charge for items while some offer them at no cost. The most popular and used promotional item is signs at 50.0% and brochures/flyers at 33.3%. Only 8.3% said pot tags or general advertisement materials.

Over 92% of the programs market directly to consumers. The programs market using websites (91.7%), newspaper articles (75.0%), magazine articles (66.7%), television spots (33.3%), direct mail (16.7%), and other (58.3%) which includes farmer's markets,

garden fairs, retail garden shows, garden clubs, radio, consumer presentations, community programs, county extension, master gardeners, and gardening events.

At the end of the survey, respondents were given the opportunity make any additional comments. Comments fell into the general categories of struggle for recognition, getting industry to participate and be involved, raising consumer awareness, cost of operation, plant selection process, and praise for the program.

Correlations

Correlations were run in SPSS 16.0 (SPSS, 2007) and significant relationships were found. Landscapers on the nominating committee and positive economic response had a very strong correlation (Table 4). Landscapers are a large group that account for putting many value added plants in the landscape and if they are involved in a plant selection program, they would know about the selected plants. There may be a link between landscaper being involved with the program and landscapers using selected plants in their business, which would help increase the economic response. Other positive correlations including: home gardeners and master gardeners on committees and revenue generation for the programs (Table 5). Like landscapers, both home gardeners and master gardeners use plants and they may be more likely to use selected plants if involved with the program. Also landscapers, home gardeners, and master gardeners could share positive experiences with others. Programs selecting trees and perennials and program generating revenue have a positive relationship indicating perennials and trees will produce sales (Table 6). Positive correlations with weaker r-values include university faculty, extension personnel, botanical garden staff, and growers nominating plants when

program do not have nomination committees and program having a positive economic response (Table 6).

Not all correlations were positive, some surprising strong negative correlations were found including university faculty on the nomination committee and the number of growers marketing the program and anyone nominating plants and the program generating revenue (Table 4). Other surprising negative correlations include involving university faculty and extension personnel on the nominating committee and the number of growers marketing the program (Tables 4 & 5). However, the relationship was positive when university faculty and extension personnel nominated plants without being on a committee. The negative relationships between university faculty, extension personnel, and growers are unexpected; however, a lack of communication between university faculty and growers could explain this relationship. Programs with university faculty involved need to find ways to strengthen the relationship by incorporating growers in the program.

Also surprising was the negative relationship between university faculty, growers, botanical garden staff, and extension nominating plants when programs do not have a nomination committee and revenue generation for the program (Table 7). Revenue generation does not measure success of the program but it does provide financial support to programs. The negative correlation between programs conducting plant trials and programs having a positive economic response was also unexpected. Promoting plants that have been tested and proven would appear to be a great selling point and lead to more sales. However, the negative correlation between the two variables indicates

otherwise. This could be viewed as good because programs and future programs are not required to include plant trials to be successful.

Many of the negative correlations seem unexpected; however, with such a small number of respondents it is hard to measure the true validity of these correlations and so it may be better to look at individual programs separately rather than together as a whole. The positive correlations do suggest programs should include groups that use plants like landscapers, master gardeners, and home gardeners as well as university faculty, extension personnel, botanical garden staff, and growers in the plant nomination and selection process.

Survey results show both similarities and differences in the existing plant selection/introduction programs. Data indicates there is no one thing to guarantee a successful program but the survey generated some guidelines a program should meet in order to be successful including industry support, adequate supply of quality plant selections, and effective marketing campaigns. The survey determined perennials, shrubs, and trees were selected most often and plant trials are not needed to be successful. However, all lines of communication should be strong with all involved and with growers and retailers. These survey results can be used to explore different options in developing plant selection/introduction programs for the state of Alabama as well as other states. Also, these results can be used to improve existing programs by comparing program structure and marketing techniques.

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Table 1. Individuals or groups involved in existing plant selection programs' plant nomination committee.

Individuals involved	Proportion of respondents (%) ^z
Nursery/greenhouse growers	88.9
Landscapers	77.8
University faculty	77.8
Extension personnel	66.7
Botanical garden staff	66.7
Homeowners/gardeners	33.3
Master gardeners	22.2
Sod growers	0.0
Other	33.3

^zData based on 13 respondents from a survey of existing plant selection/introduction programs in 2007.

Table 2. Individuals or groups involved in existing plant selection programs' nomination process where there is no nomination committee involved.

Individuals involved	Proportion of respondents (%) ^z
Anyone	75.0
Nursery/greenhouse growers	50.0
Landscapers	25.0
University faculty	50.0
Botanical garden staff	50.0
Extension personnel	50.0
Master gardeners	25.0
Sod growers	0.0
Other	75.0

^zData based on 13 respondents from a survey of existing plant selection/introduction programs in 2007.

Table 3. Individuals or groups involved in existing plant selection programs' selection committee.

Individuals on the plant nomination committee	Proportion of respondents (%) ^z
Nursery/greenhouse growers	77.8
Landscapers	77.8
University faculty	88.9
Botanical garden staff	66.7
Extension personnel	77.8
Homeowners/gardeners	11.1
Master gardeners	33.3
Sod growers	0.0
Other	33.3

^zData based on 13 respondents from a survey of existing plant selection/introduction programs in 2007.

Table 4. The type of plants selected and frequency of selection by existing plant selection/introduction programs.

Plant category	Proportion of respondents (%) ^z		
	Always	Sometimes	Never
Perennial	46.2	46.2	7.7
Tree	46.2	46.2	7.7
Shrub	53.8	30.8	15.4
Vine	7.7	61.5	30.8
Annual	15.4	46.2	38.5
Grass	7.7	38.5	53.8
Fruit	0.0	7.7	92.3
Vegetable	0.0	15.4	84.6
Other	0.0	15.4	84.6

^zData based on 13 respondents from a survey of existing plant selection/introduction programs in 2007.

Table 5. Length of existing plant selection/introduction programs' plant trials for each plant category as part of the plant selection process.

Plant category	Years (%) ^z					
	N/A	1	2	3-5	6-10	>10
Tree	46.2	0.0	0.0	15.4	7.7	30.8
Shrub	53.8	0.0	0.0	23.1	15.4	7.7
Perennial	38.5	0.0	15.4	38.5	7.7	0.0
Vine	76.9	0.0	0.0	15.4	7.7	0.0
Annual	61.5	0.0	15.4	23.1	0.0	0.0
Grass	69.2	0.0	0.0	23.1	7.7	0.0
Fruit	92.3	0.0	0.0	0.0	7.7	0.0
Vegetable	76.9	0.0	15.4	0.0	0.0	0.0
Other	92.3	0.0	0.0	7.7	0.0	0.0

^zData based on 13 respondents from a survey of existing plant selection/introduction programs in 2007.

Table 6. Survey items from the plant selection program survey with a high positive or negative Pearson's correlation*.

Survey items	<i>n</i> ^z	<i>r</i> ^y	<i>p</i> ^w
Landscapers on nominating committee & programs having a positive economic response	9	1.000	0.000
Anyone nominating plant & programs generating revenue	13	-1.000	0.000
University faculty on nominating committee & number of growers marketing the program	13	-0.980	0.000

*Very high correlations range 1.0 to 0.9 or -1.0 to -0.9.

^zNumber of respondents.

^yPearson's r-value.

^wP-value.

Table 7. Survey items from the plant selection program survey with a high positive or negative Pearson's correlation*.

Survey items	n^z	r^y	p^w
Home gardeners on selection committee & programs generating revenue	9	0.884	0.002
Home gardeners on nominating committee & programs generating revenue	9	0.707	0.033
Master gardeners on selection committee & programs generating revenue	9	0.707	0.033
Extension personnel on nomination committee & number of growers marketing the programs	9	-0.707	0.033

*High correlations range 0.9 to 0.7 or -0.9 to -0.7.

^zNumber of respondents.

^yPearson's r-value.

^wP-value.

Table 8. Survey items from the plant selection program survey with a moderate positive Pearson's correlation*.

Survey items	<i>n</i> ^z	<i>r</i> ^y	<i>p</i> ^w
Botanical garden staff nominating plants & positive economic response	4	0.577	0.423
Extension personnel nominating plants & positive economic response	4	0.577	0.423
University faculty nominating plants & positive economic response	4	0.577	0.423
Program generating revenue & selecting perennials	13	0.522	0.067
Programs generating revenue & selecting trees	13	0.522	0.067
Positive economic response & marketing using magazine articles	12	0.500	0.098

*Moderate correlations range 0.7 to 0.5.

^zNumber of respondents.

^yPearson's r-value.

^wP-value.

Table 9. Survey items from the plant selection program survey with a moderate negative Pearson's correlation*.

Survey items	<i>n</i> ^z	<i>r</i> ^y	<i>p</i> ^w
Program originating at a university & number of growers marketing the program	13	-0.658	0.015
Program originating at industry & consumer awareness being a challenge	13	-0.625	0.022
Program generating revenue & number of retailers marketing the program	13	-0.604	0.029
Growers nominating plants & programs generating revenue	4	-0.577	0.423
University faculty nominating plants & programs generating revenue	4	-0.577	0.423
Extension personnel nominating plants & programs generating revenue	4	-0.577	0.423
Botanical garden staff & programs generating revenue	4	-0.577	0.423
Programs conducting plant trials & positive economic response	13	-0.501	0.081

*Moderate correlations range -0.7 to -0.5.

^zNumber of respondents.

^yPearson's r-value.

^wP-value.

CHAPTER III

**A STATE SURVEY OF GROWERS AND RETAILERS TO DETERMINE THE
POTENTIAL FOR AN ALABAMA PLANT SELECTION/ INTRODUCTION
PROGRAM**

Additional index words. survey, growers, retailers, and program involvement

Abstract

There are many state plant selection or introduction programs and the green industry is involved in some way in every program; however, the level of involvement varies by program. Some programs like Texas Superstars™ have industry members very involved throughout the plant selection process, from nominating plants to choosing final plant selections. Others programs like Great Plant Picks and Chicagoland Grows® let selected individuals or groups nominate and choose final plant selections. Since the Alabama Nursery and Landscape Association has expressed interest in creating a plant selection program, a survey was developed to determine the overall opinion of Alabama growers and retailers of a potential plant selection program for the state of Alabama. Survey questions inquired if respondents were aware of state ornamental plant selection programs, what level of involvement they would like to have, if the program should include plant trials, who should nominate plants, and if they thought the potential program could help their business. Of 173 growers and retailers contacted, 57 responded

to the survey, resulting in 32% response rate. Over 80% were aware of state plant selection programs, however only 21% knew any information about such programs. Seventy percent thought a selection program could help their business and nearly 95% wanted to have some level of involvement in the potential program. When asked about program setup, 94% wanted to include plant trials. Sixty-nine percent wanted to let anyone in the green industry nominate plants while 26% said only people chosen to serve on a plant nominating committee. Survey results indicate there is potential for a plant selection program for Alabama due to the high percentages wanting involvement in the program and think a plant selection program would help their business.

Introduction

Many state plant selection/introduction programs have been established over the past fifteen years (Stegelin et al., 2001); however, there has been very little research on these programs. What little has been published shows some programs have been very successful at promoting selected plants and increasing sales of the selected plants (Anella et al., 2001; Mackay et al., 2001). From the plant selection program survey, it is known that program support is crucial to survival and success of the programs (E.D. Harris, unpublished data). Even with support, some programs still struggle. Some programs have not been successful, having been discontinued due to various reasons including a loss of trial space on campus (J. Sellmer, personal communication), not replacing the retired program director (D. Hensley, personal communication), and not having the mass media capabilities to efficiently advertise the program (A.D. Owing, personal communication).

Support from different areas is needed to help programs survive and be successful. Most programs have many sponsors involved with the programs which include universities, professional green associations, extension, botanical gardens, and/or state arboreta. Level of involvement varies by program and industry is usually most involved. The Texas Superstar™ program is a successful plant selection program and members of the Texas Green Industry have an important part in the program, which has contributed to its success (Mackey et al., 2001). The program has an industry advisory board that is made up of 50 members from the Texas ornamental industry, allowing members from the industry to voice their opinion. Also industry is involved with the plant evaluation process.

Industry is also directly involved with the Oklahoma Proven Program (Anella et al., 2001). Two committees exist to aid the program director, plant evaluation coordinator, and marketing coordinator. These two committees are the advisory committee and the executive committee. Both committees have representatives from the wholesale and retail industries. The advisory committee aides the management team by making plant recommendations and the executive committee assists with final plant selections. With industry having direct involvement, this allows green industry members to share knowledge and personal experience as well as voice their opinions.

The Georgia Gold Medal, Florida's Plants of the Year, Great Plants®, Pride of Kansas, and Utah's Choice all let growers or members of a professional green industry organization nominate plants while a committee makes final plant selections (Florida Plants of the Years, 2008; Georgia Gold Medal, 2008; Great Plants, 2008; Pride of

Kansas, 2008; Utah's Choice, 2008). Kentucky's Theodore Kline Plant Award, Chicagoland Grows[®], and Great Plant Picks all have selected individuals or groups from industry make both plant nominations and selections (Chicagoland Grows, 2008; Great Plant Picks, 2008; Kentucky).

Industry plays a role in most programs however how big the role is and the level of direct involvement depends on the program. If there is a chance for a program to be successful, then industry must support the program and be willing to be involved with the program. Since the Alabama Nursery and Landscape Association has expressed interest in a state plant selection program, a survey was developed in order to determine the opinion of Alabama growers and retailers of a potential plant selection or introduction program for the state of Alabama. The objectives of the survey were to determine if Alabama growers and retailers are interested in a plant selection program, what kind of involvement they would like to have in the potential program, and how the potential program should be setup. The survey inquired about their business, what level of involvement they would like to have, if they have sold or grow for any other plant selection programs, and if they are familiar with plant selection programs, and the plant selection process.

Materials and Methods

The population surveyed was made up of grower and retailer members of the Alabama Nursery and Landscape (ALNLA) located in Alabama. The current membership list was obtained from the ALNLA and was narrowed to just growers and retailers located in the state of Alabama with the help of Mr. James Harwell, Executive Director of ALNLA.

Also, growers and retailers that were members of the Greater Birmingham Association of Landscape Professionals (GBALP) were added to the list; most were members of ALNLA and already included. The total number of growers and retailers in the sample was 173.

A thirty-three question paper survey was developed to determine overall opinion of a potential plant selection or introduction program for Alabama and the level of involvement Alabama growers and retailers would like to have in this potential program (Appendix D). The surveys were mailed in ALNLA envelopes and contained two cover letters, the survey, and a pre-stamped envelope for the survey to be returned. The first cover letter was from Mr. James Harwell stating ALNLA's support for the survey and asking for responses (Appendix E). The next cover letter explained the purpose of the survey, asked for participation and to mail the survey back by March 31, 2008 (Appendix E). The survey was also set up online through www.surveymonkey.com, giving respondents the option of taking the survey online. The cover letter stated the web address where the survey was located. Surveys were mailed on March 15, 2008. No reminder or thank you post cards were sent due to the short time period of the survey.

Many of Dillman's principles were followed to increase response rate for the survey including: enclosing a pre-stamped envelope, giving respondents the option to take the survey online, and giving a short time period to return the surveys (Dillman, 2007). After the survey was closed, survey data were entered into an Excel spreadsheet (Microsoft, 2007) and uploaded into SPSS 16.1 (SPSS, 2007). Each variable was labeled and given a value so frequencies and correlations could be calculated.

Results and Discussion

After the survey was closed, 55 mail surveys had been returned and two internet surveys had been completed for a total of 57 respondents resulting in 32.9% response rate. Over 80% were aware some states have ornamental plant selection/introduction program, only 19.3% did not know about such programs. However, only 21.4% reported knowing any information about plant selection programs. Some respondents were familiar with other commercial marketing programs by participating in those programs. Over 28% reported growing and/or selling for any plant selection programs and these programs included Endless Summer Hydrangea, Knock Out Rose, Athens Select, and Alabama Grown (a regional program sponsored by a local nursery).

When asked about what level of involvement they, as growers and retailers would like to have, 94.7% said they would like some involvement. The levels of involvement varied, 86.0% said growing and/or selling selected plants, 40.4% said nominating potential plants, 31.6% said marketing and/or advertising selected plants, and 29.8% said serving on a plant selection committee. Only 5.3% of respondent said they would like no involvement in the program. These high percentages indicate potential for an Alabama plant promotion program. The 86% wanting to grow and/or sell selected plants was good; however, the percentage wanting to market and advertise selected plants needs to be higher. If the program is created, effective marketing campaigns will need to be developed where growers and retailers are involved.

When asked who should nominate potential plants, 69.6% said anyone in the green industry, 26.8% said only people chosen to serve on a plant nominating committee, 5.4%

said anyone, and 3.6% said other. When asked about the plant selection process, 94.7% said nominated plants should be trialed before they are selected as award winning plants, and 5.3% preferred the plants not to be trialed. Even though respondents agreed on including plant trials, they did not all agree on who should conduct the plant trials. Nearly 67% said growers should conduct the plant trials, 56.4% said in-state university faculty/departments should, 40.0% said botanical/public/private garden should, 34.5% said Alabama Cooperative Extension System should trial the plants, and 5.5% selected other including combinations of all the above. It is evident growers and retailers want plant trials to be included and the best solution could be it may be a combination of growers, a university, gardens, and extension personnel conducting plant trials.

Most reported that a plant selection program would be helpful to their business, 70.2% said they thought it would help, 28.1% were not sure, and only 1.8% did not think it would help. When retailers were asked if they would be willing to display advertisement material for the potential program in their store, 79.2% said yes, 12.5% said no, and 8.3% said not sure.

Business Demographics

Most of the plants shipped from Alabama growers remain in state. Over 68% ship plants in state, 61.1% ship out-of-state, 0% ship out of the country, and 27.8% said N/A which accounts for retailers and retail growers that do not ship plants. The origin of plants sold varies: 76.4% come from respondent's own nursery/greenhouse, 60.0% come from in-state growers, 50.9% come from out-of-state growers, and 3.6% come from out of the country. For the respondents that grow their own plants, 71.4% said plants come

from cuttings, 67.3% from purchased plugs, 65.3% from containers to shift up, 51.0% from seeds, and 16.3% from grafts/buds.

Fourteen percent reported having average gross sales for green goods under \$100,000, 25.0% said \$100,000-250,000, 25.0% said \$250,000-500,000, 3.6% said \$500,000-750,000, 1.8% said \$750,000-1,000,000, and 30.4% said over \$1,000,000. Respondents were scattered across the state in little towns and big cities according to the population where they were located; 28.8% were 0-9,000, 5.8% were 9,000-17,000, 13.5% are 17,000-29,000, 7.7% was 29,000-49,000, 9.6% was 49,000-88,000, 23.1% was 88,000-663,000, and 9.6% was over 663,000. To determine the size of their operation, businesses were asked about part time and full time employees. Over 63% had 0-10 part time employees, 10.9% had 11-25, 3.6% had over 25, and 21.8% said N/A. Over 69% had 0-10 full time employees, 14.3% had 11-25, 10.7% had over 25, and 5.4% said N/A. Growers reported growing a variety of plants including shrubs, perennials, trees, annuals, propagative materials, herbs, vegetable plants, fruit bearing plants, Christmas trees, and bare root nursery stock (Table 1). Popular plants sold to retail consumers were shrubs, perennials, annuals, trees, vegetable plants, and fruit bearing plants (Table 1).

The breakdown of the survey respondents included wholesale growers, retail garden centers, retail growers, and contract growers (Table 2). Their operations consisted of greenhouses, field production/containers, retail, propagation material, bare root nursery stock, and other (Table 2). All were members of at least one professional Green Industry organization including Alabama Nursery and Landscape Association (100%), Southern Nurserymen Association (40.7%), Greater Birmingham Association of Landscape

Professionals (13.0%), International Plant Propagators Society (11.1%), Tennessee Nursery Landscape Association (11.1%), and other (19.6%) organizations including South Alabama Nurseryman's Association, Alabama Farmers Federation, and Southern Christmas Tree Association.

Correlations

After analysis in SPSS (SPSS, 2007), several significant correlations were found. Being a retail operation and selling trees, annuals, perennials, vegetables, and herbs to retail consumers all had high correlations (Table 3). There were also strong relationships between retail operation and selling plants from in state growers, and retail garden center and selling plants from in state growers (Table 4). Concern had arisen from comments on the plant selection program survey on the difficulty of getting in state retailers to buy from in state growers (E.D. Harris, unpublished data). However, it appears Alabama retailers are buying most of their plants from in state growers.

Other positive relationships with weaker r-values include selling plants from in state growers and selling annuals, perennials, trees, shrubs, and vegetable to retail consumers (Table 4). Also being a wholesale grower and shipping plants in state (Table 4). Alabama growers are growing annuals, perennials, trees, shrubs, and vegetables and shipping them to in state retailers to sell to retail consumers. Plants sold to retail consumers coming from out of state growers are annuals, perennials, trees, and fruit bearing plants (Table 4). However, the correlation is stronger for annuals, perennials, and trees coming from in state growers. This could be investigated more closely to determine the amount of plants staying in state and leaving the state, as well as those imported.

For a program to be successful retailers must be willing to display advertisements in their store and the moderate positive correlations between retail garden centers or retail operations and willingness to display advertisements indicate Alabama retailers are willing. Since most program are sponsored by a green industry organization, members of green organization appear to be an appropriate place to start when developing a potential program and the positive correlation between being a professional green organization member and wanting to have some involvement in the potential program confirms this (Table 4).

Over 30% of growers and retailers contacted, responded to the survey. The majority seemed positive and hopeful about the potential for an Alabama plant selection program with 94% wanting to have some involvement in the program, 70% thinking the potential program would help their business, and 79% of retailers willing to display advertisement material in their retail store. Concerns had arisen about retailers buying from out of state; however, there were strong correlations indicating retailers do buy from in state growers and retailers do sell plants from in state growers. These survey results indicate there is a potential for a plant selection program for Alabama.

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Table 1. The types of plants grown and sold by Alabama growers and retailers.

Plant category	Proportion of respondents (%) ²	
	Grown	Sold
Perennial	56.0	46.3
Tree	54.0	44.4
Propagation material	40.0	9.3
Fruit bearing plant	14.0	25.9
Herb	20.0	31.5
Annual	42.0	46.3
Shrub	62.0	50.0
Christmas tree	3.0	14.8
Bare root nursery stock	2.0	5.6
Vegetable	20.0	31.5
Other	10.0	9.3
N/A	14.3	40.7

²Data based on 57 respondents from a survey of Alabama growers and retailers in 2008.

Table 2. Types of businesses and operations for Alabama growers and retailers.

<u>Business types</u>	<u>Proportion of respondents (%)²</u>
Wholesale growers	66.7
Retail garden centers	42.1
Retail growers	29.8
<u>Contract growers</u>	<u>12.3</u>
<u>Operation types</u>	
Greenhouse	64.3
Field production/containers	69.6
Retail	48.2
Propagation material	44.6
Bare root nursery stock	5.4
<u>Other</u>	<u>8.9</u>

²Data based on 57 respondents from a survey of Alabama growers and retailers in 2008.

Table 3. Survey items from the Alabama grower and retailer survey with a moderate positive or negative Pearson's correlation*.

Survey items	n^z	r^y	p^w
Selling plants from in state growers & selling annuals to retail consumers	52	0.682	0.000
Being a wholesale grower & shipping plants in state	54	0.657	0.000
Selling plants from in state growers & selling perennials to retail consumers	52	0.653	0.000
Average gross sales & full time employees	56	0.650	0.000
Willing to display advertisements for the potential program & being a retail operation	53	0.648	0.000
Willing to display advertisements for the potential program & being a retail garden center	54	0.643	0.000
Selling plants from in state growers & selling trees to retail consumers	52	0.624	0.000
Being a wholesale grower & shipping plants out of state	54	0.604	0.000
Wanting involvement in the potential program & being a member of a professional green industry org.	56	0.567	0.000
Selling plants from out of state growers & selling fruit bearing plants to retail consumers	52	0.562	0.000
Selling plants from in state growers & selling shrubs to retail consumers	52	0.553	0.000
Selling plants from in state growers & selling vegetables to retail consumers	52	0.551	0.000
Selling plants from out of state growers & selling perennials to retail consumer	52	0.548	0.000
Selling plants from out of state growers & selling shrubs to retail consumers	52	0.514	0.000
Selling plant from out of state growers & selling annuals to retail consumers	52	0.505	0.000

*Moderate correlations range 0.7 to 0.5 or -0.7 to -0.5.

^zNumber of respondents.

^yPearson's r-value.

^wP-value.

Table 4. Survey items from the Alabama grower and retailer survey with a high positive or negative Pearson's correlation*.

Survey items	n^z	r^y	p^w
Being a retail operation			
& selling plants from in state growers	54	0.722	0.000
Being a retail garden center			
& selling plants from in state growers	55	0.718	0.000

*High correlation range 0.9 to 0.7 or -0.9 to -0.7.

^zNumber of respondents.

^yPearson's r-value.

^wP-value.

CHAPTER IV

FINAL DISCUSSION

Many state plant selection/introduction programs have been established across the nation to select and promote plants to consumers and increase sales for growers and retailers. During this study, twenty existing and discontinued plant selection/introduction programs were located and examined. The programs all have the same basic goals, but with variability in how they are structured, operate, and select plants, as well as variability in the level of involvement growers and retailers. Program differences make it difficult for states interested in developing a program to determine the best way to develop and structure a new program. This study was conducted to collect information to aide states, such as Alabama, that are considering development of a plant selection program.

States considering a plant selection program should know there are many ways a program can be set up and no one thing guarantees success. From the existing program survey, general guidelines were formed on how to begin a program. First, a state must form a management committee to implement general guidelines. The committee must decide who wants and needs to be sponsors and at what level of involvement sponsors should have. The plant selection program survey revealed most programs are partnerships between two or more organizations such as a university, state green

association, industry representatives, and/or botanical gardens. For Alabama, it may be best to include the Alabama Nursery and Landscape Association, Auburn University, and some public gardens located throughout the state if they are willing to be sponsors. Having people from different areas involved is beneficial because support for the program and responsibilities can be shared.

Program structure, committees and their responsibilities is another decision for the management committee. This is linked to involvement because states must decide who and how many will serve on what committees. Most selection programs have committees to nominate and select plants. Correlations indicated programs should involve people that will be using the selected plants like landscapers, master gardeners, and home gardeners. If they are involved in selecting plants, they may be more likely to purchase selections as consumers leading to a more successful program. Even though having university faculty and extension personnel involved in the selection process produced negative correlation, it may be best to include them to provide more perspective. An existing program suggested setting term limits for committee members, to allow new members and ideas a chance to rotate into the committee.

The next decision is selection criteria for plants, what type and number of plants to select, and whether to include plant trials. Perennials, trees, shrubs, and annuals were the most popular plants grown and sold in Alabama; they were also selected most often by existing programs. These plants would be an appropriate starting point for an Alabama program. Correlations indicate plant trials are not necessary for a program to be successful. If the state program chooses to perform trials, should they be independent

plant trials or university sponsored? There are benefits to involving a university over independent plant trials that would require more money. However, if public gardens are involved and willing, they could serve as a trial and demonstration garden, similar to Plant Select®. Individuals on the selection committee could go to garden for evaluation and the garden could be a marketing tool promoting the program to garden visitors.

The state must develop a name, logo, marketing plan, and decide how financial matters will be handled. Existing programs use different marketing techniques but most offered marketing items to growers and retailers such as signs, pot tag/labels, and brochures/flyers and also used newspaper articles, magazine articles, websites, and garden shows to advertise to consumers. According to the program survey, the setup process could take either 1-6 months or over 12 months. There was no correlation indicating which time frame is most successful and may depend on the time it takes to implement guidelines and secure funding.

One very important aspect for potential programs is funding. The management committee needs to secure adequate funding and support. This was listed as a problem for many existing programs. Program personnel, marketing campaigns, promotion materials, and travel were listed as top expenses for the existing programs and funding can help supply these items for a program. Lack of funding will limit what a program can do, how it can help the green industry, and can ultimately lead to a program's discontinuation. Existing programs generate revenue by royalties, university grants, sale of plant tags, or through a trust/foundation. The majority of revenue generating programs do so through royalties and sale of plant tags however, this research did not determine

which method is best. Money from university grants is guaranteed while money from royalties, plant tag sales and trusts would vary. Many programs generate revenue but only two programs, Chicagoland Grows[®] and Prairiestar Flowers, generate enough to sustain themselves making outside funding unnecessary. Chicagoland Grows[®] generates money through royalties and Prairiestar Flowers through trail fees and industry support.

The grower/retailer survey revealed an interest among Alabama growers and retailers for an Alabama plant selection program; 95% said they would like to have some involvement a selection program and the majority thought the program would be helpful to their business. The majority of Alabama growers and retailers want to grow or sell the selected plants; however, only 32% want to market the plants. An increase in desire to market selected plants could result from explaining marketing expectations and most retailers said they would be willing to display advertisement materials in their retail store.

Growers and retailers had strong opinions about the plant selection process. They thought plant trials should be included and growers, a university, gardens, and/or the extension system should conduct trials. However, the plant selection program survey determined plant trials are not necessary for a successful program but it would help insure quality plants are selected. Because the most popular plants grown and sold in Alabama were shrubs, perennials, trees, and annuals this would be an appropriate starting point for plants to promote. Some existing plant selection programs voiced concern about retailers buying out of state plants; correlations indicate Alabama retailers are buying most plants from in state growers.

In the future, this research should be continued by closely examining revenue generating existing plant selection/introduction programs. The areas of concern are the plant selection process, how plant trials and plant nominations are linked together, and financial matters as to how much money is each area of the program. The plant selections survey concluded personnel was the most expensive area but the survey did not inquire on expense amount. This would provide a detailed model for Alabama and other interested states. States could decide if they want to follow the examples set by previous programs or develop new methods to run the program. Also, both existing and future programs could benefit by collecting data every year to determine the sales increase of selected plants and therefore program success as it progresses. For states considering a program, it would be helpful to survey potential consumers of the program to determine what they want, need, and if a plant selection program would be beneficial. Even though there is more information to be gathered on these plant selection/introduction programs, the research warrants the creation of a plant selection/introduction program for the state of Alabama to benefit the green industry as well as consumers.

APPENDICES

APPENDIX A

Figure 1. The initial email sent to programs trying to determine program director.

I am trying to find the program director for the XYZ program. I looked on the website and could not find a person listed. I would greatly appreciate if you could email the person's contact information for the program.

Thanks,
Emily Harris
Master's Student
101 Funchess Hall
Auburn University
harried@auburn.edu

Figure 2. The pre-contact email sent to program directors.

Dr. XYZ

I am a graduate student in the Auburn University Horticulture Department and for part of my thesis project I am looking at all the plant selection programs across the U.S. While researching the background information on each of the programs, I came across your name as the program director/contact person. If you are not the program director, please email me the current program director's contact info.

If you are the program director, then you do not have to email me back now. However, I will be sending you another email with a link to an online survey through [surveymonkey.com](https://www.surveymonkey.com). Thank you very much for your time; the information that you will provide is vital to my research project.

Thanks again,
Emily Harris
Master's Student
Auburn University

Figure 3. The email sent to program directors containing the survey link.

Mr, XYZ,

I am a graduate student in the Auburn University Horticulture Department and part of research is looking at all the plant selection programs across the U.S. I have previously sent you an email about two weeks ago when I was trying to locate the program director. To get information about the each program, I have developed an online survey through www.surveymonkey.com.

The survey should take approximately 15 minutes to complete. The answers you can provide through the survey are vital to my research project. The link to the survey is below.

http://www.surveymonkey.com/s.aspx?sm=kTOWY6DCUbp09Te8QaYw7w_3d_3d

The last day the survey is going to open is Thursday, July 12, 2007.

Thank you for taking the time to complete the survey, I greatly appreciate it!

Thanks,
Emily Harris
Master's Student
Auburn University

Figure 4. The weekly reminder email sent to program directors.

I am a graduate student in the Auburn University Horticulture Department. About two weeks I emailed several surveys to plant selection programs across the nation and as of today I only have responses from seven of them. I hope you can find time to complete the survey because I need more responses. The survey should take approximately 15 minutes to complete. The link to the survey is below.

http://www.surveymonkey.com/s.aspx?sm=kTOWY6DCUbp09Te8QaYw7w_3d_3d

The survey will close this coming Monday, July 12!!

Thanks,
Emily Harris
Master's Student
Auburn University

APPENDIX B

Figure 1. The introduction page of the plant selection program survey.

The Horticulture Department at Auburn University is conducting a survey on state-based plant selection programs. This survey is being sent to all the state-based plant selection programs in the United States. In this survey you will be asked a few questions about how your program was created and how it is currently organized. The questionnaire should take approximately fifteen minutes to complete.

The results of this project will be used in the development of future plant selection programs. With your participation, we hope to discover the best management practices and overall organization for a plant selection program. If any questions do not apply to your program, choose the N/A option.

Thank you so much for your time. I look forward to your response.

Thanks,
Emily Harris
Graduate Student
Auburn University

Figure 2. The first page of the online survey of the plant selection programs.

Plant Selection Survey [Exit this survey >>](#)

2. Creation of the Program

1. Where is the origin of your plant selection program? (Please check all that apply.)

Industry

University

State association

Other (please specify)

***2. What were the first actions/activities completed in order to begin your plant selection program?**

***3. How long did it take to officially setup the program?**

1-6 months

7-12 months

13-18 months

>18 months

4. What issues arose during the setup phase of the program? (Please check all that apply)

personnel

funding

industry support

APPENDIX C

The Plant Selection Program Survey.

1. Where is the origin of your plant selection program? (Please check all that apply).
 Industry
 University
 State association
 Other _____

2. What were the first actions/activities completed in order to begin your plant selection program?

3. How long did it take to officially setup the program?
 1-6 months
 7-12 months
 13-18 months
 >18 months

4. What issues arose during the setup phase of the program? (Please check all that apply)
 Personnel
 Funding
 Industry support
 Program support
 Other _____

5. Looking back, what would you change about the program setup?

6. Was the program modeled after another program that was already in existence?
 Yes
 No

7. If so, which one?

8. What is the primary source for funding this program?

-
-
9. What are the three most expensive aspects of the program?
 Promotion tags
 Personnel
 Advertising – 46.2%
 Travel (for committee meetings, visit to trials, etc.)
 Diagnostics/Analyses
 Maintenance of plots
 Other
10. Does the program generate a revenue stream for the organization?
 Yes
 No
 Not sure
11. If so, is this revenue adequate to sustain the program or is dependent on appropriated funds or endowment earnings?
 Yes, the revenue stream is adequate
 No, the revenue stream is no adequate
 N/A
12. Have you found granting agencies to be supportive of your efforts?
 Yes
 No
 N/A
13. If yes, then what amount of grant money has the program received?

14. Please describe any funding sources to initiate a program like this.

15. How long has the program been in existence?
 1-2 years
 3-5 years
 6-10 years
 11-15 years
 >15 years
16. Are you the program coordinator?

- Yes
- No
- N/A

17. For which classification do you work?

- University
 - Botanical garden
 - State green industry association
 - Extension
 - Other _____
-

18. Approximately how many people are directly involved in the plant selection program?

- 1-5
- 6-10
- 11-15
- 16-20
- 21-25
- >25

19. Are there committees that nominate the plants?

- Yes
- No

20. If yes, how are the members of the nomination committees chosen?

- Volunteers
- Selected by the program

21. What classification do the members represent? (Please check all that apply.)

- Landscapers
 - Nursery/greenhouse growers
 - University faculty
 - Master gardeners
 - Extension personnel
 - Homeowners/gardeners
 - Botanical garden staff
 - Sod growers
 - Other _____
-

22. How often does the nomination committee meet?

- In person
- 0/yr

- 1-2/yr
- 3-4/yr
- 5-6/yr
- >6/yr

Email

- 0/yr
- 1-2/yr
- 3-4/yr
- 5-6/yr
- >6/yr

Conference calls

- 0/yr
- 1-2/yr
- 3-4/yr
- 5-6/yr
- >6/yr

23. If you answered no to question 19, who can nominate plants for consideration?

Please check all that apply.

- Anyone
 - Landscapers
 - Nursery/greenhouse growers
 - University faculty
 - Master Gardeners
 - Extension personnel
 - Botanical garden staff
 - Sod growers
 - Other _____
-

24. Are there committees that choose the winners?

- Yes
- No

25. If yes, how are the members of the awarding committee chosen?

- Volunteers
- Selected by the program

26. What classification do the awarding committee members represent? Please select all that apply.

- Landscapers
- Nursery/greenhouse growers
- University faculty
- Master gardeners

- Extension personnel
 - Home owners/home gardeners
 - Botanical garden staff
 - Sod growers
 - Other _____
-

27. How often does the awarding committee meet?

In person

- 0/yr
- 1-2/yr
- 3-4/yr
- 5-6/yr
- >6/yr

Email

- 0/yr
- 1-2/yr
- 3-4/yr
- 5-6/yr
- >6/yr

Conference calls

- 0/yr
- 1-2/yr
- 3-4/yr
- 5-6/yr
- >6/yr

28. If you answered no to question 24, who selects the winners?

- Program coordinator
 - Other _____
-

29. How do the individuals or committees choose the winners from the nominations?

- Group discussion
 - Judging form
 - Other _____
-

30. What are the criteria for selection of the winning plants? Please select all that apply.

- Ease of propagation
- Ease of maintenance
- Pest and disease resistance
- Consumer appeal

____ Other _____

31. How often do you award a plant in each of the following plant categories?

	Always	Sometimes	Never
Perennial	___	___	___
Tree	___	___	___
Shrub	___	___	___
Vine	___	___	___
Annual	___	___	___
Grass	___	___	___
Fruit	___	___	___
Vegetable	___	___	___
Other	___	___	___

32. For the categories that you chose 'Always', is there a limitation to the number of plants that are chosen?

- ___ Yes, we only choose 1 or 2 plants for each of the categories with an entry
___ No, we choose the number based on the entries that year

33. Which areas in the program are the most challenging?

- ___ Plant nomination
___ Plant selections
___ Committee member selection
___ Grower support/acceptance
___ Retailer support/acceptance
___ Consumer awareness
___ Other _____

34. Are the plant selections tested or trialed by the plant selection program before they are selected as an award winner?

- ___ Yes
___ No

35. How long are the plants trialed?

- Trees ___ N/A
___ 1 year
___ 2 years
___ 3-5 years
___ 6-10 years
___ >10 years
Shrubs ___ N/A
___ 1 year

2 years
 3-5 years
 6-10 years
 >10 years
 Perennial N/A
 1 year
 2 years
 3-5 years
 6-10 years
 >10 years
 Vine N/A
 1 year
 2 years
 3-5 years
 6-10 years
 >10 years
 Annual N/A
 1 year
 2 years
 3-5 years
 6-10 years
 >10 years
 Grass N/A
 1 year
 2 years
 3-5 years
 6-10 years
 >10 years
 Fruit N/A
 1 year
 2 years
 3-5 years
 6-10 years
 >10 years
 Vegetables N/A
 1 year
 2 years
 3-5 years
 6-10 years
 >10 years
 Other N/A
 1 year
 2 years
 3-5 years

- 6-10 years
- >10 years

36. Has there been a positive economic response to the program (increased sales of the selected plants)?

- Yes
- No
- Not sure

37. Who has reported an increase in sales and by how much? Please approximate the amount in percentage form.

Growers _____

Retailers _____

38. Have retailers been directly contacted to make them aware of your plant selection program?

- Yes
- No

39. Approximately how many retail garden centers do you think market your plant selection program?

- 0-20
- 21-40
- 41-60
- 61-80
- 81-100
- >100

40. Do you have promotional items for retailers?

- Yes
- No

41. If yes, what type of items and what cost to the retailer? (If you do not have one of the following items please write N/A)

- Signs _____
- Pot tags/labels _____
- Brochures/flyers _____
- Bookmarks _____
- Advertisement materials _____
- Other _____

42. What has been your most popular/most used promotional item?

- Signs
- Pot tags/labels
- Brochures/flyers
- Bookmarks
- Advertisement materials
- N/A
- Other _____

43. Have growers been directly contacted to make them aware of your plant selection program?

- Yes
- No

44. Approximately how many growers do you think market your plant selection program?

- 0-20
- 21-40
- 41-60
- 61-80
- 81-100
- >100

45. Do you market your program directly to consumers?

- Yes
- No

46. If yes, how do you direct market to consumers? (Select all that apply.)

- Newspaper ads
- Newspaper articles
- Magazine ads
- Magazine articles
- Television spots
- Website
- Direct mail
- N/A
- Other _____

47. May we contact you for follow up?

- Yes
- No

48. What is the official name of your plant selection program?

49. Any additional comments?

APPENDIX D

Questionnaire for Alabama Growers and Retailers

Please answer the following questions. If any of the questions do not apply, please choose the N/A option.

1. Are you aware that some states have ornamental plant selection/introduction programs?
 Yes
 No
2. Do you know any information about state based ornamental plant selection/introduction programs?
 Yes
 No
3. If Alabama started a plant selection program, what level of involvement would you as a grower or retailer like to have? Check all that apply.
 None
 Nominating the potential plants
 Serving on a plants selection committee
 Marketing/advertising the plants
 Growing and/or selling the selected plants
4. Do you think a program like this could help your business?
 Yes
 No
 Not sure
5. There are many different ways that a plant selection program can be set up. Would you prefer the nominated plants to be trialed for a period of time before they are chosen as award winning plants?
 Yes
 No
6. If you answered yes, then who should trial the plants?
 N/A
 Alabama Coop Extension service
 In-state university faculty/departments
 Growers
 Botanical/public/private gardens

___ Other _____

7. Who do you think should be able to nominate the plants as potential award winning plants? Check all that apply.
- ___ Anyone
___ Only people chosen to serve on a plant nominating committee
___ Anyone in the green industry (landscapers, growers, retailers, university faculty, etc.)
___ Other _____
8. What is your business? Check all that apply.
- ___ Wholesale grower
___ Retail grower
___ Contract grower
___ Retail garden center
9. If there is a retail aspect to your business, would you be willing to display advertisement material in your store as a way to market the award winning plants?
- ___ N/A
___ Yes
___ No
___ Not sure
10. Do you currently display advertisement for any trademarked line of plant material in your business?
- ___ N/A
___ Yes
___ No
11. Do you sell or grow plants for any plant selection/introduction programs?
- ___ Yes
___ No
12. If you answered yes, which programs?
- _____

13. If you ship plants from your business, where do you ship the plants you grow?
- ___ N/A
___ In-state
___ Out-of-state
___ Out of the country
14. If you sell plants, where do you get them?

- My own nursery/greenhouse
- In-state growers
- Out-of-state growers
- Out of the country

15. If you grow your own plants, what are the origins of these plants? Check all that apply.

- Seeds
- Purchased plugs
- Cuttings
- Grafts/buds
- Containers to shift up

16. What is the population of the town in which you are located?

- 0-9,000
- 9,000-17,000
- 17,000-29,000
- 29,000-49,000
- 49,000-88,000
- 88,000-663,000
- over 663,000

17. What are the average gross sales for green goods in your business for the past two years?

- Under \$100,000
- \$100,000-\$250,000
- \$250,000-\$500,000
- \$500,000-\$750,000
- \$750,000-\$1,000,000
- Over \$1,000,000

18. If you have a retail aspect to your business, what is the average amount spent by customers in your store per transaction? _____

19. How many part time/seasonal employees do you have?

- N/A
- 0-10
- 11-25
- Over 25

20. How many full time employees do you have?

- N/A
- 0-10
- 11-25
- over 25

21. Do you have a florist shop component to your business?

Yes

No

22. What does your operation consist of? Check all that apply

Greenhouse

Field production/containers

Retail

Propagation material

Bare root nursery stock

Other _____

23. How many square feet of greenhouse/polyhouse do you have in production?

24. How many acres of field production do you have?

25. How many square feet of retail space do you have?

26. What do you grow? Check all that apply. `

N/A

Annuals

Perennials

Shrubs

Trees

Christmas trees

Propagative materials

Bare root nursery stock

Fruit bearing plants

Vegetable plants

Herbs

Other _____

27. Please list the top three wholesale revenue producing plants that you grow.

28. What plants do you sell to retail consumers?

N/A

Annuals

Perennials

Shrubs

Trees

Christmas trees

Propagative materials

Bare root nursery stock

Fruit bearing plants

Vegetable plants

Herbs

Other _____

29. Please list the top three plants that you sell to retail consumers.

30. Are you a member of any professional green industry organizations?

Yes
 No

31. If you answered yes, please check the organizations in which you are a member

Alabama Nursery & Landscape Association
 Mississippi Nursery & Landscape Association
 Tennessee Nursery & Landscape Association
 Florida Nursery & Growers Association
 International Plant Propagator's Society
 Southern Nursery Association
 Greater Birmingham Association of Landscape Professionals
 Other _____

32. Suggestions for possible names for program?

33. Other comments?

Thank you for taking the time to complete the questionnaire! Your response is greatly appreciated!

Please return in the enclosed stamped envelope to:
Emily Harris
101 Funchess Hall
Department of Horticulture
Auburn University, AL 36849

APPENDIX E

Figure 1. Mr. James Harwell's letter asking for support of the Alabama grower and retailer survey.



ALABAMA NURSERY & LANDSCAPE ASSOCIATION

"To promote the success and professionalism of its membership."

President

Steve Thomas
Greene Hill Nursery, Inc.
Waverly
334-864-7500

Vice President

Jim Van Antwerp
Flowerwood Nursery, Inc.
Loxley
888-922-7374

Secretary-Treasurer

Phillip Hunter
Hunter Trees
Birmingham
256-268-5890

Director

Stephen Presley
Landscape Workshop, Inc.
Bessemer
205-424-0244

Director

Bethany O'Rear
Landscape Services, Inc.
Birmingham
205-991-9584

Allied Director

Andy Zimlich
Nursery Supplies, Inc.
Mobile
251-476-6867

Director Emeritus

J. Harvey Cotten
Huntsville Botanical Gardens
Huntsville
256-830-4447

Executive Director

James Harwell
Auburn
334-821-5148

Dear ALNLA Member:

Many have suggested Alabama have its own plant selection/introduction program to benefit the state's Green Industry. The advantage of a state's selection/introduction plant program is to promote outstanding performing plants specifically for its environment. Our consumers could trust that these selected and trialed plants would perform well in their landscapes and gardens. Three of our surrounding states already have their select plant programs which have been successful in each of those states.

This month the Alabama Nursery and Landscape Association is partnering with the Horticulture Department of Auburn University for a feasibility study, to develop an Alabama plant selection/introduction program. Emily Harris, an AU graduate student is heading the study. Enclosed is a survey that would help us to determine how and if many of you would be in favor of such a program. Please take time to answer the questions and express your opinion on the matter.

As always, ALNLA is here to help promote our Alabama Green Industry. If you have any questions please call me.


James Harwell
Executive Director, ALNLA

Figure 2. Informational cover letter sent to Alabama growers and retailers.

DEPARTMENT
OF
HORTICULTURE



AUBURN UNIVERSITY
COLLEGE OF AGRICULTURE

March 14, 2008

Dear Green Industry Professional,

As a master's student in the Department of Horticulture at Auburn University, I am currently working on a project along with the Alabama Nursery and Landscape Association investigating the possibility of a plant selection/introduction program for Alabama. Plant selection/introduction programs select plants of the year and market the plants to consumers. Three of our surrounding states have programs like these (Georgia Gold Medal, Florida Plants of the Year, and Mississippi Medallion) and it has been suggested that we create one as well to benefit our industry.

As a grower or retailer you have been invited to participate in this survey so that we can determine the overall opinion of Alabama growers and retailers for a program like this and what kind of potential involvement you would like to have in the program. The survey also asks a few questions about your business.

The survey is enclosed and should take about 15 minutes to complete. After completing the survey, please return in the enclosed envelope. If you prefer, you can go to the following link to take the survey online.

https://www.surveymonkey.com/s.aspx?sm=m_2bOX37rVVaXc3_2f8mKKrxXQ_3d_3d

I assure you that the survey is confidential. Your prompt completion and return of the survey is greatly appreciated. With your voice we can create a more successful program to help you. Please return the survey in the enclosed envelope by March 31, 2008. If you have any questions regarding this survey, please feel free to contact: Emily Harris, [REDACTED] or Dr. Carolyn W. Robinson, [REDACTED].

Thank you for taking the time to complete the survey. Your input is very important!

Sincerely,

[REDACTED]

Emily Harris
M.S. Student
Auburn University

101 Funchess Hall, Auburn, AL 36849-5408; Telephone: 334-844-3059; Fax: 334-844-3131

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