#### The Florida Senate

COMMITTEE MEETING EXPANDED AGENDA

#### APPROPRIATIONS Senator Bradley, Chair Senator Simpson, Vice Chair

MEETING DATE:	Wednesday, February 13, 2019
TIME:	10:00 a.m.—12:00 noon
PLACE:	Pat Thomas Committee Room, 412 Knott Building

**MEMBERS:** Senator Bradley, Chair; Senator Simpson, Vice Chair; Senators Bean, Benacquisto, Book, Brandes, Braynon, Flores, Gainer, Gibson, Hutson, Lee, Mayfield, Montford, Passidomo, Powell, Rouson, Simmons, Stargel, Stewart, and Thurston

		BILL DESCRIPTION and	
TAB	BILL NO. and INTRODUCER	SENATE COMMITTEE ACTIONS	COMMITTEE ACTION

1 Presentation on Citrus Industry in Florida

Presented

Other Related Meeting Documents

#### Fiscal Year 2018-19 Citrus Funding

Issue	GR	TF	Total by Issue	Comments
Department of Agriculture and Consumer Services - Citrus Research		\$8,000,000	\$8,000,000	Funds are transferred to the Citrus Research and Development Foundation for research projects.
Department of Agriculture and Consumer Services - Citrus Health Response Program (CHRP)		\$7,055,176	\$7,055,176	Surveying of groves for pests and diseases and to ensure growers are taking appropriate measures to suppress disease incidence and minimize spread. Includes nursery inspection program for disease-free trees for new plantings and the citrus budwood program which supplies nurseries with clean budwood stock.
Department of Agriculture and Consumer Services - Citrus Crop Decline Supplemental Funding	\$2,500,000		\$2,500,000	Provides supplemental funding in the Citrus Inspection Trust Fund to offset the decrease in citrus box taxes revenues. Trust fund has historically supported inspections, the agricultural statistics program and the Citrus Budwood Program.
Department of Citrus - Florida Forward Consumer Communication Program	\$5,000,000		\$5,000,000	Consumer and influencer education and engagement program that provides citrus nutrition information to consumers as well as pediatricians, family physicians, dietitians, and nutritionists regarding the nutritional value of citrus products.
Department of Citrus - New Citrus Varieties Development	\$650,000		\$650,000	Program evaluates and prioritizes the state's need for new citrus varieties. The program was established to support in- state breeding of new varieties for consumer market expansions and disease resistance to benefit citrus growers and the industry.
Total Appropriation	\$8,150,000	\$15,055,176	\$23,205,176	

## The State of the Florida Citrus Industry

Senate Appropriations Committee February 13, 2019

Presented by Michael W. Sparks, Florida Citrus Mutual

#### Florida Means Citrus

- Citrus introduced to Florida by Spanish explorers, probably Ponce de Leon
- First plantings in St. Augustine around 1513
- Commercial citrus production began to gather steam in 18<sup>th</sup> century
  - Soon after the Civil War, Florida's annual commercial citrus production totaled one million boxes
  - Climbed to more than five million boxes by 1893
- 1945 production exceeded 43 million boxes.



Photo courtesy of State of Florida Archive



#### Florida Means Citrus

- FCOJ Invented in 1945, orange juice would become Florida's signature product
- At its peak, Florida citrus plantings reached nearly 860,000 acres 1996
  - 244 Million boxes of oranges
  - 50 Million boxes of grapefruit
- 95% of Florida citrus crop is processed for orange juice
- Florida Citrus Growers
  - Growing citrus for 500 years
  - 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> generation family farms
  - Resilient bunch ALWAYS DEALT WITH OBSTACLES



Photo courtesy of UF/IFAS

#### The Past Decade Has Been Difficult... The Most Challenging in the History of Florida Citrus

- Invasive Pest & Diseases
- Hurricane Irma September 10, 2017
- Significant production loss
- Falling orange juice consumption

Florida Citrus is at a Crossroads!



#### Huanglongbing, HLB, or Citrus Greening

- No single factor has contributed more to the decline in citrus production than HLB
- Bacterial disease spread by the Asian Citrus Psyllid
- Attacks a tree's vascular system and reduces fruit production to unsustainable levels in just a few years
- The solution may be a combination of research findings and not one "silver bullet" answer
- All commercial citrus groves with mature trees have been infected by HLB
- Tree mortality now exceeds tree replanting rates
- Grower production costs have tripled while utilizing a "mixed bag" strategy and focusing on increased production from existing groves



Photo courtesy of UF/IFAS

#### Hurricane Irma

- Florida citrus took another hit from Mother Nature when Hurricane Irma made landfall on September 10, 2017
- Hurricane tore through the heart of the Florida citrus industry with a methodical march through Collier, Lee, Charlotte, Desoto, Highlands, Hendry, Glades and Polk counties
- Nearly the entire 400,000 acre citrus industry was affected
  - Winds up to 110 miles per hour
  - Reports of rainfall topped 19 inches
  - Reports of 100 % fruit blown off tree and trees uprooted
  - East side of the storm, the strongest side, ripped through citrus' primary growing regions
- Citrus damage estimated at \$760 million.





#### **USDA Financial Assistance for Florida Citrus Growers**

- Hurricane Irma September 2017
- Congressional Appropriations February 9, 2018
  - Wildfire and Hurricane Indemnity Program (WHIP)
  - Florida Citrus Recovery Block Grant \$340 million
    - Appreciative
    - Frustrated
    - Encouraged
- Major revisions to the USDA RMA Citrus Crop Insurance Program - ongoing



Florida Citrus	Season	Boxes	Bearing Acres
by Boxes & Acres	2007-08	203,800,000	538,900
	2008-09	189,200,000	530,900
	2010-11	166,050,000	503,600
	2012-13	156,230,000	489,600
	2014-15	112,650,000	460,641
	2016-17	77,420,000	436,867
	2017-18	49,580,000	447,012
Stressed Grove	2018-19 Est.	86,900,000	447,012

#### **Economic Impact of Huanglongbing**

	2007-08 Season	2018-19 Season	Decrease	Percent Decrease
Production Boxes				
(millions)	203.8	86.9	(116.9)	-57%
Bearing Acres	538,900	447,012	(91,888)	-17%
Annual On-tree Value				
(billion)	\$1.5	\$0.8	(\$0.7)	-47%
Annual Economic Impact (billion)	\$10.0	\$7.2	(\$2.8)	-28%
Jobs	76,336	50,030	(, ,	
Processing Plants	25	12	(13)	-52%
Fresh Fruit Packinghouses	45	22	(23)	-51%
Florida Citrus Growers	8,000	2,500	(5,500)	-69%

#### **Marketing Challenges**

Reduced production has resulted in higher retail prices and reduced consumption

- Per capita consumption has dropped from 5.7 gallons to 2.6
- Retail Price \$4.77 a gallon 10 years ago \$6.80 a gallon presently
- Competition bottled water, energy drinks, sports drinks, exotic blends
- Bad Press Obesity, sugar and calorie content, even cancer-causing reports have been perceived as negative attributes
- Need for Florida Department of Citrus; continue to promote the positive attributes of Florida citrus



#### Florida Citrus... We Are Down but Not Out; Don't Write Our Obituary!

- Provides more than 50,000 jobs
- Citrus forms the backbone of many communities throughout the state's interior
- Total economic impact \$7.2B annually



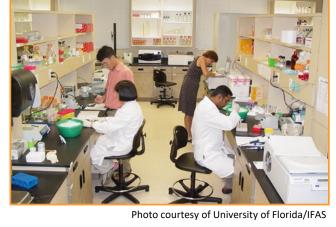


- Orange juice is still the most popular fruit juice among U.S. consumers with per capita consumption dwarfing other fruit juices.
- Popularity is not only bolstered by great taste but we are also the most nutrient dense juice packed with Vitamin C, potassium and folic acid

#### The Future of Florida Citrus Will be Found in Research

- Florida citrus growers in 2008 formed the Citrus Research and Development Foundation (CRDF), which is funded by self-imposed taxes on growers as well as supplemental general revenue appropriations. The CRDF's mission is to advance research to ensure the survival of Florida's citrus industry.
- More than 100 research projects are currently underway across the globe.
- The Florida citrus industry and state and federal have spent more than \$250 million
  - \$139 million by CRDF
- We are seeing results.

\$71 million	Growers
\$46 million	General Revenue
\$22 million	Other





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#### **Basic Research Breakthroughs**

- <u>Horticulture</u>: Variety improvement teams have developed new rootstocks and scions that are ready to be field-tested for HLB tolerance/resistance.
- Entomology: An understanding of transmission of the HLB bacteria by the Asian citrus psyllid (ACP) is ready to be developed into a successful management program.
- Pathology: Recent understanding of the below-ground pathology to improve root health will lead to better control of soil-borne root pathogens and pests of citrus with HLB.





Photos courtesy of USDA

#### The Key Now is Moving Research to the Field

- The future of the Florida citrus industry now relies on moving these laboratory breakthroughs into the grove.
- CRAFT (Citrus Research and Field Trials)
  - Will Craft the Future of Florida Citrus
  - A research-driven program with grower participation
- 2019 research program will include large-scale grower field trials (5,000 acres total) utilizing management tools for new plantings, including grove design, planting preparation, pest management, and post-planting production practices.
  - Cost analysis
  - Five year evaluations
  - Communication of successful field trials
- The goal is to provide growers with the confidence to replant and rebuild the Florida citrus industry to a level that will sustain existing infrastructure and ultimately drive expansion.

#### **Moving Forward**



Florida citrus growers are appreciative of the support they have received from the State.

We know that the continued partnership with the State will be necessary for us to be able to transform and regrow the Florida citrus industry.



CITRUS RESEARCH AND DEVELOPMENT FOUNDATION



## Where We Are And Where We're Going



#### What is our strategy?

Help growers squeeze enough production from HLB-infected trees until a greening resistant or tolerant tree solves the problem for good.



#### **Organizational Changes**

- **1**. Reduced office staff by 25% \$70K per year savings
- 2. Website redesign \$37K per year savings
- 3. Renegotiating FFVA Contract
- 4. Updated CRDF Business Plan not done since 2009
- 5. Updated CRDF By-laws
- 6. Changed CRDF Committee Structure
- 7. Created Select Committee on Plant Improvement
- 8. Changing project selection process (Staff Analysis)
- 9. Different evaluation protocol

citrusrdf.org



## **Communication Efforts**

- Board meetings held in all citrus-producing regions
- Grower Education Sessions follow each Board of Directors meeting
- Grower Report newsletter
- Monthly article in *Citrus Industry Magazine*
- Citrusrdf.org web page currently being re-designed to be more user-friendly (easier to find research and grower forum)
- Sponsorship of Citrus Expo, Annual Grower Meeting, Citrus Grower Institute
- COO talks across the state



## Examples of Tools Developed for Management of HLB Through CRDF-Funded Research

- Root Health Management
- Irrigation and Nutrition
- Soil Acidification
- CTV as a Tool for Delivery of Antimicrobial Peptides
- Asian Citrus Psyllid (ACP) Management



#### **Basic Research vs. Applied Research**

<u>Basic Research</u>: Focuses on a better or fuller understanding of a subject, phenomenon, or a basic law of nature

<u>Applied Research</u>: Scientific research that seeks to solve practical problems

Task at Hand: Blend the two by taking what we have learned through basic research and scaling it up to field application

#### **CRDF**

#### Basic research ready to be tested in the field:

- Horticulture and New Varieties
- Entomology sticky trap has potential
- Pathology killing agents into the phloem of the tree
- Microbiology methodology of detecting living vs. dead HLB bacteria
- Economics is it cost effective on a commercial basis?
- Food Science fruit quality/food safety

CITRUS RESEARCH AND DEVELOPMENT FOUNDATION

# (R,D)F

#### Where Will We Go To Find The Answers?

# Anywhere



# **QUESTIONS?**

## THANK YOU!

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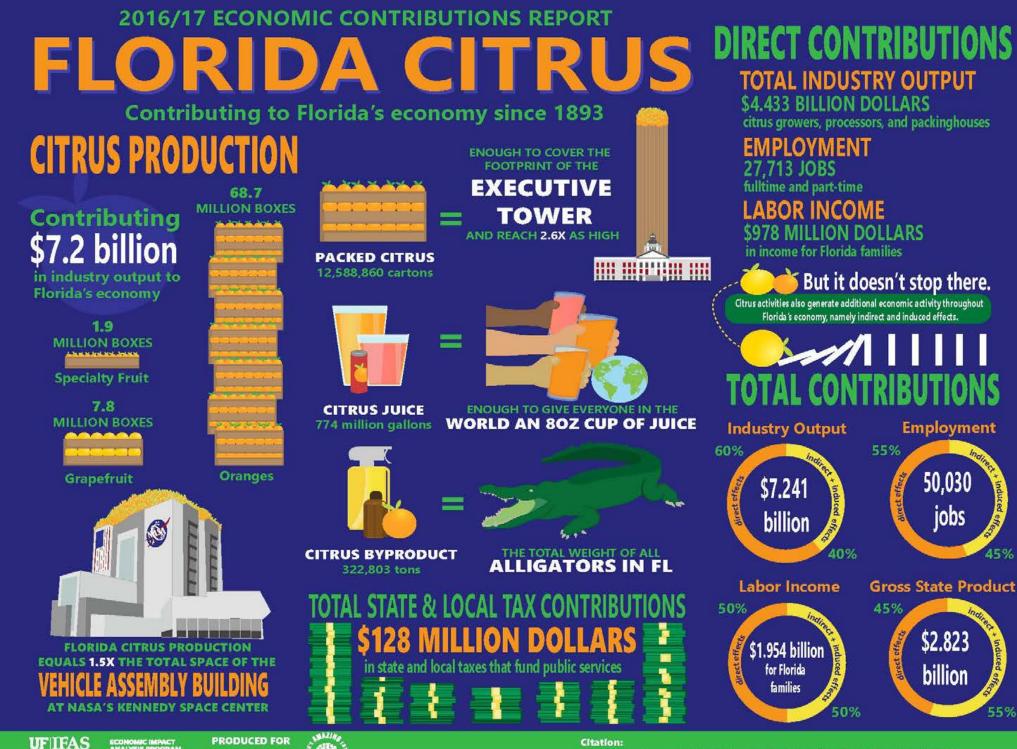
FLORIDA DEPARTMENT OF CITRUS

## Florida Department of Citrus

presentation to the Florida Senate Committee on Appropriations



Shannon Shepp Executive Director February 13, 2019



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s.ufl.edu/economicimpacta



#### Florida Department of Citrus

- Established in 1935 by growers
- Self-funded for 80+ years
- 9 member Florida Citrus
   Commission appointed by
   Governor



## **CONSUMER EDUCATION AND ENGAGEMENT PROGRAMS**

#### FLORIDA OJ PROGRAMS DRIVE DEMAND

A focus on **POSITIVE ATTRIBUTES** of FLOJ **DRIVES** 

consumer demand and awareness of nutritional benefits

Perception of NEGATIVE ATTRIBUTES of FLOJ (sugar and calorie content) have MINIMAL IMPACT on consumer demand



#### Social Media and Digital Advertising

have a direct impact on demand by influencing market penetration and quantity/volume FDOC consumer education and engagement programs ENHANCED DEMAND by

**PROVIDE HIGH RETURN ON INVESTMENT** 

#### For every \$1 spent...

FDOC delivers a second second

UNIVERSITY OF FLORIDA AGRICULTURAL MARKET RESEARCH CENTER

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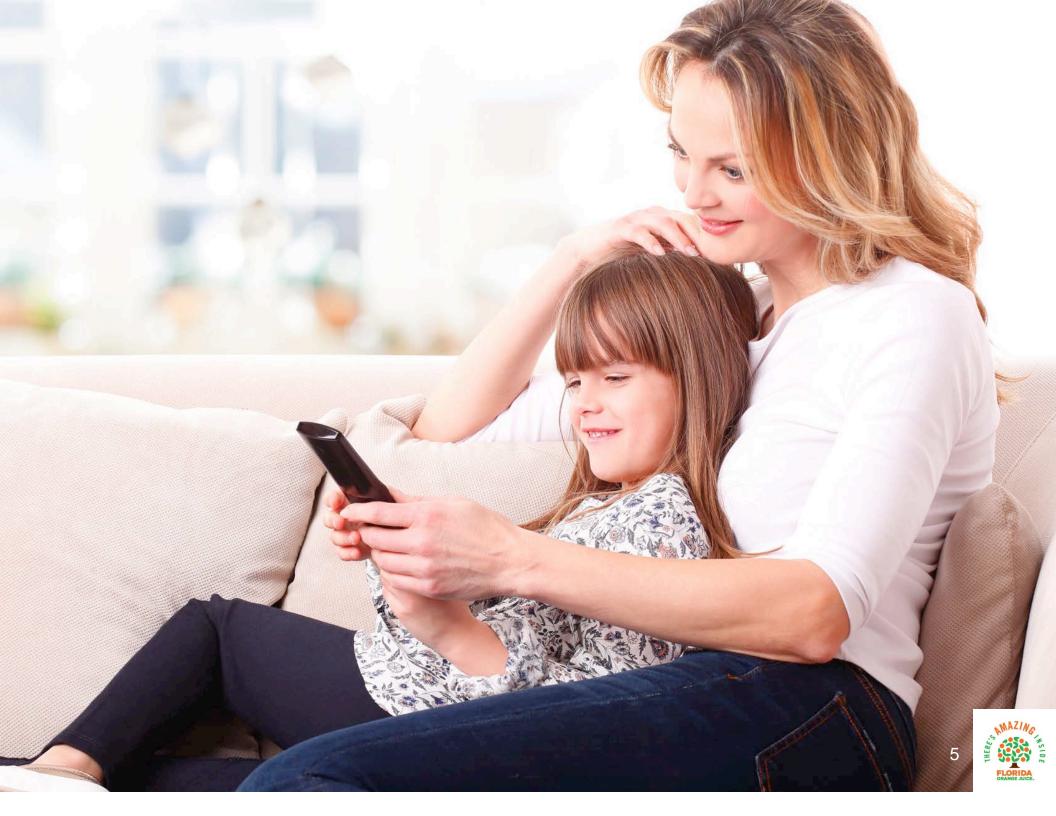
Heng, Y., R.W. Ward, L.H. House, and M.L. Zansler "Assessing Key Factors Influencing Orange Juice Demand in the Current US Market" Presented to Florida Citrus Commission on September 19, 2018.

PRODUCED FOR

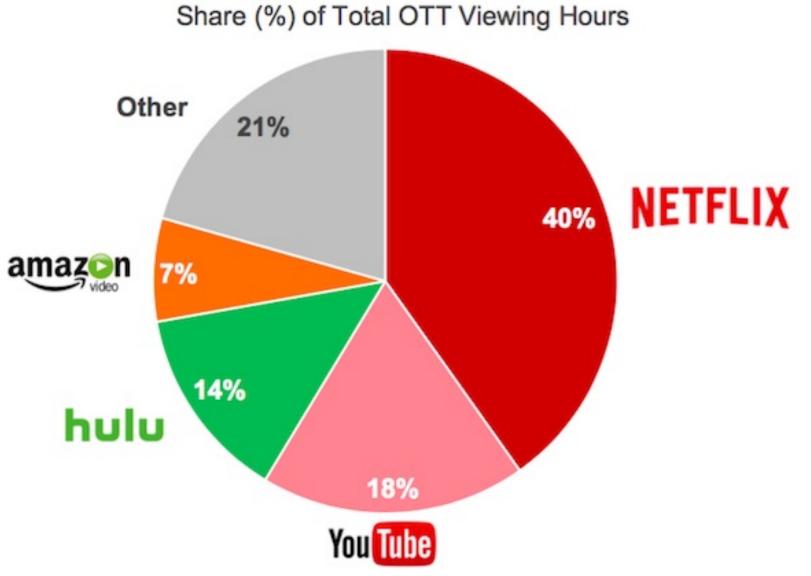
jobs protected in Florida

in the past year \_\_\_\_\_





#### Media Consumption is On Demand



Source: comScore OTT Intelligence, U.S., April 2017



#### **Health Claim Restrictions**



Adults who consume 100% orange juice perform better on cognitive tests

**LEARN MORE** 



FTER READING HOW RESEARCH HAS FOUND THAT CERTAIN NUTRIENTS LIKE THOSE IN 100% PURE FLORIDA ORANGE JUICE MAY HELP PREVENT SOME TYPES OF CANCER\*, MR. JOHNSON, KNOWN FOR HIS FRUGALITY, FINALLY RELENTED TO HIS EMPLOYEES' DEMANDS AND IMPROVED THE COMPANY'S HEALTH PLAN.



NOW THAT YOU KNOW MORE ABOUT THE BENEFITS OF 100% PURE FLORIDA ORANGE JUICE,

ARE YOU DRINKING ENOUGH?

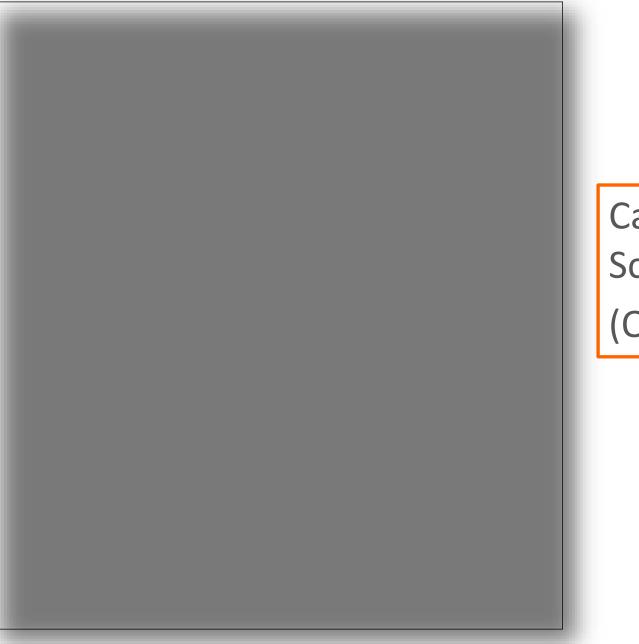
#### FDOC is...

- Nutrition Focused
- Scientific-Based Research





#### **New! OJ Nutrition Website**



Catalogs ALL Scientific Research (Old & New)



### **Clinical Research Supporting Health Benefits**



#### Heart Health (>10 supporting studies)

100% OJ consumption has been associated with favorable effects on several markers of cardiovascular health, including blood lipids, blood pressure, blood vessel function, and inflammatory and oxidative stress markers.



## Brain Health (3 supporting studies + 1 in progress)

Flavonoids and hesperidin in oranges may help maintain cell health in brain tissue. These flavonoids are able to cross the bloodbrain barrier, which the body uses to protect the brain from harmful agents.



#### Blood Sugar (7 supporting studies)

Clinical studies across various ethnicities show 100% OJ has no association with fasting glucose, insulin levels, insulin resistance, or other markers for Metabolic Syndrome



### **Clinical Research Supporting Health Benefits**





## 100% OJ Drinkers typically have higher diet quality and increased levels of key nutrients

NHANES 2003-2006 Analysis. 100% OJ drinkers are more likely to meet their EAR/AI, have higher fiber and whole fruit intake, higher healthy eating index scores, meet fruit recommendations, lower risk of Metabolic Syndrome (men) and lower total LDL cholesterol

#### 100% OJ has No Association with Weight Gain

NHANES 2003-2006 Analysis. 100% OJ adult drinkers have lower BMI, waist circumference, % body fat. Evidence does not support an association between 100% fruit juice consumption and weight status in children.



## 100% OJ is a source for hydration and rehydration after workouts

100% OJ may be a good beverage of choice to support fluid balance as it ranked higher than many other beverages on several measures of hydration in a recent study.



### Hesperidin: A Powerful Polyphenol

# OJ is the only commonly consumed food that is a **SIGNIFICANT SOURCE OF HESPERIDIN**

Hesperidin plays a valuable role in the overall benefits of 100% orange juice and may play a positive role in:

- Antioxidant
- Anti-inflammatory
- Heart and Vascular Health
- Glucose Metabolism
- Cognition

Same class of compounds responsible for benefits seen with red wine, green tea, and cocoa/dark chocolate





Green Tea Catechin





### 2018: FALL CONSUMER STYLES

- Online, nationally representative survey fielded in Fall 2018 among 3,561 U.S. adults
- ConsumerStyles fields three times a year, allowing programs to track perceptions/behaviors year over year
- ✓ Margin of error is +/- 1.22 percentage points
- Over 2,000 variables for analysis from attitudes, lifestyle values, purchasing behaviors, technology use, traditional and social media habits, information channels
- Included ten proprietary questions for FDOC, which includes 2 years of tracking data





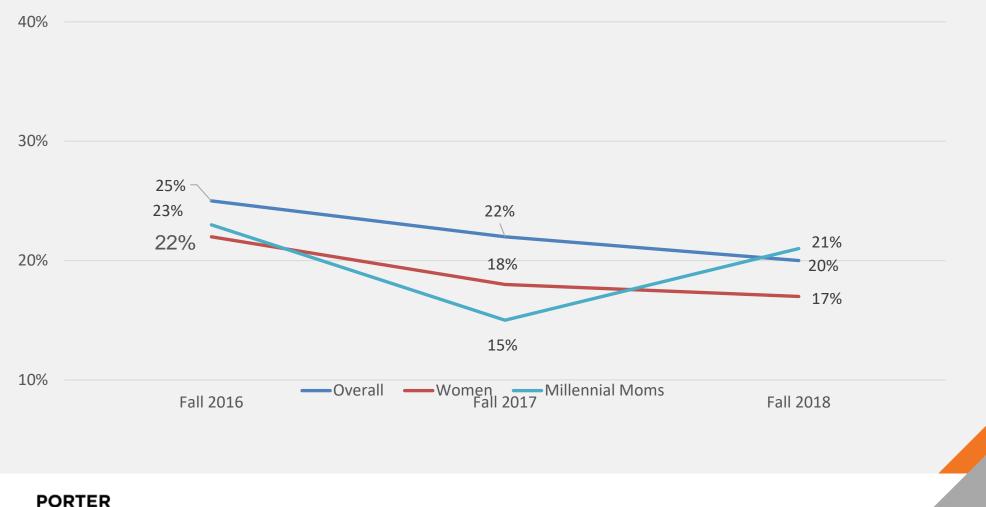
### THREE KEY POINTS

- 1. Our key target audience, Millennial Moms, shows marked year over year improvement on key indicators.
- 2. Significant increase in recall of key messages, including that 100% OJ has vitamins and nutrients, is convenient.
- 3. Time to start thinking about emerging audiences?



## MARKED YEAR OVER YEAR IMPROVEMENT AMONG MILLENNIAL MOMS WHO DRINK OJ, BUCKING THE OVERARCHING TREND.

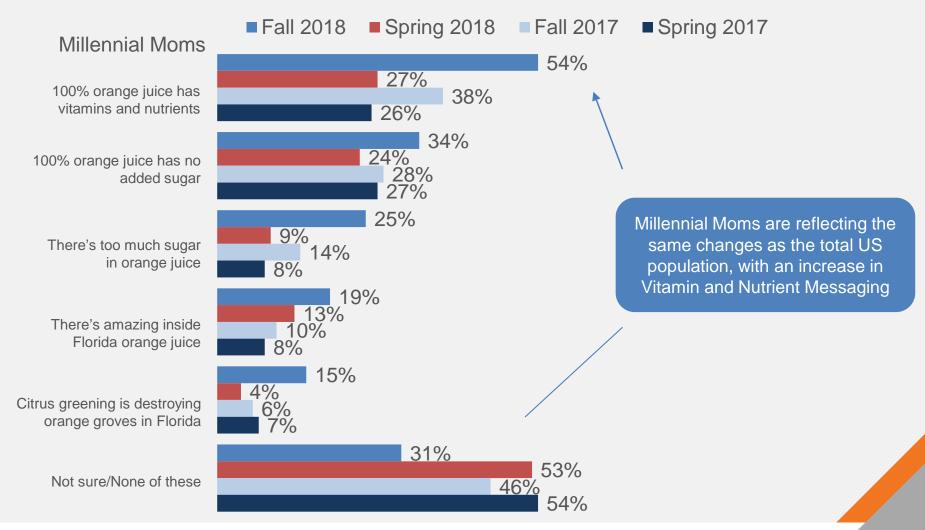
Drink 100% OJ Weekly+



NOVELLI

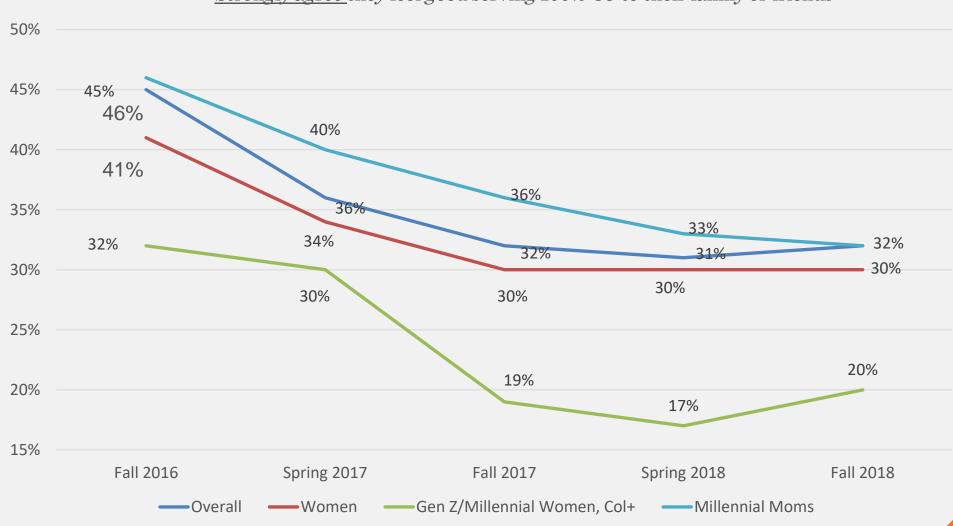
## DIRECT TARGETING WORKS. NUTRIENT CONTENT RECALL DOUBLES WITH MILLENNIAL MOMS IN THIS TRACKER.

Here are some things you may have heard or seen about Florida orange juice. What have you heard or seen?



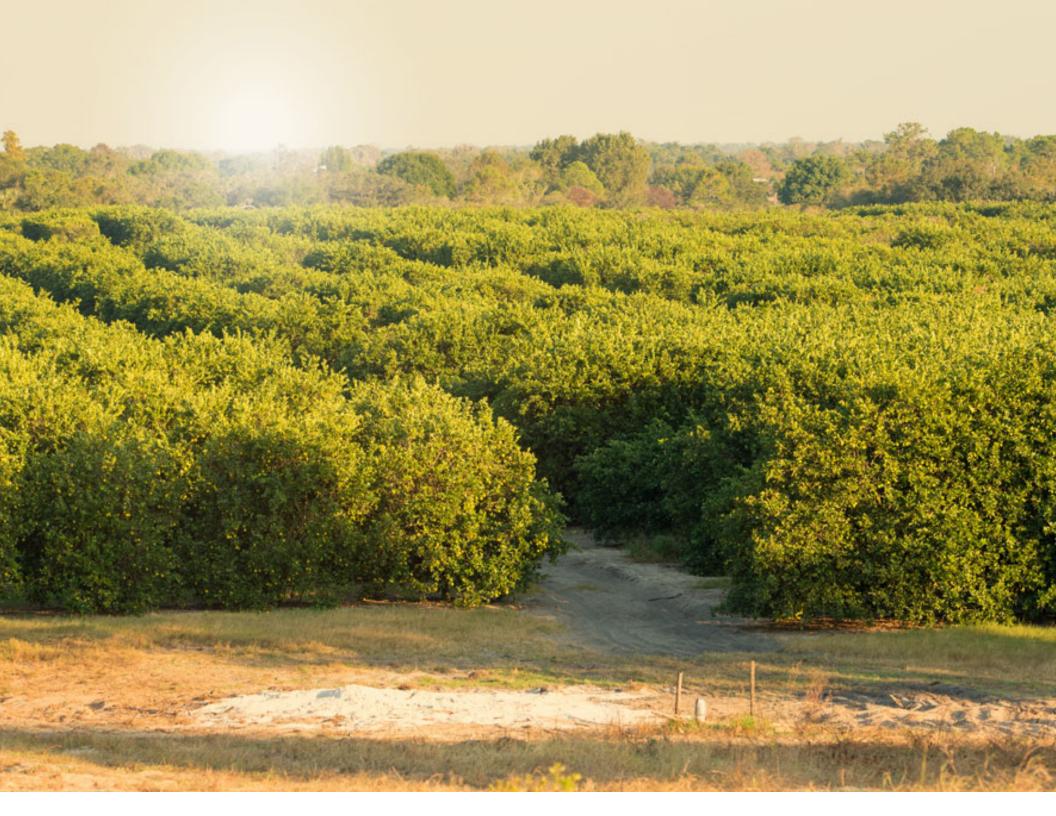


#### A CLEAR LAG AMONG YOUNG COLLEGE EDUCATED WOMEN, WHO WE DO NOT CURRENTLY DIRECTLY TARGET WITH OUR PROGRAMS.



<u>Strongly agree</u> they feel good serving 100% OJ to their family or friends





THE FLORIDA SENATE			
APPEARANCE RECORD			
$2 - \int 3 - \int q$ (Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)			
Meeting Date Bill Number (if applicable)			
Topic FCORDA CITRUS Amendment Barcode (if applicable)			
Name MICHAEU W SPARCES			
Job Title C. E. Flor, De Citores United			
Address 600 E. REONGWAY Phone 867 682-(()			
Street Ette FL- <u>73870</u> Email <u>Mikes Frechers</u> State			
Speaking:       For       Against       Information       Waive Speaking:       In Support       Against         (The Chair will read this information into the record.)			
RepresentingFlorender Citrace GROUPERS			
Appearing at request of Chair: Yes No Lobbyist registered with Legislature: Yes Mo			
While it is a Senate tradition to encourage public testimony, time may not permit all persons wishing to speak to be heard at this meeting. Those who do speak may be asked to limit their remarks so that as many persons as possible can be heard.			

This form is part of the public record for this meeting.

THE FLORIDA SENATE	
APPEARANCE RECOI	RD
(Deliver BOTH copies of this form to the Senator or Senate Professional Sta	iff conducting the meeting)
Meeting Date	Bill Number (if applicable)
Topic <u>Citrus</u> Research	Amendment Barcode (if applicable)
Name Rick Dantzler	
Job Title COO Citrus Research ? Development	Foundation
Address 200 Experiment Station Rd.	Phone 863 956 - 8817
Street <u>LK. Alfred</u> <u>FL</u> <u>City</u> State Zip	Email V Lantzler Deitrusrdb,
Speaking: For Against Information Waive Sp	eaking: In Support Against will read this information into the record.)
Representing <u>CRDF</u>	
Appearing at request of Chair: Yes No Lobbyist register	ered with Legislature: Yes No
While it is a Senate tradition to encourage public testimony, time may not permit all meeting. Those who do speak may be asked to limit their remarks so that as many p	<b>U</b>

This form is part of the public record for this meeting.

THE FLORIDA SENATE APPEARANCE RECORD

(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)

Meeting Date	Bill Number (if applicable)
TopicTORIDA CITRUS	Amendment Barcode (if applicable)
Name Shannon Shepp	
Job Title <u>Effective Director</u>	
Address 605 E Main St.	Phone 803)640-5492
Street Bartow PZ	33830 Email Scheppe cit-15.My
City State Speaking: For Against Information	Zip Waive Speaking: In Support Against Con (The Chair will read this information into the record.)
Representing	
Appearing at request of Chair: Yes No	Lobbyist registered with Legislature:
While it is a Senate tradition to encourage public testimony meeting. Those who do speak may be asked to limit their re	y, time may not permit all persons wishing to speak to be heard at this remarks so that as many persons as possible can be heard.

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THE FLORIDA SENATE	
Feb 13 209 (Deliver BOTH copies of this form to the Senator or Senate Professional	
Meeting Date	Bill Number (if applicable)
	Amendment Barcode (if applicable)
Name J. Nel Hancock	
Job Title Citrus grower	-
Address <u>Zlo31 Lakeview</u> Dr	Phone <u>863-385-3250</u>
Sebring 1-2 33870	_ Email hancockettus Qalion
	Speaking: In Support Against bair will read this information into the record.)
Representing Floride Citrus Industry	
Appearing at request of Chair: Yes No Lobbyist regis	stered with Legislature: Yes No
While it is a Senate tradition to encourage public testimony, time may not permit a meeting. Those who do speak may be asked to limit their remarks so that as mar	

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#### CourtSmart Tag Report

Case No.: Room: KN 412 Caption: Senate Appropriations Committee Judge: Started: 2/13/2019 10:03:04 AM Ends: 2/13/2019 11:29:34 AM Length: 01:26:31 10:03:05 AM Sen. Bradley (Chair) 10:04:09 AM TAB 1 - Presentation on Citrus Industry in Florida 10:07:25 AM Michael Sparks, Chief Executive Officer, Citrus Mutual 10:34:28 AM Sen. Bradley 10:35:28 AM M. Sparks Sen. Bradley 10:35:33 AM 10:36:09 AM M. Sparks 10:37:25 AM Sen. Montford 10:37:52 AM M. Sparks 10:38:44 AM Sen. Montford 10:39:17 AM M. Sparks 10:40:34 AM Sen. Montford 10:41:10 AM M. Sparks 10:41:48 AM Sen. Mayfield 10:42:36 AM M. Sparks 10:44:18 AM Sen. Powell 10:45:08 AM M. Sparks 10:46:29 AM Sen. Powell M. Sparks 10:46:49 AM Sen. Powell 10:48:11 AM 10:48:42 AM M. Sparks 10:49:06 AM Sen. Bradley Rick Dantzler, Chief Operating Officer, Citrus Research and Development Foundation 10:49:55 AM 10:58:11 AM Sen. Bradley 10:58:23 AM R. Dantzler 11:03:14 AM Sen. Bradley 11:04:16 AM Sen. Mayfield 11:04:34 AM R. Dantzler 11:05:36 AM Shannon Shepp, Executive Director, Department of Citrus 11:15:19 AM Sen. Bradley 11:16:03 AM Sen. Gibson 11:16:53 AM S. Shepp Sen. Lee 11:18:14 AM S. Shepp 11:18:50 AM 11:19:37 AM Sen. Lee 11:19:44 AM S. Shepp 11:19:45 AM Sen. Lee 11:19:48 AM S. Shepp 11:19:59 AM Sen. Lee 11:20:21 AM S. Shepp 11:21:17 AM Sen. Powell 11:22:22 AM S. Shepp 11:23:11 AM Ned Hancock, Grower from Highlands County and Department of Citrus Commissioner 11:28:03 AM Sen. Gainer 11:28:15 AM N. Hancock 11:28:35 AM Sen. Bradley

Type: