



# IMPACT OF AGRIBUSINESS MANAGEMENT ONLINE COURSES FOR SOCIALLY DISADVANTAGE FARMERS AND RANCHERS IN PUERTO RICO

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## ABSTRACT

One of the goals of the project titled Outreach and Assistance for Socially Disadvantage Farmers and Ranchers Training, and Technical Assistance on Grant Readiness and Grantsmanship in Puerto Rico was to deliver nonformal education in Agribusiness management. The course focus on delivering accounting records, financial ratios, marketing, and developing a business and marketing plan. The target audience were socially disadvantage farmers and ranchers so they can have up-to-date accounting information, business, and marketing plans so they can write grants and apply for USDA funds and state funds. To achieve objectives, we proposed to offer 18 hours of training in the following topics: Business Plan, Agricultural Marketing, Marketing Plan, Income Statement, Cash Flow, Inventory, Balance Sheet, Financial Score Card, Introduction to Microsoft Excel and the Accounting and Financial System for Farms in Excel. Participant's profile, pre-post test, and success stories were performed and to analyze participant's knowledge and evaluate project deliverables to evaluate if workshops and activities had a positive impact for their farms and agribusiness. Result showed that participants gain knowledge and many of them use their knowledge to write plans and apply for federal and state funding.

## INTRODUCTION

This project proposed to provided 18 hours education on agribusiness management to enable them to develop marketing and accounting skills. As part of educational activities, we included topics on how to prepare a Business Plan and Marketing Plan for an agribusiness. In addition, we deliver education about accounting records and financial ratios were also presented so that the participants can evaluate the data of their operation that will allow them to increase the operation income and evaluate the operation's financial situation. One of the objectives was to provide planning, communication and administration tools to farmers and ranchers to make better decisions, plan their agribusiness and make rational decisions.

## NON FORMAL EDUCATION SEMINARS AND WORKSHOPS

Distance learning methodologies were used to delivered the workshops Workshop topics are:

- Business Plan
- Agricultural Marketing
- Marketing Plan
- Income Statement
- Cash Flow
- Inventory
- Balance Sheet
- Financial Score Card
- Introduction to Microsoft Excel
- Accounting and Financial System for Farms in Excel

## METHODS

The process to gather the information was done through online questionnaires sent by email to project participants. Educational activities consisted mostly of online lectures and workshops. A formal assessment of educational activities was conducted. Participants were ask about their knowledge after taking the courses and a questionnaire about the success stories was developed. A Likert scale ( 1 to 5) was used to measure perception of knowledge after taking the workshops. Excel was used to summarize the profile data, quizzes and pre and post tests. The participants' post-test scores were compared to their pre-test scores, in order to evaluate the increasing participants' knowledge of the training content. Participants were asked on a Likert scale-type question (Very Knowledgeable to No knowledge) about attributes which included topics about financial risk, agricultural marketing, and legal risk. Finally, the success stories allowed the analysis of the participants' gained skills providing insight into the participants operation progress. In addition we included a question on future recommendations.

## RESULTS

The workshops were offered online by Zoom due to the social distancing due to COVID-19 which made it accessible to participant from different municipalities across the island. All educational materials were uploaded to the following website: <https://www.mercadeoagricolapr.com/el-negocio-de-la-pesca/>. In addition, all videos were uploaded to Doctor Gregory's youtube channel.

Participants were asked on a Likert scale-type question (Very knowledgeable to No knowledge). Table 1 shows results that participants increased their knowledge about Business and Marketing Plan to no knowledge about them. After taking workshops none had little to no knowledge. Pre-post test had similar results for all topics included: balance sheet, marketing, marketing plan, and business plan were participants increased their knowledge.

Table1: Post results for selected topics

Topic	After	Knowledge Level				
		No Knowledge	Little Knowledge	Some Knowledge	Much Knowledge	Very Knowledgeable
Basic records, purchase and use of input	After	6	11	26	15	6
Balance Sheet	After	9	5	29	15	6
Inventory	After	7	9	18	22	8
Marketing	After	6	16	23	17	2
Business Plan	After	5	11	22	23	2
Marketing Plan	After	7	11	35	9	1

As part of the educational activities, we offered a workshop on how to use the Accounting and Financial System in Excel. The system will allow them to create their accounting records and estimate their financial ratios. Participants were asked if they will use or are using the Accounting and Financial System in Excel (Figure 1). Results shows that only 34.8% are using it but 52.2 have plans to use it.

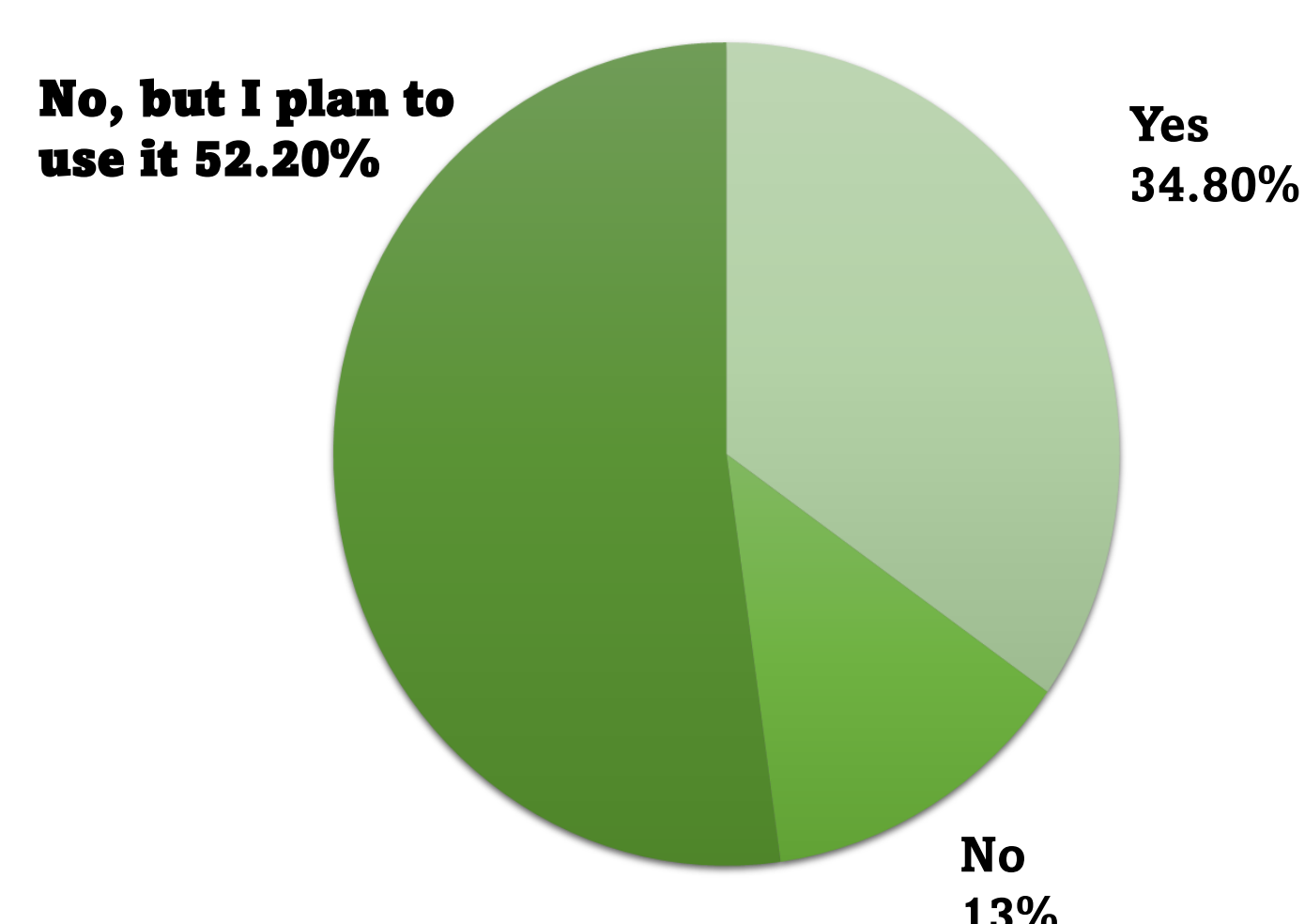


Figure 1. Participants use of Accounting and Financial System in Excel.

## RESULTS

Another questionnaire was sent to participants so they can include their success stories, 47 completed the questionnaire. Results shows how the educational activities help them

- 53.2% Write a Business Plan
- 40.4% Prepare accounting records
- 31.9% Estimate financial ratios
- 72.3% Make better decisions
- 46.8% Apply for Federal Grants

## Success Stories: Farmers Quotes

Farmer 1: "The workshops helped me a lot, to prepare financial records and to apply for the Regrow program. I think that without taking them I would not have succeeded. I am already filling out the application stage of the program. Thank you very much, I hope to continue gaining knowledge with your workshops in the future."

Farmer 2: "The workshops gave me tools to launch my agribusiness and carry out my crops, even on a small scale (only 4.8 acres) of bananas allowing me to reach the table of the residents in the town of Jayuya. My product was welcomed by the only supermarket chain in town and by a small grocery stores in the area as a product of quality and excellence. An experience of land development and extraordinary sustainability. Hopefully I can continue and expand my crop and to reach more consumers in Puerto Rico. Thanks for the opportunity."

Farmer 3: "The workshops have helped me prepare proposals to farmers and to plan and develop my farm operation in the future. The current situation of the Pandemic has not hindered at all this program of Workshops that the Agricultural Extension Service of the University of Porto Rico in Mayaguez is offering. Resources and media have been excellent."

Farmer 4: "For me this experience was amazing. These workshops have strengthened my knowledge in farm management. Thanks to the pandemic I have had to reinvent myself since I had to close my restaurant without knowing how gratifying it has made me feel switching to a farm al knowing that I am contributing to improving the food security of my beloved Puerto Rico."

Overall: These workshops have contributed to the education of farmers about the different tools that will help them maximize their production and minimize costs. The testimonies make it clear how beneficial the different workshops were for better management of the farm.

## CONCLUSIONS

In this project we delivered 18 hours of non-formal education in agribusiness management topics to farmers and ranchers from 19 towns in Puerto Rico. Due to social distancing imposed by the pandemic workshops were offered through the Zoom platform. The objective of the course is to help farmers and ranchers to improve their management, financial, and marketing skills in their agribusiness. A questionnaire was design to measure if participants have gained any knowledge in these topics Results show that, overall, participants perceive they gained knowledge in all the topics after attending the workshops. These results provide evidence that non-formal education and outreach programs are important to help farmers and ranchers improve their managerial skills that will allow them to make more rational decisions, thus improving the agribusiness income.

Workshops were promoted in social media, group chat, extension agents, email to previous participants. After each workshop participants received a participation certificate. In addition, a certification letter was provided with all contact hours.

## PROJECT STAFF AND ACKNOWLEDGEMENTS

Outreach instructors were: Dr. Alexandra Gregory and Dr. Myrna Comas from the Department of Agricultural Economics and Rural Sociology.

Graduate Student Assistants: Joe K. Lucarne.

Professor Roberto Rigau, Ed.D. candidate and the project coordinator Glenda Velázquez, Ed.D. candidate

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