

Special Research Report # 703: Public Benefits

The Appeal of Biodegradable Packaging to Floral Consumers: Part 3

Charles Hall¹, Bridget Behe², Ben Campbell¹, Jennifer Dennis³, Roberto Lopez³, Chengyan Yue⁴
¹Texas A&M University, ²Michigan State University, ³Purdue University, ⁴University of Minnesota



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Phone: 703-838-5239

Fax: 703-838-5212

E-mail: afe@endowment.org

Website: www.endowment.org

BACKGROUND

Currently, one of the most widely discussed topics in the floriculture industry, which is promulgated by consumers exhibiting greater degrees of environmental awareness, is the issue of environmental sustainability. This has led to a desire for products that not only solve the needs of consumers but are also produced and marketed using sustainable production and business practices. Consumers increasingly place a greater emphasis on product packaging and this has carried over to the greenhouse/floral sector in the form of biodegradable pots.

While various forms of these eco-friendly pots have been available for several years, their marketing appeal was limited due to their less-than-satisfying appearance. With the recent availability of more attractive biodegradable plant containers, a renewed interest in their suitability in the

floriculture sector and their consumer acceptance has emerged. The objective of this study was to determine the characteristics of biodegradable pots that consumers deem most desirable and to solicit their willingness-to-pay (WTP) for this type of product.

METHODOLOGY

This study utilized a conjoint analysis internet survey and experimental auctions to elicit floral consumers' WTP for biodegradable containers. This report focuses specifically on the conjoint analysis survey. The benefit of these types of surveys is they allow researchers to simultaneously investigate a number of product attributes and to determine the relative importance of each attribute in the consumer's preference.

The survey was administered via the internet including a representative sample of consumers from Indiana, Michigan, Minnesota, and Texas.

For this study, we consulted with industry experts in order to identify the attributes and their corresponding levels that were considered to be environmentally important to consumers, while controlling for other attributes considered

to be of lesser importance. Attributes (and levels) identified were price (\$2.49, \$2.99, \$3.49), container type (plastic, wheat starch, rice hulls, straw), carbon footprint (neutral, saving, intense), and waste composition (0%, 1-49%, >49%).

RESULTS AND CONCLUSIONS

The internet survey was implemented by Knowledge Networks during July 2009. A total of 1,113 respondents started the survey; however, 279 respondents were eliminated since they did not purchase any plants during the past year. Another 299 respondents were eliminated due to missing ratings or lack of variation among the conjoint ratings, thereby, leaving 535 respondents.

An important element of utilizing conjoint analysis is the ability to classify survey respondents into clusters or market segments. As stated in report#702 in this series, the single most important factor influencing the consumer's decision to buy flowering potted plants was container type, followed by carbon footprint, price, and waste composition, in that order. While these results show the decision across all survey

respondents, we were able to segment consumers into seven distinct clusters: (1) extremely price conscious; (2) sensitive to carbon footprint labeling; (3) environmentally conscious; (4) those who favored straw pots; (5) those that disliked straw pots; (6) those that favored rice hull pots; and (7) non-discriminating.

After assigning respondents to a cluster, a multinomial logit model was used to identify any relationships between cluster membership and the explanatory variables. These variables consisted of several demographic and socio-economic variables, recycling behaviors, and respondent recycling behaviors and beliefs.

The *price conscious* segment tended to be more educated and married. However, higher levels of expenditures on outdoor lawn/garden products resulted in a lower probability of being in this segment. Furthermore, this segment is more likely to have interest in conventional, locally produced bedding plants.

The *environmentally conscious* segment exhibited an acute level of concern or consciousness about the environment. They do not have a concise demographic profile other than they are more likely to be younger consumers, but they do have a specific set of recycling views that set them apart. For instance, they are more likely

to disagree that sorting household waste is too inconvenient; however, they generally do not check if a package is made of recycled material before making a purchase.

Consumers who *like rice hull pots* were more likely to be younger consumers with higher incomes living in a non-metro area with fewer adults per household. As incomes increase, the likelihood of being in this segment increases at a higher rate.

African Americans and Hispanics are less likely to be members of the group who *liked straw pots*, as are consumers who are married or live with a partner. Having more adult members per household and living in a metro area increased the probability of being in this segment. Consumers who always recycle their plastic containers are also more likely to be in this segment.

The segment that *dislikes straw pots* is most likely comprised of persons who do not purchase flowering annuals, but do purchase indoor flowering plants. This segment is also more likely to agree that sorting household waste is too inconvenient, which implies they are less likely to be active in recycling efforts. They do, however, have an interest in locally produced bedding plants and plants grown in recyclable pots.

The *non-discriminating* segment does not have any distinguishable preferences that can be easily targeted by a marketing campaign. In general, this segment was made-up of older consumers of lower education and incomes that live in metro areas.

A consumer profile for the *carbon sensitive* segment could not be well defined since no statistically significant differences were found. This is most likely a direct effect of the small size of the market segment, but a mixture of varying beliefs or knowledge regarding carbon intensive footprints could also play a role. However, they are easily targeted by their liking of higher waste compositions and extreme disliking of a carbon intensive footprint.

IMPACT TO THE INDUSTRY

Industry participants can utilize these findings in developing marketing programs for biodegradable containers targeted specifically for the consumer segments identified. This research will greatly benefit the floral consumer by ensuring that environmentally-friendly products marketed to them in the future truly meet their “sustainability” needs and/or expectations.

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For additional information: chall@tamu.edu.

