

<b>Title:</b>	<b>Enhancing Beginning Farmer Specialty Crop Management Skills and Opportunities in the Southwest</b>		
<b>Sponsoring Agency</b>	NIFA	<b>Project Status</b>	COMPLETE
<b>Funding Source</b>	Non Formula	<b>Reporting Frequency</b>	Annual
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<b>Submitted By</b>	Alma Enciso	<b>Date Submitted to NIFA</b>	11/25/2014

**Program Code:** BFRDP

**Program Name:** Beginning Farmer and Rancher

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**Non-Technical Summary**

Most limited resource beginning farmers and ranchers lack the ability to develop a written business plan that considers niche markets, diversification, and tax issues for specialty crops that would pass an agricultural loan officer's review. Furthermore, due to recent water right settlements for some Native Americans, management, marketing, and production expertise rather than available natural resources are the limiting factors for starting and growing a specialty crop enterprise. This Standard BFRDP proposal focuses on empowering beginning and limited resource producers to learn these skills through ongoing hands-on demonstration, instruction, and curriculum over the three years. The first year focuses on business planning, market assessment, diversification, specialty crop production possibilities, credit acquisition, and local input on demonstration activities. The second year addresses securing agricultural credit, direct marketing, and field demonstrations of specific production practices, including hoop house production options for specialty vegetables and nursery crops. The final year will focus on grower networking, income tax strategies, taking advantage of federal programs, and online recordkeeping. A series of 15 different workshops and field days will be held at nine different site locations in Arizona and New Mexico. Limited resource audiences include Southwest Native American, international refugee, and Future Farmers of America individuals. We estimate that at least 75% of our budget will be spent reaching socially disadvantaged producers. Grower presentations, producer site visits, and one-on-one education will be utilized to intensify and help personalize the educational trainings provided.

**Accomplishments**

**Major goals of the project**

Improve the success rate of beginning farmer Native American, International Refugee, and Future Farmers of America, and 4-H audiences by enabling them to: 1. Develop a business plan for specialty crops that considers direct, local, and niche marketing alternatives. The business plan will also include production, human resource, and financial components so that the plan has information and financial numbers that agricultural lenders require in securing a commercial agricultural loan. 2. Identify viable diversification strategies through multiple crops and growing methods. Recordkeeping tools proposed will allow beginning farmers to track input costs, harvest seasons, production levels, marketing costs, sale prices, and manage tax liabilities for ethnic and Native American specialty crops grown with the aide of hoop houses and in open fields. 3. Make connections with individuals that can serve as production-marketing mentors to these beginning farmers. In addition to local producers, Farm Service Agency, Natural Resource Conservation Service, and commercial agricultural personnel will also

develop connections and help mentor these beginning farmers through our annual workshops and field days held at locations in Arizona and New Mexico. Educational efforts are targeting Immigrant, Native American, and FFA/4-H individuals. Field day and workshop participants will learn about growing seasons and how hoop houses can be utilized to extend the growing season for niche specialty crops that will not thrive without a structure that provides a protected environment for at least part of the crop cycle. We will also impact participants by enabling them to produce seeds and vegetative propagated materials in hoop houses. Workshops and Field Days will be held in climatic regions that range from the high desert areas of Arizona and New Mexico to Arizona's intermediate and low desert. We are proposing a series of 15 different workshops at 10 different site locations over the three years. A total of 325 individuals are expected to participate in all of our ongoing training sessions at the 10 different sites as described in table 1. While a few individuals may drop out and a few individuals may join after our initial training, a solid base of beginning farmer participants exists in all of the locations proposed as noted in our support letters, and this is why these locations have been selected.

### **What was accomplished under these goals?**

We are starting to see several true success stories, including a few of the more engaged IRC producers that are now farming small plots located on several acres of leased farm land in the Phoenix area. We have also had individuals in the New Mexico project build their own hoop house designed from our workshops and trainings. One young family has been selling and eating the produce they have grown in the Pena Blanca NM demonstration hoop house. This family has also reported that they are selling to the local mobile food market who is requesting more and more of their products. At the location in Prescott AZ, the grower was able to extend their season for both tomatoes and peppers which increased their market and income. Hoop houses have been constructed, moved and refurbished under the project and located in visible areas to the communities (e.g., garden community property, next to a food bank, and near cooperative extension offices) increasing the number of inquiries we receive. Many of the project participants in all locations are excited about the potential to save money on seedlings and also be able to grow specialty crops that they have not grown before. They see the few individuals in the project who have taken the lessons and trainings to the next level and they want to do the same. At least 186 of the participants reported back that they are using the record books and slowly getting a better handle on their business. Only 15 have reported starting their business plans. The recordkeeping trainings continue to encourage the farmers to keep records of their own. Finally a note from our collaborators in Safford "Thank you once again University of Arizona, faculty, students, staff, and U of A Graham County Extension Department for the role you all played in making the Hoop House a reality. Your support has helped to guarantee that Our Neighbors Pantry and Our Neighbors Farm function as a "food oasis" for needy residents of Graham County." Visit: <http://ourneighborsfarm.org/>.

### **What opportunities for training and professional development has the project provided?**

#### **2014 New Groups (13 workshops, 52 hours, 140 individuals)**

Jan. 27, Benson, AZ Beginning Ranch workshop, Jan. 29, 2014, Pena Blanca NM, Crop selection and Irrigation; Jan 29, 2014, Jemez Pueblo, NM workshop on Crop selection and Irrigation; Feb. 12, 2014, Tucson AZ, hoop house construction and costs, plus hoop house management and site selection; Feb. 13, 2014, Safford AZ, hoop house construction and costs, plus hoop house management and site selection; Feb. 18, Cottonwood, AZ, workshop on understanding hoophouse production, hoophouse construction, market selection; Feb. 18, Phoenix, AZ, Plant Selection and Marketing; Feb. 26, Tucson, Certification and labeling issues; Feb. 27 Safford, Certification and labeling issues; March 3, 2014, Cottonwood AZ, understanding plant nutrition and soil fertility, basic business planning & Records and a soils wet lab session; March 18, cottonwood certification and labeling; March 26, Tucson, Funding opportunities and financial analysis; April 2, 2014, Cottonwood, one on one business plan follow-up; April 15, Phoenix, Field Day demonstration; and April 28, 2014, Phoenix, AZ, Farm liability overview and considerations;

#### **2013 (22 workshops, 88 hours, 165 individuals)**

Phoenix, AZ workshop business planning basics; Jan 9, 2013, Tucson, AZ workshop on understanding plant nutrition and soil fertility; Jan. 14, 2013, Yuma, AZ workshop business planning basics; Jan 23, 2013, Stafford, AZ workshop on understanding plant nutrition, soil fertility and potential funding sources; Feb. 6, 2013, Safford, AZ workshop on crop selection and marketing options; Feb. 14, 2013, Tucson, AZ workshop on business planning and temperature management; Feb. 20, 2013, Safford, AZ workshop understanding plant nutrition and soil fertility; Feb. 25, 2013, Phoenix, AZ workshop agricultural records part 2; Feb. 26, 2013, Prescott, AZ workshop on Food safety and water management; Feb. 28, 2013, Tucson, AZ workshop record keeping and transplanting vs. seed production; March 6, 2013, Safford, AZ workshop on food safety and funding opportunities; March 12, 2013, Prescott, AZ workshop on business plans and growers perspective; March 14, 2013, Tucson, AZ workshop on growers perspective and food safety; March 25, 2013, Phoenix, AZ workshop in house hoophouse demonstration on irrigation and growing starters; March 26, 2013, Prescott, AZ workshop on grower site visit and marketing; March 28, 2013, Tucson, AZ workshop seasonal changes in hoop house production moving to the next season; April 8, 2013, Jemez Pueblo, NM workshop on revisiting hoop house management and site selection ; April 9, Pena Blanca, on site selection and construction options; May 14, 2013, Jemez Pueblo, NM workshop on hoop house refurbishing/construction; May 15, Pena Blanca, NM workshop on hoop house construction; May 21, 2013, Phoenix, AZ workshop on wrap-up and future topics ; Aug 13, 2013, Jemez Pueblo, NM workshop on hoop house soil and crop selections; Aug 14, Pena Blanca, NM workshop on hoop house soil and crop selections ; Aug 21, 2013, Prescott, AZ workshop on wrap-up and future topics; Aug 26, 2013, Phoenix, AZ workshop on wrap-up and future topics;

**2012 (22 workshops, 88 hours, 130 individuals)**

Jan. 21, 2012, Yuma, AZ workshop on project overview and business planning, Feb. 14, 2012, Jemez Pueblo, NM, workshop on project overview and business planning, Feb. 15, 2012, Santa Domingo, NM, project overview and business planning, Feb. 14, 2012, Safford, AZ, workshop on project overview and business planning, May 22, 2012, Building a Solid Business Plan, Aug. 9, 2012, Tucson, AZ workshop on construction and growing in a hoop house, Sept. 13, 2012, Tucson, AZ, workshop on Understanding Basic agricultural record keeping; Oct. 2, 2012, Phoenix, AZ workshop on growing in a hoop house, the basics; Oct. 4, 2012, Ganado, AZ Navajo Nation workshop on construction and growing in a hoop house, the basics; Oct. 6, 2012, Safford, AZ workshop on project overview and business planning; Oct. 7, 2012, Tucson, AZ workshop on business planning part 1; Oct. 17, 2012, Safford, AZ workshop on growing local markets and system comparisons; Oct. 23, 2012, Phoenix, AZ workshop hoop house soil and crop selections; Oct. 24, 2012, Safford, AZ workshop on composting and marketing; Oct. 29, Jemez Pueblo, NM workshop on construction and growing in a hoop house, the basics; Oct. 30, Santa Domingo, NM workshop construction and growing in a hoop house, the basics; Nov 6, 2012, Phoenix, AZ workshop on record keeping and cash flow analysis for farmers; Nov 9, 2012, Tucson, AZ workshop on composting and marketing; Nov 26, 2012, Tucson, AZ workshop Soil and Irrigation overview for hoop house production; Nov. 27, 2012, Phoenix, AZ workshop on Soil and Irrigation overview for hoop house production; Dec 13, 2012, Tucson, AZ workshop crop selection and marketing; Dec. 18, 2012,

**Project Started Oct 2011 (4 workshops, 16 hours, 36 individuals)**

Nov. 8, 2011, Keams Canyon, AZ, workshop on Introduction to the AZ BFRDP, Nov. 9, 2011, Whiteriver, AZ workshop on Introduction to the AZ BFRDP; Nov. 16, 2011, Jemez Pueblo, NM, workshop on Introduction to the AZ/NM BFRDP, Nov. 16, 2011, Santa Domingo, NM, workshop on Introduction to the AZ/NM BFRDP

## Additional Results from participants:

Participants were asked several questions both before and after the Beginning Farmer (BF) Classes.

Before any BF classes, how much knowledge did you have about direct farm marketing?

	A Great Deal	Considerable	Moderate	Slight	None
Before	0%	8%	16%	8%	68%
After	0%	25%	58%	17%	0%

Before any BF classes, how much knowledge did you have about organic certification and labeling?

	A Great Deal	Considerable	Moderate	Slight	None
Before	5%	8%	18%	32%	37%
After	13%	24%	39%	21%	3%

Before any BF classes, how much knowledge did you have about GHP/GAP?

	A Great Deal	Considerable	Moderate	Slight	None
Before	0%	0%	0%	18%	82%
After	9%	18%	64%	9%	0%

Before any BF classes, what were your intentions regarding developing a marketing plan?

	Definitely Yes	Definitely No	Maybe	Never Considered it
Before	18%	8%	29%	45%
After	27%	6%	54%	13%

Before any BF classes, what were your intentions regarding keeping good crop/financial records?

	Definitely Yes	Definitely No	Maybe	Never Considered it
Before	0%	0%	56%	44%
After	56%	0%	33%	11%

Before any BF classes, how much knowledge did you have about soil characteristics and testing?

	A Great Deal	Considerable	Moderate	Slight	None
Before	1%	17%	28%	33%	21%
After	8%	49%	29%	10%	4%

Before any BF classes, how much knowledge did you have about organic vegetable production?

	A Great Deal	Considerable	Moderate	Slight	None
Before	10%	21%	15%	33%	21%
After	15%	33%	38%	13%	0%

Before any BF classes, how much knowledge did you have about production in hoop houses?

	A Great Deal	Considerable	Moderate	Slight	None
Before	4%	9%	25%	35%	27%
After	13%	43%	23%	21%	0%

Have the BF classes motivated you to do any or more of the following?

- 1) Growing (outside or inside): 46%
- 2) Construction (hoop house): 8%
- 3) Growing & Construction: 46%
- 4) No activities above thus far: 0%

How did attending these Beginning Farmer workshops influence your hoop house intentions?

More likely to Build Own : 59%

No Change in Intentions at this Time: 29%

Less Likely to Build Own: 12%

#### How have the results been disseminated to communities of interest?

The results of the previously mentioned workshops have been disseminated to communities of interest collectively through, telephone calls and one-on-one follow-up with local farm boards, invited presentation we have delivered at other local meetings and through the farmer to farmer connections developed during our workshop and hoop house trainings.

#### What do you plan to do during the next reporting period to accomplish the goals?

{Nothing to report}

#### Participants

##### Actual FTE's for this Reporting Period

Role	Non-Students or faculty	Students within Staffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Scientist	1.4	0	0	0	1.4
Professional	0	0	0	0	0
Technical	0.7	1.5	1	0	3.2
Administrative	0.4	0	0	0	0.4
Other	0	0	0	0	0
Computed Total	2.5	1.5	1	0	5.0

#### Student Count by Classification of Instructional Programs (CIP) Code

Undergraduate	Graduate	Post-Doctorate	CIP Code
	1		01.11 Plant Sciences.
2			01.01 Agricultural Business and Management.

#### Target Audience

Target audiences reached during the 2013/14 fiscal year include limited resource beginning farmers as follows: 1) Native American producers in northern Arizona and New Mexico, 2) international refugees located with our Phoenix IRC partner, and 3) small scale limited resource individuals in Arizona and New Mexico.

#### Products

Type	Status	Year Published	NIFA Support Acknowledged
Journal Articles	Published	2014	YES

**Citation**

K. Hanson, T. Mahato and U.K. Schuch, "Soil Solarization in High Tunnels in the Semiarid Southwestern United States" HortTechnology, Vol. 49(9), September, 2014

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2011	YES

**Citation**

Crop Records: Beginning Farmer Record Keeping Workbooks

**Other Products****Product Type**

Software or NetWare

**Description**

Development of the LocalFresh.info website that allows for consumers to identify and connect with local direct farm marketing farmers.

**Changes/Problems**

{Nothing to report}