Workshop

Creative Thinking, Creative Funding: Research, Extension, and Teaching Programs and Consortiums—The 2013 National Floriculture Forum

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Beginning in the late 1980s, faculty, graduate students, and industry members interested in floriculture have gathered each spring or every other year to discuss “where floriculture is headed and what that means for them.” The group typically engages in 1–2 d of discussion and presentations reflecting on current issues, the future of floriculture and also uses the opportunity to visit unique greenhouse and nursery facilities in the area where the forum is held. This year, the National Floriculture Forum

(NFF) was held in Portsmouth, NH, conveniently located in the New England states which were previously known for horticultural businesses that grew cut flowers and potted plants.

The 2013 NFF began with a day-long tour of four local growers who demonstrated to the group how they have reinvented and/or reinvested to stay competitive by focusing on young plant production (plugs/liners) and retail/wholesale sales of garden bedding plants. The operations visited included D.S. Cole Growers (Loudon, NH), Pleasant View Gardens (Loudon, NH), Cavicchio Greenhouses (Sudbury, MA), and Konjoian’s Greenhouses (Andover, MA). These first three operations demonstrated recent upgrades to their facilities and/or production practices to improve the long-term sustainability of their operations such as wood biomass boilers, flood floors where water is captured and reused making labor for watering efficient and increasing adoption of biological pest management.

On 23 Mar., morning technical sessions began with faculty and graduate students discussing creative platforms

and models for teaching, research, and extension. An update on the Alliance for Cooperative Course Exchange in the Plant Sciences (ACCEPs) was presented as a framework for multi-institutional distance learning courses (Evans et al., 2011). Next, experiences were shared from “Total Crop Management,” an innovative upper-level undergraduate class at Purdue University taking a hands-on approach to proactive, holistic crop management. Students met weekly to monitor a poinsettia crop for pests and diseases, height graphical tracking, substrate and water quality, and the growing environment. The class then interpreted weekly data, discussed implications for finishing a quality crop, and made team-based decisions. Also, relevant to teaching, a framework for meaningful internship experiences was discussed with a focus on establishing learning objectives before the internship to clarify the expectations for the student, business host, and faculty advisor. In regards to preparing future faculty, the Graduate Teaching Scholars Program at Virginia Tech established a cohort of scholars and mentors and provides graduate students with a framework for developing teaching skills and confidence to become well-rounded educators.

Two divergent methods for industry outreach were presented. The Integrated Pest Management In-depth program combines three hands-on modules with a greenhouse tour in a format that encourages active learning in a small group setting (Mattson et al., 2013). Capitalizing on the increasing usage of technology by greenhouse growers, low-cost platforms for developing smart phone apps were presented using two case studies; an insect control chart turned into a mobile phone app (Getter, 2012) and a mobile phone-optimized website connected to a quick response code that directs consumers to landscape alternatives to garden impatiens (Getter, 2013). Research presentations focused on “atypical” greenhouse and field crops and the production challenges they presented (Paparozzi, 2013).

The afternoon began with a panel discussion by two deans and one department head offering their perspectives on the future and the implications for floriculture/horticulture programs across the United States. Current and

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future challenges cited include rising costs but declining public support of higher education, department mergers, declining resources at the federal and state levels, publication/grant pressures, and increases in clerical tasks and reporting. Despite these challenges many potential opportunities were noted such as greater effectiveness through enhanced technology (e.g., distance learning or mobile apps for plant diagnostics), focusing on high-impact programs that enhance economic or social conditions and diversification of funding beyond traditional grant agencies (e.g., royalty streams from patented processes/plants or partnerships with industry).

Representatives from industry paired with faculty then led discussions on the relationship between the academy and industry in goals for teaching, extension, and research. Creative thinking and funding abounded with many future insights. For example, the floriculture industry is interested in the development of new grower tools from specific crop models during production using e-tools such as podcasts, grower alerts, and smartphone apps. There is a need to move beyond production research to develop strategies that ensure postharvest longevity and garden performance. Faculty must be able to market their own research and extension programs, and were strongly encouraged to turn peer-reviewed research publications into trade articles,

industry reports, podcasts, and e-books. For specific research needs, industry members are partnering with foundations to fund professors and joining alliances (e.g., the Floriculture Research Alliance) to get their needs addressed. Industry members are looking to universities and faculty to recruit and train undergraduate students through research opportunities and internships. Students should be trained for professional-level experiences by seeking internships; representatives of the American Floral Endowment expressed dismay at the number of intern scholarships that lack applicants. They challenged faculty to encourage their students to apply.

Future endeavors for floriculturists will involve more industry partnerships. Faculty and students were strongly encouraged to focus on improving gardeners' growing success, conduct research that involves less impact on the environment, and look at ways these areas can be used to produce cost savings for horticultural businesses. The following pages include papers to serve as examples of the creative thinking and funding ideas that were discussed at this year's forum. For additional information and pictures, please visit our Facebook page or website (National Floriculture Forum, 2013) or view an article in *Greenhouse Grower* magazine (*Greenhouse Grower*, 2012).

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