Incubator Farms for North Carolina: a White Paper

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With the average age of farmers over 57 and rising, America needs a lot of new farmers and it needs them soon. Since it was funded in the 2008 Farm Bill, USDA's Beginning Farmer and Rancher Development Program (BFRDP) has funded over 140 diverse projects in 46 states. These projects are testing many approaches to recruiting and training a new generation of farmers. **Incubator farms** are one promising approach.

Background

Although the term "*incubator farm*" is fairly new and flexible in meaning, an incubator farm is typically a place where people are given temporary, exclusive, and affordable access to small parcels of land, for the purpose of learning farming skills and launching farm businesses. Some incubator farms offer little more than a patch of farmland, while others provide structured training, technical assistance, shared tools, storage and processing facilities, or other infrastructure. Incubator farms may be thought of as a type of *business incubator*, one that is designed to support the development of new farm businesses. (The term "farm incubator" is also common.)

Although similar in concept to *community gardens* where multiple individuals share a communal growing space, incubator farms are geared towards professional farmers instead of amateurs and home gardeners. Incubator farms are also related to internships, apprenticeships, and other opportunities to "learn by doing" that have been around for as long as agriculture. A major difference is that interns and apprentices ordinarily work for an existing farm business - they may be viewed as employees who have agreed to be paid at least partly in education (instead of money) for their services. By contrast, incubator farm participants are not employees and they have not been given a job. They are generally establishing an independent farm business and learning "agri-preneurial" skills. Their revenues generally are solely tied to their own efforts and their own farm enterprises, and they can't be hired or fired (unlike interns or apprentices).

Unlike an intern or apprentice, incubator participants have full responsibility for their plot of land including managing and working the land and typically financing production expenses. They typically make all the business and marketing decisions of an independent farm operation.

Interest in incubator farms is increasing in many parts of the country. With the rising interest in addressing challenges faced by beginning farmers, such as access to land and infrastructure, the number of incubator farms in North Carolina and nationally has been expanding.

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Intervale Center in Vermont is one of the oldest and best known incubator farms in North America, begun in 1986. A 2012 database developed by New Entry Sustainable Farming Project at Tufts University tracked 61 programs across North America that consider themselves land-based incubator farms (existing or forming). Currently in North Carolina, there are at least five existing incubator farms, and more than five in the planning stages. Most of the existing North Carolina incubator farm efforts have been the work of Non-Governmental Organizations (NGOs) and individual farmers until fairly recently.

Bringing New Farmers to the Table - Incubator Farm Project is a current major effort in North Carolina providing technical support for planning and implementation of new incubator farms. This project is a partnership of the Center for Environmental Farming Systems (CEFS - a partnership of the two land grant universities, NCSU and NCA&TSU, and the NC Department of Agriculture & Consumer Services), an NGO (Carolina Farm Stewardship Association), a national information service provider (National Center for Appropriate Technology), and a North Carolina attorney providing legal education services.

Table 1 lists existing and proposed incubator farm programs in North Carolina.

Table 1: North Carolina Incubator Farms

Incubator Farm	Location	Status
3 Eagles Sanctuary (working name)	Stanly County	Proposed
Elma C. Lomax Incubator Farm	Cabarrus County	Existing
Hines Chapel Preserve Incubator Farm (working name)	Guilford County	Proposed*
LINC Urban Farm Initiative	New Hanover County	Implementing Spring 2013*
Maverick Farms Farm Incubator and Grower Program (FIG)	Watauga County	Existing
Onslow County Incubator Farm	Onslow County	Existing *(as of 2/2013)**
PLANT @ Breeze Farm Enterprise Incubator	Orange County	Existing
Raft Swamp Farms	Hoke County	Existing
Town of Robbins Incubator Farm (working name)	Town of Robbins, Moore County	Proposed*

* *Notes programs partnered with the Bringing New Farmers to the Table - Incubator Farm Project.*

Why incubator farms?

Many people who want to go into farming today did not grow up on farms. Incubator farms make sense in a world where the skills and techniques of farming have become unfamiliar or even forgotten. High land prices can also pose a barrier to entry into farming. Therefore, incubator farms provide a lower-risk environment for learning basic skills, giving new farmers the opportunity to practice before taking the financial plunge of investing in land and equipment.

The increasing number of consumers willing to pay premium prices for healthy, locally-grown food has brought farming into the realm of possibility for many who would not previously have considered it. These local and niche market opportunities require new business skill sets, rather than just production expertise. Most incubator farms emphasize this business skill development as well as sustainable and organic growing techniques that enable participants to tap into these lucrative markets.

Incubator programs can provide an initial land-based training opportunity for an aspiring farmer, or provide a next step on the path to farming following an internship or apprenticeship. These programs can also serve people—such as refugees, immigrants, or urban people with day jobs—who would find it difficult or impossible to be interns or apprentices.

Who participates?

Incubator farm participants generally do not own farmland, but many want to start a farm business, and many are somewhat or entirely lacking in farming experience. Participants come from all backgrounds, and include career changers, retirees, landowners, unemployed or underemployed persons, stay-at-home mothers, college graduates, and working adults who want to transition into agriculture over time or for supplemental income.

Many incubator farms are started to support specific groups. Immigrants and refugees are target populations at the New Entry Sustainable Farming Project (Massachusetts), Big River Farms Program (Minnesota), and New American Sustainable Agriculture Program (Maine). ALBA (California) trains farm workers and (more recently) limited resource people in general. There is also growing interest in training veterans in the business of farming.

Though some challenges to new farmers, such as access to land, are inherently addressed by incubator farms, specific needs and challenges of beginning farmers can vary from community to community. Therefore it is important to include input from local aspiring and beginning farmers in the project planning and implementation phases of new incubator farms. Input that could guide program development includes: training needs, agricultural enterprises of interest (e.g. produce, livestock, dairy, grains, value-added), availability of other opportunities to gain farming experience, preferred production philosophy, and other local challenges to getting a new farm business started.

Community benefits

Incubator farms are started for a wide variety of reasons, including job creation; ensuring a future generation of food producers has the skills and knowledge to farm effectively; keeping farmland in active production; rural revitalization; food security; increased access to healthy food in urban and rural communities; and support for specific groups (veterans, ex-offenders, at-risk youth, etc.). Whatever the motivation, consumers benefit from access to very fresh produce. Additionally, increased local spending on locally grown food can encourage more robust economic activity in communities, resulting in additional farm jobs as well as job creation beyond the farm.

For example, several incubator farms (e.g. New Entry, ALBA, Intervale Center), as they have matured, have established food aggregation and distribution facilities, both to provide market opportunities for their

farmers and to generate revenue for the incubator farm. These facilities have created jobs in their communities.

Examples of other community benefits of incubator farms include:

- The Intervale Center, in addition to serving as an incubator farm, farmer training resource, and food hub, is located along a river and serves as a multi-functional community resource, providing recreational opportunities for the surrounding community.
- The New Entry Sustainable Farming Project, in addition to working with immigrant and refugee farmers, has worked with a local youth organization. The teens market produce from the farm at a local farmers' market, learning entrepreneurial skills.
- The programs at ALBA are designed to protect a sensitive watershed that drains directly into Monterrey Bay.
- The Elma C. Lomax Incubator Farm has a community garden that provides opportunities for neighbors to grow their own produce and connect with beginning farmers on site, in addition to generating revenues to support the farm.
- Some incubator farms partner with local food banks as a community service and outlet for surplus produce.

In all, community benefits vary from place to place but are often multi-dimensional.

Business structures and staffing

Incubator farms vary in their business structures. Some are stand-alone 501(c)(3) non-profit organizations while others are programs of existing non-profit organizations or universities. The amount of acreage used by incubator farms varies considerably as well.

Staff at incubator farms has varied responsibilities including recruiting, training, and leading workshops, writing and reviewing funding proposals, managing the farm budget, and managing relationships with existing farmers and other community stakeholders. Staff members often also have traditional farming responsibilities including maintaining and repairing infrastructure and equipment.

Paid staff time can be reduced by allocating responsibilities to participant farmers, giving them leadership opportunities and other experience. Another example - Intervale Center has developed an equipment cooperative, a creative strategy for their participants to own, manage and maintain shared farm equipment and infrastructure, thus ultimately minimizing staff oversight time.

Table 2, on the following page, illustrates some of the ways in which incubator farms can be structured, including their staff allowances.

How are programs funded?

Funding varies from program to program, but generally comes from people and organizations who value the particular services that the incubator is providing. Some programs have local funding, but all programs that were reviewed for this White Paper also have some "outside" funding, including substantial support from USDA. For example, ALBA and New Entry Sustainable Farming Project have both received funding from USDA's Outreach and Assistance for Socially Disadvantaged Farmers & Ranchers (OASDFR) and Beginning Farmer & Rancher Development (BFRDP) programs, as well as from USDA's Risk Management Agency.

Some programs are associated with colleges or universities, which may provide land, instructors, or other facilities. Some programs have their own revenue-generating activities. Until 2011, Intervale ran a composting business, and now runs a nursery and a food hub. In general, long-term funding is a challenge for most programs, which typically need not only land but also equipment, buildings, water, power, and professional staff in order to be successful.

Table 2: Business Structure and Staffing

Incubator Farm	Management Structure	Land Tenure	Farm Management / Staff	Financing
ALBA (Agriculture and Land-Based Training Program), Salinas and Las Lomas, CA	501(c)3 Non-profit	Rural Development Center (RDC) – 110-acre organic farm. Farm Training and Research Center – 195-acre farm (60 acres in cultivation). Ownership: ALBA.	8 program and leadership staff	Revenue reported on ALBA website includes grants and sales through ALBA Organics, wholesale produce distributor.
Elma C. Lomax Incubator Farm, Cabarrus County, NC	501(c)3 Non-profit	Using 8 acres of 30.6 total acres. Ownership: Cabarrus County.	Part-time Farm Superintendent (county staff); two Cooperative Extension Agents provide training/technical assistance.	Partially funded annually by Cabarrus County from deferred taxes paid on farmland coming out of present use tax valuation. Grant funds used for initial development. Program fees assessed to participants.
Intervale Center, Burlington, VT	501(c)3 Non-profit	~350 acres managed by Intervale Center. Ownership: City of Burlington, Intervale Center, and private landowners.	15 employees (FT/PT)	Revenue reported (2009) as 41% programs, products, & services, 46% grants, 12% community support, 1% other sources.
New Entry Sustainable Farming Project, Lowell, MA	A partnership project between Tufts University and Community Teamwork, Inc. (501(c)3) - Advisory Board	Using ~25-30 acres (as of 2011). Ownership: Privately held leased land.	9 employees (FT/PT/Seasonal)	Revenue reported (2013) as 80% grants, 10% programs, 5% individual donor support, 5% other.
Onslow County Incubator Farm, Onslow County, NC	A partnership Program of Onslow County Farmers' Market – a 501(c)3 and Onslow County Cooperative Extension	Using 10 acres Ownership: Privately held – 10 year lease.	1 program staff person, PT	Fee-based support. Grant support for start-up costs. Cooperative Extension employee coordinating training/technical assistance.
PLANT@Breeze Farm Enterprise Incubator, Orange County, NC	Program of Orange County Cooperative Extension and Orange County Economic Development - Planning Committee - Friends of Breeze is a 501(c)3 that receives tax deductible contributions.	Using 5 acres of 269 total acres (99 acres open). Ownership: NC State University.	Part-time Orange County Ag. Economic Development Coordinator; two Cooperative Extension staff support the farm as a portion of their duties. PT farmer liaison/farm manager.	Orange County supports the program with $10K/year. Additional grant funds are supporting infrastructure development over time. Program fees assessed to participants.
Raft Swamp Farms, Hoke County, NC	501(c)3 Non-profit (as of 2011)	~200 total acres (70 acres open). Ownership: Privately held.	Management and training by farm owners.	Some grant support. Financial information not fully available. Program fees assessed to participants.

Facilities and infrastructure

Incubator farms vary in the infrastructure they provide to participants, as well as fee structures. Some incubators, due to funding constraints, start up with minimal funding, boot-strapping to make do, not dissimilar to the way many farmers get started. Others have identified enough start-up funds to fully build out in their early years of operation.

Some programs charge participants one flat fee that covers land and infrastructure access, while others charge fees allocated among costs including land, equipment, irrigation and other infrastructure.

Table 3, on the following page, illustrates some of the facilities and infrastructure that incubator farms may provide.

Training, technical assistance, and mentoring

Most incubator farms provide some level of training and technical assistance, which may include business planning, marketing, production methods, and other topics. Experienced farmers, Cooperative Extension and other community partners are often brought in to support the training.

One example of an incubator farm introductory training program is the eight week training series at the PLANT @ Breeze Farm Enterprise Incubator in Orange County, North Carolina. This program covers topics of:

- Whole Farm Planning and Business Planning
- Transplant Production and Irrigation
- Introduction to Soils and Equipment for Small Farms
- Post-Harvest Handling, Food Safety, and Weed Control
- How to Direct Market Farm Products
- Soil Fertility, Cover Crops, Vegetable Insects, and Recordkeeping
- Capital Resources and Enterprise Development
- Vegetable Diseases
- Livestock for Small Farms

In addition to their formal training programs—or in place of them—some incubator farms have connections with experienced farmers in the community who agree to provide mentorship to the participants, give farm tours, or provide other kinds of support and encouragement. Some incubator farms partner with local CRAFT (Collaborative Regional Alliances for Farmer Training) networks that have already developed active learning communities where farmers learn from other farmers through field days, workshops and social events.

Experience and recruitment

Most programs in North Carolina recruit participants primarily through word of mouth, websites, on-line application forms, and partner organizations such as Carolina Farm Stewardship Association.

Recruitment processes and requirements vary. Most programs have an application process and some require an interview, reference check, and even a background check. Most require a farm business plan. Many do not require farming experience to access land, although it is often highly encouraged.

Markets

All of the incubator farms documented in this White Paper work with participants to sell into the local community via farmers' markets, restaurants, farm stands, and in some cases through aggregation and distribution facilities.

For example, New Entry Sustainable Farming Project's participants sell mainly through their World PEAS Food Hub and Marketing Collaborative which offers a Community Supported Agriculture (CSA) program, sells to institutional food services, restaurants, and farmers' markets, and (as noted above) includes a partnership with a local youth organization. Intervale Center manages the Intervale Food Hub, a 24-member (as of 2010) farmer collaborative. The Hub aggregates, markets, and distributes local produce, meats, eggs, and other specialty local food products. ALBA also has a marketing arm called ALBA Organics.

Table 3: Facilities and Infrastructure

Incubator Farm	Facilities / Infrastructure	Annual Participant Fees *(not including training program fees)*	Production Philosophy
ALBA (Agriculture and Land-Based Training Program), Salinas and Las Lomas, CA	Tractors and various implements, resource center, classrooms, maintenance workshop, produce cooler, distribution facility.	• Land $1300/ acre • Equipment – including tractors and implements • Irrigation (based on metered usage) (2008 data)	Rural Development Center teaches organic farming practices.
Elma C. Lomax Incubator Farm, Cabarrus County, NC	Greenhouse, high tunnel, post-harvest shed, walk-in cooler, tractor, irrigation hookups, security and deer fencing, tools in secure shed, office, classroom, and restroom.	• Land $240/year for 0.3 to 0.7 acres of land. (2012 data)	Incubator Farm is Certified Organic operation.
Intervale Center, Burlington, VT	Vegetable washing stations, coolers, tractors, hand tools, two greenhouses, multiple well water access points.	• Land $126-$164/acre • Intervale Farmers Equipment Corporation, owned by farmers, run like a cooperative. • Irrigation (based on metered usage) (2008 data)	All farms follow organic standards. Several farms are independently certified organic.
New Entry Sustainable Farming Project, Lowell, MA	Hoop houses, storage sheds, irrigation, small equipment and tools, produce wash stations, electric fencing, walk-behind tractors, walk-in cooler.	• Land $675/acre • Equipment $50 • Pesticides (organic) $50 • Cooler use $125 • Custom tractor services available (variable cost/hourly) (2012 data)	Follows the organic standards set by the National Organic Program (NOP), not certified.
Onslow County Incubator Farm, Onslow County, NC	Hoop house, storage shed, irrigation, walk-in cooler, tractor service.	• Training - $75 for five month long prerequisite training • Land $50 / ¼ acre • Tractor service, Irrigation, Walk-in Cooler…fees yet to be determined	Sustainable farming practices, Integrated Pest Management and organic principals taught
PLANT@ Breeze Farm Enterprise Incubator, Orange County, NC	BCS with rototiller and plow, mowers, small bush hog tractor (on loan), hand tools, irrigation system, two hoop houses, walk-in cooler, post-harvest wash area.	• Land $110/0.25 acre (2012 data)	Do not require organic practices but encourage them through trainings.
Raft Swamp Farms, Hoke County, NC	Greenhouse, hand tools, farm library, tractors, electricity, irrigation system.	• Land $400 for 3.5 acres • John Deere 790 Tractor fee per hour • BCS tractor fee per hour • Access to greenhouse space, electricity, water for irrigation; hand tools owned, individual instruction; farm library; and assistance with joining local markets/farm business planning included in land base fee. (2010 data)	"All natural farming" is practiced on site.

Transition strategies

Many incubator farms have a time limit for the use of the incubator land, although a few do not. Time limits at some incubators have been based on helping new farmers meet the three-year farm operation experience, production history and Schedule F documentation requirement of agricultural lenders (e.g. USDA Farm Service Agency, Farm Credit).

One criticism of farm incubator programs has been that they merely delay the inevitable "moment of truth" faced by new farmers—the purchase or leasing of expensive farmland. Therefore, some incubator farms, such as New Entry and Intervale Center, have very focused transition programs to assist their participants in finding land where they can farm when their tenure with the incubator comes to an end. Particularly in areas where land is expensive and in limited supply, it seems apparent that a transition strategy will be a key component of an incubator farm program with goals of ensuring a future generation of successful food producers. Most new farmers will need some guidance in securing land, whether through purchase or lease.

Incubator farm programs can develop partnerships with community organizations that could assist with transition, such as land trusts and Cooperative Extension. Incubator farms can also build and maintain relationships with local landowners and those who work with them, such as realtors and attorneys specializing in land transactions.

Summary

In summary, there are a growing number of incubator farms in North Carolina and nationally working on the "farmer shortage" problem and other goals. Though incubator farms are still very much an emerging and experimental approach, it is evident from the distinct programs across North Carolina and the country, that incubator farms are ripe for exploration through community-based visioning and conversation.

Based on this exploration of various incubator farms and comparison of their structure and function, our conclusions are:

- There is considerable variation among incubator programs, in their management structure, land tenure arrangement, training, staffing, facilities, fee structure, and production philosophy.
- Although there are some common challenges for beginning farmers across the country, there is no "cookie cutter" approach to creating a successful incubator program.
- The planning process should ideally be community-based. All of the incubator programs launched through our project Bringing New Farmers to the Table have begun with a facilitated discussion about what the community values and wants to accomplish, what kinds of agricultural businesses the community wants to nurture, and what resources are available to achieve these goals.
- Most incubator farm programs are challenged for time based on all the roles and responsibilities that come with running a farm and supporting the needs of their participants. As a result, program evaluation is minimal or lacking in many cases, making it difficult to fully document the successes of programs. Therefore, it is too early to say how successful these approaches will ultimately prove to be in launching successful new farm businesses, or whether one model will prove more successful than others.
- Very little, if any, research has been conducted on the effectiveness of incubator farms. Additional studies could help document evidence of successes and lessons learned from existing programs.

Our recommendations for other new North Carolina incubator farms are:

- Include local beginning farmers, from the earliest stages, in the planning and implementation of new incubator farms. The needs of beginning farmers vary from place to place, and including them

in the planning will help ensure a program that meets their specific needs. Evaluate the program for continued relevance over time.

- Involve a wide variety of community stakeholders in the planning process from the beginning. We believe that incubators have the best chance of succeeding if they are locally controlled and the community feels a strong sense of ownership and pride in them.
- Train new farmers on business sustainability and profitability strategies that can lead to success in these times of diminishing supplies of affordable inputs and continuous competition with global exports.
- Develop a clear plan for long-term funding. Funding from the people who value and benefit from the services the program is providing would be the ideal.
- Develop a clear transition strategy and provide some kind of support to graduating participants who are leaving the program and seeking access to farmland.

North Carolina is poised to become a national leader and proving ground for the concept of an "incubator farm." We believe this approach is worthy of continued exploration and support and has the potential to impact local economies above and beyond the creation of important jobs on the farm.

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