The Power of Plants: We’re More than Just Pretty (and how to capitalize on that)

Dr. Charlie Hall
Ellison Chair in International Floriculture
Texas A&M University
carliehall@tamu.edu
EllisonChair.tamu.edu

Consumers are spending, but on what?

Real Personal Consumption Spending
January 2005 to March 2011
Personal consumption expenditures consist of the actual and imputed expenditures of households; the measure includes data pertaining to durables, non-durables and services. It is essentially a measure of goods and services targeted toward individuals and consumed by individuals.
Consumers spend if products offer value and are relevant and authentic!

Elements of perceived value

1. Functional/instrumental value
2. Experiential/hedonic value
3. Symbolic/expressive value
4. Cost/sacrifice value
ARE WE RELEVANT?
Benefits of human-plant interactions

- Economic benefits
- Eco-systems services benefits
- Health & well-being benefits
Environmental Benefits
(Ecosystems Services)

<table>
<thead>
<tr>
<th>Carbon sequestration</th>
<th>Reduced noise pollution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved air quality</td>
<td>Reduced soil erosion</td>
</tr>
<tr>
<td>Attracts wildlife and promotes biodiversity</td>
<td>Reduced storm water runoff</td>
</tr>
<tr>
<td>Energy cost savings associated with heating / cooling</td>
<td>Improved water quality</td>
</tr>
<tr>
<td>Reduced heat and cold damage</td>
<td>Reduced urban glare</td>
</tr>
<tr>
<td>Offsets heat islands</td>
<td>Effective windbreaks</td>
</tr>
<tr>
<td></td>
<td>Increased biodiversity</td>
</tr>
</tbody>
</table>
## Benefits of human-plant interactions

### Economic Benefits
- Beautification draws customers & reduces shopping stress
- Boosts occupancy rates
- Generates tourism revenue
- Job creation from increased services demanded
- Reduced health care costs
- Increased property values
- Tax revenue generation
- Reduced street repairs and maintenance costs
- Upgrade effects of surrounding areas
- Revenue from educational programs & special events

### Environmental Benefits
- Carbon sequestration
- Improved air quality
- Attracts wildlife and promotes biodiversity
- Energy cost savings associated with heating / cooling
- Reduced heat and cold damage
- Offsets heat islands
- Reduced noise pollution
- Reduced soil erosion
- Reduced storm water runoff
- Improved water quality
- Reduced urban glare
- Effective windbreaks
- Increased biodiversity

### Health/Well-being Benefits
- Improved concentration and memory retention
- Enhanced learning capacity
- Plants generate happiness
- Reduced stress and depression
- Health and recreation benefits
- Accelerates healing process
- Therapeutic effects of gardening
- Improves relationships / compassion
- Improved human performance / energy
- Medicinal properties
- Improved mental health
- Reduced community crime
- Traffic safety / driver satisfaction

## Remember these principles?

1. **Expenditures rise to meet income.**
   -- (C. Northcote Parkinson)

2. **People afford what they want.**
   -- (Lowell Catlett)
We enhance quality of life.

If we can position ourselves in such a way that we are viewed as necessities in people’s lives and not mere luxuries, that is the best recession-proofing and weather-proofing we can do.

Quality of Life Constructs

1. Social Well-Being
2. Physical Well-Being
3. Psychological Well-Being
4. Cognitive Well-Being
5. Environmental Well-Being
6. Spiritual Well-Being
Social well-being

- Sociocultural/socioeconomic/class status
- Political environment
- Adequate income/wealth/financial status
- Standard of living/lifestyle
- Material possessions/resources/circumstances
- Social relationships/contact/interactions/networks
- Opportunities for fun, humor, enjoyment, and creativity
- Sense of connectedness between home, neighborhood, and community

Physical well-being

- Biological/physical well-being; medical status
- Personal hygiene/grooming/clothing/appearance
- Nutrition
- Exercise/physical fitness
- Illness/disease/injury/disability
- Non-life-threatening conditions
- Somatic sensation; pain and discomfort
- Occupational function; level of physical functioning ability (activities of daily living)
### Psychological well-being

- Emotional/mental health
- Feelings/emotions/affect/mood/morale/attitude
- Coping abilities; Levels of stress
- Self-worth/self-esteem/self-concept/sense of being
- Enjoyment/pleasure/happiness
- Life satisfaction/level of life acceptance
- Satisfaction with programs/services/care/setting
- Achievement of personal goals, hopes, aspirations
- Freedom/choice/control over life/independence

### Cognitive well-being

- Thinking processes
- Life management skills
- Memory/learning ability/concentration
- Decision-making
- Problem-solving/judgment/logic
Environmental well-being

- Living arrangements/housing conditions
- Privacy/confidentiality
- Stimulating environment
- Personalization/familiarity; “homeness” of surroundings
- Cleanliness/sanitary conditions
- Safety

Spiritual well-being

- Personal values/morals/beliefs
- Standards of conduct; day-to-day choices; moral decisions
- Religious affiliation/involvement
- Human drive; sense of life’s purpose
- Sense of wholeness/completeness
- Adherence to religious practices/traditions/customs
- Faith/belief in “higher power”
Retail Messages

Did You Know That…

Flowers increase compassion, enhance moods, and increase productivity at home and at work.
Did You Know That…

The added value of an attractive landscape to a home's perceived value is about 9 percent.

Did You Know That…

Design sophistication is the highest ranked factor that adds to the perceived value of a home. Thus, investing in the services of a landscape design professional will optimize the value of a home.
A 25-foot tree reduces the annual heating and cooling costs of a typical residence by 8-12% -- an average of $10 savings per household.

People worry less in the midst of flowers. The likelihood of depression is greatly reduced by flowers as well.
Did You Know That...

A mature tree canopy reduces air temperature by about 5-10° F and also reduces the internal temperatures of nearby buildings.

Did You Know That...

A typical person consumes about 386 lbs of oxygen per year. A healthy tree about 32 ft tall can produce about 260 lbs of oxygen annually. Two trees can therefore supply the oxygen needs of a typical person each year.
Did You Know That...

The canopy of a street tree absorbs the impact of water that falls on pavement and then must be removed by a storm water drainage system.

Did You Know That...

Gardening and landscaping offers many opportunities for exercise and socialization for persons who are learning to deal with limitations such as sensory loss & physical decline.
Gardening helps to burn calories as an alternative to working out.

Planting landscape buffers can reduce the flow of sediments and pollutants into nearby bodies of water.
Did You Know That...

In a work environment, plants help create a more creative/innovative thought and problem solving process.

Did You Know That...

Plant-filled rooms contain 50% to 60% fewer airborne molds and bacteria than rooms without plants.
Did You Know That…

A tree shading an outdoor air conditioner unit can increase its efficiency by as much as ten percent.

Did You Know That…

An average tree absorbs 26 pounds of carbon dioxide from the air each year and releases enough oxygen each day to supply a family of four.
Did You Know That…

Women 50 and older who gardened at least once a week had higher bone density than those who jogged, walked, swam or did aerobics.

Did You Know That…

Plants in the office reduce employee sick time by 14%.
Did You Know That…

Plants increase civic pride, community involvement, economic development, and decrease vandalism & crime rates

What does it look like if we go it right?
Price elasticity and revenue

Introduction

Growth

Maturity

Decline

Sales

Profits

Time

Dollars

Introduction

Growth

Maturity

Decline

Sales

Profits

Time

Dollars

Introduction

Growth

Maturity

Decline

Sales

Profits

Time

Dollars

Introduction

Growth

Maturity

Decline

Sales

Profits

Time

Dollars

Introduction

Growth

Maturity

Decline

Sales

Profits

Time
Pricing in the long run

(a) Typical Firm
(b) Total Market

EllisonChair.tamu.edu

Ellison Chair in International Floriculture

Mission Statement:
The mission of the Chair is to advance the health and viability of the floriculture industry on a national and international scope through exemplary academic leadership, cutting-edge applied research, innovative extension-outreach programs, and by mentoring well-educated, impassioned leaders to support the future of floriculture.