

Methods and Approach

This study was conducted to determine Florida's goat and sheep (small ruminants) producers' satisfaction with their state's slaughter and processing facilities. Most importantly, the project investigators (team) conducted the inquiry to determine the need to purchase a mobile processing unit for small ruminant producers in the state. Therefore, they developed a survey instrument and submitted the document to the Institutional Research Board at the University of Florida (UF) to ensure they used the appropriate steps to protect the rights and welfare of individuals participating in the inquiry. Once the survey was approved, the investigators (Shelia Austin [Lead investigator] and personnel from Florida A&M University [FAMU] and UF) created a flyer to invite farmers to participate in the study. The survey was disseminated through email listservs, extension personnel, goat associations, posted in feed stores in five counties in Florida, rural businesses catering to farmers, online, at agricultural events, and in-person contacts.

Results and Discussion

Survey respondents were asked to report data from their 2019 and 2020 farm operations, the thought being that the Covid pandemic likely disrupted their business. Some survey respondents did not answer all questions. So, the number of participants who replied to each question is indicated in the tables and figures that follow.

Tables 1-3 provide a summary of demographic information provided by the 159 respondents who participated in this survey.

In terms of years of operation, 62% of respondents indicated they had been in business for less than 10 years. Of note, the USDA defines beginning farmers and ranchers "as those who have operated a farm or ranch for 10 years or less either as a sole operator or with others who have operated a farm or ranch for 10 years or less." Only 38 percent of the respondents indicated that they had been in business for 10 years or longer.

Nearly half of the operations (47 percent) were less than 10 acres in size, with another 39% being between 10 and 50 acres. Six percent of the operations were between 50 and 100 acres, and 8 percent were over 100 acres in size.

Annual revenues from 2019 showed a strong tendency toward smaller sized operations. Thirty two percent of respondents indicated revenues less than \$1,500, while another 30 percent reported revenues between \$1,500 and \$5,000; in other words, over 60 percent of survey respondents reported annual sales of less than \$5,000. Twenty seven percent of respondents reported revenues of between \$5,000 and \$10,000 and 18 percent reported revenues between \$10,000 and \$20,000. Only 3 percent of respondents indicated that their operation generated revenues between \$20,000 and \$100,000, and another 3 percent reported revenues in excess of \$100,000.

Table 1 Number of Years in Operation

Demographics	Response Rate¹ (%)
Years in Operation (48 responses)	
Less than 3 Years in operation	12%
3-6 Years in operation	31%
7-9 Years in operation	19%
10+ Years in operation	38%
<i>Beginning Farmers <10 Years in operation</i>	62%

¹The percentage of farmers responding to years in operation.

Table 2 Number of Acres in Farm Operation

Farm Operation Size (49 responses)	Response Rate¹ (%)
Less than 10 acres	47%
11-20 acres	31%
21-30	2%
31-40	2%
41-50	4%
51-60	0%
61-70	4%
71-80	2%
81-90	0%
91-100	0%
100	2%
200	4%
300	2%
<i>Acres in Operation ≤ 20 Acres</i>	77%

¹The percentage of farmers responding to acres in operation

Table 3 Revenue Produced from Raising Small Ruminants

Revenue Earned for 2019 (33 responses) by Categories ¹	Income Earned ²	Percentage of Income Earned ³
<i>Less than \$1500</i>		
	\$120	2.94%
	\$200	5.88%
	\$500	5.88%
	\$1,000	14.71%
	\$1,050	2.94%
<i>\$1,500 - \$5,000</i>		
	\$1,500	0%
	\$2,000	8.82%
	\$2,500	2.94%
	\$2,655	2.94%
	\$3,000	2.94%
	\$3,500	2.94%
	\$4,800	2.94%
	\$5,000	5.88%
<i>\$5,500 - \$10,000</i>		
	\$5,500	2.94%
	\$5,600	2.94%
	\$8,000	2.94%
	\$9,000	2.94%
	\$9,500	2.94%
	\$10,000	5.88%
<i>\$10,001 - \$20,000</i>		
	\$12,000	2.94%
	\$15,000	5.88%
	\$16,000	2.94%
<i>\$20,001 - \$100,000</i>		
	\$75,000	2.94%
	\$100,000	0%
<i>\$100,000 +</i>		
	\$210,000	2.94%

¹ Revenue earned by categories [less \$1500, \$1500- \$5000 or between \$5500-5600].

² Actual income, earned by respondents per category.

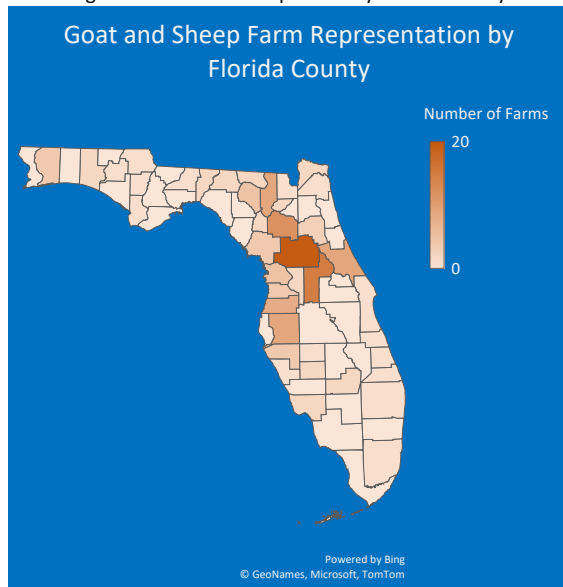
³ Percentage of income earned by respondents per category. For example, 3% of the respondents earned \$120 or 6% earned \$5,000 annually from farming.

Farms by Florida County

While the original goal of this project was to look at goat meat markets and processing, the project survey generated responses from approximately as many sheep producers as goat producers. Since both goats and sheep are small ruminants, and because of similarities between goats and sheep in terms of meat processing and marketing, we have included the responses of both goat and sheep producers in this report.

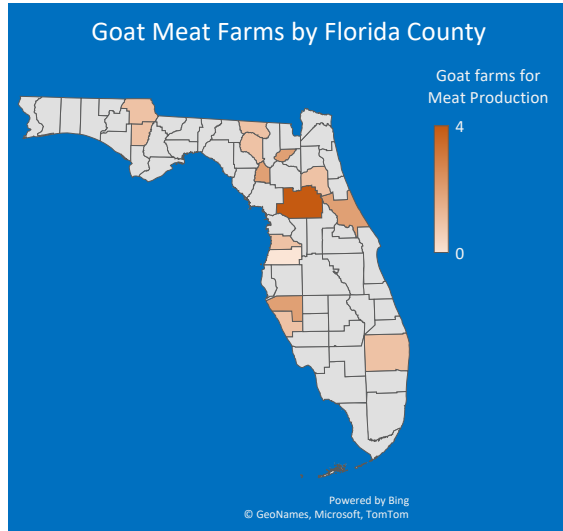
Figure 1. is a map that graphically displays the concentration of each county's total number of goats and sheep farms reported by survey participants. In figure 1, the color orange represents each county in Florida. The darker the color, the larger the number of farms reported from that area. Survey responses indicated that most goat and sheep farmers are concentrated in the state's northern region instead of the state's southern portion. Marion County reported the largest number of farms (20), followed by Lake County (15), Alachua County (12), and Columbia and Volusia counties, both have nine farms.

Figure 1. Goat and Sheep Farms by Florida County



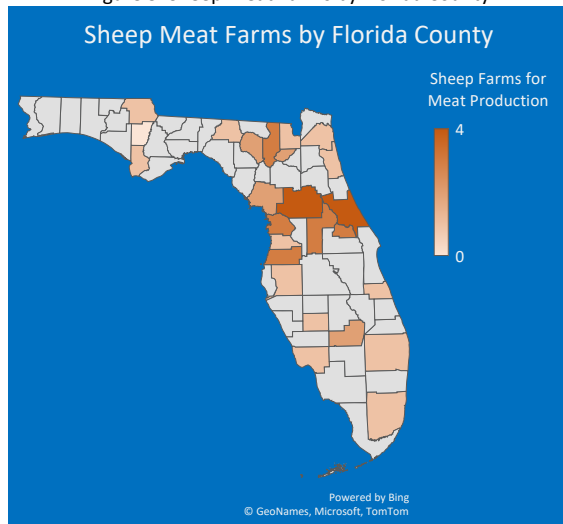
The following map (figure 2) illustrates the distribution, by county, of goat farms as reported by survey participants. While Marion County is also the largest county with goat farms, there seems to be a more scattered distribution of goat farms, again with the majority being in north-central Florida.

Figure 2. Goat Meat Farms by Florida County



However, based on the data, there was a wider distribution of sheep farms in the state's southern region than goat farms, as shown in figure 3.

Figure 3. Sheep Meat Farms by Florida County



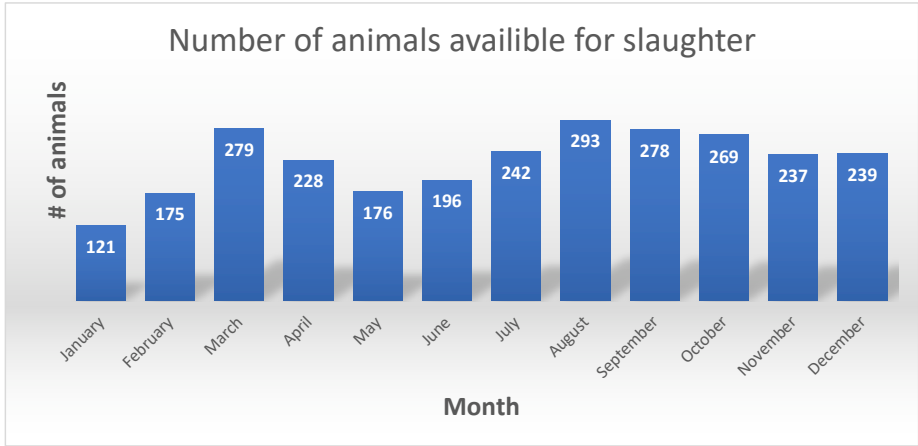
Goat and Sheep Availability by Month

Most farms in the study had goats and sheep for slaughter from July through September, while fewer small ruminants were butchered during the winter months (figure 4). The following figure (5) represents the number of goats and sheep available for slaughter by month from survey respondents in Florida. The monthly patterns shown are generally consistent with the data from figure 4 on the number of farms that have animals available for slaughter.

Figure 4. Number of Florida Farms with Goats and Sheep for Slaughter, by Month Based on Survey Responses.



Figure 5. Number of Goats and Sheep Available for Slaughter in Florida, by Month, Based on Farms Reporting.



Travel for Processing

Table 4 summarizes the data provided by the survey respondents on the number of miles they currently travel or are willing to travel for custom exempt and USDA-inspected meat processing and packaging services. The first row in the table revealed that 31 participants reported the distance they traveled to access USDA-inspected processing was from 4 to 100 miles, with an average of 44.9 miles. A single respondent noted they traveled 4-miles, as was the case for the 100-mile response.

The second row of the table (4) showed that 25 participants reported how far they travel to access custom exempt processing, with responses varying from 1 mile (1 respondent) to 100 miles (1 respondent). The average for these responses was 30.8 miles, which is reasonable as ranchers would not be expected to travel as far to access custom-exempt processing as they would USDA inspected processing.

Furthermore, 37 participants responded to how far they would be willing to travel for custom exempt packaging. Their responses varied from 1 to 100 miles, with the average response being 40.7 miles, as shown in table 4. In both cases, the respondents indicated they would be willing to travel somewhat further than they presently travel to access USDA and custom exempt processing.

Table 4. Travel for Processing

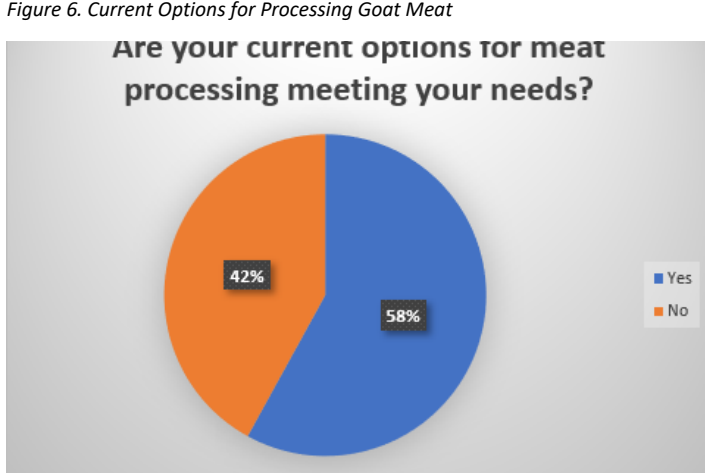
	# of Observations	Mean (miles)	Minimum (miles)	Maximum (miles)
Miles Traveled for USDA Inspected Processing	31	44.9	4	100
Miles Traveled for Custom Exempt Processing	25	30.8	1	100
Miles Willing to Travel for USDA Inspected Processing	49	46.7	10	100
Miles Willing to Travel for Custom Exempt Processing	37	40.7	1	100

Are Current Processing Options Meeting Your Needs?

The next three charts reveal additional information on processing difficulties that respondents face.

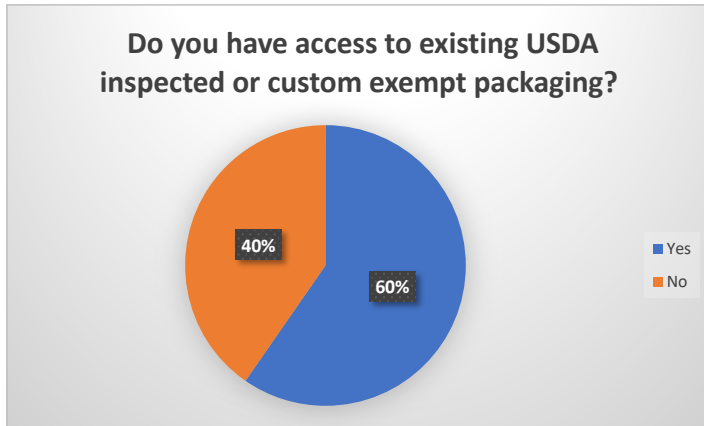
Figure 6 reports the results of the question whether current meat processing options are meeting the needs of 43 survey participants who responded. Forty-two percent of the respondents reported that their current options for meat processing are not meeting their needs.

Figure 6. Current Options for Processing Goat Meat



Forty percent of the respondents, as shown in figure 7, revealed that they do not have access to USDA inspected packaging or custom exempt packaging.

Figure 7. Accessibility to USDA or Custom Exempt Processing Facilities



However, respondents reported were almost evenly split on access to slaughter and processing as a barrier to the growth of their operations (refer to figure 8).

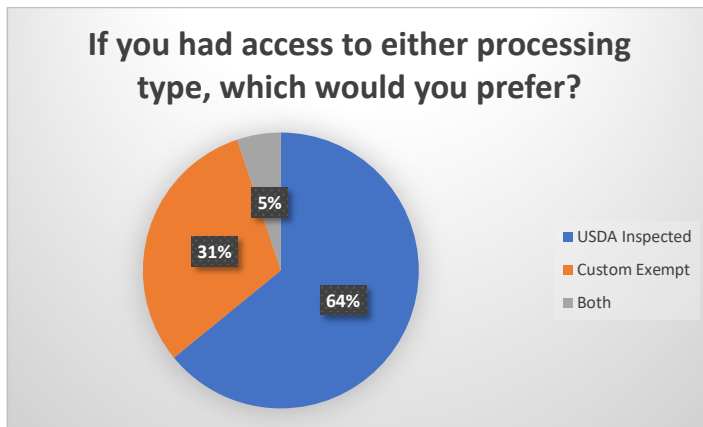
Figure 8. Barriers in Expanding Producers Farm Operation



When respondents were asked to describe the difficulties associated with meat processing, most who responded reported difficulty finding USDA certified processing, many of them also indicated that they had to travel too far for the service (refer to table 4).

In figure 9, sixty-four percent of respondents said they preferred USDA certified processing, indicating their difficulties accessing federal processing facilities. Thirty-one percent of respondents remarked that they favored custom exempt processing, and 5% of respondents revealed that they would like access to both forms of processing to satisfy their customer needs and marketing plans.

Figure 9. Processing facility preference



When asked to describe the range of processing needs that are not being met, responses tended to point to the same few issues:

- Access to nearby processing facilities.
- Prohibitively high costs of processing small batches.
- Difficulty even finding processors who would handle small batches.

One respondent even indicated the quality of the cuts obtained from the USDA inspected facility they used was extremely poor.

Other Survey Responses

From this point onward in the survey, a relatively small number of participants entered responses, making it difficult to draw a more decisive conclusion. However, there are interesting insights to be gained from the data. The survey asked respondents to provide information on what they paid for slaughter and cut-and-wrap for USDA inspected and custom exempt processing. Unfortunately, very few participants responded to these questions. The reported prices varied over such a wide range that it was impossible to draw any useful information from the responses. Survey participants were

also asked if they have current market opportunities for USDA inspected or custom exempt products that they cannot fully serve.

The lack of processing facilities did not seem to be a constraint for goat and sheep producers. More than two-thirds of respondents indicated that they did not have markets they couldn't serve because of processing.

The survey also questioned if slaughtering and processing access were barriers to growth for their farm operation. Over half of respondents indicated that it was not a barrier to growth. Survey participants who answered that processing was a barrier to the development of their farm operation were asked to specify the obstacles to growth. The responses to this question were limited in number.

The primary complaint was about high processing fees, but also there were restrictions on access altogether, issues with transportation and related costs, and poor quality.

The survey then asked participants to identify if they served a customer base that requires specific processing methods to satisfy religious practices. Approximately 20 percent of producers indicated that they serve a customer base that compels special processing. Most of these producers also report they process goat or sheep to satisfy the Halal requirements and some Kosher demands.

Furthermore, scarcely more than 20 producers responded to the question about their level of satisfaction with USDA-inspected slaughter facilities. Their responses are in Table 5. It should be noted that respondents often tended to give the same ranking for all categories. Also, some respondents did not reply to all categories, so the total number of responses varies slightly across categories.

Table 5. How satisfied are you with using Florida **USDA-inspected** slaughter facilities for each of the following categories?

	Extremely satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Extremely dissatisfied
cut quality	6	5	9	0	2
affordability	5	5	8	2	2
customer service	6	4	8	2	2
plant sanitation	5	4	8	3	2
capacity for multiple species	5	5	8	1	2
distance	6	1	8	2	5
access	4	4	8	2	4
prices	5	4	8	2	2
value of services	5	4	8	2	1

Table 6. How satisfied are you with using Florida **Custom Exempt** slaughter facilities for each of the following categories?

	Extremely satisfied	Somewhat satisfied	Neither satisfied nor dissatisfied	Somewhat dissatisfied	Extremely dissatisfied
cut quality	6	6	11	0	1
affordability	6	5	11	1	1
customer service	8	7	9	0	1
plant sanitation	7	4	10	1	1
capacity for multiple species	6	3	13	0	1
distance	8	4	11	0	1
access	9	4	10	0	1
prices	6	6	10	0	1
value of services	7	5	10	1	1

When asked where survey participants marketed their goat and sheep products, 6 respondents indicated that they sold their animals live, 22 respondents indicated that they sold their meat products on farm direct to customers, 2 responded that they sold their meat products at farmers markets, one indicated that they sold their meat products to a local restaurant and one respondent indicated that they delivered their meat products directly to customers.

Survey responses regarding the percent of annual goat and sheep sales going to each market the respondents serve, suggest very focused marketing channels, with nearly all farms relying on only a single market channel for all of their sales.

Nineteen producers reported primarily serving their own county in which they operate. Responses for geographic markets served are contained in Table 7.

Table 7. Geographic Areas Served.

Geographic Area Served	Number of Responses
Jacksonville/St. Augustine area	4
Gainesville area	9
Tallahassee area	4
Pensacola area	0
Orlando area	3
Tampa/St. Petersburg/Clearwater area	6
Lakeland/Winter Haven area	3
Naples/Ft. Myers area	0
Vero Beach/Ft. Pierce/Stuart area	2
West Palm/Palm Beach County	1
Miami-Dade County	2
Other Florida areas (unspecified)	8
Alabama	2
Georgia	2
Other States (unspecified)	1
International Exports	1

Slightly over half of producers who responded (13 out of 21 respondents) indicated that they had recently experienced challenges in serving their current markets. Challenges identified included:

- COVID-19
 - can't take sheep to fairs to gain exposure
 - reduced custom slaughter availability
- Can't find quality advertising outlets
- Limited ability to arrange for slaughter and marketing
- Concern about being dependent on only a single marketing channel
- Lack of USDA facilities nearby
- Can't sell meat due to law/expense
- Can't get the processing done
- Inability to sell online
- Higher gasoline prices
 - Customers won't travel as far to purchase meat, therefore, decreasing my sales
 - Customers expect discounts to cover their extra fuel costs
- Breed association and registration company restricting flock management under threat of losing registration.

Once again, responses regarding the maximum amount that producers would be willing to pay for USDA-inspected and Custom-Exempt slaughter and processing services were very limited and spread over such a wide range that they offered no useful information or insights.

Concluding Observations

Discussion

It must be noted that the COVID-19 pandemic presented a great challenge to completion of this grant. The recruitment and survey dissemination methods written into the grant were simply not possible to execute given the shut-down of public events. An unforeseen opportunity to collaborate with a University of Florida grant, similar to this SARE grant to survey livestock producers in Florida, allowed us to combine survey instruments and recruit from additional populations. This widened our pool of respondents and made in-person contact with producers less of a barrier to completion.

Survey responses suggest very focused marketing channels, with nearly all farms relying on a single market channel for all of their sales.

More than two-thirds of respondents indicate that they do not have markets they are unable to serve because of processing limitations. The survey also questioned if slaughtering and processing access were barriers to growth for farm operations. Over half of respondents indicated that it was not a barrier to growth.

In looking at the survey results for satisfaction with current use of USDA-inspected slaughter facilities and current satisfaction with use of Custom Exempt slaughter facilities, the nature of producer's relationship to the processed meat must be considered. For Custom Exempt, the producer facilitates the processing for the buyer of the animal. For USDA-inspected slaughter, the producer takes ownership of the processed meat for sale and thus may have higher expectations for the quality of the meat.

Based on the results of this survey, at this time, it does not appear that a Mobile Slaughter Unit (MSU) or small USDA slaughter facility could be supported in Florida for small ruminants as,

- current production is limited to farmers with small acreage (production constraints)
- the existing production constraints limits sales
- the majority of current small ruminant producers are beginning farmers and relatively inexperienced

Recommendations:

- Need for further research...

Cooperators

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Mark Yarick. Mark is a consultant with the Florida Small Business Development Center who works with small businesses to help them start, grow and succeed. He specializes in rural business development, agribusiness and financial management. His favorite part of working for the FSBC at UNF is financial planning, analysis and projections. Mark feels at home every day rolling up his sleeves, kicking the tires and looking under the hood as he troubleshoots his clients' businesses. Mark is a certified Economic Development Financial Professional. He holds an AS in Aviation Maintenance Technology, an AS in Automotive and Machinery Technology from LeTourneau University, a BAS in Business Administration from Saint Leo University and an MBA from the University of North Florida. His role in this project will be to facilitate contact with farmers, producers and businesses that may benefit from a mobile meat processing enterprise.

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Angela McKenzie-Jakes. Angela is currently employed as an Extension Animal Science Specialist with the Cooperative Extension Program in the College of Agriculture. Ms. McKenzie-Jakes will assist in recruiting farmers to participate in the survey, help disseminate the results of this study through future workshops and publications, and help develop the final report for the grant.

Sheila Austin

Role: farmer

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Commented [A1]: Need Bill Messina's info for this section

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Sheila Austin. Sheila is the owner of Red Boot Goat Farm. Red Boot Goat Farm, LLC is a family farm located in Bradford County, Florida. The farm has been operational since 1977. In 2010, after making improvements to the land, the family launched a meat goat business that failed. Sheila completed the Florida A&M Master Goat and Sheep Certification Program in 2018 to re-establish the family meat goat business. Her role as project lead is to use the lists of producers identified by Angela, and list of custom exempt businesses provided by Mark, along with individuals identified by flyers, word of mouth, recruitment efforts, etc., to collect contact information and email surveys and/or arrange for in-person interviews. She will schedule events and arrange space at agriculture venues (such as county fairs and local extension offices to recruit and interview stakeholders. Sheila will manage the survey and data analysis efforts by FRED and be the primary author on publications and reports generated to disseminate project results.

William A. Messina, Jr.

Role: survey development, online host, statistics

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William A. Messina, Jr. is an agricultural economist with the Food and Resource Economics Department at the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) where he conducts research, extension and teaching programs on a wide range of agricultural marketing, trade, development and policy issues. He is the Extension Coordinator for the Food and Resource Economics Department, and the editor for the Department's Extension publications. Bill holds a Bachelor of Science degree in Agricultural Economics from Cornell University and a Master of Science degree in Food and Resource Economics from the University of Florida.