

FLORIDA RESIDENTS'

FERTILIZER

PRACTICES AND PERCEPTIONS

An overview for outreach and Extension professionals

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AGENDA



**FLORIDIANS'
FERTILIZER
USE**



**FLORIDIANS'
PERCEPTIONS
OF
FERTILIZER
PRACTICES**



**INFLUENCE
OF VIDEOS
ON
FERTILIZER
PRACTICES**



**IMPLICATIONS
FOR
EXTENSION
AND
RESEARCH**

**IMPROPER
FERTILIZER
APPLICATION
CAN CONTRIBUTE
TO WATER
QUALITY
IMPAIRMENT**

**DISCONNECT
BETWEEN
FERTILIZER
PRACTICES AND
PERCEIVED
INFLUENCE ON
WATER QUALITY**



01.

**MOST
RESIDENTIAL
LAWNS ARE
FERTILIZED AND
PRACTICES ARE
HIGHLY
VARIABLE**



02.



03.

**PROTECT WATER
QUALITY BY
PROMOTING
FERTILIZER
APPLICATION
WHEN CONDUCIVE
TO PLANT UPTAKE**



04.

DEMOGRAPHICS

**FLORIDA RESIDENTS
18-YEARS AND OLDER**

FLORIDA RESIDENCE

1-4 years: 12%

5-9 years: 12%

10-19 years: 21%

20-29 years: 21%

30-39 years: 15%

40-49 years: 10%

50+ years: 10%

AGE

19-29: 10%

30-39: 12%

40-49: 13%

50-59: 20%

60-69: 29%

70-79: 15%

80+: 2%

DEMOGRAPHICS

GENDER
RACE

GENDER

Male: 39%

Female: 61%

RACE

Hispanic/Latino: 11%

American/Alaskan Native: 2%

Black/African American: 6%

Asian/Pacific Islander: 3%

White: 89%

Other: 2%

DEMOGRAPHICS

EDUCATION
PROPERTY OWNERSHIP

EDUCATION

Less than High School: 1%
High School/GED: 13%
Some College: 20%
2-year College Degree: 14%
4-year College Degree: 30%
Masters Degree: 16%
Doctoral Degree: 3%
Professional Degree: 4%

PROPERTY OWNERSHIP

Own: 85%
Rent: 14%
Other: 1%

DEMOGRAPHICS

**HOME OWNERS'
ASSOCIATION
(HOA)**

PART OF AN HOA

Yes: 47%

No: 50%

Unsure: 3%

LANDSCAPING POLICIES

Yes: 78%

No: 15%

Unsure: 8%

REWARDS FOR LANDSCAPING

Yes: 27%

No: 62%

Unsure: 10%

PENALTIES FOR LANDSCAPING

Yes: 76%

No: 15%

Unsure: 9%

CURRENT

*Always/often
engage in behavior*

78%

74%

66%

54%

FERTILIZER PRACTICES

READ LABEL ON FERTILIZER
BAG TO MAKE SURE TO APPLY
RIGHT AMOUNT

WATER-IN FERTILIZERS AFTER
APPLICATION TO MOVE
FERTILIZER INTO SOIL FOR
UPTAKE BY PLANT

SWEEP AWAY FERTILIZER ON
PAVED SURFACES AND PUT
BACK IN BAG OR ON LANDSCAPE

SELECT SLOW-RELEASE
NITROGEN PRODUCTS WHEN
PURCHASING FERTILIZERS

FUTURE

*Very likely/likely to
engage in behavior*

84%

82%

77%

70%

CURRENT

*Always/often
engage in behavior*

35%

33%

25%

21%

FERTILIZER PRACTICES

**ENSURE LANDSCAPE
PROFESSIONAL HAS GREEN
INDUSTRIES BMP
CERTIFICATION TO APPLY
FERTILIZER**

**WHEN HIRING A LANDSCAPE
PROFESSIONAL, ASK IF THEY
HAVE TRAINING IN FERTILIZER
APPLICATION**

**APPLY FERTILIZERS BASED ON
SOIL TEST RESULTS**

**TEST SOIL TO KNOW WHAT
NUTRIENTS IT NEEDS BEFORE
FERTILIZING**

FUTURE

*Very likely/likely to
engage in behavior*

47%

49%

54%

52%

PERCEIVED BEHAVIORAL CONTROL

IMPLEMENTING GOOD FERTILIZER PRACTICES

4.51: Possible for me/Not possible for me

4.24: Easy for me/Not easy for me

4.34: In my control/Not in my control

4.38: Up to me/Not up to me

4.32: Practical for me/Not practical for me

PERSONAL NORMS

4.35 I feel a personal obligation to carefully apply fertilizer according to plants' needs

4.28 I feel a personal obligation to read the fertilizer label before application

4.08 I feel a personal obligation to explore ways to reduce my landscape's impact on water quality

3.91 It is important to encourage my friends and family to apply fertilizers properly

3.80 I feel a personal obligation to encourage my friends and family to carefully apply fertilizers in their landscapes



SOCIAL NORMS

4.09 The people who are important to me would approve if I applied fertilizers appropriately

4.04 The people who are important to me expect that I will read the fertilizer label before applying fertilizer

3.99 The people who are important to me expect that I carefully apply fertilizer according to plants' needs

3.96 The people who are important to me would expect that I use good fertilizer practices



**INTERESTED
IN
LEARNING
MORE
ABOUT**

53%

**HOME AND GARDEN
LANDSCAPE IDEAS**

36%

**WATER-SAVING
IRRIGATION
PRACTICES**

34%

**FERTILIZER
MANAGEMENT**

33%

**PESTICIDE
MANAGEMENT**

30%

**WATER-SAVING
IRRIGATION
TECHNOLOGIES**

**INTERESTED
IN
LEARNING
MORE
ABOUT**

35%

**ALTERNATIVE WATER
RESOURCES**

33%

**IMPACT OF WATER
CONSERVATION ON
LANDSCAPES**

32%

**IMPACT OF WATER
CONSERVATION INSIDE
THE HOME**

32%

**WATER AVAILABILITY
FOR FUTURE
GENERATIONS**

30%

**IMPACT OF CLIMATE
CHANGE ON WATER
RESOURCES**

**INTERESTED
IN
LEARNING
OPPORTUNITIES**

49%

**VISIT A
WEBSITE**

38%

**WATCH A
VIDEO**

37%

**READ PRINTED FACT
SHEETS, BULLETINS, OR
BROCHURES**

33%

**READ A NEWSPAPER
ARTICLE OR SERIES**

32%

**WATCH TV
COVERAGE**



RESULTS

- Lowest practices:
 - Soil testing
 - Application based on test results
 - Ensuring certification of hired professional
- Future behavior intent:
 - Higher than current behaviors
- High perceived control to implement good practices
- Personal norms:
 - Higher than social norms
- Don't feel obligated to encourage family and friends
- Top learning interests are not directly related to fertilizer

IMPLICATIONS

PRACTICES

- Encourage continued reading of labels and intent for future behaviors
- Reinforce perceived control to implement good practices
- Create more visible social norms



IMPLICATIONS

EDUCATION

- Opportunities for education:
 - Soil testing
 - Asking professionals for certification
 - Deliver desired learning interests and find ways to integrate fertilizer practices
- Encourage people to talk with family & friends



RESEARCH OBJECTIVES

**DESCRIBE FLORIDIANS'
ATTITUDES AND ELABORATION
TOWARD FERTILIZER
PRACTICES**

**DETERMINE HOW THE FRAME AND
GOAL-ORIENTATION OF VIDEO
MESSAGES IMPACT FLORIDIANS'
ATTITUDE TOWARD FERTILIZER
PRACTICES**

**DETERMINE HOW THE FRAME
AND GOAL-ORIENTATION OF
VIDEO MESSAGES IMPACT
FLORIDIANS' ELABORATION
RELATED TO FERTILIZER
PRACTICES**

GOAL ORIENTATION MESSAGE



NON-GOAL MESSAGE

The purpose of this section is to investigate how people like you consume information presented in a video. Your task is to examine the video just as you would if it were a video you were interested in viewing. Following the video, you will be asked some questions about your thoughts and perceptions.

GOAL MESSAGE

The purpose of this section is to investigate how people like you consume information presented in a video. Particularly, we are interested in how you consume information about proper fertilizer practices. Proper fertilizer practices are important in helping to protect our water resources. If proper fertilizer practices are not followed, we may damage our ecosystem. Your task is to examine the video just as you would if it were a video you were interested in viewing. Following the video, you will be asked some questions about your thoughts and perceptions.

TREATMENT GROUPS

No goal message

GROUP 1

Personal frame video



Goal message

GROUP 2

Personal frame video



No goal message

CONTROL GROUP

No video

No goal message

GROUP 3

Social frame video



Goal message

GROUP 4

Social frame video





PERSONAL FRAME

VIDEO





SOCIAL FRAME
VIDEO



ATTITUDE MEASUREMENT

**IMPLEMENTING GOOD
FERTILIZER PRACTICES IS**

BAD:GOOD
UNIMPORTANT:IMPORTANT
FOOLISH:WISE
HARMFUL:BENEFICIAL
NEGATIVE:POSITIVE
UNNECESSARY:NECESSARY



ELABORATION MEASUREMENT

**WHILE VIEWING
THE VIDEO, WERE YOU**

NOT VERY ATTENTIVE TO IDEAS
UNCONCERNED WITH THE IDEAS
DISTRACTED BY OTHER THOUGHTS
NOT REALLY EXERTING YOUR MIND
RESTING YOUR MIND
TAKING IT EASY



ATTITUDES OF TREATMENT GROUPS

No goal message

GROUP 1

Personal frame video



M=4.76



Goal message

GROUP 2

Personal frame video



M=4.78

No goal message

CONTROL GROUP

No video

M=4.68

No goal message

GROUP 3

Social frame video



M=4.78



Goal message

GROUP 4

Social frame video



M=4.82

**ELABORATION
OF
TREATMENT
GROUPS**

No goal message

GROUP 1

Personal frame video



M=2.79



Goal message

GROUP 2

Personal frame video



M=2.78

No goal message

**CONTROL
GROUP**

No video

NOT MEASURED

No goal message

GROUP 3

Social frame video



M=2.76



Goal message

GROUP 4

Social frame video



M=2.80

RESULTS



- Significant difference in respondents' attitudes toward fertilizer practices were found
- Significant difference was found between the control group and respondents receiving the social frame video with goal orientation message
- No significant difference in elaboration of groups

IMPLICATIONS

EXTENSION PROFESSIONALS

- Utilize videos
- Utilize value framing
- Use social frames
- Use goal-orientation
- Paired together is most effective
- Test messages prior to release

RESEARCH

- Video variables
- Increased elaboration
- Other contexts
- Thought-listing/qualitative methods
- Repeated exposure
- Longitudinal design





CONTACTS

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