Household Behavior and Homeowner Education Strategies

Water Conservation: half-empty or half-full?

Regional Webinar Series

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Review of Social Marketing as Applied to Water Conservation Behaviors

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Definition of Social Marketing

• ...use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify or abandon a behavior for the benefit of individuals, groups, or society as a whole.

(Kotler, Roberto and Lee 2002)
Features of Social Marketing

1. Consumer behavior is the bottom line
2. Programs must be cost effective
3. All strategies begin with the customer
4. Interventions must involve all of 4Ps
5. Market research is essential to designing, pretesting and evaluating programs
6. Markets are carefully segmented
7. The competition is always recognized
4Ps

1. Product
   (3 interpretations: augmented, actual, core)

2. Price (what are barriers to change)

3. Placement (make it convenient)

4. Promotion (advertising, branding, spokespersons)
Landscape irrigation
Example: Audiences and behavior

1. Estimated 800,000 acres (or more) in Florida.

2. Those who irrigate their lawns are using up to 65% of their total water outside of the home.

3. Most studies show they are watering too much and often do not know how to adjust their irrigation timer.

4. Many who overwater are subject to codes and covenants and belong to HOAs.
Homeowners and irrigation BMPs: What are the behavioral objectives?

The amount of water a lawn needs depends on several factors: the type of grass, how it is maintained, the site (shady or sunny?), and the time of year. The best approach is to water "as-needed" when areas of the lawn begin to show wilt. This approach keeps your lawn lean and mean.

Some signs of wilt are:
1. The grass color becomes a blue-gray rather than a clear green;
2. Footprints remain for a long time when the grass is walked on.
3. Grass blades fold in half lengthwise.
4. Soil samples from the root zone feel dry.
How much water to apply?
(if it hasn’t rained)

1. In the summer: \( \frac{3}{4} \) to \( \frac{1}{2} \) an inch two times per week.
2. In the winter, once every 10-14 days
3. How long do I run the irrigation?

\[
\text{Maximum number of zones} = \frac{(T \times R)}{D}
\]

Where:
- \( T \): maximum time available for irrigation between cycles (hours)
- \( R \): irrigation application rate (inches/hour)
- \( D \): irrigation depth per application (inches)
What do surveys show as common practices?

If you have an irrigation system, what best describes the way it is set to operate: n = 81

- Set and left alone – 32 (39.51%)
- Set seasonally – 36 (44.44%)
- Turn on manually – 9 (11.11%) ***
- Someone else sets – 4 (4.94%)
Barriers to change

HOA, landscapers and lifestyle contribute to management approaches

Not interested in learning a lot of information

Recognize potential for environmental degradation from lawns

Do not understand stormwater systems

Risk of declining home value with change

Comfortable with the status quo
Before we decide on social marketing

1. Should we educate them about the water requirements of their lawn, the mechanics of their irrigation system or the ways they can save water?

2. Should we look to technological fixes such as soil moisture sensors, private companies that “tune-up” or reset their irrigation timers?

3. Should we encourage low water landscapes?
Is there an alternative to the BMP approach?
Irrigated Turf Percentages:

Significant differences exist between those who report up to 25% irrigated turf in their lawn and those who report having more than 25% of their lawn irrigated. These differences occur in:

• Being within an HOA - Those with lower irrigated turf areas are less likely to be in an HOA than those with larger areas of reported irrigated turf ($\chi^2 = 30.57, p < .000$).

• Type of HOA - Those with lower irrigated turf areas are less likely to be in an HOA deemed very strict or somewhat strict than those with larger areas of reported irrigated turf ($\chi^2 = 30.73, p < .000$).

• Using a Lawn Service - Those with lower irrigated amounts of turf are less likely to use a lawn service than those with larger areas of reported irrigated turf ($p < .000$).
**Irrigated Turf Percentages:**

- **Fertilization Frequency** - Those with lower irrigated turf areas are less likely to fertilize their lawns more than twice per year than those with larger areas of reported irrigated turf ($\chi^2 = 36.98, p < .000$).

- **Rain Barrel** - Those with lower irrigated turf areas are more likely to have a rain barrel than those with larger areas of reported irrigated turf ($\chi^2 = 15.61, p < .000$).

- **Water Conservation Behaviors** - Those with lower irrigated turf areas are more likely to exhibit more water-conservation practices (both in-home and yard) than those with larger areas of reported irrigated turf ($p < .000$).

No significant differences appear to exist for:

- **Irrigation Freq.** ($\chi^2 = .36, p = .55$).
- **Extension Contact Freq.** ($\chi^2 = 2.55, p = .11$).
**Rain Barrel Items:** n=189

In regards to owning a Rain Barrel:
- 189 report owning a rain barrel, though some refer to creating a DIY version, using a bucket or trash can instead of a true system
- 334 report not owning any sort of rain collection system

Comparing owning a rain barrel to the frequency of practicing other water conservation behaviors:
- If participants report owning a rain barrel, they are significantly more likely to practice other water conservation behavior both inside the home and in the yard than those who do not own a collection system ($p < .000$)
How do we know if we are doing social marketing correctly?

Do we have a clear behavioral objective?

Will the customer receive a benefit (that they value)?

Have we defined and described a target group that will be measured for acceptance or rejection of the behavior?

Have we recognized the barriers and tried to lower them?
Is extension ready for cbsm?

1. Target audience versus the public
2. Behavior change versus education
3. Allegiance to stakeholders and advisory boards
4. Content specialists versus process specialists
5. Can we give the public what it wants?
6. Can we agree on environmental sustainability?
Conclusions

1. Social marketing is a proven methodology for changing behaviors
2. Community based social marketing improves the methodology by collaborating with groups of target audiences
3. Social marketing is most effective when you use all of the tools (8Ps)
4. We have to make difficult decisions first before turning to social marketing
Social marketing websites

• The Social Marketing Institute
  (social-marketing.org)

• Fostering Sustainable Behavior (cbsm.com)

• Tools of Change (toolsofchange.com)

• socialmarketingquarterly.com

• waterwordsthatwork

• On Social Marketing and Social Change
  (socialmarketing.blogs.com)
Thank You!

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