

## Incubator Farms as Beginning Farmer Support

### Abstract

Incubator farms are a fairly new model developing across North America to address barriers to beginning farmers, including access to land, capital, and credit, and opportunities to learn and develop skills in farm business planning. The number of incubator farms is increasing nationally. A sub-sample of existing incubator farm programs are described and compared side by side, providing evidence of the variation in program design. Extension may serve alternative roles, beyond the educator, in design and development of these programs.

**Joanna Massey Lelekacs**  
NC Cooperative Extension Coordinator for Local Foods Center for Environmental Farming Systems  
NC State University  
Raleigh, North Carolina  
[joanna\\_lelekacs@ncsu.edu](mailto:joanna_lelekacs@ncsu.edu)

**John O'Sullivan**  
Distinguished Professor of Sustainable Agriculture and Community Based Food Systems Center for Environmental Farming Systems  
NC A&T State University  
Greensboro, North Carolina  
[johno@ncat.edu](mailto:johno@ncat.edu)

**Mike Morris**  
Southwest Regional Office Director  
National Center for Appropriate Technology  
San Antonio, Texas  
[mikem@ncat.org](mailto:mikem@ncat.org)

**Nancy Creamer**  
Distinguished Professor of Sustainable Agriculture and Community Based Food Systems Center for Environmental Farming Systems  
NC State University  
Raleigh, North Carolina  
[nancy\\_creamer@ncsu.edu](mailto:nancy_creamer@ncsu.edu)

### Problem Statement

Simply put, America needs new farmers. However, support for new farmers is more complex than training up a new cohort. The average age of farmers is 57 and rising (USDA, 2007), and reasons for farmer and farmland loss are multifaceted. Farming continually grows more financially challenging, in part due to diminishing supplies of affordable inputs and competition with global exports (Association of Public and Land-grant Universities, 2010). Constraints vary, and reasons families do not stay in farming are often based around very personal, complex situations (Branan, 2011).

There is also increasing interest, from many non-farmers, in exploring farming as a new career. This is encouraging, but constraints deter aspiring farmers from pursuit of their dreams. These include access to land, access to capital, and farm business planning training and support (Curtis et al., 2010; Shute et al., 2011).

### Background

The terminology "incubator farm" is fairly new and still somewhat variable in meaning. An incubator farm is typically a place where people are given temporary, exclusive, and affordable access to small parcels of land and infrastructure, and often training, for the purpose of honing skills and launching farm businesses.

A 2012 database developed by New Entry Sustainable Farming Project at Tufts University catalogued 61 programs across North America that consider themselves land-based incubator farms (existing or forming), with three of those programs in North Carolina (NC). Today, we are aware of nine distinct programs in NC (Table 1).

**Table 1.**  
North Carolina Incubator Farms

<b>Incubator Farm</b>	<b>Location</b>	<b>Status</b>
Elma C. Lomax Incubator Farm	Cabarrus County	Existing
Hines Chapel Preserve Incubator Farm (working name)	Guilford County	Planning
Inter-faith Food Shuttle Incubator Farm	Wake County	Existing
LINC Urban Farm Initiative	New Hanover County	Planning
Maverick Farms Farm Incubator and Grower Program	Watauga County	Existing
Onslow County Incubator Farm	Onslow County	Existing
PLANT @ Breeze Farm Enterprise Incubator	Orange County	Existing
Town of Robbins Incubator Farm (working name)	Moore County	Planning
Transplanting Traditions Community Farm	Orange County	Existing

## Theory of Change

The theory of change behind incubator farm development is: By providing opportunities for new farmers to access land, develop the skill set and experience essential to run a successful farm, and help developing a business plan, these farmers have a better chance of securing capital, accessing their own land, and ultimately being successful in achieving their farm business goals.

This theory of change is based upon assumptions:

- The large number of consumers willing to pay premium prices for healthy, locally grown food has brought farming into the realm of possibility for a new cohort of farm entrepreneurs.
- Market opportunities around towns and cities elicit small farm market viability.
- Incubator farms provide lower-risk environments for beginning farmers to hone skills and establish markets before major financial investment in land and infrastructure.

## Comparison of Programs

To better understand the current design of incubator farm programs, we collected information on a sub-sample of programs from NC and around the U.S. (Tables 2 and 3). Programs selected represent outwardly

successful, longer-running incubator programs as a beginning guide to possible approaches to establishing future programs. Review of the programs included interviews with key staff members and data gathered from program websites. Data points included:

- Management structure,
- Infrastructure,
- Training,
- Markets, and
- Evaluation

Our findings:

- Considerable variation exists among incubator programs, in their financing, land tenure, staffing, facilities, and fee structures.
- Although common challenges exist for beginning farmers across the country, there is no "cookie cutter" approach to designing incubator farm programs.
- Program evaluation of many incubator farms, to date, has been minimal; therefore, documentation of successes is limited.
- Extension's involvement in programs varies across the U.S.
- Programs are engaging many community and regional partners in their development and implementation.

**Table 2.**

Business Structure, Land Tenure, Staffing, and Financing

<b>Incubator Farm / Location</b>	<b>Management Structure</b>	<b>Land Tenure</b>	<b>Farm Management / Staff</b>	<b>Financing / Revenue 2012-2013 data</b>
ALBA Salinas and Las Lomas, CA	501(c)3 Non-profit	Rural Development Center (RDC) – 89-acre organic farm. Farm Training and Research Center – 55-acre farm. Ownership: ALBA.	8 program and leadership staff	<ul style="list-style-type: none"> <li>• Grants/contracts.</li> <li>• Participant fees.</li> <li>• Sales through ALBA Organics.</li> </ul>
Elma C. Lomax Incubator	501(c)3 Non-profit including partnership with	Using 9 acres of 30.6 total acres. Ownership: Cabarrus	Part-time Farm Superintendent (county staff); two Cooperative	<ul style="list-style-type: none"> <li>• Participant fees.</li> <li>• Partial funding</li> </ul>

<p>Farm Cabarrus County, NC</p>	<p>Cabarrus County government and Cabarrus County Cooperative Extension</p>	<p>County.</p>	<p>Extension Agents provide training/technical assistance.</p>	<p>annually by Cabarrus County from deferred taxes paid on farmland coming out of present use tax valuation.</p> <ul style="list-style-type: none"> <li>• Partial funding from county annual budget.</li> <li>• Grant funds supported initial development.</li> </ul>
<p>Intervale Center Burlington, VT</p>	<p>501(c)3 Non-profit</p>	<p>~ 350 acres managed by Intervale Center.  Ownership: City of Burlington, Intervale Center, and private landowners.</p>	<p>15 employees (FT/PT)</p>	<ul style="list-style-type: none"> <li>• 50% programs, products, &amp; services.</li> <li>• 38% grants and restricted contributions.</li> <li>• 12% community support and business partners.</li> </ul>
<p>New Entry Sustainable Farming Project Lowell, MA</p>	<p>A partnership project between Tufts University and Community Teamwork, Inc. (501(c)3) with  - Advisory Board</p>	<p>Using ~10 acres on three sites.  Ownership: Privately held leased land.</p>	<p>8.5 FTE (FT/PT/Seasonal)</p>	<ul style="list-style-type: none"> <li>• 80% grants.</li> <li>• 10% programs.</li> <li>• 5% individual donor support.</li> <li>• 5% other.</li> </ul>
<p>PLANT@ Breeze Farm Enterprise Incubator Orange County, NC</p>	<p>Program of Orange County Cooperative Extension and Orange County Economic Development  - Planning Committee</p>	<p>Using 5 acres of 269 total acres (99 acres open) and 40 acres fenced and leased for grazing livestock.  Ownership: NC State University.</p>	<p>0.5 FTE Orange County Ag. Economic Development Coordinator; two Cooperative Extension staff support the farm as a portion of their duties.</p>	<ul style="list-style-type: none"> <li>• Participant fees.</li> <li>• Orange County annual budget - \$10K.</li> <li>• Grant funds to support</li> </ul>

	<p>- Friends of Breeze is a 501(c)3 that receives tax deductible contributions.</p>		<p>Part-time farmer liaison/farm manager.</p>	<p>infrastructure development.</p> <ul style="list-style-type: none"> <li>• Cooperative Extension coordinates training/technical assistance.</li> </ul>
--	---	--	---	---

**Table 3.**  
**Facilities and Participant Fees**

<p><b>Incubator Farm/ Location</b></p>	<p><b>Facilities / Infrastructure</b></p>	<p><b>Annual Participant Fees (not including training program fees) 2012-2013 data</b></p>
<p>ALBA Salinas and Las Lomas, CA</p>	<p>Tractors and various implements, resource center, classrooms, maintenance workshop, produce cooler, distribution facility.</p>	<ul style="list-style-type: none"> <li>• Land \$1,820/acre/year (market rate)</li> <li>• Irrigation (based on metered usage)</li> </ul>
<p>Elma C. Lomax Incubator Farm Cabarrus County, NC</p>	<p>Greenhouse, high tunnel, post-harvest shed, walk-in cooler, tractor, irrigation hookups, security and deer fencing, tools in secure shed, office, classroom, and restroom.</p>	<ul style="list-style-type: none"> <li>• Land \$240/year for 0.3 to 0.7 acres of land.</li> <li>• Tractor usage fee \$4/tractor hour.</li> </ul>
<p>Intervale Center Burlington, VT</p>	<p>Vegetable washing stations, coolers, tractors, hand tools, two greenhouses, multiple well water access points.</p>	<ul style="list-style-type: none"> <li>• Land \$156-195/acre</li> <li>• Intervale Farmers Equipment Corporation, owned by farmers, run like a cooperative.</li> <li>• Irrigation (based on metered usage)</li> </ul>
<p>New Entry</p>	<p>Hoop houses, storage sheds, irrigation, small equipment and</p>	<ul style="list-style-type: none"> <li>• Land \$665/acre</li> </ul>

<p>Sustainable Farming Project Lowell, MA</p>	<p>tools, produce wash stations, electric fencing, walk-behind tractors, walk-in cooler.</p>	<ul style="list-style-type: none"> <li>• Equipment \$150/season</li> <li>• Pesticides (organic) \$55/season</li> <li>• Cooler use \$175/season</li> <li>• Technical Assistance \$300/season</li> <li>• Custom tractor services available (variable cost/hourly)</li> </ul>
<p>PLANT@ Breeze Farm Enterprise Incubator Orange County, NC</p>	<p>BCS with rototiller and plow, mowers, small bush hog tractor (on loan), 40hp New Holland tractor with mower, front bucket and rototiller, hand tools, irrigation system, two hoop houses, walk-in cooler, post-harvest wash area.</p>	<ul style="list-style-type: none"> <li>• Land \$110/0.25 acre</li> </ul>

Many incubator farms are reporting strong interest and participation. In North Carolina, educational workshops at three Extension-associated incubator farms are eliciting annual interest from 25-50 participants. Generally, 10-15% of those participants go on to use incubator land to start their businesses. Interest in the programs increases each year, despite lack of focused recruitment activities, highlighting the participant need for the program offerings in these particular programs:

- Farm business planning education,
- Access to land and equipment, and
- Early market assessment.

Some incubator farms work across the value chain, i.e. a food systems approach to local food economic development. For example, several incubator farms have established associated marketing programs, providing market outlets for participants and, in some cases, generating program revenue. This value-chain approach to beginning farmer support may encourage:

- More robust economic activity across the value chain, as well as
- Farmland maintained in active production,

- Rural revitalization, and
- Increased healthy food access.

The number of incubator farms in North America is increasing (Winther, 2013). It is evident from the distinct programs across North Carolina and the country that many communities consider incubator farms an idea ripe for exploration for beginning farmer support.

## **Extension: Partnering to Address the Problem**

Throughout its history, Extension has:

- Focused on addressing issues facing rural America (Rasmussen, 1989), and
- Developed a complex model to help individuals develop skills necessary for success in agriculture and other fields (Boone, 1985).
- Since the problems faced in modern market-responsive agriculture are numerous and complicated, Extension's theory of change must adapt beyond the traditional educator framework (Dunning et al., 2012).
- Diverse interests and passionate individuals are often supporting incubator farm programs. Extension can serve a traditional role as educator and also has the opportunity to facilitate community partnerships as described by Patton (1986) and, specifically related to local food systems work, Raison (2010).

## **Conclusions**

We believe incubator farms are worthy of continued exploration and research, and have the potential to influence food system change locally. In order for programs to support this local change, we conclude:

- Diverse expertise is needed for planning and implementation of programs, e.g., business planning, marketing, production, customer satisfaction, supply chain, and others.
- Extension may be suited to provide support to incubator farm programs beyond the traditional educator framework. As others have recently suggested, this includes:
  - Facilitation (Raison, 2010)
  - "Leader-as-catalyst" (Morse, Brown, & Warning, 2006), and
  - "Leveraging the concerns of the communities in which they are embedded into lasting food system change" (Dunning et al., 2012).
- Based on the complexities of the "farmer shortage" problem, as well as unpredictable social and environmental change, it will be important to train incubator farm participants on adaptable business and profitability strategies.
- Standard evaluation metrics for programs and additional research on success rates of incubator farm participants relative to those following alternative paths to farming will benefit the movement.

## References

- Association of Public and Land-grant Universities. Experiment Station Committee on Organization and Policy—Science and Technology Committee. (2010). *A Science Roadmap for Food and Agriculture*. Retrieved from: <http://www.nera.umd.edu/escop/scienceroadmapnov172010.pdf>
- Boone, E. (1985). *Developing programs in adult education*. Prospect Heights, IL: Waveland Press.
- Branan, A. (editor). (2011). *Planning the future of your farm: A workbook supporting farm transfer decisions*. Chapel Hill, NC: Author.
- Curtis, J., et al. (2010). *From farm to fork: A guide to building North Carolina's sustainable local food economy* (p. 35). Raleigh, N.C: Center for Environmental Farming Systems.
- Dunning, R., Creamer, N., Lelekacs, J. M., O'Sullivan, J., Thraves, T., & Wymore, T. (2012). Educator and institutional entrepreneur: Cooperative Extension and the building of localized food systems. *Journal of Agriculture, Food Systems, and Community Development*. Advance online publication: <http://dx.doi.org/10.5304/jafscd.2012.031.008>
- Morse, R. S., Brown, P. W., & Warning, J. E. (2006). Catalytic leadership: Reconsidering the nature of Extension's leadership role. *Journal of Extension* [On-line], 44(2) Article 2FEA9. Available at: <http://www.joe.org/joe/2006april/a9.php>
- Patton, M. Q. (1986). Extension's partnership with the future. *Journal of Extension* [On-line], 24(3) Article 3FUT1. Available at: <http://www.joe.org/joe/1986fall/sfut1.php>
- Raison, B. (2010). Educators or facilitators? Clarifying Extension's role in the emerging local food systems movement. *Journal of Extension* [On-line], 48(3) Article 3COM1. Available at: <http://www.joe.org/joe/2010june/comm1.php>
- Rasmussen, W. D. (1989). *Taking the university to the people: Seventy-five years of Cooperative Extension*. Ames, IA: Iowa State University Press.
- Shute, L. L., Anderson, A., Bernhardt, H., Creech, T., Fleming, S. vT., Oakley, E., & Shute, B. (2011). *Building a future with farmers: Challenges faced by young, American farmers and a national strategy to help them succeed*. New York: National Young Farmers Coalition. Retrieved from: [http://www.youngfarmers.org/reports/Building\\_A\\_Future\\_With\\_Farmers.pdf](http://www.youngfarmers.org/reports/Building_A_Future_With_Farmers.pdf)
- U.S. Department of Agriculture (USDA). (2007). *2007 Census of Agriculture Fact Sheet: Farmers by Age*. Retrieved from: [http://www.agcensus.usda.gov/Publications/2007/Online\\_Highlights/Fact\\_Sheets/Demographics/farmer\\_age.pdf](http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Demographics/farmer_age.pdf)
- Winther, E. A. (2013, August). National incubator farm training initiative. Symposium conducted at the *Southeast Beginning Farmer Conference*. Columbia, SC.

*Copyright* © by Extension Journal, Inc. ISSN 1077-5315. Articles appearing in the Journal become the property of the Journal. Single copies of articles may be reproduced in electronic or print form for use in educational or training activities. Inclusion of articles in other publications, electronic sources, or systematic



large-scale distribution may be done only with prior electronic or written permission of the [Journal Editorial Office, \*joe-ed@joe.org\*](#).

If you have difficulties viewing or printing this page, please contact [JOE Technical Support](#)