

OUR FARMS, OUR FUTURE

The Next 30 Years of Sustainable Agriculture

SARE PROJECT LNC15-368

P.I. Eleazar U. Gonzalez

On-farm and Ranch Education of New and Beginning Latino Producers in Missouri

Project Overview

This research and educational program explores Latino producers’ understandings, skills and perceptions about sustainable farming and ranching production methods. It also seeks to enhance their awareness and knowledge which is needed to protect the soil, water and other natural resources.This should also improve their profits. The U.S. Census of 2007 to 2012 shows Latino producers in Missouri increased by 26%,yet the total farming population decreased by 4%. In the first stage, we developed a research approach based on qualitative and quantitative methodologies.The qualitative data was collected from a series of four focus group interviews among 28 Latino producers. Then, a survey-interview instrument was created to collect quantitative data from 100 Latino farmers and ranchers.The Latino producers’ points of views, perceptions, skills and knowledge of practicing sustainable production methods were analyzed using NVivo and SPSS software. During the second stage, an educational approach was used to teach the producers about sustainable agriculture.We taught 46 Latino farmers and ranchers from two regions in Missouri in four in-class workshops and four on-farm demonstrations. During the final stage, the survey survey is going to be repeated among the same sample of 100 producers interviewed in stage one. The Latino producer’s enhanced skill levels, knowledge base and change in perceptions of sustainable production methods will be documented at the end of the program.

Table 1. Demographic profile and descriptive statistics of Latino Producers in the program, n=100

Variables	Parameter	Number	Mean	Mode	Std. Deviation	Variance
Age/years	≤ 35	16				
	≤ 55	53	2.15	2	.672	.452
	≥ 56	31				
Education/years	≤ 6	73				
	≤ 9	10	1.22	1	.769	.592
	≥ 10	17				
Gender	Female	2				
	Male	98	1.98	2	.140	.020
Region/origin	México	71				
	U.S.	8				
	Central A.	21	1.50	1	.822	.677
Farming/activity	Large livestock	42				
	Small livestock	25				
	Specialty crops	33	1.91	1	.769	.592
Farm size	≤ 10	40				
	≥ 10 ≤ 50	49				
	≥ 50	11	1.71	2	.655	.430
Ownership	Mortgage	40				
	Paid	46				
	Lease	14	1.74	2	.690	.477
Farming in years	≤ 10	73				
	≥ 11 ≤ 15	11				
	≥ 16	16	1.43	1	.755	.571

Most participants in the program have attended 6 or fewer years of formal education, own farms and ranches with small acreages and have been producing for 10 years or less. Their success depends on careful planning and protecting the natural resources on which their farming and ranching depend.

Research Approach

Based on the assumptions: (a) new and beginning Latino producers are highly biased to opt for conventional production methods instead of sustainable methods, and (b) Latino producers are unaware of the consequences of using conventional production methods on their farms and ranches.Table 2 shows the correlation between predictive variables and the dependent variable of “knowledge of sustainable agriculture” in the model.

Table 2. Correlations and descriptive statistics (n=100)

Variables	1	2	3	4	5	6	7
1. Knowledge of sust. agriculture	--						
2. Farming activity	-.225*	--					
3. Follow convent. pest control	-.274**	-.015	--				
4. Tilling or not tilling	.354**	-.543**	-.044	--			
5. Convent. agriculture awareness	.427**	-.220*	-.065	.253*	--		
6. Access to agroecological inputs	.352**	-.179	-.258**	.149	.411**	--	
7. Grazing or not grazing mgmt.	-.251*	-.461**	.075	-.354**	-.188	-.095	--
Media	2.49	1.91	1.62	2.39	2.52	2.85	1.79
Std. Deviation	.86	.87	.87	.83	.76	.48	.92
Variance	.78	.75	.76	.69	.57	.23	.85

*p < 0.05. **p < 0.01. (2-tailed)

The model showed that Latino farmers and ranchers’ skills and knowledge about sustainable agriculture is explained in 33% by the independent variables in table 2. Results support the assumptions above.



Educational Approach



An educational–curriculum program was designed based on preliminary findings from data collected from focus groups and survey interviews. This curriculum enhances the Latino farmer and ranchers’ skills, knowledge and understandings of sustainable production methods.The training occurred in 2017 and included 4 classroom workshops and 4 on-farm demonstrations for 46 Latino producers in Missouri.

Educational Program-topics influencing Latino farmers in transitioning into sustainable agriculture:

- Farm management skills
- Management of financial and production records
- Sustainable soil management
- Water use and management
- Holistic grazing systems (ruminants & monogastric)
- Agro-ecological practices in specialty crops
- Biological pest control management
- Native plants
- Pollinators

