Agricultural Producer Attitudes Toward Agri-tourism in Miami-Dade County, Florida

FAMRC Industry Report 2-1
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Abstract

Miami-Dade County, Florida attracts millions of domestic and foreign visitors annually. The County also hosts a large and dynamic agricultural industry. Despite this proximity of tourists and agriculture, only a limited number of organizations in the area provide agri-tourist opportunities. In a survey of the County's agricultural community, producers were asked about the likelihood of their participation in a cooperative agri-tourism program and the benefits and risks they perceived from doing so. Of the 274 respondents to this question, 54.7 percent indicated they were "not at all likely" to participate in such a program. Vegetable and nursery producers showed the least interest, with 65.6 percent and 57.3 percent respectively indicating they were "not at all likely" to participate, while higher percentages of fruit and aquacultural operations indicated they would "very likely" participate (30.7 and 27.4 respectively). These response differences among the four operation types were not, however, found to be statistically significant. When participation responses from large and small operations of all types were compared, it was found that larger operations were statistically less likely to participate in an agri-tourism program.

Respondents' perceived benefits and risks of agri-tourism reflected their overall reluctance to engage in such activities. Almost 49 percent of responses indicated that a cooperative agri-tourism program would provide no or few benefits. The most frequently cited risk was liability (42 percent). Other risks that were repeatedly cited included added costs, phytosanitary issues, and operational seasonality. Overall, 24 more risks were listed by respondents than benefits. Of the respondents that did list benefits, increasing consumer awareness was cited most frequently. Other benefits included increased sales, revenues and profits. While the majority of producers in Miami-Dade County have serious reservations about engaging in agri-tourist activities, the supplemental income from such an endeavor may be attractive to some types of smaller operations.
FLORIDA AGRICULTURAL MARKET RESEARCH CENTER

The Florida Agricultural Market Research Center is a service of the Food and Resource Economics Department. Its purpose is to provide timely, applied research on current and emerging marketing problems affecting Florida's agricultural and marine industries. A basic goal of the Center seeks to provide marketing research and related information to producer organizations, trade associations, and governmental agencies concerned with improving and expanding markets for Florida's agricultural and marine producers.

Client organizations are required to pay direct costs associated with their research projects. Such costs include labor for personnel and telephone interviewing, mail surveys, travel, and computer analyses. Professional time and support is provided to organized producer groups at no charge by IFAS.

Professional agricultural economists with specialized training and experience in marketing participate in every Center project. Cooperating personnel from other IFAS units are also involved whenever specialized technical assistance is needed.

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INTRODUCTION

This report presents the findings of a survey on the willingness of agricultural producers in Miami-Dade County, Florida to participate in a cooperative agri-tourism program. It evaluates and discusses the benefits and risks that producers perceived about diversifying their enterprises to include such activities.

CURRENT SITUATION

Miami-Dade County's desirable location and climate, in combination with its abundant resort amenities, attract millions of domestic and foreign visitors to the area annually. In 2001, there were over 10.5 million overnight visitors to the area, half of which were from foreign countries (Greater Miami Convention and Visitors Bureau, 2002). The County is also unique among other major U.S. tourist destinations in that it hosts a large and dynamic agricultural industry that produces a wide variety of tropical fruits and vegetables.

Eco-tourism and agri-tourism are rapidly growing industries in some areas of the United States. In many circumstances, with reasonable accommodations, entrepreneurial growers can increase consumer awareness, promote their agricultural products and even generate direct sales in conjunction with their commercial operations. In addition to fostering better public relations, these activities can also increase profitability.

Despite the apparent opportunities and benefits for agriculture to exploit its proximity to the area's tourism, only a limited numbers of organizations and businesses provide agri-tourism type opportunities in the Miami-Dade area. Some of the participants include: Burr's Berry Farm, Fairchild Tropical Gardens (who sponsor the International Mango Festival), Knaus Berry Farms, the Miami-Dade County Fair and Exposition, Orchid Jungle, the Redland Fruit and Spice Park (which sponsors the Redland Farm and
Garden Show and the Redland International Orchid Festival), Robert's is Here fruit stand, and the Southern Florida Tropical Growers, Inc. (who sponsor the Tropical Agricultural Fiesta). Among these organizations there is little coordination or information sharing. While the Miami-Dade County Agricultural Extension Service is an important educational resource for agriculture and related issues in the area, it is not organized to promote commercial agri-tourism.

RESEARCH OBJECTIVE

An opportunity to explore producer attitudes regarding agri-tourism came about when a future land use study of Miami-Dade County was commissioned by the Florida Department of Agriculture and Consumer Services to the University of Florida in 2000 (Degner et al., 2002)\(^3\). Part of this study involved a comprehensive survey effort to elicit opinions and ideas from the agricultural community regarding infrastructure and policy issues that impacted area farms and agribusinesses. One section of the survey was devoted to polling respondents about the likelihood of their participating in a cooperative agri-tourism program and the benefits and risks they perceived from doing so. Over 2,800 written questionnaires were mailed to private sector individuals and organizations in the County during the winter of 2001. A total of 333 responses were received.

SURVEY FINDINGS

Survey participants were asked whether they were likely to participate in a cooperative agri-tourism program that would bring visitors to their operations for tours and retail sales. A semantic-differential response format was used to classify their response with three choices: "Very likely", "Somewhat likely", and "Not at all likely". Producers were then asked, in an open-ended format, what benefits and risks, if any, an agri-tourism program would pose for their operation. The responses to each of these questions are discussed below.

Likelihood of Participation

Producer semantic-differential responses to their likely participation in an agri-tourism program are presented by operation type in Table 1. From left to right, the
columns contain the number of completed questionnaires for each operation type, the number of participants that responded to the question, followed by the percent selecting one of the three responses.

Table 1. Likelihood of Miami-Dade County agricultural producers to participate in agri-tourism.

<table>
<thead>
<tr>
<th>Response</th>
<th>Completed Surveys</th>
<th>Agri-tourism Responses</th>
<th>Participation in Agri-tourism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number</td>
<td>number</td>
<td>&quot;Very Likely&quot;</td>
</tr>
<tr>
<td>Fruit</td>
<td>125</td>
<td>114</td>
<td>30.7</td>
</tr>
<tr>
<td>Vegetables</td>
<td>47</td>
<td>32</td>
<td>12.5</td>
</tr>
<tr>
<td>Nursery</td>
<td>150</td>
<td>117</td>
<td>18.8</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>11</td>
<td>11</td>
<td>27.3</td>
</tr>
<tr>
<td>Totals/weighted average percentages</td>
<td>333</td>
<td>274</td>
<td>23.4</td>
</tr>
</tbody>
</table>

Of the 333 questionnaires returned, 274 respondents completed the question on participation in agri-tourism. With the exception of aquaculture, 50 percent or more of respondents in each of the operation types indicated they were unlikely to participate in a cooperative agri-tourism program. Vegetable producers had the lowest response rate to this issue (32 out of 47 respondents, or 68 percent) and were also the least interested in agri-tourism, with 65.6 percent indicating they were "not at all likely" to participate in such a program. After vegetable producers, nursery operations were the least likely to embrace agri-tourism, with 57.3 percent indicating they were "not at all likely" to participate. Fruit and aquaculture operations were the most favorably disposed toward agri-tourism with 30.7 and 27.3 percent (respectively) indicating they would "very likely" participate in such a program.

A Chi-square test was performed to determine whether semantic-differential responses between the four types of operations were statistically different. This test, with 4 degrees of freedom, had a probability value 0.126, which means there would be a 12.6
percent chance of being wrong if it were concluded that responses were different between operation types. This indicates that while there are some differences in responses among fruit, vegetable, and nursery operations (aquaculture responses were not included in the test because of the small number of respondents of this type), these differences were not great enough to be considered statistically significant.

Data on the size of respondents' operations were also requested in the survey. It seems plausible that smaller operations may be more interested in diversifying their operations and taking advantage of possible direct retail-sales opportunities associated with agri-tourism, while larger operations would seem more likely to structure their marketing efforts toward high-volume wholesale channels. Larger agricultural operations may also perceive a greater liability risk from agri-tourism activities (deeper pockets) than relatively small operations. To evaluate whether operation size influenced producers' willingness to engage in agri-tourism, survey respondents were classified as either small or large based on the number of acres in their operation. Allowances were made for the type of operation in this classification. Vegetable operations with 100 acres or more were considered large, otherwise they were classified as small. For fruit operations, the breakpoint between small and large was set at 20 acres, and for nursery operations it was set at 10 acres. In Miami-Dade County, vegetable operations typically use land more extensively than fruit, nursery and aquaculture enterprises.

The response numbers and percentages for small and large operations of each operation type, and all types combined, are presented in Table 2. Information on acreage was provided by 239 of the 274 respondents who completed the agri-tourism participation question. It appears that small operations are more favorably disposed to agri-tourism. More than twice the proportion of all types of small operations (25.8 percent) were "very likely" to participate in a cooperative agri-tourism program, compared to all types of large operations (11.8 percent). Within specific types of operations, perhaps the greatest difference occurred between large and small nurseries. Over 21 percent of small nursery operations indicated that they were "very likely" to participate in an agri-tourism program, compared to less than six percent of large nurseries. Similar but less dramatic differences are seen between large and small fruit
growers, but equal proportions of large and small vegetable growers were "not at all likely" to participate in an agri-tourism program.

Table 2. Comparison of Likelihood of participation between large and small operations in Miami-Dade County

<table>
<thead>
<tr>
<th>Size and Type</th>
<th>Participation &quot;Not at All Likely&quot;</th>
<th>Participation &quot;Somewhat Likely&quot;</th>
<th>Participation &quot;Very Likely&quot;</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number</td>
<td>percent</td>
<td>number</td>
<td>percent</td>
</tr>
<tr>
<td>Small Fruit</td>
<td>38</td>
<td>46.9%</td>
<td>17</td>
<td>21.0%</td>
</tr>
<tr>
<td>Small Vegetable</td>
<td>7</td>
<td>63.6%</td>
<td>3</td>
<td>27.3%</td>
</tr>
<tr>
<td>Small Nursery</td>
<td>38</td>
<td>53.5%</td>
<td>18</td>
<td>25.4%</td>
</tr>
<tr>
<td>Total Small</td>
<td>83</td>
<td>50.9%</td>
<td>38</td>
<td>23.3%</td>
</tr>
<tr>
<td>Large Fruit</td>
<td>19</td>
<td>61.3%</td>
<td>5</td>
<td>16.1%</td>
</tr>
<tr>
<td>Large Vegetable</td>
<td>7</td>
<td>63.6%</td>
<td>4</td>
<td>36.4%</td>
</tr>
<tr>
<td>Large Nursery</td>
<td>24</td>
<td>70.6%</td>
<td>8</td>
<td>23.5%</td>
</tr>
<tr>
<td>Total Large</td>
<td>50</td>
<td>65.8%</td>
<td>17</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

A chi-square test with 2 degrees of freedom for different responses rates between large and small operations of all types was equal to 6.79 and a probability 0.034.

Chi-square tests were again performed to see if these differences were statistically significant. None of the tests for response differences between large and small operations of a particular type were found to be statistically significant, although the probability value of the test on large and small nursery operations (0.11) was very close to the 10 percent threshold. When the chi-square test was performed for response differences between all types of large and small operations, however, it was found to be highly significant. With 2 degrees of freedom, this chi-square value was 6.79, and had a probability value of 0.034. Thus a statistically significant difference in the acceptability of agri-tourism is found to occur between large and small operations in the County.
Perceived Benefits and Risks

Responses to the open-ended requests for perceived benefits and risks of agri-tourism were reviewed and categorized by the general type of characteristic cited. The results of this categorization are shown below in Tables 3 and 4. Because of the greater variety of responses, the results from this part of the survey were not broken out by operation type. Overall, more risks were perceived than benefits. Six percent fewer participants provided responses to agri-tourism's benefits, compared to its risks, and 24 more risks were listed by respondents than benefits.

The types of responses in Tables 3 and 4 are ranked in order of frequency cited. Almost 49 percent of the producers indicated that there were "None" or "Few" benefits to agri-tourism (Table 3). In many cases, this was just a complementary affirmation of the participant's responses to agri-tourism's risks. Increasing consumer awareness or familiarity about the product and industry was the most frequently (34.6 percent) cited benefit of agri-tourism. Twenty-two percent of respondents indicated that agri-tourism could increase sales, revenues or profits to their organization. There were a variety of other benefits cited, but the vast majority fell in these first two categories.

Table 3. Perceived benefits of participating in a cooperative agri-tourism program by agricultural producers in Miami-Dade County, Florida (2001).

<table>
<thead>
<tr>
<th>Type of Perceived Benefit</th>
<th>Responses</th>
<th>Percent a</th>
</tr>
</thead>
<tbody>
<tr>
<td>No or few benefits</td>
<td>93</td>
<td>48.7%</td>
</tr>
<tr>
<td>Increase product or industry awareness</td>
<td>66</td>
<td>34.6%</td>
</tr>
<tr>
<td>Increase sales or profits</td>
<td>42</td>
<td>22.0%</td>
</tr>
<tr>
<td>Other benefits</td>
<td>11</td>
<td>5.8%</td>
</tr>
<tr>
<td><strong>Total Responses</strong></td>
<td>212</td>
<td><strong>111.1% b</strong></td>
</tr>
</tbody>
</table>

a. percentages are based on 191 observations (respondents).
b. percentages sum to more than 100 because there were 212 responses from 191 respondents.
Table 4. Perceived risks of participating in a cooperative agri-tourism program by agricultural producers in Miami-Dade County, Florida (2001).

<table>
<thead>
<tr>
<th>Type of Perceived Risk</th>
<th>Responses</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>Liability</td>
<td>85</td>
<td>42.3%</td>
<td></td>
</tr>
<tr>
<td>Added costs or reduced productivity</td>
<td>58</td>
<td>28.9%</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>57</td>
<td>28.4%</td>
<td></td>
</tr>
<tr>
<td>Exposure to insects/disease</td>
<td>7</td>
<td>3.5%</td>
<td></td>
</tr>
<tr>
<td>Seasonality</td>
<td>5</td>
<td>2.5%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>24</td>
<td>11.9%</td>
<td></td>
</tr>
<tr>
<td><strong>Total Responses</strong></td>
<td>236</td>
<td>117.5%</td>
<td></td>
</tr>
</tbody>
</table>

*Percentages are based on 204 observations (respondents).*

There were a greater variety of perceived risks that discourage producers from participating in agri-tourism. Many of these hinge on the very nature of agricultural production itself. The most frequently cited risk was liability, which was listed by over 42 percent of those responding to the question. Clearly, trip and fall accidents, exposure to pesticides and powerful industrial equipment pose real and present risks to employees and visitors alike in many agricultural production settings. To reduce or prevent these types of accidents would require significant investments in safety equipment and labor for some types of agricultural operations. Indeed, the second most frequently listed risk for agri-tourism was the costs of additional labor and amenities necessary to accommodate visitors. Included within this category of responses were those indicating that agri-tourism would interfere with regular production activities on the site.

A significant minority of respondents saw no particular risks to engaging in agri-tourism activities. Over 28 percent of producers responding to the question on perceived risks by indicating that there were "None". Of course, this is in part a reflection of those operations that listed numerous benefits to agri-tourism in other half of the question.

Other issues that tend to discourage producers from engaging in agri-tourism activities included pytosanitary concerns and the seasonality of production and harvesting.
activities. Many producers believe that allowing large numbers of people to access and
tour their operations would significantly increase the potential for exposing crops or
groves to harmful diseases and insects. The recent devastation to the area's lime industry
from citrus canker is still fresh in the minds of many producers.

Other producers expressed concerns about the seasonality of their activities. Unlike some of the notable agri-tourism industries such as the Napa Valley wine country in California or the Vermont maple syrup industry, agricultural products grown in Miami-Dade County are seasonal and highly perishable. Consequently there are months during the year when there are no crops in the fields or mature fruit in groves to purchase or harvest. There are also certain phases of the production process where it would be very inconvenient or dangerous for tourists to be present on the farm.

SUMMARY AND RECOMMENDATIONS

Although Miami-Dade County would appear to have great potential for agri-
tourism, currently only a handful of organizations or business in the area are engaged in
providing these services. A survey of agricultural producers in the area found that many
have serious concerns about the feasibility of agri-tourism for their operations. Most of
these concerns were related to the nature of the agricultural production practices
commonly used in the area. The widespread use of chemicals and powerful mechanical
equipment makes it problematic to bring untrained visitors or tourists on to many farm
work environments. Pytosanitary issues were also a major concern of area producers.
Growers feared that bringing tourist onto their farms would increase the exposure of their
crops and groves to potentially destructive pests and diseases. Survey respondents also
pointed out that agriculture in Miami-Dade County is highly seasonal. Consequently,
there are months during the year when few activities or products are available for tourists
to purchase or experience. In comparing survey responses between large and small
operations, it was found that small operations were significantly more inclined to
participate in a cooperative agri-tourism program.

Currently, there is little in the way of public programs or coordinating
organizations to promote the demand or supply of agri-tourism opportunities in Miami-
Dade County. The formation of a coalition of enterprisers that are interested and willing
to participate in a coordinated effort to provide agri-tourism experiences to area visitors year-round is recommended. An advisory agri-tourism work-group or agri-tourism coordinator could be established by the state or county to help provide information and logistical support for enterprises wishing to explore this opportunity. This would help insure that year-round tourism opportunities are available. An effective and dynamic agri-tourism program could significantly enhance agricultural sales in the area, particularly for smaller area producers. Such a program would also create additional jobs in the County to provide these tour services. With over ten million visitors already coming to the area each year, a $20 sale to just five percent of these visitors would generate more than $10 million in new revenues to the agriculture industry annually.

ENDNOTES

1. The authors are post-doctorial associate, professor, and coordinator of economic analysis, Department of Food and Resource Economics, Institute of Food and Agricultural Sciences, University of Florida, Gainesville.
