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SCRI - CLEAN WATER³
REDUCE, REMEDIATE, RECYCLE

2017 California Nursery Conference

Water Management In Nursery and Greenhouse Production

Marketing water use to consumers

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Plants need water.

- But, do people need plants, especially in times of drought?
- Will they quit buying our products, or will they switch the type of plants they buy?
- What they are thinking will profoundly shape their behavior.
- So, what do consumers think about water, plants, and their landscape?

Water in the landscape

- In residential settings, indoor water usage remains relatively stable throughout the year and is related to household size and appliance efficiency.
- Outdoor water use is most often determined by garden type and importance, social norms, and size.
- Higher water usage is also associated with lifestyle preferences for large gardens, large lawns, color of green home environment, and high enjoyment of gardening.

Attitudes influence behavior

- We have some room for change in attitude and behavior. 25% of Australian homeowners reported watering their gardens three to four times weekly and even disregarded permitted levels of watering during water restrictions in drought.
- At the same time, another 24% of homeowner respondents reported never watering their garden.

Income and gender matter

- More income often means more water conservation. One study showed an income tipping point in households > $100,000 practiced water conservation more frequently and were more likely to adopt drought-tolerant plants into their landscape.
- Being female is also generally positively correlated with the adoption of drought-tolerant plants and more favorable attitudes regarding water conservation and environmentalism. In fact, male head-of-households were 20% less likely to adopt drought tolerant plants.

Marketing to consumers

- Messages are more likely to resonate with higher income and female consumers (key customer demographics for plant buyers)
- Must understand attitudes to begin to communicate with them where they are.

Information from recent three studies can help us understand consumer behavior

- 2015 study of 1555 respondents nationally, focused on bee health.
- 2016 study funded by SCRI WateR3 with 1477 respondents, focused on water source and plant water use in the landscape.
- 2017 retail garden center study

2015 Online Survey

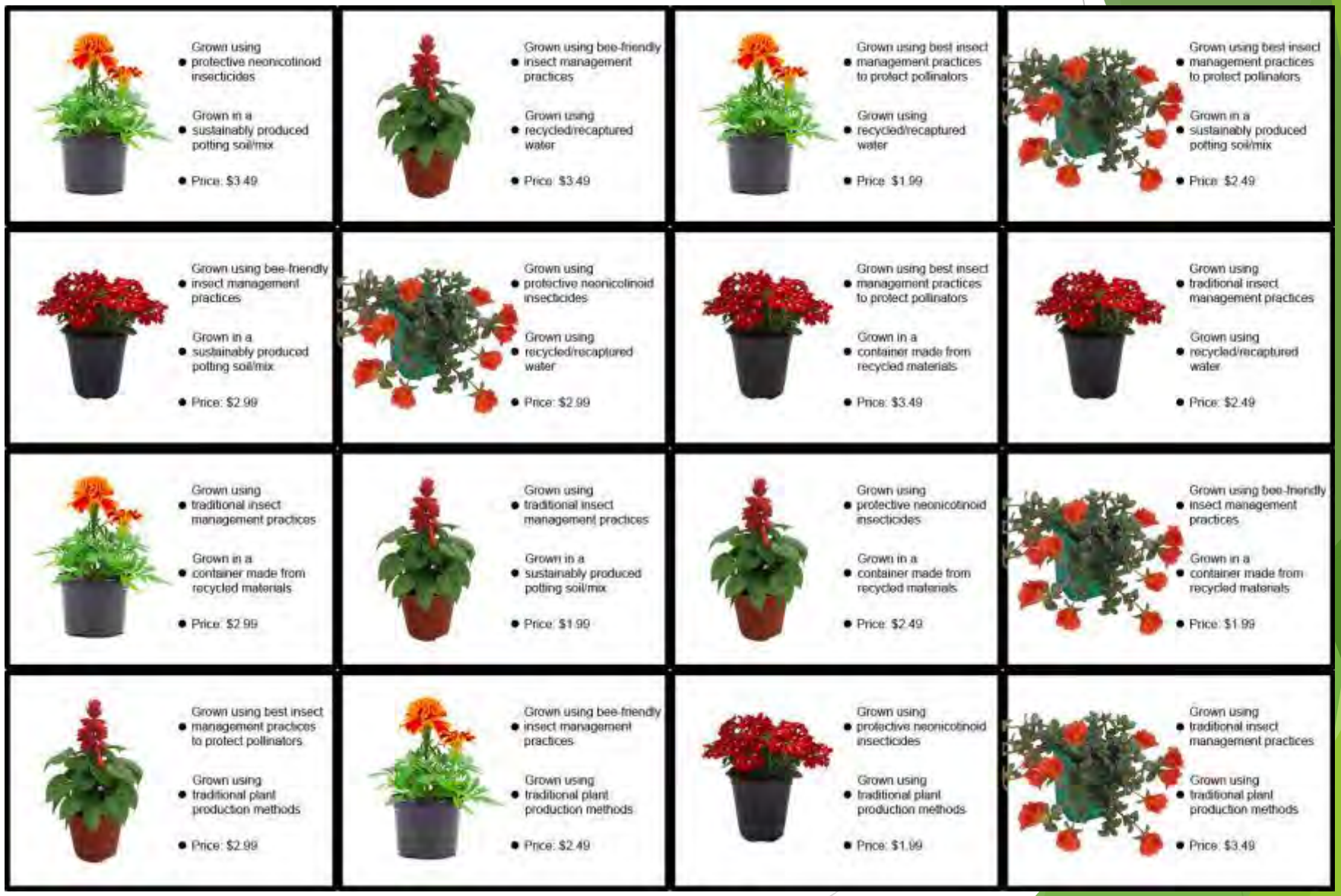
Included environmental component:

Sustainable potting mix,

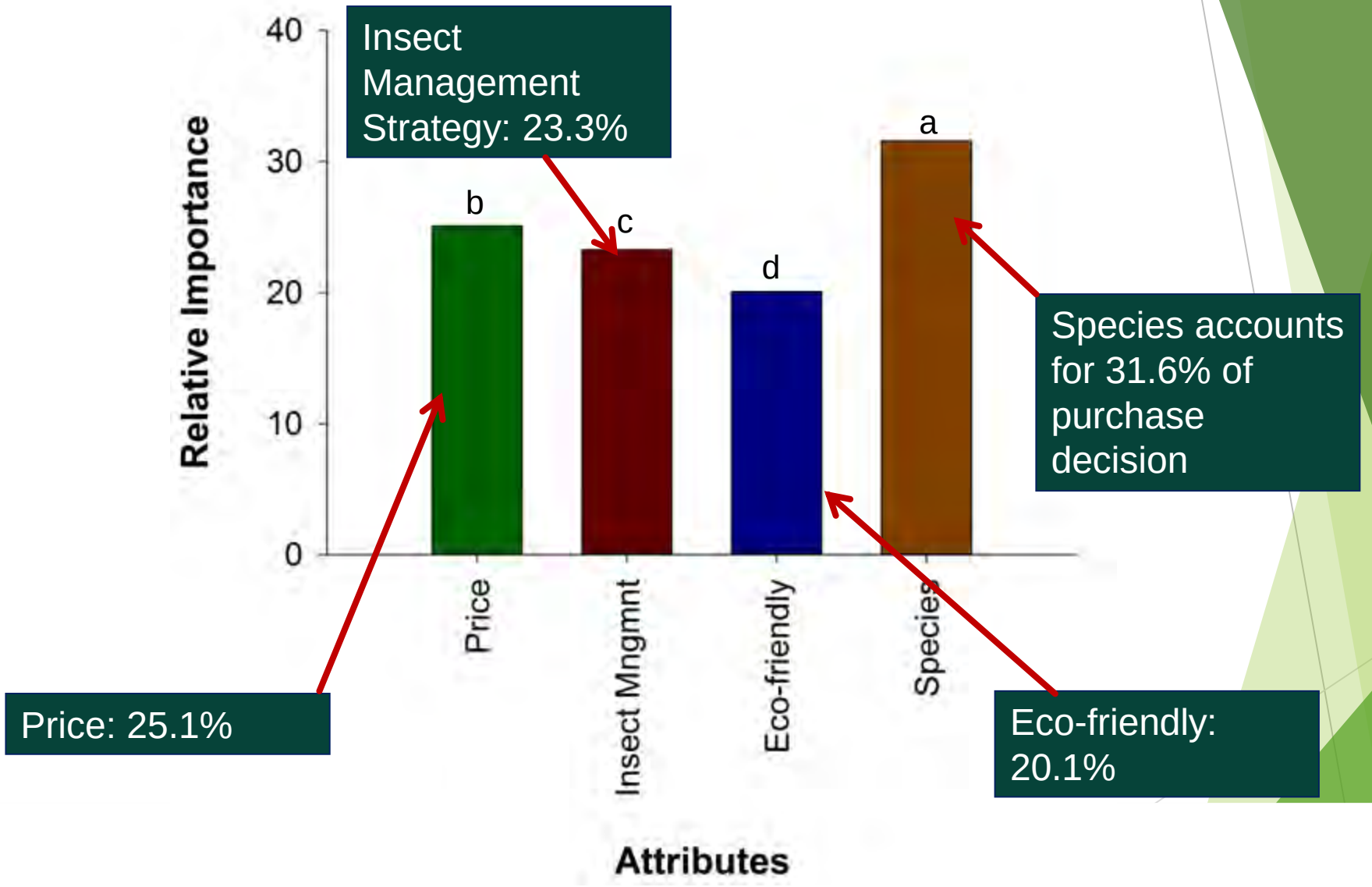
recycled container,

recycled water,

traditional practices



Relative importance of four product attributes in online survey in 2015.

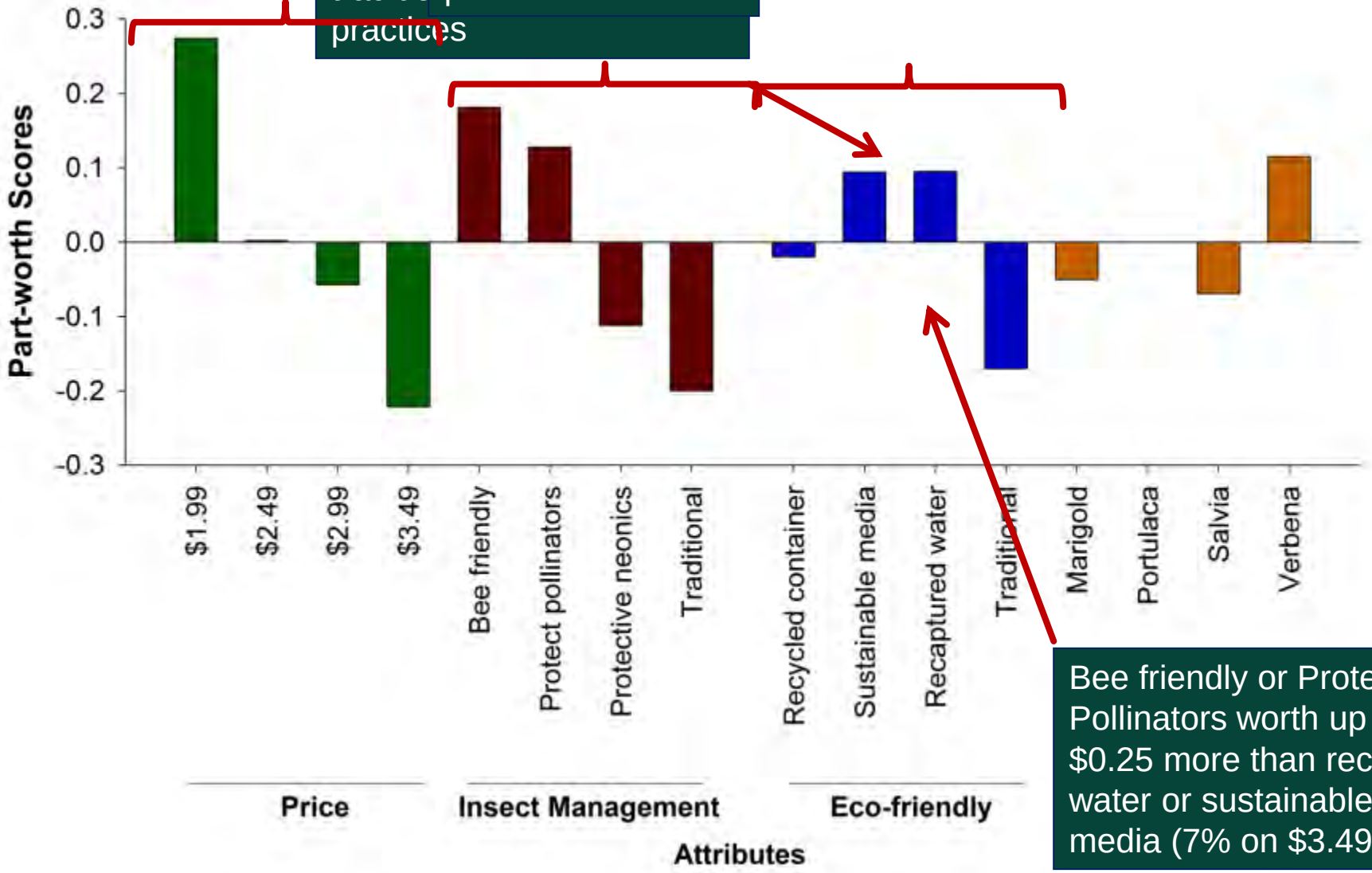


Getter, Kristin, Bridget Behe and Heidi Wollaeger. 2016. Comparative Consumer Perceptions on Eco-friendly and Insect Management Practices on Floriculture Crops. HortTechnology 26(1):46-53.

Low prices preferred to higher prices

Traditional least preferred, bee-friendly most preferred

Recycled/recaptured water and sustainable potting mix preferred over recycled pots and traditional methods

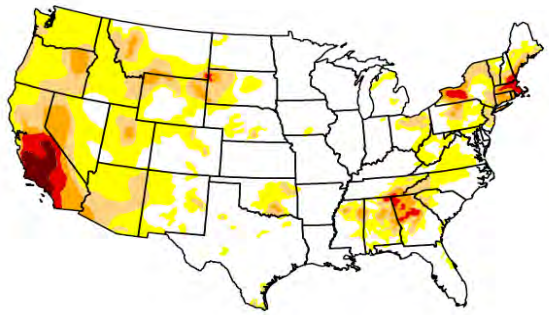


Bee friendly or Protecting Pollinators worth up to a $0.25 more than recycled water or sustainable media (7% on $3.49)

2016 SCRI Consumer Data

- SCRI grant, sought data set to investigate consumer perceptions in greater detail
- Asked about their water conservation expertise and interest as well as plant expertise and interest.
- Collected data 7 to 13 September 2016 with 1447 complete and useful responses.

- Compared three of four consumer groups using U.S. Drought Monitor classification for the area in which they lived, along with their drought perception.
  - Experienced real drought/ but it was not perceived (“Head in the Sand” we should be concerned about this group) NP/R
  - Experienced real drought/ and was perceived (accurate and in drought conditions) P/R
  - Experienced no real drought/ not perceived (normal circumstances) NP/NR
  - Experienced no real drought/ perceived (water contentious) P/NR



September 20, 2016
(Released Thursday, Sep. 22, 2016)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

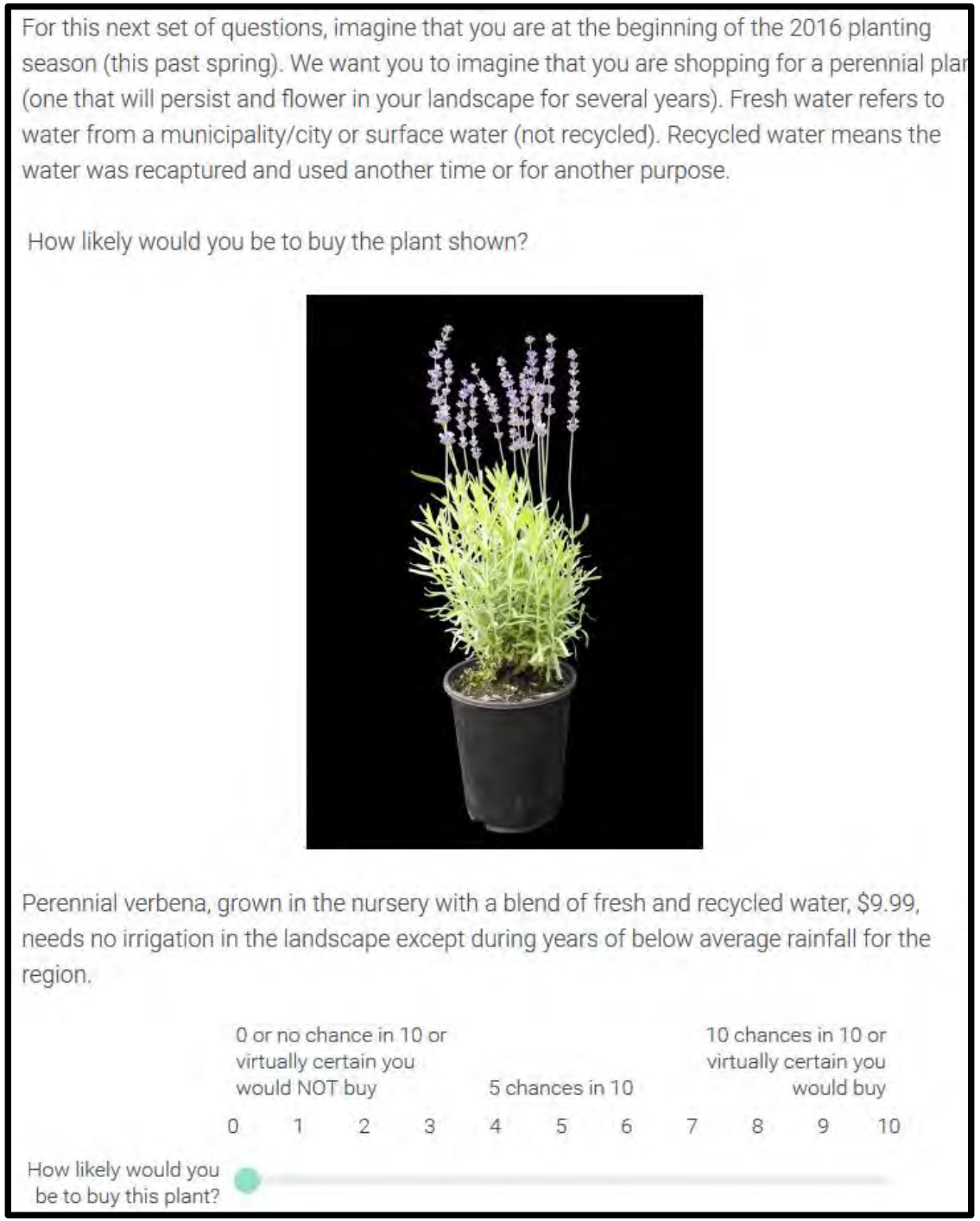
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	54.97	45.03	18.82	7.76	2.94	1.11
Last Week 9/13/2016	55.80	44.20	18.34	7.72	2.86	1.11
3 Months Ago 6/21/2016	58.77	41.23	14.80	5.05	2.26	1.11
Start of Calendar Year 12/29/2015	66.99	33.01	18.74	11.56	6.28	2.70
Start of Water Year 9/29/2015	44.91	55.09	31.36	20.09	11.45	3.00
One Year Ago 9/22/2015	45.19	54.81	31.47	19.79	11.35	3.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author(s):
Anthony Artusa
NOAA/NWS/NCEP/CPC



6 plants (3 perennials, 3 tree/shrubs)

3 prices (low, moderate, high)

3 water sources (fresh, recycled, blend)

2 landscape water uses (requires irrigation in the landscape, but only for the first season to help the plant become established OR requires irrigation in the landscape for most seasons after establishment.

What matters most (percent relative importance) in the purchase decision?

Plant most important. Water use importance increases in drought.

	Trees		
	Not Perceived/ Real Drought	Not Perceived/ Not Real	Perceived/ Real Drought
	Head in Sand	Normal	Drought
	n=645	n= 364	n=196
Plant	45.6 a	43.5 a	49.1 a
Water source	18.8 b	19.8 b	18.4 b
Water use Landscape	16.1 c	16.8 c	15.0 b
Price	19.6 b	19.9 b	17.5 b

Lower case letters indicate significant difference in column at $p \leq 0.05$.

Utility scores for production water source	All (n=1295)	Head in Sand (n=675)	Normal (n=377)	Drought (n=208)
Fresh water	0.201 (0.016)	0.240 A (0.021)	0.148 B (0.029)	0.169 AB (0.040)
Recycled water	0.054 (0.016)	0.050 (0.023)	0.064 (0.029)	0.041 (0.044)
Blend of fresh water and recycled water.	-0.256 (0.02)	-0.290 (0.026)	-0.212 (0.038)	-0.210 (0.057)

Fresh > Recycled > Blend

Especially for HIS group

Utility scores for landscape irrigation needs	All (n=1295)	Head in Sand (n=675)	Normal (n=377)	Drought (n=208)
Requires irrigation in the landscape, but only for the first season to help the plant become established.	0.207 (0.019)	0.141 B (0.026)	0.311 A (0.039)	0.224 AB (0.046)
Requires irrigation in the landscape for most seasons after establishment.	-0.207 (0.019)	-0.141 A (0.026)	-0.311 B (0.039)	-0.224 AB (0.046)

First Season > All Seasons

Very little difference for HIS

Very big difference for Normal

Moderate difference for Drought

Lower case letters designate significant differences in rows; upper case letters designate differences in the column.

Bogie Lake Greenhouse

2017 In-store retail study

6 retailers (2 Detroit, 2 Kalamazoo, 2 Grand Rapids)

Displayed sign for 6 weeks (comparable endcaps) and noted sales -, --, nc, +, ++

Approximately how much product did it take to restock endcap (indicate units sold)

Wenke Greenhouse

River Street Flowerland

- May 1-7 with sign ++ (70%) without sign ++ (40%)
- May 8-14 with sign ++ (35%) without sign ++ (31%)
- May 15-21 with sign + (20%) without sign ++ (33%)
- May 22-28 with sign + (18%) without sign + (19%)

A highly visible road sign and simple communication to hundreds of households in South Florida resulted in a 61% decrease in lawn watering. Findings also show that once the initial drop in lawn watering occurred shortly after the signs went up during the test year, the experimental group maintained a wide separation from the control group, at about 41 percent below the control group.

The rain-watered lawn: Informing effective lawn watering behavior by Felicia D. Survis and Tara L. Root in *Journal of Environmental Management*. Courtesy of Debbie Hamrick and New Terrain.

How do we market or communicate water attributes to consumers?

- Do make water part of the communication or conversation.
- Consider communicating more about plant water use in the landscape.
- Concerns over recycled water would suggest this not be a part of the conversation at this time. More work needs to be done.
- Where can you communicate this information? Website, paper communications, delivery trucks, employee uniforms, etc. Help retailers construct and label plant material that uses less water in the landscape.

Feature: What the product is

Benefit: What the product does

People don't buy features, they buy benefits!

FORUM: *Review, symposia, program and/or viewpoint papers.*

Economic, Environmental, and Health/Well-Being Benefits Associated with Green Industry Products and Services: A Review[1]

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Abstract

Green industry firms have competed for decades on the basis of quality and service. While these competitive dimensions are still important, the industry has continued along its path of maturation and firms must incorporate other factors into their value proposition in order to be successful in this hypercompetitive market. Given the recent economic downturn of 2008–2009, consumers are more value-conscious than ever, but are still willing to consume, and pay premiums for, products and services that enhance their quality of life. This paper summarizes the peer-reviewed research regarding the economic benefits, environmental benefits (eco-systems services), and health/well-being benefits of green industry products and services that serve to enhance the quality of life for consumers.

Index words: quality of life, human-plant interactions, value proposition, monetization of landscapes.

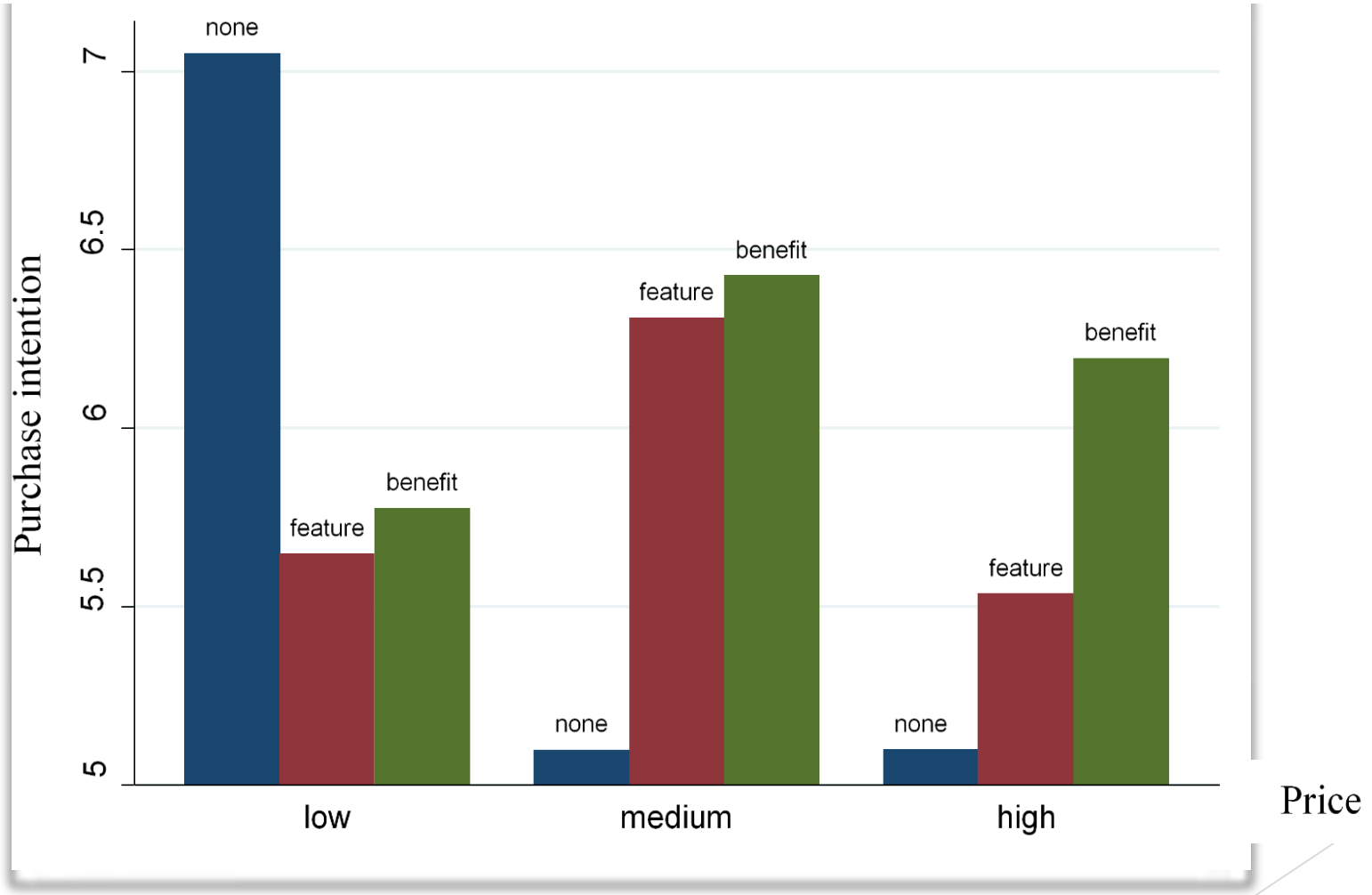
Significance to the Nursery Industry

This paper provides a review of the substantial peer-reviewed research that has been conducted regarding the significant benefits of green industry products and services including economic benefits, environmental amenities in the form of eco-systems services, and health and well-being benefits. This research should be strategically incorporated into both industry-wide and firm-specific marketing messages that highlight these quality of life dimensions in order to maintain the industry's sense of value and relevance for gardening and landscaping consumers of the future.

may involve greater firm-level risk. While the outlook may be somewhat unclear in terms of the outlook for industry growth and the nature of consumer demand, it is clear that the development of innovative management and marketing strategies will continue to be a requisite skill in ensuring the survivability and profitability of green industry firms in the future. Stated slightly differently, if the green industry can position itself in such a way that its products/services are considered to be *necessities* in people's lives and not mere *luxuries*, that is the best mitigation strategy against recession and weather-related risks it can employ.


Begonia
$1.99
Color all summer long
Sign Position: L, M, R
Plant
Price
Price Location: T, M, B
Plant, Feature, Benefit

Interaction of price (low, medium, high) and cue type (none, feature, benefit)



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