

Uncertain Behaviors and Attitudes of Specialty Crops Growers amidst Covid-19 Pandemic

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Abstract

The Specialty Crop Industry was hard hit after Covid-19 was declared a pandemic. Concerns of the future of the industry triggered the initiation of a Qualtrics survey to investigate growers' attitude and behaviors amidst Covid-19, identify new production practices and cost analysis going into the fall crop season. The results of the survey conducted from June 10-July 02, 2020 will also be useful to Extension professionals in other regions and Policymakers in determining financial assistance programs for growers who suffered from Covid-19 pandemic. Results depicted that 62.5% of farmers will plant the same acreages in the fall of 2020 amidst the pandemic.

Keywords: specialty crops, Covid-19, growers, production practices, extension professionals

1. Introduction

Georgia is an agricultural state with a farm gate value of \$14 billion (GFGVR, 2018). Poultry and eggs are the largest contributors with 41.4%, followed by row and forage crops (16.2%). Smaller contributors included: vegetables, fruits, and nuts (12.7%), livestock and aquaculture (10.3%), ornamental horticulture (6.5%), forestry and related products (5.7%), and others (6.3%) In 2018, the Georgia vegetables, fruits, and nuts industry combined farm gate value were \$1.74 billion. Vegetables alone accounted for \$1.13 billion. In 2018, the top ten vegetables in terms of farm gate value were sweet corn, onions, bell peppers, watermelon, cucumbers, tomato, carrots, cabbage, yellow squash, and zucchini. Among fruits and nuts, major contributors include blueberries, pecans, peaches, grapes, apples, strawberries, and blackberries (GFGVR, 2019).

Before the Covid-19 pandemic, the dynamic of Georgia specialty crops industry had been subjected to enormous disruptions during the past two decades. The Montreal Protocol recommended a complete eradication of Methyl Bromide because of toxicity to the ozone layer (UNEP, 1995; Culpepper and Langston, 2000; Fonsah, 2005; Fonsah et al., 2005). The multistate outbreak of Salmonella Saint Paul reported in 43 states, the District of Columbia, and Canada, resulted in 1,442 human infections (CDC, 2008; Rodrigues et al., 2020). The Thrips vectored Tomato Spotted Wilt Virus (TSWV) destroyed several tomatoes farms, caused serious plant wilting, decreased yield, and affected fruit overall quality appearance (OCA) (Fonsah et al., 2010; Awondo et al., 2012). Most recently, Tomato Yellow Leaf Curl Virus (TYLCV), transmitted by whiteflies, became a major threat (Fonsah et al., 2018).

A severe frost in 2017 devastated over 50% of Georgia blueberries during the week of March 5th (Knox, 2018; Nickle, 2018). Hurricane Michael devastated both specialty and row crops in South Georgia, including pecans (Fonsah et al., 2018; Fonsah, Wells & Dorfman, 2018). In 2018 and 2019, trade disruption resulted from the tariff war between the U.S. and China and the trade war between the U.S., Mexico, and Canada, which ended up abolishing the North American Free Trade Agreement (NAFTA) that was created in 1994 (Fonsah, 2018; Liu et al., 2018). The uncertainties created by these trade wars negatively influenced the global economy and businesses (Fonsah, 2018; Liu et al., 2018), and had serious negative effects on the specialty crop industry in Georgia and the United States at large. Before that, it was the Tomato Suspension Agreement with Mexico (Nobel and The Counter, 2019).

According to Berman and Camerota (2020), the coronavirus also known as COVID-19 has killed 215,910

Americans with 7,858,344 reported cases. Worldwide, over 38,172,523 cases have been reported with 1,086,918 death. The above-mentioned incidences, i.e., the large number of reported cases and the total number of Americans reported dead due to covid-19 or related cases, were due to unsuccessful policy implications. More-so, no one envisaged that the spillover effect would impact the agricultural sector and the U.S. economy in general. The COVID-19, took the U.S. and the world by surprise (UNEP, 1995; Culpepper and Langston, 2000; Fonsah, 2005; Fonsah et al., 2005; CDC, 2008; Rodrigues et al., 2020; Fonsah et al., 2018; Fonsah, Wells & Dorfman, 2018). As a result, there was border and embassy closures, and travel restrictions by several countries, including the United States (Fonsah and Shealey, 2020).

Most specialty crop commodities are handpicked, requiring seasonal migrant labor or H-2A guest workers (Fonsah and Shealey, 2020; Costa and Martin, 2020; Dowdy, 2020).

According to Fonsah and Shealey (2020), “the presence of covid-19 would affect the specialty crop industry in the following ways: (a) significant loss of crops in the field since most of the specialty crops are handpicked, and there will be insufficient H-2A migrant labor, (b) delayed harvesting and harvesting process if the CDC’s recommended social and physical distances are adequately respected, (c) the state of Georgia and the U.S. specialty crops industry will suffer additional significant financial losses due to limited market access, (d) temporal shutting down of borders would decrease the number of H-2A workers entering the U.S. and decrease importation of specialty crops from Mexico and other U.S. trade partners, thus creating national food insecurity and shortages, (e) finally, the national food insecurity and shortages will trigger a significant price increase for specialty crops”.

By March 11, 2020, when Covid-19 was declared a pandemic by the World Health Organization (CDC, 2020), planted fruits and vegetables were maturing in the field in Georgia, the Southeast regions and other parts of the country. Furthermore, before Secretary Pompeo’s briefing about relaxing the H-2A guest worker’s program, the announcement that the U.S. Embassy in Mexico was going to stop interviews of seasonal workers sent another wave of panic to the existing Covid-19 pandemic fear. This study was conducted to investigate growers’ uncertain attitudes and behaviors amidst Covid-19 and to help identify alternative production practices and cost analysis preceding the fall crop season.

2. Material and Methods

Data were collected using a Qualtrics survey developed by scientists and Information Technology (IT) personnel at the [University], [College], after the Covid-19 was declared a pandemic. The survey was sent to the [University] Cooperative Extension Educators and the [Fruits and Vegetable Growers Association] twice for content testing and validation. After their validation and approval, the survey was distributed to growers from June 10 - July 02, 2020, through the [FVGA] and [University] Cooperative Extension Educators list serves. Although friendly reminders were sent weekly (three times), there were only 39 respondents. Data were subjected to descriptive statistical analysis. These analyses will be useful to in forecasting and developing accurate economic and crop enterprise budgets for 2021. They will also be useful to state, regional, and national policymakers in determining financial assistance programs for growers who suffered losses due to the Covid-19 pandemic.

3. Result and Discussions

The results of the survey indicated that 58% of the respondents whose farms were affected during Covid-19 had a farm size of 50 acres or less while 17% had 101-250 acres. Furthermore, 8% of the respondents had a farm size of 251 – 500 acres, 1,251-1,500 acres, and greater than 1,751 respectively (Figure 1).

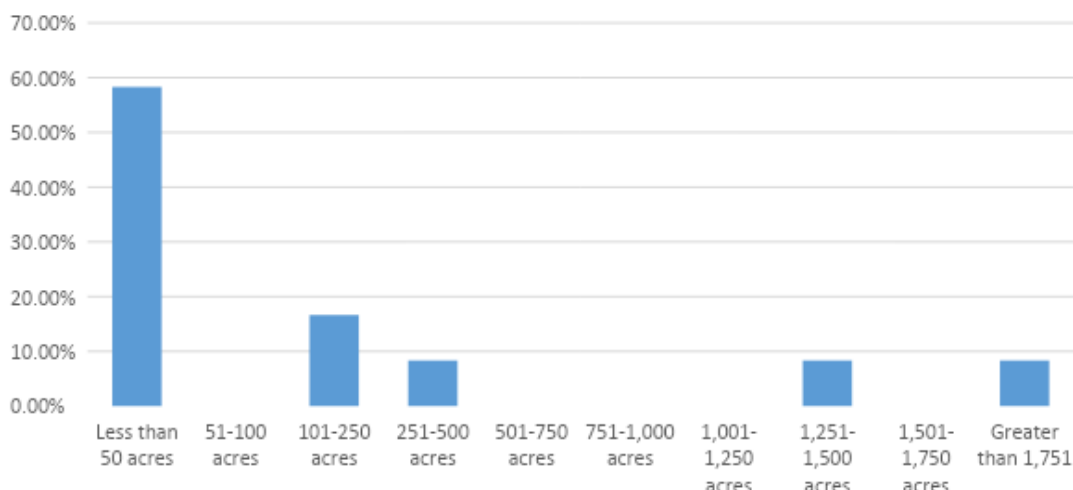


Figure 1. Approximately what was the size of your farm affected during the Covid-19 pandemic, 2020?

Respondents were asked the approximate percentage of their production that was lost due to Covid-19. Results showed that 80% of the respondents indicated that they lost 10% or less of their bell pepper, while 20% of the respondents indicated they lost between 21% - 30%. For cabbage, 50% of the growers lost 10% or less, 25% lost 21%-30% while 25% lost greater than 50% of their crops. For cucumber, 66% of the growers sustained a loss of 10% or less while 33.33% lost 41%-50% of their crops. Other crops that sustained losses were eggplants, kale, onion, snap beans, squash, sweet corn, and tomato.

In the fruits and tree nuts category, it was interesting to note that blackberries, blueberries, cantaloupes, muscadine, satsuma citrus, and watermelon all reported a 10% loss or less. However, the respondents indicated that 66.67% of pecans sustained losses of 10% or less and 33.33% of the farmers indicated 41%-50% loss due to Covid-19. On the other hand, 60% of the strawberry respondents sustained a 10% loss or less, 20% of them sustained 21%-30% losses while 20% experienced losses greater than 50%.

The survey results further depicted that 62.5% of farmers will plant the same area in the fall of 2020 compared to 2019 despite the Covid-19 pandemic. On the other hand, 25% will increase acreages while 12.5% will plant fewer acreages (Figure 2). For those who plan to increase acreages, 50% of them will increase between 41-50% while the other 50% will increase acreages up to 10% (Figure 2).

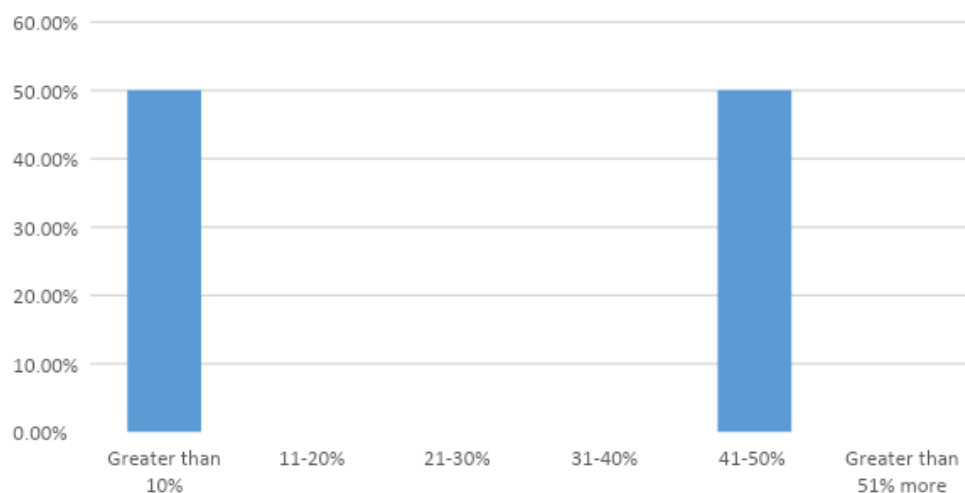


Figure 2. What are your estimated planted acreages in the fall 2020 planting season?

The results further showed that 75% of the growers lost \$100,000 or less during the first 3 months of the pandemic declaration while 12.5% of them lost between \$501,000 to \$1,000,000 and 12.5% lost \$1.5 million to \$2.0 million during the same period (Figure 3).

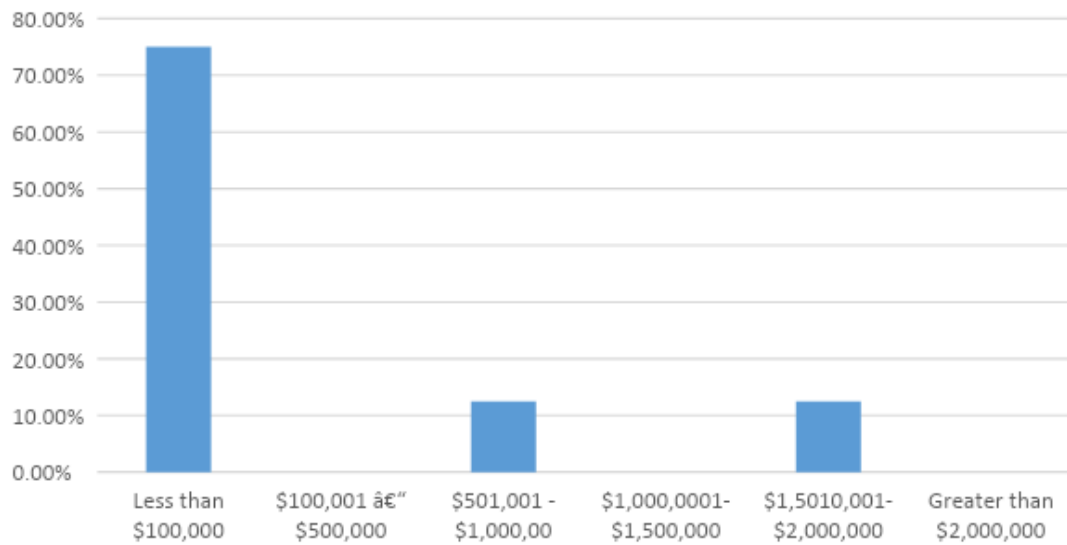


Figure 3. What are your estimated losses during the 3-4 months into the Covid-19 pandemic?

Finally, it was revealed that 37.5% of the respondents were willing to start all over again, 12.5% were willing to try new ventures besides farming, 12.5% will reduce the size of their business, 12.5% will file for bankruptcy and 25.0% will switch to other things (Figure 4).

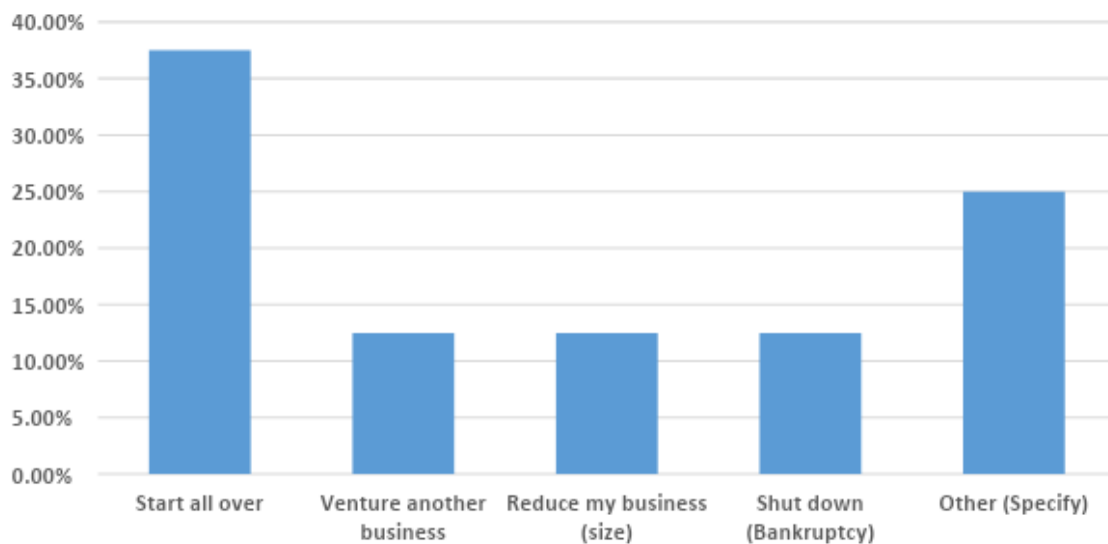


Figure 4. What is the estimated long-term plan of your farm business due to Covid-19?

When asked if there will be a shift in their ag-practices during and after the post-Covid-19, the survey revealed that 77.78% will plant the same crops in the next planting season and 22.22% indicated they would not plant (Figure 5).

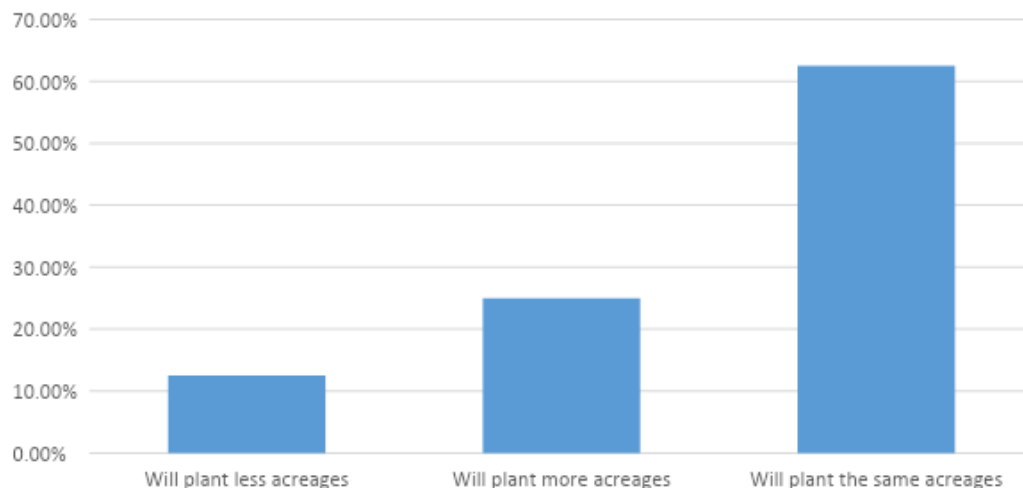


Figure 5. What are your future planting strategies vis-à-vis the shift in acreages during and after the Covid-19 pandemic?

Figure 5 also illustrates that 13% of the respondents will plant less acreage in the post-pandemic than pre-Covid-19 pandemic. These are growers who want to minimize their risk. On the other hand, 25% indicated they would plant more, while 63% said they would maintain status-quo.

4. Conclusion

Although the Georgia specialty crop industry is very dynamic, it has undergone several significant changes ranging from pests and disease to trade policies. For the past two decades, the industry has experienced significant growth from \$0.50 million to \$2.56 billion. The Covid-19 pandemic is one of many challenges encountered by the industry. As a result, the objectives were to investigate growers' attitudes and behaviors amidst Covid-19 and identify new production practices and cost analysis going into the fall crop season.

Results showed that 80% of the respondents indicated that they lost 10% or less of their bell pepper while 20% of the respondents indicated they lost between 21% - 30%. For cabbage, 50% of the growers lost 10% or less, 25% lost 21-30% while 25% lost greater than 50% of their crops. For cucumber, 66% of the growers sustained a loss of 10% or less while 33% lost 41%-50% of their crops.

On the other hand, blackberries, blueberries, cantaloupes, muscadine, satsuma citrus, and watermelon all reported a 10% loss or less. Also, 67% of pecans growers sustained losses of 10% or less and 33% of respondents indicated 41-50% loss due to Covid-19, while 60% of the strawberry respondents sustained 10% loss or less, 20% of them sustained 21-30% losses while 20% experiences losses greater than 50%.

Furthermore, the results of the survey depicted that 63% of farmers will plant the same acreages in the fall of 2020 compared to fall 2019 despite the Covid-19 pandemic. On the other hand, 25% will increase acreages while 13% will plant less. These analyses will be useful to state and regional extension personnel in forecasting and determining which economic and crop enterprise budgets to develop for 2021. It will also be useful to the growers of the fresh food industry in planning marketing strategies vis-à-vis the complete value and supply chain. It will also be useful to Georgia and the United States Policy-makers in their efforts in developing policies aimed at mitigating losses encountered by the specialty crop industry in Georgia and the United States in general.

5. Programs Implications

Although the survey was limited to the state of Georgia, the results of this research will be equally important and useful to Extension Specialists, Educators and Agents in other regions of the United States in terms of providing accurate and timely information vis-à-vis production practices to the growers. Extension professionals are encouraged to carry out similar studies in their respective states, as it provides quick solutions to problems that producers encounter and need in their day-to-day business decision making process. Furthermore, a similar study is important and useful to researchers, extension specialists and agents in terms of developing enterprise budgets especially in states or regions where specialty and row crops are abundant, but resources to develop crop budgets are limited. It will also be important in forecasting planted acreages and specific commodities. State, regional and federal policy makers will equally find this publication useful in terms of determining the level of assistance to provide to growers who suffered from the Covid-19 pandemic.

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