

<b>Title:</b>	<b>Plowing Ground in New Jersey: Growing New Farmers and Generating Alternative Land Linkages</b>		
<b>Sponsoring Agency</b>	NIFA	<b>Project Status</b>	COMPLETE
<b>Funding Source</b>	Non Formula	<b>Reporting Frequency</b>	Annual
<b>Accession No.</b>	225775	<b>Grants.gov No.</b>	GRANT10771621
<b>Project No.</b>	NJW-2011-01008	<b>Proposal No.</b>	2011-01008
<b>Project Start Date</b>	09/01/2011	<b>Project End Date</b>	08/31/2014
<b>Reporting Period Start Date</b>	09/01/2011	<b>Reporting Period End Date</b>	08/31/2014
<b>Submitted By</b>	Eve Minson	<b>Date Submitted to NIFA</b>	11/25/2014

**Program Code:** BFRDP

**Program Name:** Beginning Farmer and Rancher

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{NO DATA ENTERED}

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{NO DATA ENTERED}

**Non-Technical Summary**

Historically known as the Garden State, there has been a very purposeful drive to preserve the remaining open spaces and farmland in the state over the past several generations. In addition, there is an extremely high demand for fresh, organic, and local foods throughout the state and surrounding cities. Despite this demand, much of the land in New Jersey is not currently being used to support the state's food needs. Beginning farmers interested in producing local food are thwarted by high land costs, and landowners with available land do not know how to connect constructively with farmers who will farm with methods fitting with their community or land management goals. The most densely populated state in the nation, New Jersey is also the reported home of the largest Community Supported Agriculture (CSA) in the US -- Honey Brook Organic Farm with over 2,300 members (over 3500 persons served) and they have a waiting list, as do most CSA operations in New Jersey. Farmers markets have exploded to over 125 in NJ, up from 40 in 2000 (Rutgers University, 2009). The largest downfall of most markets is there are too few farmers in general and specifically, too few organic producers. New Jersey, being located between New York City and Philadelphia has a potential market of almost 31 million people using the 100 mile food shed, centered in Philadelphia that includes all of New Jersey (DVRPC, 2010), but the demand is not being met locally. This problem is exacerbated by the steady loss of viable farmland to a sprawling and inefficient land use pattern. There are no beginning farmers programs in NJ. With over 188,000 acres available in New Jersey as preserved farm land, there is a phenomenal growth potential for beginning farmers. Access to land is one of the major obstacles for beginning small scale farmers in New Jersey. Land values are so high that buying land is not economically feasible for beginning farmers. Those unable to purchase land often turn to short term leasing or other arrangements. However, with short-term leases common and no NJ-specific model lease/contracts for landowners and farmers to turn to, this situation is unlikely to change without intervention. Most linkages in New Jersey now between land holders and potential farmers are ad-hoc . This proposal puts forth a systems approach that will encourage, grow, and empower new small scale farmers in the Garden State and address the growing concern of too few beginning farmers and access to farm land. Tier 1 is an early assessment and planning stage including decision-making classes and technical training courses. Tier 2 focuses on building work experience through the NOFA-NJ Internship Program. Tier 3 focuses on support for farmers beginning independent farming with a mentor at structured Incubator sites and with other independent farmers. The Farm Land Linkages program at the Tier 4 level is a series of new lease programs.

**Accomplishments**

**Major goals of the project**

Objective 1: Develop curricula that include teaching and educational tools for beginning farmers specific to the available land and recommended growing approaches in New Jersey. Outcomes: develop technical training and instructional tools to offer beginning farmers, helping these them work through a decision-making process through courses such as: Exploring the Small

Farm Dream, Tilling the Soil of Opportunity and additional training programs and learning opportunities on the technical aspects of organic farming, and required steps for organic certification. Objective 2: Support beginning farmers at the Intern/Apprenticeship level to begin networking and expanding their technical knowledge. Outcomes: hands-on internships and apprenticeships including visits to farms and centers, and opportunities to exchange knowledge and ideas. Specific technical classes will be developed for the interns and participating farmers, and assessment tools to allow beginning farmers to enter this process at their appropriate level of knowledge and expertise. Objective 3: Establish a Beginning Farmer Incubator Farm and the Credentialed Organic Producers (CrOP) program in support of mid-level beginning farmers who are starting their own farming operations, including a Mentorship component. Outcomes: Applications from NOFA-NJ credentialed beginning farmers will be evaluated and accepted to participate in CrOP programs, provide beginning farmers access to small acreages to farm in a mentorship relationship with an established farmer. Develop incubator programs on farmland. Objective 4: Deliver technical assistance to beginning farmers through field trips, on-farm field days, farmer twilight meetings, annual NOFA-NJ Winter Conference, and other conferences and workshops. Outcomes: Year round and at different technical levels depending on the audience. Field days, workshops and winter conference sessions for beginning farmers. Objective 5: Improve Access to Land through Model Leases and Contracts and a Farm Land Linkages program for both farmers and land owners. Outcomes: Working with partners, develop a set of land leases and contracts that can be used by beginning farmers to gain access to land. Educational efforts will also be geared towards landowners to raise their awareness of the need and benefits to farm land access. The first tier will serve 50 beginning farmers per year; the second phase, interning and work experience, will serve 20-25 per year; the third phase, Incubator or CrOP beginning farmers, will serve 6-10 per year; and the last phase, implementation, will serve 5-8 per year. As the program matures and grows, these numbers will increase as the capacity of the project partners increases, along with the general awareness and acceptance of the program increases in New Jersey.

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

New Jersey has a significant and growing demand for locally, organically-grown food and vegetables; with the average age of the American farmer increasing and the number of next generation farmers decreasing, it has become imperative that the institutional knowledge, support network and resources that are inherent in multi-generational farming operations be conveyed through alternative means. Our Incubator Farm program continued to provide access to land for three beginning farmers. 1 of those farmers graduated off the Incubator into a lease-agreement, another expanded his vegetable CSA to 100 people, began a meat CSA and secured a land lease to transition onto over the next year, and the third doubled his acreage. At the Incubator Farm, the 2 remaining farmers cultivate 11 acres of land, which feeds over 100 families through a Community Supported Agriculture program, plus hundreds of weekend visitors who patronize the Duke Farms Farmers Market. These 2 businesses are supporting 2 families and employing over 5 part-time staff members, with expansions planned by the farms for next year. NOFA-NJ envisions adding 3-5 more farmers to the Incubator Farm over the next year to the existing 2. According to evaluations collected for 21 of 48 workshops, 199 beginning farmers increased their knowledge on subjects ranging from organic disease management and poultry processing to tractor safety and the business of farming. The Beginning Farmer Program is providing business planning training, experiential education, land linkage services and technical assistance - in order to increase the number of viable sustainable farms in the region. Objective 1: Develop curricula that include teaching and educational tools for beginning farmers specific to the available land and recommended growing approaches in New Jersey. A survey of training preferences for beginning farmers was done in year 1 with 59 respondents. 44% identified as "explorers," or considering farming as a career, and 54% identified as "planners," or actively planning a career in farming. Apprenticeships were considered a valuable training tool by 85% of beginning farmers in the exploring stage and by 66% of planners. 56% of respondents planned to pursue organic certification and 31% were considering it, but not certain. As a result of this survey 11 courses were offered for beginning farmers. After attending "Exploring the Small Farm Dream," 52 people who are exploring a career in farming were better able to answer the question "Am I ready to start an agricultural business?" and 49 rated the usefulness of the course as "Excellent." 11 beginning farmers responded to a follow-up phone survey 6 months later. Of those 11, 7 had started farming, and 2 reported it was as a result of "Exploring the Small Farm Dream." After attending "Tilling the Soil of Opportunity," 30 people intended to use business planning concepts taught during the class within the year; topics included creating marketing strategies, budgeting, analyzing financial statements and planning for retirement. 35 attendees indicated increased knowledge on at least one of the aforementioned topics. 1 year later, 5 of 12 participants in "Tilling the Soil of Opportunity" responded to a follow-up survey. 4 indicated they had created a business plan, and 4 reported it was as a result of attending this course. Of the 11 beginning farmer evaluations collected from "Road to Certification," 10 indicated an increase in topics related to organic certification, and 10 are better able to answer the question "Is organic certification right for me?" Objective 2: Support beginning farmers at the Intern/Apprenticeship level to begin networking and expanding their technical knowledge. 48 workshops were held to encourage networking and impart technical knowledge. (Evaluations were collected for 21 workshops, with 203 respondents). For the 21 workshops that were evaluated, 199 attendees indicated increased knowledge as a result of the workshop and 184 indicated that they would use the knowledge in the coming year. Objective 3: Establish a Beginning Farmer Incubator Farm and the Credentialed Organic Producers (CrOP) program in support of mid-level beginning farmers who are starting their own farming operations, including a Mentorship component. Six applicants were interviewed by NOFA-NJ staff and the Beginning Farmer Advisory Committee; four farmers were accepted into the program and three farmers broke ground in spring 2013. In year 3, 1 of the 3 beginning farmers

graduated off the Incubator Farm and entered into a land-lease arrangement close to his home. He is still farming. The 2 remaining farmers expanded their production and attended monthly meetings to assess their progress. 5 beginning farmers were matched with mentors. No new farmers were accepted onto the Incubator Farm for year 3, please see "Problems/Changes" for more information. Objective 4: Deliver technical assistance to beginning farmers through field trips, on-farm field days, farmer twilight meetings, annual NOFA-NJ Winter Conference, and other conferences and workshops. A total of 406.75 hours were spent consulting on technical issues with beginning farmers through farm visits and phone/email responses to questions. 10 technical events were held: 3 conferences and 7 field days on local farms. Evaluations from beginning farmers were collected for 4 field days with 41 respondents. 39 people increased their knowledge on field day topics, and 32 people plan to use what they learned at the field days within the year. Objective 5: Improve Access to Land through Model Leases and Contracts and a Farm Land Linkages program for both farmers and land owners. Over 1500 land leasing guidebooks were distributed to agricultural organizations and individuals. 203 people attended land leasing workshops, with 75 submitting evaluations. 75 participants increased their knowledge of issues to consider when developing a lease. 71 increased their knowledge of farmers' interests and concerns when seeking access to land. In year 2, a land leasing course was developed for landowners (Leasing 101: Making Your Land Available for Farming) and held twice. 33 landowners increased their knowledge on how to create a vision for their land; 33 increased their knowledge on how to assess the agricultural capabilities of their land; 32 increased their knowledge on farmers leasing interests and concerns; and 33 increased their knowledge of issues to consider when developing a lease or contract. In addition, 11 intended to seek assistance in evaluating the agricultural capabilities of their land; 12 intended to develop a plan for leasing their land; 9 intended to make their land available to a farmer; 11 intended to enter into a lease with a farmer; 8 intended to improve an existing lease relationship; 8 intended to use a land linkage service to find a farmer; and 11 intended to seek acreage to lease. In year 3, a second land leasing course was developed for landowners (Maintaining Farmland Leases: Managing Conflict in Your Lease Agreement) and held twice. 13 landowners/farmers/others increased their knowledge on strategies for building and maintaining a positive lease relationship between farmer and landowner; 13 landowners/farmers/others increased their knowledge on key elements to include in a lease document and how to develop a lease to avoid conflict; 12 landowners/farmers/others increased their knowledge of their own conflict style and how different styles can be utilized in different situations; 12 landowners/farmers/others increased their knowledge of effective communication strategies to help with conflict resolution; and 13 farmers/landowners/others increased their knowledge on the use of mediation and other third-party resources to help with conflict resolution. 5 farmers were successfully matched with landowners through NOFA-NJ.

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

Three classroom-style courses to help farmers create production and business plans and organic systems plans were held for a total of 11 offerings. Other workshops include: On-farm poultry processing, Pastured Poultry Production, Food Safety on the Farm, Managing Soil Nitrogen, Marketing Niche Meats, Organic Orchard Management, Designing a Rain Garden for Water Management, Constructing A CoolBot Cooler, Building a Hoop House, Site Evaluation, Organic Orchard Management Series, Tractor Safety and Maintenance, Organic Disease Management, Post-Harvest Handling, Pest and Disease Identification, Pest Exclusion Fencing, Striking the Balance Between Work and Personal Life, Organic Weed Management, Skills-Scale-Sustainability, Business of Farming, Organic Pest Management, and On-farm Leaf Mulching. 23 micro-workshops were held during day-long educational events (each workshop was 30 minutes). Our annual Winter Conference has over 500 attendees every year and about 60 classes each year.

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

Information on beginning farmer workshops, funding opportunities and land leasing was conducted through email newsletters, paper publications, social media and presentations. 65 email newsletters were sent and 18,738 total customers opened the newsletters. 30 press releases were sent to media contacts. Local publications, such as the NJ Farm Bureau and Penn State's Start Farming newsletters, Edible Jersey magazine, the Daily Record, Hunterdon County Democrat, and the Star Ledger newspapers featured articles on programs and workshops. 3 advertisements were placed in The NJ Farmer. 5 Presentations were made (Winter Conference 1/26/13; NJ Land Conservation Rally 3/9/13; Winter Conference 1/25/2014; Site Evaluation Workshop 3/7/2014; Informational Meeting 7/24/14). The SADC publicized the Land Leasing Guidebook by mailing 2,160 fliers and mailed copies of the Land Leasing Guidebook to the individuals on the SADC's Agricultural Mediation Program roster of mediators. 1,600 copies of the guidebook were printed and are available electronically on the NOFA-NJ and SADC websites. SADC partners visited county boards of agriculture and County Agriculture Development Boards to publicize the project.

#### **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 Stuffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Scientist	0.9	0	0	0	0.9
Professional	0.7	0	0	0	0.7
Technical	0.7	0	0	0	0.7
Administrative	0.4	0	0	0	0.4
Other	0	0	0	0	0
Computed Total	2.7	0	0	0	2.7

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

{NO DATA ENTERED}

**Target Audience**

Information on demographics and land access was collected through scholarship applications – there were 185 applications returned from September 2012 through August 2014. 52% (96 people) of applicants were male, and 48% (89 people) were female. 76% (141 people) identified as white; 8% (14 people) were Asian; 3% (6 people) were Hispanic; 4% (7 people) were black; 1% (1) was other; and 8% (15 people) preferred not to respond. In terms of farm experience (out of 175 applications) 20% (34 people) were considering and exploring a career in farming but had not completed any hands-on training; 28% (49 people) were not currently farming independently (i.e. running their own farming business) but were currently, or had in the past, participated in a farm apprenticeship or internship; 10% (18 people) were planning to start farming independently within the year; 25% (43 people) had been farming independently for 1 to 3 years; 8% (14 people) had been farming independently for 4 to 7 years; 1% (1 person) had been farming independently for 8 to 10 years; 2% come from a farming background so they don't know how to count how many years they've been farming independently; and 6% (10 people) chose Other. 22% (40 people) were not ready for land; 20% (37 people) were seeking land; 10% (19 people) were involved in short-term (less than 5 year) lease with a landowner; 4% (8 people) were involved in a long-term (greater than 5 year) lease with a landowner; 18% (34 people) had purchased land; 3% (6 people) had inherited land. There were multiple combinations of land access situations, as well – people who currently owned land and were seeking additional land, people who had a short-term lease and were seeking land, people who were not ready for land but were seeking land, etc.

**Products**

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2013	YES

**Citation**

"Leasing Farmland in New Jersey: A Guide for Landowners and Farmers." (2013) Trenton, NJ: New Jersey State Agriculture Development Committee.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Published	2012	YES

**Citation**

Minson, E. "Beginner Farmer Incubator Farm Launches Its Inaugural Year." (2012) Natural Awakenings, October 2012 (P36-37).

Type	Status	Year Published	NIFA Support Acknowledged
Other	Other	2013	YES

**Citation**

Cook, Justine. "Site Evaluation Guide." (2013) NOFA-NJ.

Type	Status	Year Published	NIFA Support Acknowledged
Other	Other	2014	YES

**Citation**

Cook, Justine. "Road to Certification: Course Curriculum." (2014) NOFA-NJ.

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

Other

**Description**

Education objective: A survey of training preferences for beginning farmers was done in year 1 with 59 respondents. As a result of this survey 9 beginning farmer courses were offered. 4 sessions of "Exploring the Small Farm Dream," a curriculum developed by the New England Small Farm Institute that helps exploring new farmers identify the steps necessary to start a farm were offered; 4 sessions of "Tilling the Soil of Opportunity," a curriculum developed by NxLevel that helps new farmers create a business plan for their farm were offered. A webpage was created to support this class by Joan Divor, business librarian at the Burlington County Library ([explore.bcls.lib.nj.us/nofa-nj](http://explore.bcls.lib.nj.us/nofa-nj)). Beginning farmers were surveyed to establish baseline data on the types of useful trainings. Based on the results of that survey, the new course "Road to Certification" was outlined, a needs assessment was conducted for farmers who are not certified organic, but are closely aligned with its principles, and the curriculum created. "Road to Certification," a NOFA-NJ curriculum was offered twice.

**Product Type**

Other

**Description**

Technical workshops objective: 23 micro-workshops were held at Incubator Farm Open Houses on topics such as: Cover Crop Management, Pollinators and Their Habitats, Organic Pest and Disease Management, Permaculture, Building a Hoop House, and Seed Saving and Starting. 25 in-depth workshops were held on topics including, On-farm Food Safety, Managing Soil Nitrogen, Pastured Poultry Production and Processing, Tractor Safety and Maintenance, the Business of Farming, and Site Evaluation.

**Product Type**

Other

**Description**

Incubator Farm objective: In year 1, a Beginning Farmer Advisory Committee, composed of seven new and experienced farmers in New Jersey was formed. They coordinated the hiring of a Beginning Farmer Program Manager with NOFA-NJ staff. An Incubator Farm plan was created to outline the general concept of an incubator farm and included a sample lease for participants, an inventory of resources, and the environmental and conservation requirements for participating. Application materials were created for the program and the components and management of other incubator farms were researched. In year 2, a lease was negotiated with the Duke Farms Foundation for use of a cottage and 119 acres of land. 6 applicants were interviewed by NOFA-NJ staff and the Beginning Farmer Advisory Committee; 4 farmers were accepted into the program and 3 of those 4 broke ground in spring 2013. The barn was damaged during Hurricane Sandy and was renovated in 2013. Irrigation, a cooler, and a wash stand were installed on the farm. The three farmers were matched with mentors and monthly meetings were conducted to assess the success of the program. The farmers were introduced to the public at the annual Open House. In year 3, 1 of the 3 beginning farmers graduated off the Incubator Farm and entered into a land-lease arrangement close to his home. He is still farming. The 2

remaining farmers expanded their production, were matched with new mentors, and attended monthly meetings to assess their progress. Several potential second Incubator Farm sites were investigated in other parts of the state, but none have yet come into fruition.

No new farmers were admitted to the Incubator Farm in Year 3. See "Changes/Problems" for more information. Currently, 2 beginning farmers have submitted 2015 applications for the Incubator Farm.

### Product Type

Other

### Description

Technical assistance objective: Consulting on technical issues was offered to beginning farmers through farm visits and phone/email responses to questions, plus a webpage was created with resource links. A total of 406.75 hours were spent consulting on technical issues. 10 technical events were held: 3 Winter Conferences, and 7 field days on local farms.

### Product Type

Educational Aids or Curricula

### Description

Improve access to land objective: In year 1, landowner and farmer surveys were conducted, common leasing issues were researched and a landowner course overview and outline were created. 4 landowner workshops that provided information on land leasing issues in year 1. In year 2, a land leasing course was developed for landowners (Leasing 101: Making Your Land Available for Farming) and held in June 2013. In year 3, a second land leasing course was developed for landowners (Maintaining Farmland Leases: Managing Conflict in Your Lease Agreement) and held in both January and March 2014.

### Product Type

Other

### Description

Improve access to land objective: There were 6 landowner workshops that provided information on leasing issues; and 3 landowner-farmer networking sessions. A contract was negotiated with Rowan University in 2013 to create a searchable land leasing web program. However, in 2014, it was determined that Rowan University would be unable to fulfill the activity and a contract was successfully executed, for the same scope of work, with Rutgers University.

## Changes/Problems

### Objective 1:

"Exploring the Small Farm Dream" was held annually, as planned, but the instructor could not commit to alternate locations. The curriculum developer, New England Small Farm Institute, was contacted in early 2014 in an effort to train new trainers in New Jersey, but there was not sufficient demand. In addition, there was not enough time or expertise to initiate the translation of materials and hiring a translator to work with our current instructor was cost prohibitive. NOFA-NJ is currently looking for alternate, bilingual instructors to expand the class to other areas in New Jersey.

A similar challenge was met with "Tilling the Soil of Opportunity" – while the class was held in multiple locations, there is only one certified instructor in New Jersey and she is not bilingual. We have brainstormed potential solutions for translating the material but have not found one that is cost-effective to date.

The original goal to annually develop new curricula was not met due to staff resource challenges: no new course was developed in Year 1, but the course "Road to Certification" was developed in Year 2 and offered in Year 3. A mini-course called "Site Evaluation" was also offered in Year 3 and will be developed into a full course based on the positive feedback received from participants.

### Objective 2:

The technical course offerings improved and increased each grant year, but the first year fell short of our initial goals. This was mostly due to the short timeframe available for planning and outreach to beginning farmers in the initial year. During Year 1, however, NOFA-NJ compiled an excellent roster of experts and farm hosts, which was used to plan the workshops offered in Year 2 and Year 3. Year 3 had the greatest success, which we attribute both to the quality of offerings and the level of outreach offered. In addition, we found attendance increasing annually, which we feel reflects a level of trust that beginning farmers hold in our training program.

### Objective 3:

The establishment of the Incubator Farm Program was a major accomplishment and required a great deal of planning with our partner, Duke Farms Foundation. The initial site offered by Duke Farms was found unacceptable after the resource inventory conducted in Year 1; the capital resources required to improve the site and create a working farm far exceeded those available for the program. A second site was identified on Duke Farms in Year 1 and three farmers were accepted into the program in Year 2. Original plans included expansion of the program to two additional sites: lack of infrastructure, a major barrier for beginning farmers, was an issue at three sites that had been identified through partnerships. We have been in contact with land trusts and municipalities throughout the state to find alternate locations and will continue to work on this piece of Objective 3.

In addition, when evaluating the long-term sustainability of the program, the original design of the program had to be changed; the new design did not include an on-site mentor, but did include individual mentors for each farmer. This new mentorship design allowed for more specific mentorship relationships and allowed the participants to find mentors whose business models or operation more closely reflected their own goals. The participants were required to spend a minimum of 30 hours in consultation with their mentors and both participants and mentors filled out end-of-year evaluations.

The Incubator Farm accepted no new farming businesses in Year 3, although two promising candidates did apply and NOFA-NJ successfully connected them with landowners. Duke Farms Foundation, who has provided a 25 year, no-cost lease for the Incubator program, notified NOFA-NJ that there are arsenic levels above NJDEP residential soil remediation standard limits (19 parts per million) present on the farm. Through conversations with the Board of Trustees, Duke Farms Foundation and Natural Resource Conservation Service personnel, we decided to close the application process for 2014, until a suitable action plan was created. After weeks of investigation, a bioremediation plan has been implemented, made possible through the aforementioned partnerships. We have also partnered with Brooklyn College to conduct an on-site research project that will test the efficacy of a specially formulated compost amendment on arsenic immobilization. Although it was initially considered a setback, the situation was beneficial for the program. It provided us with the time to scrutinize the program in its second year, without the demands of orienting new businesses. Multiple improvements have been identified and the application process is now open for 2015.