Cut Foliage Growers Research and Extension Preferences

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In early 1998, two questionnaires were distributed at meetings and through mailings to cut foliage producers in Lake, Putnam, and Volusia Counties where major cut foliage production occurs in Florida. One questionnaire asked respondents to rank various research topics under the categories of economics, entomology, horticulture, nematology, plant pathology, plant physiology and weed science. The second questionnaire dealt with extension programming and publications. Main extension programming categories were business management/economics/marketing, entomology/nematology/plant pathology/weed science, horticulture, plant physiology and regulatory. In addition, respondents were asked to rank publications on specific topics (crop production guides, disease/insect control guides, compilations of lists of pesticides labeled for specific crops) and of specific types (Cut Foliage Grower, Cut Foliage Research Note, county cut foliage newsletters). Finally, the extension questionnaire asked growers if they wanted cut foliage information and publications made available on the Internet. On both questionnaires the ranking scale went from 1 = highest to 5 = lowest priority; if rankings were left blank, they were given a priority value of 5. There were many locations on both questionnaires where respondents could write in requests for research or information on specific topics and crops.

Results

Research Priorities. Figure 1 illustrates the top 10 research topics based on overall rankings. These rankings reflect the major concerns of the cut foliage industry as a whole. Not surprisingly, increasing demand through marketing was ranked the top priority; obviously a reflection of increasing domestic and international competition and continuing price erosion for the predominant cut foliage crops such as leatherleaf fern and tree fern. The second highest ranked research project was non-chemical control methods for insects and mites. This is probably a response to concerns about employee and environmental impacts of pesticides. The three research areas that

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Figure 1. Growers ranked these ten research areas as the highest in priority.

received the next highest ranking were plant nutrition, root-knot nematode control and efficacy of new bactericides and fungicides. Little is known about the nutritional requirements of many cut foliage crops and there are few, if any, nematicides labeled for use on them (Stamps and Rock, 1996). Serious problems controlling diseases such as *Xanthomonas* of tree fern and anthracnose of leatherleaf fern (Stamps et al., 1997) and increased production costs associated with controlling those diseases, coupled with frequent introductions of new products touted as bactericides and fungicides, have made information as to which products are really effective of utmost concern to cut foliage growers.

The sixth highest priority research area was the recently started cut foliage business analysis program. In 1997, 17 cut foliage firms participated in this first ever financial evaluation of Florida’s cut foliage industry. Ranked next after that program were two in the area of pest control— integrated pest management and control of sedges. Another weed control problem, control of grasses, and the horticultural task of evaluating new cut foliage crops for introduction into the industry rounded out the top ten priority research areas.

Research subject area requests that respondents wrote in are listed below followed by the number of respondents listing that topic in parentheses:
Economics  Economic benefits of integrated pest management (1); economics of producing sun-grown cut foliages (1)
Horticulture  Culture of English ivy (1), leatherleaf fern (1), pittosporum (1), tree fern (3), woody ornamentals (1); irrigation efficiency (1) and management for cold protection (1)
Plant Pathology  Leatherleaf fern - diseases (1), fern anthracnose (3); tree fern - bronzing (1), Xanthomonas control (1)
Plant Physiology  Tree fern - bronzing (1)
Weed Science  Leatherleaf fern - control of dayflower (Commelina) (1); tree fern - control of yellow nutsedge (1) and Phyllanthus (1)

**Extension Priorities Programs.** On the information delivery side, the highest ranked extension program priority was pest control (Figure 2). This fits right in with the keen interest in research on disease and pest control noted above. Methods of reducing crop production costs was the second highest rated program area, indicating a desire by cut foliage producers to become/remain profitable. With a seemingly ever-increasing array of regulatory agencies and regulations to deal with, respondents asked for help in keeping up with changes in laws and regulations. Increased competition and declining profitability of traditional cut foliage crops (Stamps, 1996)

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**Top 10 Grower-Ranked Extension Projects**

- Pest Control
- Crop Management Strategies
- Law/Regulation Changes
- New Plant Recommendations
- Postharvest Longevity
- Understanding Fertilizers & Soils
- Marketing Trends
- Pesticide Updates
- Pest/Disease of the Month
- Labor/Personnel Issues

*Numbers are average rankings where 1=highest and 5=lowest; therefore, lower numbers indicate higher rankings.

**Figure 2.** Growers ranked these ten extension programs as the highest in priority.
has sparked significant interest in finding new crops to grow so this topic was ranked 4\textsuperscript{th} highest. Rounding out the top five extension program priorities was information on factors affecting the postharvest longevity of cut foliage crops.

The 6\textsuperscript{th} top priority was programming aimed at increasing grower understanding of fertilizers and soils information that is essential for maximizing production while minimizing costs and negative environmental impacts due to over watering and/or over fertilizing. Interest was also high regarding marketing trends information on what's selling and what's not. Another pest control-related topic, pesticide updates, was ranked 8\textsuperscript{th}. Pesticides come and go, are renamed, undergo label and formulation changes, etc.; therefore, growers ranked updates on these changes on a regular basis as a high priority. There was also considerable interest in monthly information about specific disease or pest problems. The last of the top ten extension priorities was programming dealing with labor/personnel efficiency and issues.

**Publications.** Extension publications both on specific topics and the specific types were highly rated with an overall average ranking of 1.56. Sixty-six percent of the respondents ranked the current extension publications as a #1 priority. Unfortunately, there is no funding nor adequate personnel to produce the publications that the growers indicate they need. On the topic of publishing cut foliage documents on the World Wide Web of the Internet, growers were evenly divided with those against publication citing access by foreign competition as a serious problem.

Extension program comments that respondents wrote in are listed below followed by the number of respondents listing that topic in parentheses:

**Business**  
Selling techniques and teamwork (1)

**Horticulture**  
Culture of English ivy (1), pittosporum (1), ruscus (1), tree fern (1)  
[Editor's note: Culture guides are available for English ivy, pittosporum and ruscus.]

**Plant Pathology**  
*Rhizoctonia* and *Cylindrocladium* control (1)

**Plant Physiology**  
Leatherleaf fern - control of sori (and spore) production (1)

Specific comments regarding extension publications included:

- Anthracnose control guide is #1 priority (1)
- E-mail communications would be nice to have (1)
  
  [Editor's note: All four authors have e-mail addresses Stamps-rhs@icon.apk.ufl.edu, Landrum-lbml@gnv.ifas.ufl.edu, Dilger-dilger@gnv.ifas.ufl.edu, Tilton-putnam@gnv.ifas.ufl.edu]

- Interactive discussion section on website (1)

- Production of a catalog of available literature would be useful (1)

- Updated lists of pesticides available for each crop grown: problem controlled, application method, application rates, when to apply (3); leatherleaf fern (1) and tree fern (1)
  
  [Editor's note: The list of pesticides labeled for use on leatherleaf fern was updated in February 1998.]

The authors will use the responses from the questionnaires to help plan future extension programs and publications. They will also distribute this information to scientists in various fields and encourage them to conduct research relevant to Florida's cut foliage industry.

**References**

