The Florida Senate

COMMITTEE MEETING EXPANDED AGENDA

AGRICULTURE Senator Albritton, Chair Senator Gainer, Vice Chair

MEETING DATE:Monday, February 4, 2019TIME:1:30—3:30 p.m.PLACE:301 Senate Building

MEMBERS: Senator Albritton, Chair; Senator Gainer, Vice Chair; Senators Broxson, Montford, and Rader

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
1	Overview and Discussion of the Impact of Agriculture in Florida		Presented
2	Update on Hurricane Michael Recovery by UF/IFAS		Presented
3	Presentation on Agricultural Best Manageme Group	nt Practices by Rich Budell, Budell Water	Presented
4	Update on the Florida Department of Citrus b	y Shannon Shepp, Executive Director	Presented
	Other Related Meeting Documents		



February 4, 2019

Rodney L. Clouser Professor and Associate Chair, Food and Resource Economics Department University of Florida-IFAS



Structure of comments today:

1. The importance of Florida agriculture, natural resources and food industries to the state.

2. Composition/make-up of agriculture and natural resources industry in Florida and data related to some commodities, and their importance nationally or internationally.

3. Will conclude with a few "big issues and challenges" in the industry and for policy makers looking toward the future.

(Most data presented today are reported by the National Agricultural Statistics Service (NASS) in 2017 (2016 and in some instances 2015 data)



Contributions to the State Economy

Local, state and federal policy makers, industry and individual producers get excited when the impacts of Florida agriculture, natural resources and food industries are reported annually.

The latest report indicates: **1.68 million direct jobs** 611,000 indirect and induced jobs or 2.294 million total jobs in Florida \$165.5 billion in output/sales contributions \$47.7 billion in foreign and domestic exports contributions to the state economy \$137.7 billion in total value added contributions to the state (14.7% of Gross State Product)



Contributions to the State Economy

Sceptics might argue "narrow that down to production related agriculture." So remove food and kindred products distribution and nature based recreation.

Guess what? The contributions are still large: 634,400 plus total jobs in Florida and \$42.3 billion in total value added contributions to the state (or about 4.5 % of Gross State Product)

And, the pertinent question to ask is "How would or could the state fill that gap in Florida's economy if Florida's agriculture was less robust?"



Maybe even more impressive about the state's agriculture and natural resource industries are:

4. Florida is literally the A-Z (alligators to zucchini, or maybe you prefer, asparagus to zinnias) of commodity production in the US and a world leader as well.
-Estimate about 200 different commodities produced in the state

-Some form of agriculture is present in every county in the state

3. Florida agriculture has been long-term resilient and innovative in spite of droughts, floods, fires, multiple freezes, hurricanes, labor issues, trade issues, strong and weak national/international economies, pests and diseases.



Maybe even more impressive about the state's agriculture and natural resource industries are:

2. Florida is the breadbasket of winter production in the US of healthy, nutritious and affordable vegetables/fruits. Important to food supply both nationally and internationally!

1. Most impressive in my opinion, in spite of all the challenges, is a state growth rate that has expanded from less than 10 million in the early 1980s to a state population in 2018 of 21.3 million and the agriculture and natural resource sectors are the main owners, users and stewards of over 73% of the state's land base.

This needs to be continually stressed to residents and policy makers!





Data Supports the Importance of the Industry

Industry Makeup and Composition

Most Florida residents are surprised that the state of Florida consist of about 36 million acres. Most of it is agricultural and natural resource related use:

Total Land Area in Florida:

Forested Land Area: Private ownership: **Public ownership:**

Land in Farms:

36 million acres 17 million acres 10.5 million acres 5.6 million acres 9.5 million acres

Approximately 26.5 million acres of the state's 36 million acres are used for agriculture and natural resource use. That equates to 73.6 percent of the land area in Florida.





Data Supports the Importance of the Industry Industry Makeup and Composition: Most of this land is privately owned by, families, family businesses and corporations or cooperatives.

Farms identified in Florida the last Census of Agriculture -approximately 47,000.

The average size farm in the state is 200 acres. Less than half the size of the U.S. average of 442 acres.

Comparisons: Texas has an average farm size of 537 acres, California of 331 acres and Illinois 351 acres.

In Florida only about 5,600 farms, or about 12% of farms identified have sales greater than \$100,000.



Data Supports the Importance of the Industry

Industry Makeup and Composition:

- Florida farms with sales between \$10,000 and \$99,999 represents the state's fastest growth segment over the last 12-13 years with 33% growth.
- Based on NASS reports 2016 (2015 data) Florida ranked 17th in farm cash receipts (\$8.37 billion sales) in the U.S.
- California ranked first (\$47 billion) with the "American Bread Basket states" (Iowa, Nebraska, Minnesota, Illinois, Kansas, Wisconsin and Indiana) all ranked in the top 10 with receipts between \$11 and \$27.6 billion.
- Because of Hurricane Irma's impact in 2017 and continuing problems with citrus greening my expectation is that Florida's ranking will decline some in terms of cash receipts.





Data Supports the Importance of the Industry

Industry Makeup and Composition: Net Farm Income Provides a Better Understanding:

Florida net farm income, or receipts less expenses, ranked 7th nationally at just over \$3 billion. California leads all states in the U.S. in this category with \$14.6 billion in net farm income.

In many ways, that explains Florida's agriculture industry; a "high risk but high reward (high valued specialty crops)" industry when conditions go well (e.g., weather and markets).



UF FLORIDA Florida Agriculture: National and International Importance

Florida's agriculture industry is diverse and dispersed throughout the state (literally every county).

Vegetables: produced throughout the state and winter vegetables primarily south; Citrus: primarily central and southern areas; Cattle/Calves: throughout state; Row crops and Timber: northern tier of state and Floriculture: throughout state.



UE FLORID Florida Agriculture: National and International Importance Florida Value of Production as % of Total US Value (2016)54% of the total U.S. value for grapefruit, 53% of the total U.S. value for oranges, 40% of the total U.S. value for fresh market tomatoes 37% of the total U.S. value for fresh market snap beans, 36% of the total U.S. value for fresh market cucumbers, 31% of the total U.S. value of cucumbers for processing, 29% of the total U.S. value for fresh market bell peppers, 24% of the total U.S. value for fresh sweet corn, 21% of the total U.S. value for watermelons, 19% of the total U.S. value for strawberries,

24% of the total U.S. value for fresh sweet corn.



UF FLORIDA Florida Agriculture: National and International Importance

Florida Value of Production as % of Total US Value (NASS 2016)

14 Commodity Sectors with Sales Greater Than \$100 Million

Commodity	Florida	U.S.	Florida percent of U.S.	Florida national ranking
	(1,000 dollars)	(1,000 dollars)	(percent)	
Oranges	1,173,488	1,963,353	59.8	1
Floriculture	1,039,411	4,373,639	23.8	2
Cattle/Calves	859,164	78,228,639	1.1	21
Sugarcane for Sugar and Seed	561,099	1,016,944	55.2	1
Dairy Products	548,688	35,739,249	1.5	16
Tomatoes, Fresh	453,102	1,243,113	36.4	1
Chicken Eggs	315,615	13,499,904	2.3	15
Strawberries	290,598	2,219,144	13.1	2
Peppers, Bell	220,478	806,115	27.4	2
Broilers	203,149	28,709,834	0.7	19
Sweet Corn, Fresh	154,980	927,413	16.7	2
Grapefruit	127,313	216,258	58.9	1
Peanuts	120,215	1,275,227	9.4	3
Potatoes	103,366	3,594,450	2.9	12



Florida Agricultural Exports 2017

Florida Products Exported:

Meats (fresh/frozen) **Prepared vegetables/fruits Dairy Products Edible fruits/nuts Edible vegetables Other miscellaneous Importing Countries:** Canada Mexico **Dominican Republic** Bahamas Panama **Netherlands** Columbia **Trinidad & Tobago** Guatemala **Costa Rica**

\$599 million \$360 million \$346 million \$329 million \$291 million \$454 million \$747 million \$250 million \$216 million \$210 million \$165 million \$143 million \$139 million \$120 million \$111 million \$103 million

Food and Resource

Economics





Significant Future Policy Issues of Florida's Agricultural and Natural Resources

Challenging policy issues in Florida's future related to agriculture, natural resource and the environment are numerous. Policy choices will be difficult and demanding! There will be no shortage of issues and policy choices.

R. Clouser



Top Tier Tough Florida Agricultural Policy Issues

4. *Recovery from back-to-back hurricanes with large impacts on Florida's agriculture and natural resources.

3. *Farm labor Issues have been well documented in Florida. For Florida agriculture to thrive in the future, a ready, reliable and skilled based labor supply is required.

2. *Pest and disease problem in farm production and specifically citrus greening.

1. *Water quality issues related to agricultural production and the state's natural resources.



Big Issues Will Be Abundant – Policy Decisions Tough!

Policy Choices For the Future Need to be Thought of As An Investment Rather Than a Fiscal Expense!

Why?

Agriculture is a Primary Owner, User and Steward of the State's Land and Natural Resource Base.

Florida agriculture has been long-term resilient and innovative in spite of many challenges!

Back to Where We Started: The Pertinent Question to Ask is "How would or could the state fill that gap in Florida's economy if Florida's agriculture was less robust?"



THE FLORIDA SENATE		
APPEARANCE I	RECORD	

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

Bill Number (if applicable)

Topic Impacts of Agriculture in Florida	Amendment Barcode (if applicable)
Name Dr. Rudney L. Clouser	-
Job Title Professor and Associate Chair Food and	Resources Economics at VF/JFAS
Address 215 S. Monne St.	Phone 850-270-4010
Tallahussee, FL 32301 City State Zip	Email V. price @ Ufledu
(UEITEAS) (The Cha	peaking: In Support Against air will read this information into the record.)
Representing University of Flunda Institute of 7	Tood and Agricultural Sciences
Appearing at request of Chair: Ves No Lobbyist regist	tered with Legislature: 🔄 Yes 🔼 No

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Efforts Of UF/IFAS In Assisting North Florida Ag Producers In Recovering From Hurricane Michael



Glen Aiken, PhD

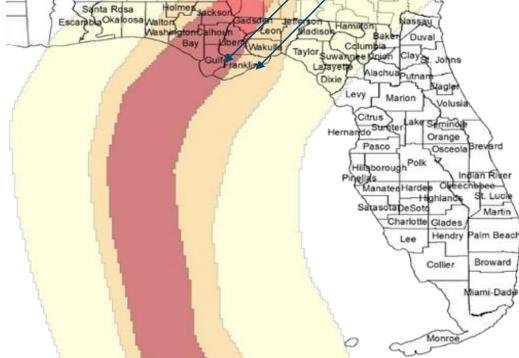
IFAS North Florida Research And Education Center

Quincy, Marianna And Suwannee Valley Units





Cat. 3: 111 – 129 mph Cat. 4: 130 – 156 mph











IFAS Faculty are Farmers too

- ✓ Clean-up,
- \checkmark repairs,
- ✓ replacement of pivot irrigation systems

Replacement of greenhouses, feed barn, and peanut areas will be approximately \$1.5 million for Quincy and Marianna Research Stations combined.



Agricultural Assessments

- Post-storm agricultural damage assessments critical function of UF/IFAS Extension agents.
- USDA/FSA wants to know what's happening in storm impacted area.
- FDACS needs information to apply for state and federal funding for restoration.
- UF/IFAS administration to determine area needs.
- Policy/Decision makers, (state & federal) need info to organize a response.



Damage to Panhandle Agriculture

Losses in timber greater than \$1.28 billion



Most cotton harvests were lost

Tomato fields in Quincy



Most pivots in Jackson County look like this







Cattle Industry Suffered Significant Loss Of Livestock

- Cattle were lost through death,
- Most perimeter fences were down, cattle escaped,
- > It took weeks to round up and return the survivors,
- Major challenge getting enough generators and hooking them up to water wells to provide water to cattle.







How Can IFAS Further Assist Recovery Efforts And Prepare For The Next Hurricane?

- Extension programs that address management strategies to mitigate hurricane damage
- Accelerate our development of alternative crops
- Additional research





Hurricane Recovery Workshop:

Taking the Next Steps to Salvage and Restoration of Forests and Natural Resources Impacted by Hurricane Michael Calhoun County, FL

Date: February 12, 2019, sign in at 9:00 am CST Lunch provided, concludes at 5:00 pm CST

> Rivertown Community Church 19359 Highway 71 Blountstown, Florida 32424



October 2018 lingers on for many in west Florida. Hurricane Michael exploded onto shore in the central Florida Panhandle and barreled its way north, leaving behind an 80mile wide path of destruction. Approximately three million acres of forestland was hit, with economic damages conservatively estimated to be \$1.3 billion.

You are not alone. Many, if not most, forest landowners in

this region are still looking for answers to difficult questions. What assistance is available? What do I do with trees still on the ground? Can I get reimbursed for losses? Can I get assistance with replanting? What are the tax implications? What is the status of forest product markets? Join us in Blountstown at this free hurricane recovery workshop for forest landowners, provided by the Florida Tree Farm Program. A panel of experts from a wide array of expertise will lead the discussion and help answer your questions. The Florida Forest Service, University of Florida IFAS Extension, Florida Tree Farm Program, Florida Forestry Association, Florida Farm Bureau, Florida Fish and Wildlife Conservation Commission, USDA Natural Resources Conservation Service and Farm Service Agency, forest and natural resource professionals, forest products industry, tax professionals, and fellow Tree Farmers and forest landowners will be there.

Register: This event is free and includes lunch. Register in advance so we can plan accordingly. Contact UF/IFAS Calhoun Extension (850) 674-8323 to register. Please share this announcement with others who need this information.



Support for this event is provided by the Florida Tree Farm Program, USDA Forest Service via the Florida Department of Agriculture and Consumer Service's Florida Forest Service, and the Florida Sustainable Forestry Initiative Implementation Committee.

Workshops

- IFAS will develop extension workshops across commodity groups to address questions on management strategies to mitigate the effects of hurricanes.
- The first one is scheduled for **February 12, 2019.**
- There will be opportunities for on-farm research or demonstrations; particularly with timber growers.



The Northwest Extension District had two trailers for delivering supplies, materials and generators to those in need.





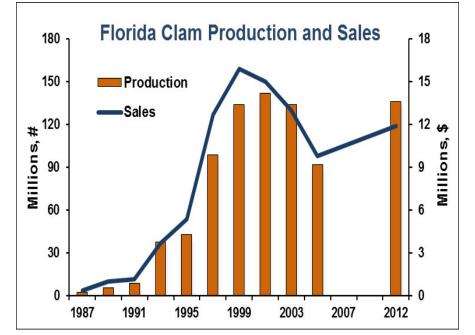
These were critical tools but we just didn't have enough to meet the needs.





Florida Clam Industry We Have A History Of Success

- The most recent study of the economic contribution of the Florida clam industry was conducted in 2012. Industry output, or gross revenue impact to the state's economy, was estimated to be \$38.7 million.
- Value of sales by growers to wholesale dealers was \$12.3 million, while value of sales by dealers was \$19.5 million.



- As hard clams made their way from the production site to the final buyer, **\$21.9 million** in added value was generated.
- The clam culture industry supported **543 jobs** and generated **\$14.7 million** in labor income.
- Hard clam sales generated \$1.4 million in state/local tax revenues and \$2.7 million in federal taxes



Alternative Crops: There is a growing need, especially after Hurricane Michael!



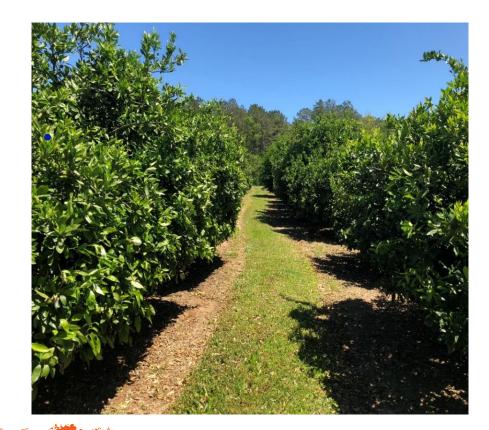
Industrial Hemp

This alternative crop is growing in popularity and has the interest of the ag industry and it has a number of alternative uses:

- Extraction of cannabidiol (CBD) from floral material for health and wellness products
- High-quality fiber
- Grain for food
- Seed for planting hemp

There Is An Opportunity In North Florida To Expand Acreage Of Satsuma And Other More Cold-tolerant Orange Varieties.

- Less pressure from psyllids and Greening (HLB) Disease.
- Considerable interest in citrus among growers as an alternative crop for diversification.







Alternative Crops: Carinata





- Oil from the seed is converted to aviation fuel
- High protein source for animal feed
- Drought and heat tolerant
- High yield
- Carinata releases potent bio fumigants that could control soil borne diseases, insects, and weeds
- USDA-NIFA funded grant to Dr. David Wright (NFREC) to evaluate as a bioenergy crop



Alternative Crop: Lupines

- Oil from seed is converted to bio-diesel and meal is high protein.
- Excellent cover crop
- Research done at Quincy REC during the 1930s and 1940s





Hops

- UF/IFAS began testing hops in Central Florida in late 2015
- > There is a growing market.
- The number of craft breweries in Florida has jumped from 66 in 2013 to 243 in 2017 with an economic impact of over \$3 billion.

Additional uses:

- Anti-microbials in hops have shown to have benefits in the diet of ruminants.
- Used to make paper.







Needs of IFAS for Future Recovery Efforts and Preparation for Hurricanes to Come

- Additional trailers for delivering materials and supplies to agricultural producers. This will also help meet educational needs.
- Coordinate workshops, round-table discussions and on-farm trials to develop strategies for recovery of farming operations and reducing risks for future hurricanes.
- Conduct research to identify genotypes and develop BMPs for developing a strong citrus industry in North Florida.
- Expand our research efforts with industrial hemp and other alternative crops to develop BMPs, assess economics and provide options to growers.
- Develop plans to effectively mitigate problems associated with salt water surges, wind damage to structures and fences, and long-term power (accessible generators).



Questions?





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APPEARANCE RECORD
(Deliver BOTH copies of this form to the Senator or Senate Professional Staff conducting the meeting)
Bill Number (if applicable)
Topic <u>Efforts of UF/IFAS assisting Humicane Michael</u> Amendment Barcode (if applicable) No. Dk. (1990 Ail(200
Name Dr. Glen Aiken
Job Title Center Director. North Flunche Research and Education Center
Address <u>215 S. Monve St.</u> Phone
Tallahassee, FC 32301 Email
Speaking: For Against Information Waive Speaking: In Support Against (The Chair will read this information into the record.) Information Information Information
Representing University of Florid Institute Food Agricultural Sciences
Appearing at request of Chair: Yes No Lobbyist registered with Legislature: Yes No

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S-001 (10/14/14)

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Agricultural Best Management Practices Implementation and Performance

Senate Committee on Agriculture Senator Ben Albritton, Chair February 4, 2019

Rich Budell Budell Water Group

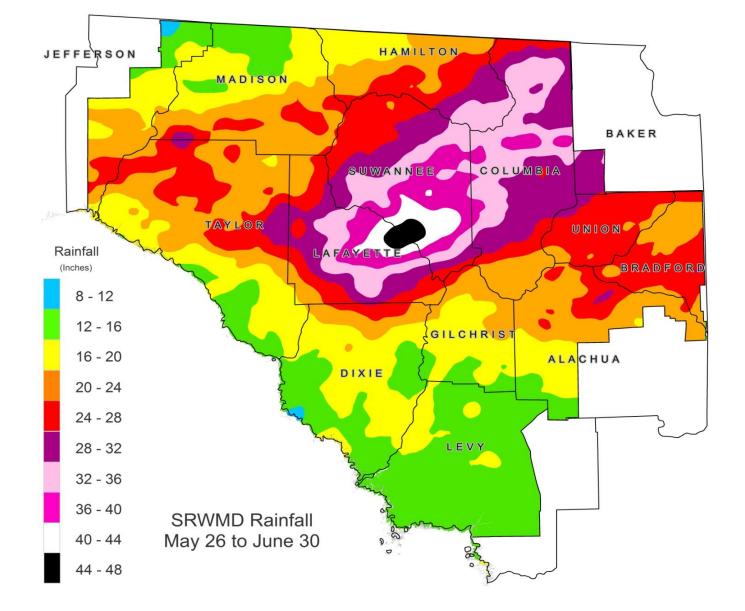
BMP Background

Agricultural Production Diversity

- -More than 300 commodities-
- -Seasonal vs. Year round-
- -Soils, topography-
- -Weather-
- -Unique environmental features-

Comprehensive Water Resource Programs

- -Numeric Nutrient Criteria
- -Total Maximum Daily Loads
- -Basin Management Action Plans



BMP Verification

Initial BMP Verification

-Conducted by FDEP for all BMP Manuals-Based on published and technical data-Manual revisions also reviewed-Precursor to Manual adoption-

BMP Implementation

BMP Enrollment Data

-BMP selection & enrollment conducted by FDACS staff-

-BMP implementation status conducted by surveys and site visits-

-Within BMAP areas & for all of Northern Everglades, landowners must either implement BMPs or conduct water quality monitoring-

-Irrigated vs non-irrigated acreage-

Commodity	Total NOI Acres	# of NOIs
Citrus	508,984	3,32
Conservation Plan	346,188	
Cow/Calf	2,595,203	2,86
Dairy	58,753	5
Equine	13,195	20
Lake Okeechobee Protection Plan	113,067	9
Specialty Fruit/Nut	16,117	50
Nursery	35,222	1,29
Poultry	530	1
Row/Field Crops	1,327,595	3,01
Sod	105,074	8
Wildlife	161,736	2
Total Acres	5,281,664	11,47



Discialmer: This map/information represents an estimate of the amount and/or location of acreage enrolled in FDACS BMP programs for specific commodities and/or regions of the state. It is not binding, and does not otherwise affect the interests of any persons, including any vested rights or existing uses of real property. The accuracy and reliability of this map/information are not guaranteed, and are affected by continual changes in land use, crop production, and other socioeconomic factors. Data current as of June 30, 2018.

N

BMP Performance

Confirmatory BMP Verification

-Completed by FDEP for: Silviculture BMPs-Ridge Citrus BMPs-

-Completed by SFWMD for EAA BMPs-

-Monitoring underway in other areas-

-BMP performance is variable-

Typical EAA landscape



Comprehensive Best Management Practices Plans



Staff Gauge

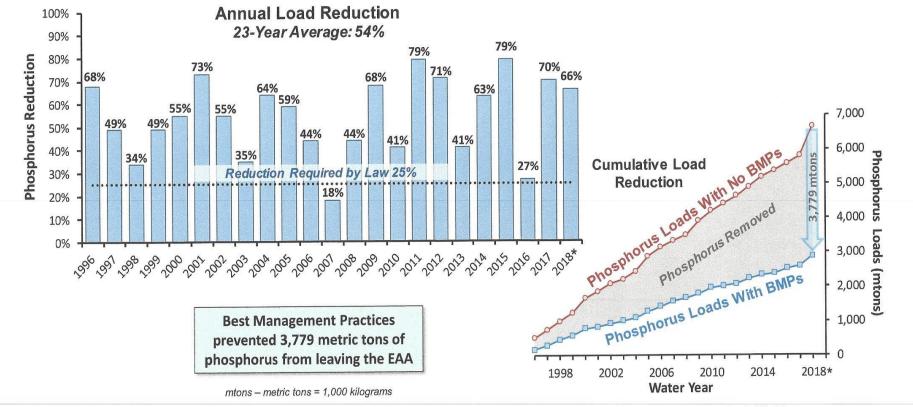
neo barrete

Rain Gauge



Control structure

SOUTH FLORIDA WATER MANAGEMENT DISTRIDR Everglades Agricultural Area Phosphorus Load Reduction Achieved with BMPs



*WY2018 Extraordinarily Wet Year

<u>sections</u>

Typical Lake Okeechobee Watershed Landscape

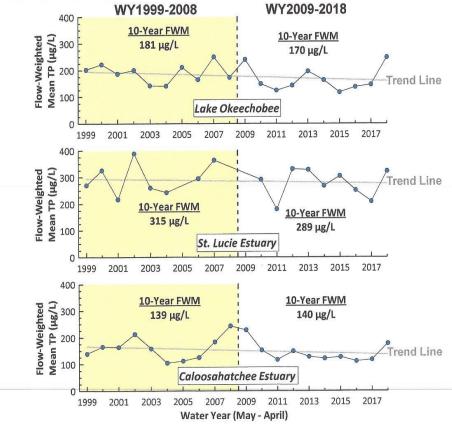






Long-term Flow-weighted Mean Phosphorus Concentration Trends

Lake Okeechobee and St. Lucie Estuary and Calooshatchee Estuary



Lake Okeechobee Inflows

- FWM TP concentration for last 10 years is 6% lower than previous 10-year period
- General downward trend over 20-year period

St. Lucie Estuary Inflows*

- FWM TP concentration for last 10 years is 8% lower than previous 10-year period
- General downward trend over 20-year period

Caloosahatchee Estuary Inflows*

- No apparent difference in FWM TP concentrations between last 10 years and previous 10-year period
- Lower variability in concentrations last 10 years
- General downward trend over 20-year period

* Excluding Tidal Portions of St. Lucie and Caloosahatchee Estuaries Source Data: South Florida Environmental Reports

 $\mu g/L = ppb; FWM = Flow-Weighted Mean$

14

-BMP performance varies with weather, geography and production technique-

-We must commit to long-term BMP performance monitoring-

Summary Facts

-Biological systems to not respond in timeframes that match our desires-

-Implementation of BMPs alone will not achieve our water resource protection and restoration goals-

Questions?

Rich@BudellWaterGroup.com

I HE FLORIDA SENATE	
APPEARANCE REC	
(Deliver BOTH copies of this form to the Senator or Senate Profession	al Staff conducting the meeting)
Meeting Date	Bill Number (if applicable)
Topic A. Brang	Amendment Barcode (if applicable)
Name RICH BUDEII	
Job Title PRESIDEN, BUDEN WETER GARDE	
Address 6712 Chevy Way	Phone 850 519 0115
Street TLA FL. 323/	Email
	e Speaking: In Support Against Chair will read this information into the record.)
Representing	
	gistered with Legislature: 🗌 Yes 🕅 No
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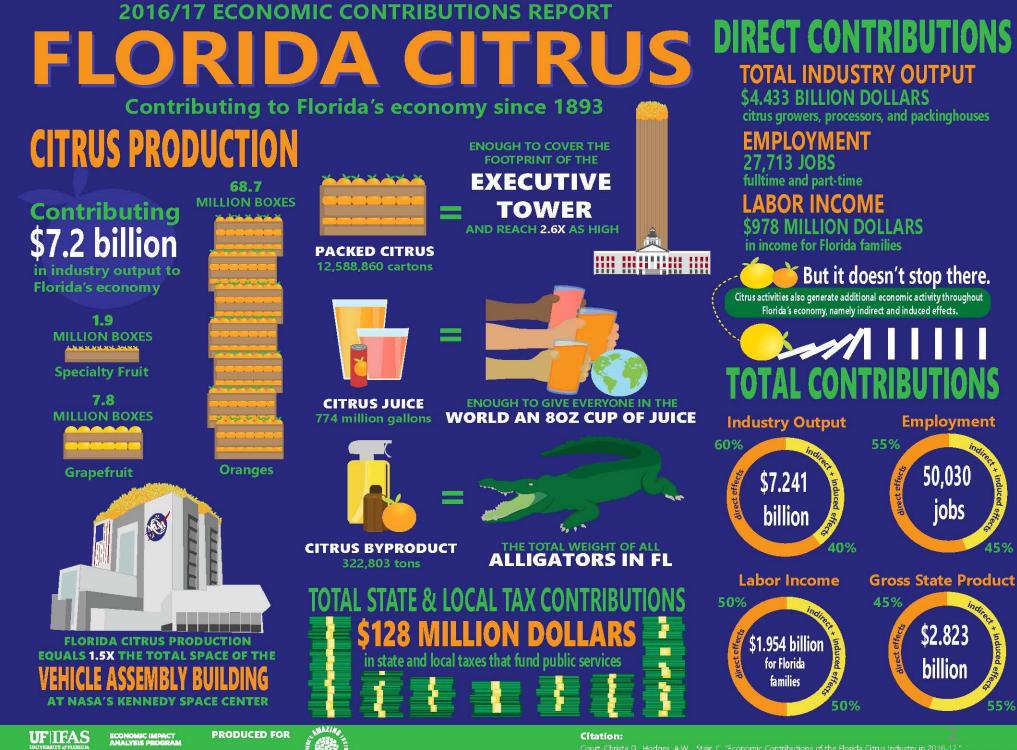
FLORIDA DEPARTMENT OF CITRUS

Florida Department of Citrus presentation to the

Florida Senate Committee on Agriculture



Shannon Shepp Executive Director February 4 , 2019





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 \$9.75 to the State net return of \$9.75 of Florida



1040

PRODUCED4FOR

jobs protected in Florida

in the past year _____



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.

Florida OJ 101: Sugar

HOLLEY GRAINGER



Florida OJ 101: Hesperidin





Grower Profile: Ned Handcock





Steamed Orange Halibut





When it comes to Millennial Moms...

70%

don't associate 100% OJ with sugar



Nutrient content overrides concerns about sugar

85% of moms

feel good serving 100% OJ to family or friends



A quarter of Millennial Moms are still in the "persuadable" bucket.



<u>27%</u>

are not sure if they associate[•] 100% OJ and sugar



Opportunities for those who are not sure exist as we consider future programming.

Direct targeting works. Nutrient content recall doubles with millennial moms.

MILLENNIAL MOMS ARE HOLDING Steady on positive Attributes of 100% oj:



- Made with only one ingredient: oranges
- Convenient





		FLORIDA SENATE	
\mathcal{T}	APPEAR Deliver BOTH copies of this form to the Se	ANCE RECO	
Meeting Date			Bill Number (if applicable)
Topic <u>Flarid</u>	a Department a	CHW S	Amendment Barcode (if applicable)
Name <u>Shanao</u>	in Shepp		,
Job Title <u> </u>	five Director	and the second	
Address 605 E	Main SP.		Phone 563 640 5492
Street	W FE	33830	EmailSiskeppecitrus Mifloi
<i>City</i> Speaking: For	State Against Information		Speaking: In Support Against hair will read this information into the record.)
Representing			
Appearing at request of	Chair: Yes No	Lobbyist regist	stered with Legislature: Yes No
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CourtSmart Tag Report

Room: SB 30 [°] Caption: Sena	1 ate Committee on Agriculture	Case No.: Judge:	Туре:
	2019 1:33:12 PM 2019 3:29:54 PM Length: 01:56	:43	
1:33:11 PM	Meeting called to order by Cha	ir Albritton	
1:33:20 PM	Roll call by Administrative Assis	stant Laureen Zaugg	
1:33:29 PM	Quorum present	_	
1:33:35 PM	Pledge of Allegiance led by Sei		
1:34:09 PM	Comments from Chair Albritton		
1:34:40 PM 1:34:54 PM	Tab 4 introduced by Chair Albri Presentation by Ms. Shannon S		or on the Florida Department of Citrus
1:49:40 PM	Comments from Chair Albritton		Ton the Florida Department of Olitus
1:50:09 PM	Response from Ms. Shepp		
1:50:24 PM	Question from Senator Montfor	ď	
1:50:33 PM	Response from Ms. Shepp		
1:52:21 PM	Follow-up question from Senate	or Montford	
1:52:37 PM	Response from Ms. Shepp		
1:52:54 PM	Additional question from Senat	or Montford	
1:53:00 PM	Response from Ms. Shepp		
1:53:25 PM	Response from Chair Albritton	and	
1:53:53 PM 1:54:11 PM	Response from Senator Montfo Response from Ms. Shepp	זמ	
1:54:43 PM	Additional comments from Sen	ator Montford	
1:54:56 PM	Response from Ms. Shepp		
1:55:52 PM	Question from Senator Rader		
1:56:09 PM	Response from Ms. Shepp		
1:58:56 PM	Comments from Chair Albritton		
1:59:04 PM	Introduction of Tab 1 by Chair A		
1:59:24 PM		niversity of Florida, Profe	essor and Associate Chair, Institute of Food and
Agricultural Se			
2:14:42 PM 2:14:51 PM	Response from Chair Albritton Continued presentation by Dr.	Cloucor	
2:14:06 PM	Comments from Chair Albritton		
2:16:36 PM	Response from Dr. Clouser		
2:16:53 PM	Additional comments from Cha	ir Albritton	
2:17:01 PM	Question from Senator Broxsor	n	
2:17:21 PM	Response from Dr. Clouser		
2:18:40 PM	Comments/question from Sena	ator Rader	
2:19:49 PM	Response from Dr. Clouser	or Dodor	
2:23:29 PM 2:23:52 PM	Follow-up question from Senate Response from Dr. Clouser	of Radel	
2:26:03 PM	Comments from Chair Albritton		
2:26:53 PM	Introduction of Tab 2 by Chair A		
2:27:07 PM			Florida Research and Education Center,
University of F			
2:49:18 PM	Comments from Chair Albritton		
2:49:27 PM	Question from Senator Montfor	ď	
2:50:08 PM	Response from Dr. Aiken	or Montford	
2:53:07 PM	Follow-up question from Senate	or Montford	
2:53:15 PM 2:54:10 PM	Response from Dr. Aiken Additional question from Senate	or Montford	
2:54:18 PM	Response from Dr. Aiken		
2:55:26 PM	Comments from Senator Montf	ord	
2:55:33 PM	Response from Dr. Aiken		
2:56:17 PM	Comments from Chair Albritton	1	
2:56:23 PM	Introduction of Tab 3 by Chair A	Albritton	

- 2:56:49 PM Presentation by Mr. Rich Budell, President, Budell Water Group
- **Question from Senator Montford** 3:03:02 PM
- Response from Mr. Budell 3:03:09 PM
- 3:03:29 PM Continued presentation from Mr. Budell
- 3:16:53 PM Question from Chair Albritton
- 3:17:01 PM Response from Mr. Budell
- Additional question from Chair Albritton 3:18:34 PM
- 3:18:42 PM Response from Mr. Budell
- Continued presentation from Mr. Budell 3:18:56 PM
- **Question from Senator Montford** 3:22:47 PM
- Response from Mr. Budell 3:22:53 PM
- Comments from Chair Albritton 3:25:49 PM
- 3:26:00 PM Response from Mr. Budell
- 3:27:46 PM Question from Chair Albritton
- 3:27:53 PM Response from Mr. Budell
- 3:28:04 PM Question from Senator Gainer 3:28:14 PM Response from Mr. Budell
- Comments from Chair Albritton
- 3:28:54 PM
- 3:29:32 PM Senator Montford moves to adjourn, meeting adjourned without objection