

# Preliminary Report on Pilot Survey of Farmer's Mental Well-Being

Updated: July 20, 2021



This document was produced by the Georgia Rural Health Innovation Center at Mercer University School of Medicine pursuant of Georgia Department of Community Health Grant #19045G.

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## **About the Georgia Rural Health Innovation Center**

In 2018, Georgia lawmakers dedicated special funds to establish a new Rural Health Innovation Center tasked with confronting the complex health care challenges and wellness disparities facing rural communities. Mercer University School of Medicine (M.U.S.M.) was awarded the grant funds in 2019 and formally established the Georgia Rural Health Innovation Center on its Macon campus. M.U.S.M. boasts a longstanding commitment to serving rural Georgia's health needs, with a mission to educate physicians dedicated to tackling the health challenges in rural Georgia. The Rural Health Innovation Center serves as a critical resource to rural communities to improve access and effectiveness of health care by offering research, collaboration, and training opportunities.



## **Preliminary report on Pilot Survey of Farmer's Mental Well-Being**

The Georgia Foundation for Agriculture partnered with the Georgia Rural Health Innovation Center at Mercer University to inventory the mental well-being, stressors, and coping mechanisms for Georgia farm owners, farm workers, farm managers, and their spouses.

The pilot survey ran from May 2021 through June 2021 to test the measures used for the statewide survey. This report contains basic demographics of the sample (N= 536) and some straightforward outcomes; in addition, there is an appendix of upcoming analyses. Where we use the term "farmers," we mean farm owners, farm managers, or farm workers. People that own farms in 135 of Georgia's 159 counties completed the survey. Farm workers reported working in at least 86 counties across the state.

Participants were asked about their demographics, household, and connection to a farm or farmer. They were also asked a series of questions that focused on mental well-being, including stressors, coping methods, and emotions. The survey was available in English and Spanish and took an average of 11 minutes to complete.

The authors would like to thank Claire Belay, Pedro Escobar, and Michael Kshatri, medical students at M.U.S.M., for translating the survey. The authors would also like to acknowledge James Dunaway, Taylore Brooks, and Lauren Gilbert, Ph.D., for their part in developing the survey.

*Methodological notes: All differences mentioned in the report were significant and tested using the appropriate statistical tests. The abbreviation "A.V.G." denotes an average, and the symbol "±" denotes a standard deviation. Rounding to one decimal may have led to a total of more or less than 100%.*

## Demographics

The sample consisted of 536 farmers and spouses of farmers. The largest proportions of the participants were farm owners (N=247, 46%) and farm workers (N=220, 41%).

Role of the participants	Count	Percent
Farm owners	247	46.0
Farm managers	8	1.5
Farm workers	220	41.0
Spouse of farm owners	44	8.2
Spouse of farm workers	15	2.8
Other	3	0.6
Total	535	100%

There was a larger proportion of males (N=414, 77.1%) compared to females. Three participants identified as gender diverse. Gender diverse is an umbrella term used to recognize survey participants that do not identify as male or female; gender options in this survey included male, female, and gender diverse. Farm owners had a larger proportion of men (89.8%) than farm workers (73.5%). The average age of the participants was 40 ( $\pm 8.2$ ) years old. Farm owners (AVG=41.4 years old) were on average older than farm workers (AVG=38.1 years old).

Three quarters of the survey participants were white (75%). 11% identified as Black or African American, 9% as American Indian or Native Alaskan, and 4% identified as Hispanic, Latinx or Spanish.

Most participants (54%) had completed an education of vocational certificate/trade school or higher. The most common educational category was “some college, no degree” (25%).

Education Level	Count	Percent
None	4	0.7
Primary school: 1st - 6th grade	5	0.9
Secondary school: 7th - 11th grade	19	3.5
High school graduate	88	16.4
Some college, no degree	136	25.4
Vocational Certificate / Technical / Trade School	68	12.7
Associate degree	87	16.2
Professional degree	38	7.1
Bachelor's degree	68	12.7
Master's degree	19	3.5
Doctoral degree or equivalent	4	0.7
<b>Total</b>	<b>536</b>	<b>100</b>

The majority (92%) of the sample was married or living with a partner.

Marriage status	Count	Percent
Single, never married	30	5.6
Married	463	86.7
Divorced	11	2.1
Widowed	2	0.4
Living with partner	28	5.2
<b>Total</b>	<b>534</b>	<b>100</b>

About three quarters (76.8%) had children living in the household, with the majority having one or two children (81.9%).

Children in household	Count	Percent
1	135	33.1
2	199	48.8
3	61	15.0
4	13	3.2
<b>Total</b>	<b>408</b>	<b>100.0</b>

The median household income for Georgia in 2019 was \$58,700 per year (Census, 2020). The median household income for participants in this survey was in the \$60,000 - \$79,999 range. Farm owners have a higher median income (60-79,000 per year) than farm workers (45-59,000 per year.)

Household Income Per Year	Count	Percent
<\$15,000	3	0.6
\$15,000-\$19,999	4	0.7
\$20,000-\$24,999	8	1.5
\$25,000-\$34,999	29	5.4
\$35,000-\$44,999	101	18.9
\$45,000-\$59,999	97	18.1
\$60,000-\$79,999	74	13.8
\$80,000-\$99,999	87	16.3
\$100,000-\$149,999	72	13.5
\$150,000+	60	11.2
Total	535	100

Most farmers were U.S. citizens (78.3%), although another 17.6% were legal permanent residents.

Immigration status	Count	Percent
U.S. citizen	419	78.3
Legal permanent resident (“green card,” immigrant visa, permanent worker visa)	94	17.6
Temporary worker (temporary nonimmigrant work visa)	10	1.9
Temporary student or exchange visitor (student visa, exchange student or J visa)	10	1.9
Refugee	2	0.4
Total	535	100.0

## FARMER WORK SUMMARY

In the following section, we zoom into the work characteristics of farm owners and farm workers.

### Farm owners

Most farm owners (84.2%) have been farm owners longer than 5 years (see below table, 84.2% includes those farming 5-10 years; 10-20 years; and 21 years or more). About two-thirds (63.0%) of the farm owners are first-generation farmers. First-generation farmer was defined as ‘the first in your family to own a farm.’ For 65.0% of the farm owners, farming was their only source of income.

Years of Experience	Count	Percent
Less than 1 year	4	1.6
1 to 5 years	36	14.2
5 to 10 years	118	46.5
10 to 20 years	76	29.9
21 years or more	20	7.9
Total	254	100.0

When asked how many diverse farms they oversee, most said they oversee one (55.9%). This question could be answered by selecting the number of physical farm locations respondents oversee or the number of products grown/raised in the same location. The question was left intentionally vague to allow farmers to select the choice that most closely represents how they identify their farming operation.

Diverse farms	Count	Percent
1	142	55.9
2	51	20.1
3	36	14.2
4	17	06.7
5	2	0.8
6	3	1.2
7	3	1.2
Total	254	100.0

A third of the farm owners (33.3%) had a farming operation size of more than 300 acres. Household income generally went up as the farming operation size increased.

Farming operation size	Count	Percent
Less than 10 acres	11	4.3
10 - 50 acres	9	3.6
51 - 100 acres	28	11.1
101 - 200 acres	78	30.8
201 - 300 acres	43	17.0
301 - 400 acres	16	6.3
401 - 500 acres	26	10.3
501 - 750 acres	30	11.9
751 - 1000 acres	9	3.6
1000 acres or more	3	1.2
Total	253	100.0

When asked about the type(s) of farm they own, the farm owners (N=254) mentioned most often cattle and beef (96 times), fruits and vegetables (78 times), wheat, corn, etc. (58 times), and cotton and wool (58 times). Note that multiple selections were possible due to 44.1% of the farm owners producing various farm products.

Farm Type	Count
Aquaculture	18
Cattle and Beef	96
Cotton and Wool	58
Dairy	33
Fruits and Vegetables	78
Nursery, Sod, & Floriculture	22
Peanuts, pecans, other nuts	36
Pigs	13
Poultry and Eggs	33
Sugar & Sweeteners	2
Timber/Pulpwood	3
Wheat, corn, & other grains	58
Other livestock	6
Other	4

### Farm workers

Most farm workers (77.2%) had more than 5 years of experience, which shows a similar tendency in the farm owners group (see below table, 77.2% includes those farming 5-10 years; 10-20 years; and 21 years or more). Most farmworkers were first-generation (67.4%). First-generation farmer was defined as ‘the first in your family to work on a farm.’ Farm workers generally worked on the same farm the entire year (88.8%). The remaining farm workers indicated that they worked 2 and 3 farms in a typical year. Two farm workers indicated they worked respectively 4 and 5 farms a year.

Years of Experience	Count	Percent
Less than 1 year	1	0.4
1 to 5 years	50	22.3
5 to 10 years	130	58.0
10 to 20 years	42	18.8
21 years or more	1	0.4
Total	224	100.0



When asked about the type of farming operations they work on, most indicated their farms were fruits and vegetables (82 times), cotton and wool (73 times), and cattle and beef (49 times). This seems to indicate that the farms that produce fruits and vegetables might employ a larger ratio of farmworkers than cattle and beef farms do.

Farm Type	Count
Aquaculture	14
Cattle and Beef	49
Cotton and Wool	73
Dairy	45
Fruits and Vegetables	82
Nursery, Sod, & Floriculture	39
Peanuts, pecans, other nuts	39
Pigs	18
Poultry and Eggs	31
Sugar & Sweeteners	11
Timber/Pulpwood	11
Wheat, corn, & other grains	47
Other livestock	0
Other	0

## MENTAL WELL-BEING OUTCOMES

The following section presents some initial outcomes about mental well-being and stressors.

### Job satisfaction

We asked each group if they feel unhappy about being a farmer or spouse of a farmer. Most farm owners (63.2%) indicated that they hardly ever (never to a few times a year) feel unhappy about being a farm owner. For spouses of farm owners, this was 40.8%. For farm workers, this was 37.1%; for the spouses of farm workers, it was 47.0%. This seems to indicate that spouses of farm owners feel unhappy more often than the farm owner themselves. Overall, it also shows more unhappiness in farm workers.

Frequency feeling unhappy with own role	Farm Owner		Farm Owner Spouse	
	Count	Percent	Count	Percent
Never	97	38.2	8	18.2
One to four times per year	64	25.2	10	22.7
At least once per month	37	14.6	12	27.3
At least once per week	52	20.5	11	25.0
Daily	4	1.6	3	6.8
Total	254	100.0	44	100.0

Frequency feeling unhappy with own role	Farm Worker		Farm Worker Spouse	
	Count	Percent	Count	Percent
Never	51	21.0	4	23.5
One to four times per year	88	36.2	4	23.5
At least once per month	65	26.7	6	35.3
At least once per week	33	13.6	2	11.8
Daily	6	2.5	1	5.9
Total	243	100.0	17	100.0

## Anxiety

The survey inquired about anxiety, described in this survey as a feeling of being bothered or distressed, by asking how often they fear something will happen. Farm owners feared losing their farm or a large amount of farming income at least once a month or more frequently in 37.5% of the cases. About half of the farmers (46.3%) were fearful of losing their job more than once a month. The non-US-citizens were asked if they feared being forced to leave the country. Almost half of them (45.3%) experienced anxiety about it more than once a month.

Frequency of anxiety about	Losing Farm/Income		Losing Job		Forced to leave the country	
	Count	Percent	Count	Percent	Count	Percent
Never	68	26.8	46	17.6	40	34.2
One to four times per year	91	35.8	94	36.0	24	20.5
At least once per month	49	19.3	58	22.2	27	23.1
At least once per week	39	15.4	51	19.5	19	16.2
Daily	7	2.8	12	4.6	7	6.0
Total	254	100.0	261	100.0	117	100.0

The farmers were asked if they worried about a variety of things. Farmers seemed to worry about all the issues we put in front of them. First, we asked about their future and their

livelihood. About 80% worried at least a little bit about not being able to provide for their family and about succession planning (for farm owners). More than 90% worried about saving up for retirement.

Worry about...	<b>You cannot provide for your family</b>		<b>Succession planning</b>		<b>Saving for retirement</b>	
	Count	Percent	Count	Percent	Count	Percent
Not at all or none	100	18.7	108	20.3	45	8
A little bit	123	23.1	145	27.2	141	26.4
Moderately	153	28.7	122	22.9	142	26.6
A lot	108	20.3	93	17.4	134	25.1
Extremely	40	7	41	7	60	11.2
N/A	8	1	12	4	11	2
<b>Total</b>	<b>532</b>	<b>100.0</b>	<b>532</b>	<b>100.0</b>	<b>533</b>	<b>100.0</b>

About half (52.3%) worried about the future, in general, more than once per month.

Worry about the future	Count	Percent
Never	106	20.3
One to four times per year	167	32.0
At least once per month	131	25.1
At least once per week	83	15.9
Daily	35	6.7
<b>Total</b>	<b>522</b>	<b>100.0</b>

We included questions about Covid-19 as well, where it became apparent that the great majority of farmers (90%) worried about getting the virus and about the pandemic’s effect on their farm work.

Worry about	<b>Catching Coronavirus</b>		<b>The pandemic’s effect on the farm</b>	
	Count	Percent	Count	Percent
Not at all or none	53	9.9	55	10.3
A little bit	117	22	125	23.4
Moderately	159	29.8	145	27.1
A lot	122	22.9	143	26.7
Extremely	68	12.8	53	9.9
N/A	14	2.6	14	2.6
<b>Total</b>	<b>533</b>	<b>100.0</b>	<b>535</b>	<b>100.0</b>

When we asked about anxiety surrounding racism, more than three quarters (71.8%) worried about experiencing racism themselves, and 74% worried about racism in their community.

Worry about	Experiencing racism		Racism in my community	
	Count	Percent	Count	Percent
Not at all or none	151	28.2	139	26.0
A little bit	112	20.9	111	20.8
Moderately	130	24.3	135	25.3
A lot	96	17.9	105	19.7
Extremely	32	5.9	27	5
N/A	13	2.4	16	3
Total	534	100.0	533	100.0

There was also some anxiety about possible changes to farming and agricultural laws and policies, with 88.8% worrying at least a little bit. Farm owners were also worried about the difficulty in hiring or managing employees: 81% worried at least a little. Finally, about 9 out of ten worried about unexpected financial burdens potentially coming their way.

Frequency worry about	Possible changes to farming/agricultural laws or policies		Difficulty hiring or managing employees		Unexpected financial burdens	
	Count	Percent	Count	Percent	Count	Percent
Not at all or none	60	11.2	102	19	76	14.2
A little bit	143	26.8	119	22.2	129	24.1
Moderately	155	29.1	131	24.4	165	30.8
A lot	127	23.8	100	18.6	109	20.3
Extremely	36	6.7	61	11.4	51	9.5
N/A	11	2	22	4	5	<1
Total	532	100.0	535	100.0	117	100.0

Farmers were also worrying about health issues and illness (78.6%), their alcohol use (80.7%), and balancing home and work life (91.0%).

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Worry about illness or health issues	Count	Percent
Not at all or none	114	21.4
A little bit	172	32.3
Moderately	109	20.5
A lot	89	16.7
Extremely	39	7.3
N/A	10	1.9
<b>Total</b>	<b>533</b>	<b>100.0</b>

Worry about alcohol use	Count	Percent
Not at all or none	103	19.3
A little bit	182	34.1
Moderately	146	27.3
A lot	62	11.6
Extremely	31	5.8
N/A	10	1.9
<b>Total</b>	<b>534</b>	<b>100.0</b>

Worried about home-work-balance	Count	Percent
Not at all or none	48	9.0
A little bit	139	26.2
Moderately	166	31.3
A lot	97	18.3
Extremely	69	13.0
N/A	12	2.3
<b>Total</b>	<b>531</b>	<b>100.0</b>

**Negative Affect**

We used the Positive Affect Negative Affect Scale (PANAS) to measure the mood and/or emotions of the survey respondents. The PANAS can be used to measure a person’s outlook on the world. For example, if someone has a positive affect, they tend to interact in a more positive way. Conversely, someone with a negative affect might experience the world in a more negative way. Positive and negative affect does not equate to good or bad. In this section, we focus on the mood or emotions felt by the respondents, as described by how they responded to the PANAS. Feelings of loneliness were experienced by about half of the farmers (48.3%), sadness or depression by 49.2%, and feelings of hopelessness by 31.6%.

Frequency feelings about	Lonely		Sad or Depressed		Hopeless	
	Count	Percent	Count	Percent	Count	Percent
Never	149	28.0	119	22.7	230	42.9
One to four times per year	126	23.7	147	28.1	137	25.6
At least once per month	135	25.4	131	25	98	18.3
At least once per week	93	17.5	92	17.6	55	10.3
Daily	29	5.5	35	6.7	16	3
<b>Total</b>	<b>532</b>	<b>100.0</b>	<b>524</b>	<b>100.0</b>	<b>536</b>	<b>100.0</b>

When asked if they had suicidal ideation, 32.1% had thought about it at least once in the past year, with 11.8% of farmers thinking about it more than once a month, 8.4% at least weekly, and 1.7% daily.



Thoughts of wanting to die by suicide	Count	Percent
Never	364	67.9
One to four times per year	55	10.3
At least once per month	63	11.8
At least once per week	45	8.4
Daily	9	1.7
Total	536	100.0

### Access to Care

We asked participants if they had access to basic personal care, food and groceries, and medical care. Over a half (52%) reported that they do not have access to basic personal care items. Nearly two-thirds (64%) reported that they had access to food and groceries and just over one-third (35%) reported they had access to recreational activities. The authors did not define personal care items, food or groceries, or recreational activities in the survey allowing the respondents to apply their own definition of the terms.

As for medical care, 41% said they could access emergency medical care, 38% said they could access in-office routine care and 31% reported they could access routine online medical care. Fewer respondents have access to mental health professionals; 23% have access to an in-person visit, 25% have access to online visits, and 11% have access to telephone care. We asked the participants if they have ever visited a mental health professional and 23% reported that they visit one regularly, at least once a month. 34% report they have seen one once or twice, and 11% haven’t but would like to.

### Conclusion

This preliminary report only touches upon a part of the survey that was administered. Further analysis is ongoing. It became apparent that farmers, including farm owners, farm managers, and farm workers, are having anxiety directly related to their work, such as succession planning, retirement, illness, Covid-19, and its effect on their work. In addition, negative feelings, including suicidal ideation, are shown to be prevalent among this sample. These preliminary results have shown that this is an area of significant concern which justifies further inquiry.