Strategies for Increasing Resilience in Tourism Operations: Lessons from Agritourism

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Abstract for Oral Presentation at TTRA 2021

Introduction

The COVID-19 pandemic has tested the resiliency of tourism operations across the globe. Impacts of local-level policies designed to limit the spread of the virus have challenged traditional models of operation in all sectors of the industry. In the state of North Carolina (NC; USA), stay-at-home orders and social distancing requirements have forced tourism operations to drastically alter how they deliver their services. This includes agritourism – visiting a working farm for education or recreation (Gil Arroyo et al., 2013). For example, NC's Executive Stay-at-Home Order No. 121 (in effect March 30 - April 30, 2020) and subsequent social distancing measures impeded agritourism operators from receiving visitors and hosting school field trips at their farms. As on-farm visits are a crucial form of revenue diversification for agritourism operations (Tew & Barbieri, 2012), their operators were forced to re-envision how they could attract and host visitors, protect employees, and follow state and local safety guidelines.

This presentation outlines the lessons learned from NC's agritourism operators' resilience in the face of challenges brought on by the COVID-19 pandemic. Building upon two studies, we illustrate the managerial strategies agritourism operators implement to remain operating and generating revenue during the COVID-19 pandemic. While these strategies are in response to a global health crisis, they hold value for how tourism operations can respond to future crises.

Literature Review

Agritourism is a farm diversification strategy to reduce risk in uncertain agricultural markets (Nickerson et al., 2001). Apart from generating income by offering recreational services (e.g., U-pick) and educational services (e.g., school field trips), family farms use agritourism as a market outlet for their agricultural products (Kline et al., 2016; Tew & Barbieri, 2012). Agritourism revenues boost local economies through sales taxes, local employment, and support for local businesses (Barbieri, 2013). Despite the important role of agritourism for family farms' sustainability and its broader benefits to society, there is limited research exploring the impact of

a health crisis on agritourism operations. As the stay-at-home order and subsequent measures to contain the spread of COVID-19 directly affect agritourism farms' ability to operate, there is a unique opportunity to learn about the impact of a health crisis on agritourism operations' resilience.

Resilience has been used to understand how socio-ecological systems adapt to unexpected threats and recover from them without disrupting the system's basic functions (Chiaia, Barchiesi, De Biagi, & Placidi, 2019; Xu et al., 2015). Agritourism may be well positioned to withstand the crisis because of its inherently diversified business practices (Barbieri et al., 2018), particularly an increased interest of the public in local food. Agritourism operators diversify their sources of income by offering on-farm sales of their agricultural products and promoting the appreciation for local food (Brune et al., 2020; Kline et al., 2016; Schnell, 2011). Yet, there is little knowledge about how these diversified business practices contribute to agritourism resilience in the context of a health crisis. Agritourism farms' performance during the COVID-19 pandemic may largely determine the resilience of local economies and LFSs, as well as the ability of rural communities to "bounce back" in times of crisis. Thus, it is important to assess the usefulness of diversified business practices in agritourism to face this crisis.

Methods

Two studies of agritourism operations in NC provided data on resilience strategies that farmers have implemented to address the challenges brought on by COVID-19. Study 1 started in 2017, providing insight on standard operating strategies that generate valuable outcomes in times of crisis. Study 2 started in the spring of 2020 shortly after state and local policies significantly altered how agritourism operations could provide services. Study 2 offers insight into real-time resilience strategies that continue to be adapted as public health measures evolve.

Study 1: Quantitative assessment of the impacts of an agritourism experience on visitors

In this study, we surveyed visitors at six agritourism farms with comparable agritourism offerings (e.g., u-pick, educational displays, and onsite market) located across NC. We conducted self-administered surveys before and after the agritourism experiences during the Fall 2018 and Spring 2019. The survey included Likert-type scales to measure respondents'

intentions to advocate for local foods (4 items). To analyze the data we used Cronbach's alpha ($\alpha > 0.6$) to assess the internal reliability of the scale (Nunnally, 1978) and conducted repeated measures multivariate analysis of variance to measure the influence of agritourism experiences on intentions to advocate for local food ($p < 0.05$).

Study 2: Qualitative assessment of agritourism operators' response to COVID-19

We invited agritourism operators located across NC to participate in this study using purposive sampling to guarantee participants had agritourism operations that offered educational experiences. A semi-structured interview guide was developed to collect qualitative data from seven agritourism operators who discussed their strategies to adapt to the COVID-19 pandemic. To analyze the data we transcribed the interviews verbatim using a transcription service. Using NVivo Qualitative Data Analysis Software, we conducted thematic analysis using resilience and diversification for selective coding to derive conclusions related to the aim of the study.

The data related to advocacy for local food systems generated in Study 1 illustrates a resilience strategy that agritourism operations utilize during times of normal operation (i.e., developing a population of local food advocates). Study 2 illustrates how agritourism operators' leverage their past efforts of creating local food advocates to position themselves as local food providers, contributing to their resilience during the pandemic.

Findings and Discussion

Lesson 1: Utilize tourism experiences to maximize support from existing customers

Findings from Study 1 indicate that agritourism operations garner long-term support from their visitors during normal operations. Previously reported findings reveal that an agritourism experience increases visitors' likelihood to purchase local foods and increase their budget to purchase local foods (Brune et al., 2020). As many agritourism operations offer farm markets where they sell their own products and local foods (Tew & Barbieri, 2012), these findings suggest that agritourism experiences could generate repeat customers seeking local foods. Further evidence from Study 1 indicates that agritourism experiences may also generate future customers from visitors' social network, as there was a significant increase in likelihood to encourage family and friends to buy local food after an agritourism experience (Table 1). This

"ripple effect" of the agritourism experience extends to visitors' willingness to speak with elected representatives about supporting local farmers, indicating that agritourism experiences can activate visitors as advocates for local food.

Table 1
Change of likelihood to advocate for local food before and after an agritourism experience (Rep-MANOVA)[1]

Likelihood to Advocate for Local Food (*n* = 319)	**Mean** [2]		***F*-value**	***p*-value**
	Pre Visit	**Post Visit**		
Itemized Variables	**3.43**	**3.53**	**4.374**	**0.002**
Encourage family and friends to buy local food	3.93	4.04	9.055	0.003
Speak with elected representatives about supporting local farmers	3.05	3.19	9.952	0.003
Provide a charitable contribution via "checkoff" box on your state taxes to support local food	3.25	3.37	6.872	0.009
Donate to a charitable organization that supports local food	3.48	3.51	0.531	0.467
All Variables (α = 0.845)[2]	**3.43**	**3.53**	**4.374**	**0.002**

[1] Overall model: Wilks' lambda = 0.900, $F = 11.204$; $p = 0.002$.
[2] Measured on a 5-point Likert scale (1 = *very unlikely*, 5 = *very likely*).

The lesson from these findings is that agritourism operators are adept at using the experiences they offer to engender support from their customers beyond just repeat visitation. By increasing the likelihood that existing customers and members of their social network will buy local foods, agritourism operators broaden their potential customer base, which they can draw upon during times of crisis when demand may lessen. By increasing the likelihood that visitors will advocate for local farmers with elected representatives agritourism operators ensure that their voice will be amplified during times of crisis when policy changes may affect them. Other types of tourism businesses can learn from agritourism operators' ability to generate a "ripple effect" with their experiences. They should seek opportunities to empower guests to share their experiences with those within their immediate network and with more distant connections like policymakers. Doing so would help them to cultivate the robust network of support that agritourism operators benefited from during the COVID-19 pandemic. Consequently, Study 1 indicates that the resilience of agritourism operations is not only a result of a quick response to a crisis, but also attributed to the intentional building of social support pre-pandemic.

Lesson 2: Leverage opportunities to diversify offerings

Agritourism operations by definition are diversified – they are both a working farm and a tourism provider (Gil Arroyo et al., 2013). Typically, the agricultural production operation provides the context for the tourism experience, but this synergy was disrupted by the COVID-19 pandemic. In NC, stay-at-home orders in the spring of 2020 prohibited leisure travel experiences effectively ceasing the tourism experience component of agritourism operations. However, the agricultural production component of the operation was able to continue and the presence of on-farm markets allowed many farms to operate as essential businesses, providing access to food in many rural communities. Farmer 2 revealed that serving as a market for local food allowed them to remain in operation and generate revenue: "*Well, the fact is that we were deemed an essential business during the stay-at-home [order]. Obviously, [that] we were able to open our doors and provide products for consumers benefited us at this time*."

Several farmers noted that the agricultural production component of the farm was the function that helped the agritourism operations withstand the initial shutdown:

> "*We do the agritourism in the fall and on normal years. I would say the agritourism business probably saved our produce business the majority of the time. This year it looks like it's going to be the other way around. It looks like the produce business may save the agritourism business this year*."

This insight from Farmer 5 illustrates the benefits of a diversified tourism operation both during and outside of a crisis. In contrast, Farmer 6 did not have an on-farm market and their agricultural production is built upon animal husbandry, resulting in significant challenges at the beginning of the shutdown. When asked about whether they had been able to generate some income during the shutdown Farmer 6 replied: "*No, we did not because we did not grow any produce or strawberries or anything. So we did not have crops that were coming out*." The lesson is that while not all tourism businesses are built upon dual functions like an agritourism operation, exploring the potential to serve multiple functions (and audiences) provides opportunities to adapt in times of crisis. Tourism businesses can learn from this lesson by seeking to diversify their functions to serve both tourists and local residents, increasing their resilience in times of crisis.

Lesson 3: Localize supply chains

Beyond allowing them to remain open as an essential business, agritourism operators recognized that their ability to sell locally grown products through on-farm markets was beneficial during the pandemic. Farmer 5 explained: *"I feel like people are looking for more local stuff right now, so we've tried to stick with our local retail sales, instead of wholesale this year."* Farmer 5 also noted that this strategy was generating considerable economic benefits: "*Last year we did 75 CSA boxes … this year we have 91."* Farmer 2 also noted similar increases in sales achieved as a result of the demand for local products and their ability to adapt to safe delivery of such products: "*We were able to sell more strawberries than we ever have before, but it was all done here at the market. We adapted and did curbside pickup and online orders...*" These examples indicate that agritourism operations were positioned to leverage their role in local supply chains, thus improving their resilience during times of crisis. These strategies build upon previous efforts by agritourism operators to highlight their value as local food providers and promote advocacy for local food (Lesson 1), which ultimately paid off in times of crisis.

There is also evidence that agritourism operations helped to localize supply chains and contribute to the resilience of fellow farmers by selling other farms' agricultural products at their markets. Farmer 2 illustrates how such partnerships generated benefits for both the agritourism operator and the local suppliers:

> *"We did some partnership with some farmers that we knew did not have the resources to either have their own store, or where we could help them by selling things online… We've probably had about seven or eight [farmers] that we've helped locally and there were some farmers that we were already [selling] their stuff and then there were a few that we generally buy a little bit from them, but we bought more than we usually do because those are the type of farmers that sell at our local farmers' markets, but they weren't open, so they weren't able to sell."*

The benefits agritourism operators gained by localizing supply chains (e.g., greater on-farm market sales) contributed to their resilience during the COVID-19 pandemic, but also that of other farmers. The lesson for other tourism operations is that localizing their supply chain (i.e., partnering with local producers for direct sale or supplies) can facilitate a consistent access to necessary supplies and opportunities to increase sales of their products during crises.

Lesson 4: Cultivate a robust network within and outside of tourism

Agritourism operators reported activating a robust network to help guide their decision-making in response to the COVID-19 pandemic. Agritourism operators collected insights from network members in both the agriculture and tourism industries, giving them many information sources to consider. Farmer 3 indicated the importance of having insight from both industries: "*We attended webinars with the Department of Ag, the Strawberry Growers Association for North Carolina helped a lot. Our local chamber, the Tourism Authority, and Business Development Authority, have been sending out a lot of information.*" Drawing upon resources from multiple industries provided them with many resources and different approaches to addressing the challenges brought on by the COVID-19 pandemic.

Additionally, agritourism operators benefited from connecting with their peers through the state-level association, the North Carolina Agritourism Networking Association (NC-ANA). This organization is a long-standing resource for agritourism operators in the state which provides opportunities for farmers to learn from other farmers as noted here by Farmer 2, "*The [NC-ANA]... We have done webinars, we have done Zoom calls where we all get on the call and we just share our ideas together.*" Farmer 3 indicated that such opportunities were particularly valuable in times of crisis, *"[Meeting with NCANA was good] I think because it told us what other farms are doing and how they're handling certain situations. Some of them are open in the spring, so that helped us get some ideas of how they were doing things.*" These findings show that all tourism businesses can benefit from contributing to a robust network of peers both within their own tourism sector (e.g., lodging), across the tourism industry, and as a part of other industries (e.g., agriculture and local food movement). Building connections in all of these spaces provides access to resources that are invaluable in times of crisis.

Conclusions

Resilience and adaptive capacity to external shocks largely depend on a systems' ability to diversify its basic functions, such as income generation (Xu et al., 2015). The literature indicates that the diversified business practices of agritourism operations contribute to their resilience

(Barbieri et al., 2018). This study strengthened this premise by examining the resilience of the agritourism operations to a health crisis, more specifically, the COVID-19 pandemic. Thus, this work illustrates through two studies: (1) that agritourism operators nurture advocacy for local food through agritourism experiences and (2) how agritourism's diversified practices (e.g., highlighting their role as local food outlets) contribute to their adaptive capacity and resilience. Consequently, this works advances the understanding of agritourism resilience by illustrating how agritourism operators lay the foundation for resilience by developing advocates during times of normal operation and then activate those advocates as consumers and supporters of their services during times of crisis.

The lessons described in this work illustrate how multiple strategies ensure the resilience of NC agritourism operators in the wake of the COVID-19 pandemic. While many of these strategies maximized the inherent attributes of agritourism operations (i.e., having both agricultural and tourist functions), this structure (i.e., multifaceted operations) demonstrates a model that other tourism businesses could employ to advance their own resiliency. Additionally, agritourism farms were able to reorient their operations and services offered (e.g., from leisure providers to food outlets) given their ongoing effort to convey their role as local food providers before the pandemic, which ultimately facilitated their positioning as a safe food outlet during the health crisis.

The global pandemic has disrupted the tourism industry creating unprecedented challenges, but it also posed opportunities for businesses to emerge with competitive advantages, and an example of this is agritourism businesses. Operations that thrived within the agritourism industry in the face of the COVID-19 related shutdown improved their performance informed by an evolving understanding of customers, markets, advertising effectiveness, and open lines of communications with peers. The COVID-19 pandemic highlights the need for a more sustainable, inclusive, and resilient tourism model. As agritourism experiences leverage the value they offer to communities as local food providers, the agritourism industry may be an example of how to deal with the global health crisis contributing to building a more resilient tourism model.

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