Rural Development Strategy for the Fort Bragg Region

Justification

Since well before the current recession, rural America has experienced a serious economic decline tied to fundamental shifts in the structure of the U.S. economy, particularly in the agriculture and manufacturing sectors. Over the past two decades, economic developers in both rural and metropolitan areas have focused on the so-called "new economy" sectors, seeking to attract high-paying knowledge-based jobs and to move away from commodities and products made by unskilled and semi-skilled workers. It is common to hear statements such as "...rural areas must offer natural amenities, good schools, access to transportation networks, and other infrastructure to attract high-wage professionals who work in "new economy" industries."[1] Such statements reflect recognition that the high levels of education required for even entry-level jobs in high-tech industries mean that they are a poor fit for most rural areas. As Day (1998) points out,

> "In many areas, strategies to promote inward investment and diversification have resulted in the introduction and encouragement of new, and often poorly interconnected, forms of employment, which may bear no relation to pre-existing activity, and which, therefore, demand the formation of new skills and attitudes. Often, rather than meeting the needs of local people directly, this has led to the in-migration of newcomers who have been more immediately adapted to the requirements of the new economic order – for example, by already having attitudes or experience deemed appropriate to the new forms of work." (p. 99)

Thus, in order to be sustainable and to improve the quality of life for the region's current residents, economic development strategies in rural regions such as the Fort Bragg area need to be diversified to include sectors that link to existing skills and resources. To be clear, attracting high-tech military-related businesses to the Fort Bragg region will certainly benefit the region's economy. However, this alone will be insufficient to ensure a sustainable improvement in the quality of life for this rural region's current residents. To be sustainable, development must simultaneously promote economic profitability, environmental stewardship, and improved quality of life for most of the people who live in an area. The resilience of the region's economic, social, and environmental systems will be enhanced by finding synergies between agriculture- and technology-based economic development strategies.

Sustainable agriculture tied to an expanded local food system shows great promise as an engine for rural development. Demand for sustainably and locally grown foods has been growing nationwide, despite the economic downturn. Research commissioned by the Appalachian Sustainable Agriculture Project found that less than 1% of all food consumed in western North Carolina is locally grown;[2] this is likely true of the Fort Bragg region as well. If that figure could be raised so that 10% of the food purchased in the Fort Bragg region came from

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[1] Gale, F., and McGranahan, D., 2001. Nonmetro areas fall behind in the "new economy". Rural America, v. 16, no. 1, p. 44-52. Quote is from p. 45.

[2] Kirby, L. D., Jackson, C., and Perrett, A., 2007. Growing Local: Expanding the Western North Carolina Food and Farm Economy. SSARE.

local sources, an additional $36 million each year would be retained within the region's economy.[3] This equates to about $1 per person per day spent on locally-produced food. The agricultural capacity exists to readily supply 10% of the region's food needs; it has been estimated that North Carolina as a whole could supply as much as 64.4% of its food needs.[4] This goal is well in line with what is being considered elsewhere in the United States; in March of 2009, the Illinois Local and Organic Food and Farm Task Force concluded that it is feasible for 20% of Illinois food expenditures to be grown, processed and distributed in-state by 2020.

The characteristic that distinguishes sustainable agriculture from past practices is that it involves long-term strategic planning that emphasizes maintaining options for the future while acknowledging the need for economic returns in the near-term. This strategic planning must include more than simply agricultural production. Many of the factors that determine the economic viability of farms lie outside the control of farmers. For example, food processors and distributors play a critical role in determining the possible pathways that food products travel. Therefore, a narrow focus on the agricultural sector is inadequate; instead, it is necessary to consider the regional food system as a whole. Unfortunately, the existing food system does not provide processing and distribution infrastructure needed to effectively connect local food producers to local consumers, which limits small-scale farmers' ability to make a reasonable profit from food production. On average, the farmer's share is $.20 of every dollar spent on food. The rest of it goes for off farm costs that include marketing, processing, wholesaling, distribution and retailing. Some of these, such as marketing, wholesaling, distribution and retailing, add no value, but soak-up a considerable percentage of the food dollar.[5] Development of appropriate local processing and distribution infrastructure could increase the farmers' share of the food dollar, and thus could provide significant economic benefits to the region as well as jobs for local residents that are closely tied to the region's culture and identity.

Taking steps to enhance the local food system will have more than simply an economic impact on the region. Working lands along with undeveloped natural areas form the region's green infrastructure. Green infrastructure is defined as "an interconnected network of natural lands and other open spaces that conserves natural ecosystem values and functions, sustains clean air and water, and provides a wide array of benefits to people and wildlife ...in short, our natural life-support system."[6] An approach to land use planning that emphasizes conservation of green infrastructure on a regional scale can pay dividends in the form of reduced costs for public services.

Over the past decade, the number of farms and the amount of land being farmed has decreased across most of the Fort Bragg region and in the state as a whole, while the estimated market value of the land has risen. Farmers have been unable to make sufficient profit from

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[3] This figure assumes a population for the 11-county region of around 1 million (CRGP) and an annual food expenditure per person of $4,010 (calculated by CEFS based on 2008 estimates from the USDA Agricultural Marketing Service); roughly half of that is for groceries and half for food consumed away from home.

[4] Timmons, D., Wang, Q., and Lass, D., 2008. Local foods: estimating capacity. Journal of Extension, v. 46, no. 5, article 5FEA7.

[5] http://localfoodsystems.org/economics-local-food-system

[6] Benedict, M. A., and McMahon, E. T. (2006) Green Infrastructure: Linking Landscapes and Communities. Island Press, p. 1.

farming to permit them to keep their land in production. The response to this in other parts of the country has been to increase efficiency and yield through consolidation of small farms into large-scale commodity farms. Such consolidation has been less common in the southeastern United States. Due to both historical patterns and physiographic characteristics, the average farm size in North Carolina, as in most of the southeastern United States, is very small compared to midwestern and western states.[7] Family farms account for 97% of all farms in North Carolina, with about 85% of farms classified as small family farms.[8] Farmland in North Carolina has been lost to development at a rapid rate; the state lost more farms in 2006 than any other state in the nation (Marlow 2007).

This rapid conversion of working lands to development poses a serious threat to the missions of North Carolina's military bases. Residential and commercial development patterns surrounding Fort Bragg and Marine Corps installations are largely incompatible with the installations' missions. Urban development near the perimeter of active military bases impacts operational effectiveness, training, and readiness missions. Conversely, military activities pose a threat to public safety and livability in nearby developed areas, potentially exposing residents to artillery fire, aircraft noise, dust, and accidents.[9] In addition to limits imposed on military activities by residential and commercial development of land near the installations, the loss of biodiversity within a region due to unplanned development of natural lands can adversely impact the military mission; an increase in the number of threatened and endangered species can profoundly affect any military installation that contains such species.[10] The Military is an enormous contributor to the region's economy. Erosion of the military bases' ability to fulfill their missions due to encroachment could lead to base closures, which would be a massive economic loss for the region. In order to preempt potential encroachment, Fort Bragg has been working with land and environmental conservation organizations to conserve natural lands, forests, and farmland. Although the Joint Land Use Study (JLUS) conducted by the Regional Land Use Advisory Commission (RLUAC) has had a positive impact, much work is needed to implement the JLUS recommendations and thus protect Fort Bragg's ability to achieve its mission.

Finally, there is increasing recognition that the rising vulnerability of the national food system has homeland security ramifications that are of concern to the nation's military planners. According to the U.S. Department of Homeland Security, "U.S. agriculture and food systems are vulnerable to disease, pest, or poisonous agents that occur naturally, are unintentionally introduced, or are intentionally delivered by acts of terrorism."[11] In the same way that a distributed electricity generating system with many local sources is less vulnerable to large-scale failure than a centralized electricity generating system, a distributed food system, with production and processing occurring in many local facilities is less vulnerable to large-scale disruption than the current, more centralized food system.

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[7] See the map at http://www.nass.usda.gov/Charts_and_Maps/Farms_and_Land_in_Farms/fncht6.asp
[8] http://www.agr.state.nc.us/stats/census/highlights.htm
[9] See http://www.rluac.com
[10] Lachman, B. E., Wong, A., and Resetar, S. A., 2007. The Thin Green Line: An Assessment of DoD's Readiness and Environmental Protection Initiative to Buffer Installation Encroachment. RAND Corporation, Arlington VA.
[11] http://www.dhs.gov/xabout/laws/gc_1217449547663.shtm

Vulnerability to naturally occurring events is another concern for those studying food security. Currently, almost half of the fruit and vegetables produced in the United States are grown in California. Most of this food production occurs in California's Central Valley, an arid area, and is totally reliant on irrigation. California, along with the rest of the Southwest, is experiencing drought conditions. Scientists studying past weather conditions suggest that these dry conditions are more typical for the region than the relatively wet conditions the region has experienced over the past couple of decades, and the drought is expected to continue for the foreseeable future. This pattern is expected to be exacerbated by global climate change. The decreasing supply of fresh water available for agriculture, drinking water, and maintenance of endangered species is certain to have major negative implications for the future productivity of California's agricultural powerhouse. Coupled with the high monetary and political costs of fuel, it is likely that the price for California-derived food will increase significantly in the coming years. An increase in the food production capacity of the Fort Bragg region will be needed in order to maintain an adequate supply of affordable food for the region.

Rural Development Strategy

Our Rural Development Strategy has been designed to accomplish a diverse set of objectives, while taking into account the current economic context and other constraints. The starting point for our planning has been the need to safeguard the mission of Fort Bragg and the region's vital "green infrastructure" by preserving undeveloped land (farms, working forests, and natural lands) in critical areas identified by the Joint Land Use Study and Sustainable Sandhill's Suitability Mapping program. In order for land owners to choose to keep working lands in production, it must be possible for them to make a reasonable profit from their efforts. In addition, in order for these lands to continue being productive over the long term, and for the undeveloped lands to continue to provide valuable ecosystem services, it is necessary for landowners to adopt practices that are not harmful to the environment and that do not degrade the soil. In light of the aging of farmers in North Carolina, there is an urgent need to recruit young people to farming if we are to maintain agricultural production over the long term. These three requirements - that farming be profitable, environmentally sensitive, and attract a new generation of farmers - are essential for long term sustainability of agriculture in this and other rural regions.

Among the goals for economic development in this region is an increased quality of life for the region's residents. To contribute towards this objective, our rural development strategy must be equitable, providing benefits to a broad range of landowners, including those with limited resources. Different groups of landowners will have different needs and capacities, and so a "one size fits all" program would be insufficient. Instead, our strategy includes a diversity of market types and support services, so that landowners have access to resources and markets appropriate to their circumstances.

Like all business enterprises, a local food system needs to be adaptive so that it can respond to dynamic and rapidly changing economic and socio-cultural conditions. Adaptability is also needed to effectively cope with the constant stream of new information about existing activities and resources, and the potential impacts of one organization's actions on others. Therefore, an important element of our strategy is an organizational structure emphasizing networks over hierarchies through the forging of strong working relationships and

communication channels among governmental agencies, non-profit organizations, and businesses within the region.

Very different management practices and incentives are required for farms, working forests, and natural lands (Figure 1). We therefore have developed separate strategies for each type of land, keeping in mind that individual landowners in the region commonly own and manage some mix of these three types of undeveloped land.

Farmland Preservation

Many of the factors that determine the economic viability of farms lie outside farmers' control. For example, food processors and distributors play a critical role in determining the possible pathways that food products travel, and in the cost added by each step in the pathway. Therefore, a narrow focus on the agricultural sector is inadequate to achieve our diverse goals; instead, it is necessary for us to consider the regional food system as a whole.

A food system includes all of the people and businesses that play a role in producing food and getting it to consumers: producers (and their suppliers), processing facilities, distribution and transport services, and markets (Figure 2). Each component in the food system must function effectively in order for any one component to be successful and for the operation of the whole system to be sustainable. Therefore, our strategy includes capacity building projects aimed at each component. These project elements include:

- Farmer Recruitment and Training: A critical challenge for the future of agriculture in both the region and the state is the aging of the farmer population. Fewer young people are choosing to pursue farming, and so there are not enough young farmers to take over from those who are nearing retirement. For our local food system to be sustainable over the long term, we need to recruit and train new farmers. Therefore, we are working to develop a recruitment/training and mentorship program. Needed training will be provided by the Cooperative Extension Service and local colleges. A notable partner in this effort is the Sandhills Family Heritage Association, which has established a mentoring/apprenticeship program aimed at high school students in six of the eleven counties in the Fort Bragg region.
- Food Processing Facilities and Supporting Services: Food processing and associated services (such as transportation and short-term storage) are essential to operation of a regional food system. Different products require different types of processing, and large farming operations need correspondingly higher-volume processing facilities than are economical for use by small-scale farms. Therefore, we plan to establish two different types of processing facilities. First, we will make use of existing processing capacity within the region to handle large-scale orders, products with longer shelf-lives, and products that require more extensive processing and packaging. For example, George's Foods in Pembroke, NC can process 1,500-2,000 lbs of product per hour, and has the appropriate equipment to peel, cut, puree, package, freeze, and store a wide variety of fruits and vegetables. In order to serve smaller-scale farms, we plan to establish facilities that can consolidate produce from multiple small farms and minimally process (clean, trim, package) fruits and vegetables with shorter shelf lives. Transportation and storage capacity will be established to support both types of facilities. The smaller facilities and the supporting services will be managed by project staff, who will also serve as a broker between smaller farms and institutional buyers.

- Direct Marketing: Growing fruits and vegetables for direct-to-consumer markets such as farmers markets and CSAs requires only small amounts of land and very limited processing of products. In addition, the farmers get a much higher price per unit when selling in such venues. Thus, direct markets are ideal for small-scale, new, and lower-capacity farms. We will establish a CSA serving the people who live and work at Fort Bragg, and will support expansion of farmers markets in the region.
- Contracts with Institutional Buyers: Direct marketing can supply only a very small amount of the food consumed locally, and can support only a small number of farmers. In order to increase the proportion of local food consumed in the region, it is necessary to link local producers to institutional buyers in the region. Through "Feed the Forces," we are working with Foster-Caviness and Fort Bragg to set up contracts and protocols for purchasing locally-grown food for the base.