Market Channel Evaluation: Produce

Market channel analysis is used to compare the costs and returns to the sale of products through different market outlets. By comparing these costs and returns and the relative risks associated with each channel, growers can make informed decisions about primary and secondary channels for their products.

This report was created to provide insights into the experiences of small and mid-scale produce growers that had recently entered, or were considering entering, the market channels of NCGT grocery and food service partners in 2013 and 2014. The reporting is part of the evaluation phase of action research[1] used by the NCGT project, with findings used to inform continued project activities related to NCGT goals and objectives.

NC Growing Together is a project supported by the Agriculture and Food Research Initiative competitive grant no. 2013-68004-20363 of the USDA National Institute of Food and Agriculture.

United States Department of Agriculture National Institute of Food and Agriculture

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Introduction

When the NCGT project began in 2013, a selection of small-to-mid-sized growers representing "local" producers, and grocery and wholesale business personnel representing "mainstream" buyers, were interviewed to understand local growers' perceptions of selling to mainstream buyers and these buyers' perceptions of sourcing from local growers. As defined by the NCGT project "local" producers are NC small and mid-sized farmers with annual gross receipts of <$1 million (this accords with the USDA Economic Research Service's Farm Typology of small and mid-sized family farms[2]). "Mainstream" buyers are large-scale conventional food system entities such as regional and national supermarket chains, wholesale/distributors, and food service providers. Growers were also asked to share their thoughts on selling through various market channels (direct to consumer, retail, wholesale) and how they chose between market channels, and to share post-harvest costs and expected prices so that generalizations could be made about the relative profitability of various market channels.

[1] Action Research is a reflective process of progressive problem solving that involves iterative cycles of planning, action, and evaluation to build knowledge and create change.

[2] Small to mid-sized growers defined as "Farm Occupation Farms" and "Midsize family farms" with a maximum annual gross cash farm income of less than $1 million . Source: *Updating the ERS Farm Typology, April 2013,* http://www.ers.usda.gov/media/1070862/eib110_summary.pdf)

This descriptive research was conducted to gain a better understanding of the following: the mix of market channels used by the types of producers targeted by the NC Growing Together project; producers potential to sell (and their actual experience selling) into the retail grocery and wholesale-distributor market channels of the project partners; and the buyers perception of smaller-sized producers as likely vendors. The study was also undertaken to evaluate baseline conditions on the level of difficulty of small and mid-sized farmers to sell into "mainstream" market channels, ascertain what the project could provide to make these channels easier to access, and to connect with producers who could be tracked over the course of the project.

Data & Method

Information was collected via in-person semi-structured interviews from four small to mid-scale produce farming operations, two regional produce wholesaler-distributors, four grocery retail store managers or produce managers, a corporate level grocery produce category manager, and a regional grocery produce merchandizer. All producers manage diversified farms growing a variety of produce items, and all have experience selling through wholesale and direct-to-consumer market channels. One sells a portion of the farm product through a food hub, and two have sold directly to a retail grocery. Figure 1 indicates the farms' primary and secondary market channels.

Figure 1. Primary and Secondary Market Channels of Interviewed Farms

	Primary Market Channel	Secondary Market Channels
Farm 1	Wholesale (80%)	CSA, food hub, restaurants
Farm 2	Farm Stand (50%)	Wholesale
Farm 3	Wholesale (60%)	Grocery retail
Farm 4	Wholesale (50%)	Farm stand, grocery retail, farmer's market

The produce wholesaler-distributor and retail store/produce managers and other retail grocery personnel all have experience (prior to the project or during the first year of the project) purchasing or attempting to purchase produce from small to mid-scale diversified farms.

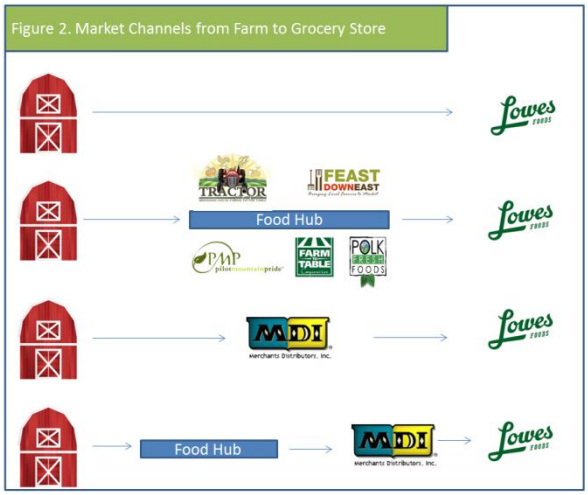
Summary of Findings

Routes from Farm to Mainstream Market

The NCGT project engages with a number of business entities so that the work can concretely explore the possible connections that can be made between local producers and mainstream markets. Two basic models are used to scope the project to a size that can be managed over the life of the grant: a "grocery model" that entails connecting producers with a grocery store chain and its store shoppers, and a "military model" that entails connecting producers with a military base and its dining services customers. The possible market channel routes from producers to consumer for each of the models is illustrated in Figures 2 and 3.

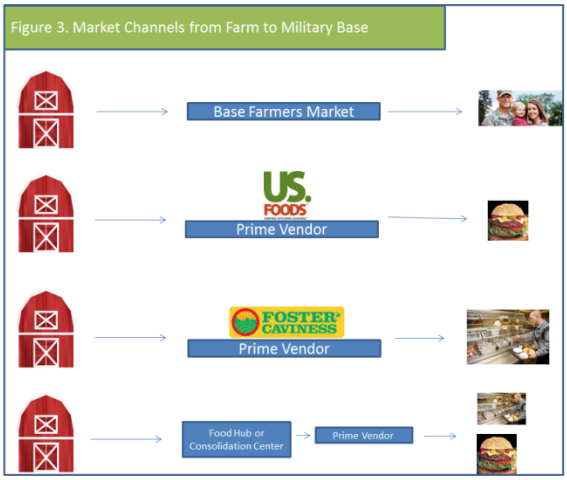
In Figures 2 and 3 the mainstream market business entities are represented by their logos. The end consumers in each are Lowes Foods Stores shopper for the grocery model, and those dining in Fort Bragg dining halls and base restaurants for the military model.

Figure 2. Market Channels from Farm to Grocery Store



For the grocery model, farmer products can reach Lowes store shelves through four possible routes: (1) Farmer sells via direct-store-delivery (DSD), delivering to individual stores (2) Farmer sells product to a food hub which then sells via DSD (3) Farmer sells directly to the grocery store wholesaler/distributor which delivers to stores (4) Farmer sells to a food hub which then sells to the wholesaler/distributor which then delivers to stores.

Figure 3. Market Channels from Farm to Military Base



For the military model, farmer products can reach the base through four possible routes: (1) Farmers sell directly to base residents and other military personnel at an on-base farmers market (2) Farmers sell product to US Foods, the prime vendor for the Morale, Welfare, and Recreation (MWR) facilities on base (e.g., restaurants, catered events) (3) Farmers sell product to Foster Caviness, the prime vendor for the soldier dining halls (4) Farmers sell product to a food hub which then sells product to a prime vendor, which then sells to the base MWR facilities or dining halls.

Desire for Diversification

As noted above, two of the four farms interviewed were selling into the grocery store market channel, with one selling direct and another selling via a food hub.

All farms desire more than one market channel, with primary and secondary channels selected on the basis of premium returns as well as risk-mitigation. Farmers are willing to sell into market channels in which they only break even, or even lose money once their own labor is accounted for, in order to prevent too much reliance on other channels. For example, one farmer sells nearly all farm product through several wholesalers, but sells a small percentage of

farm sales to a food hub. Sales via the hub are breakeven at best, but the farmer supplies the hub as a diversification strategy.

In another example of diversification, one farmer sells most product on-farm and through wholesalers, but also maintains a stand at a summer farmers market for the exposure the stand offers to his on-farm stand (which has a wider selection of products). Such diversification strategies work for farms that are large and/or close to a metro area because this location provides more marketing options.

Location, Diversification, and Risk

Larger farms and farms located near metropolitan areas are able to diversify market channels, and thus obtain higher profits and mitigate risk, to a greater degree than smaller farms and farms located in rural areas. Small to mid-sized farms in non-metropolitan areas face the greatest business risk and are least able to select among various profitable market channels. The larger the farm and/or the closer to a metropolitan area, the better the ability of the farm to use diversification as a farm management strategy.

Producer Perceptions of Market Channels

All farms have in the past or currently rely to some degree on selling through traditional wholesaler-distributors. Two of the four have had very negative experiences with wholesalers and would prefer to avoid selling to wholesalers due to: (1) delays in payment (2) uncertainty as to whether or not the product will be rejected when delivered to the warehouse.

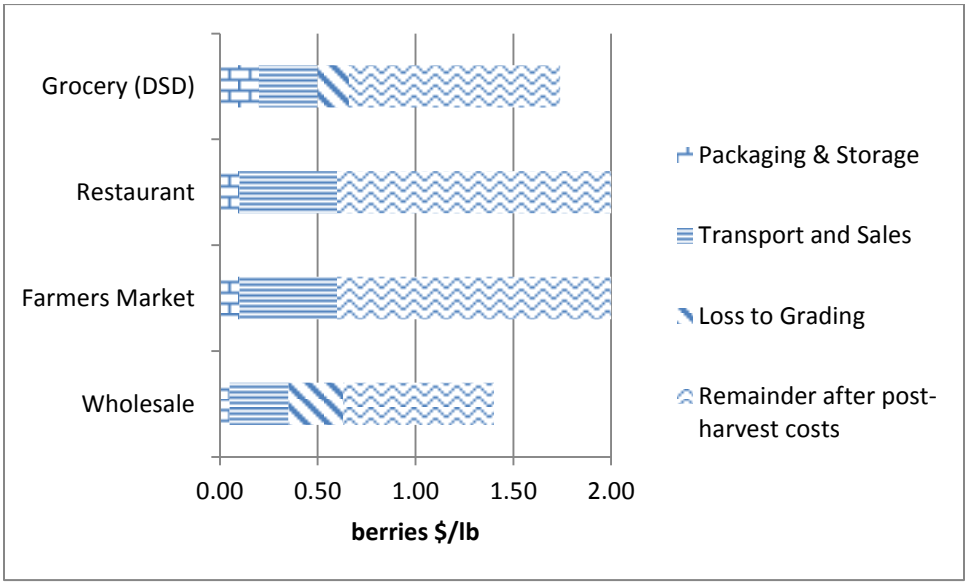
Two of the four farms began selling direct to partner grocery stores (direct-store-delivery, or DSD) during the first year of the project. From the producer's standpoint, the following benefits were noted in comparing DSD retail sales to a wholesale-distributor channel: (1) higher price (2) greater certainty of sale (3) faster payment (4) more leeway in sizing resulting in less field loss (5) ability to hear feedback from customers (via store/produce managers) on quality.

Retail grocery prices are lower than direct-to-consumer sales, but require less marketing labor on the part of the farmer. The disadvantages of DSD noted from the standpoint of producers were: (1) limited amounts demanded per single store (2) pricing was dependent on comparison to a wholesale price (and thus could not vary based on attributes—e.g., place-based, flavor-- of the local product).

Market Channel Cost Comparison for Farmers

Figure 3 illustrates the relative differences in post-harvest costs and sale prices for different market channels.[3] Note that the "remainder" indicates the sale price for that market channel less the post-production marketing and sales cost associated with that channel. Note that the highest market price for the product illustrated, berries, is garnered at farmers markets and restaurants, but these channels also require the greatest transport and sales costs in the form of vehicle transportation and labor. The Wholesale and Grocery market channels require less cost for Transport and Sales, but include a grading loss (due to wholesale and grocery standards on size and appearance). Note that these results will differ depending on the product, its associated sale prices and sales and marketing costs, and the particular situation of the producer.

Figure 3. Example of Relative Costs/Returns to Various Market Channels



Example of Relative Costs/Returns to Market Channels, berries $/lb	Sale Price	Packaging & Storage	Transport and Sales	Loss to Grading	Remainder = returns less post-harvest costs
Wholesale	1.40	0.05	0.30	0.28	0.77
Farmers Market	2.00	0.10	0.50	0.00	1.40
Restaurant	2.00	0.10	0.50	0.00	1.40
Grocery (DSD)	1.74	0.20	0.30	0.16	1.08

[3] For more information and Extension programming materials on market channel analysis, see *Guide to Marketing Channel Selection: How to Sell Through Wholesale & Direct Marketing Channels* http://ccetompkins.org/sites/all/files/63/guide-to-marketing-channels.pdf

Again, keep in mind that the "returns less post-harvest costs," above, is what remains to cover production costs.

Buyer Perceptions of Local

All grocery personnel interviewed noted that their customers will not pay more for local, but will purchase local if a local and non-local item are priced the same. Simply differentiating the product with a "local" designation is not seen as being a means to command a higher sales price for a "local" product. This view of the relative value of local was mirrored in store managers own views of buying local products from local producers. As one noted: "I'm more than happy to buy local if the price is the same and they can get it here."

Grocery store managers suggest that local farmers package their products (e.g., tray, clamshell) with UPC codes rather than delivering loose product with PLU Codes. This allows store managers to purchase this differentiated product at a different price that than of commodity product from the wholesale warehouse. PLU Codes on produce vary only by type of product (e.g., broccoli crowns, broccoli, peaches) and does not differ by origin.

Overall, grocers interviewed estimated that "shrink" (loss) for DSD compared to warehouse-sourced items was equal. However, the corporate produce category manager noted select instances of poor-quality product received by managers through DSD, which led to more shrink compared to a warehouse product.

From the grocery wholesaler/distributors viewpoint, the distributor is open to purchasing produce at commodity pricing if delivered and meeting quality specs. "Local" can not be segregated into separate slots because the wholesalers believe the cost is too high to dedicate an entire slot and run parallel product lines through the inventory system.

Addition of Local Vendors to Grocery and Military Models

Grocery Model: The grocery wholesaler/distributor signed up four new small-mid-scale produce vendors ($< 1 million in sales) in 2013 and is purchasing from two new food hubs (in addition to one that signed on as a vendor in 2012). The wholesaler/distributor works with the grocery category manager to increase the number and variety of local vendors. Twenty-nine DSD vendors were added in 2013 with nearly all of these qualifying as small and mid-scale farms.

Store produce managers are evaluated on the average margin (sale price – purchase price) that they generate. An unintended consequence of this strategy is that store managers are unable to "do deals" with farmer-vendors who may have large amounts of a product and are willing to sell this product more cheaply, with the intention that more units are sold. This strategy

conflicts both with the margin incentive, and with weekly advertisements across stores that hold stores to offering particular advertised prices.

Military Model: The wholesaler/distributor selling into the dining halls sources nearly all product through its membership via a wholesale coop based in California. To this researchers knowledge (based on conversation with the wholesale/distributor), the wholesaler did not add any "local" vendors ($<1 million in sales) in 2013. One restriction on adding "local" vendors has been the requirement that vendors be GAPs certified. Early in 2013 the distributor attempted to source local non-GAP certified product and keep these items segregated within the warehouse, but the cost was deemed prohibitive and this practice was discontinued by fall of 2013.

The wholesaler/distributor selling into the base MWR facilities, to this researchers knowledge (based on conversation with the wholesale/distributor), did not add at any "local" vendors ($<1 million in sales) in 2013. One restriction on adding "local" vendors has been the requirement that vendors be GAPs certified.

A major impediment to incorporating small and mid-sized vendors into the military supply chain is that the prime vendors (those with supply contracts with the military) are not incentivized to source products from local farmers, and without incentives the differential costs (e.g., transaction costs for dealing with more numerous smaller vendors) only increase the vendors cost without compensation from the Department of Defense contract. Additionally, those who do the product ordering on base are also not currently incentivized to seek out use of local products. Even if they were, there is currently no information in the prime vendors catalogs (used by base personnel for ordering) that indicates which products are "local" vs "non-local" based on geographic source of production. Therefore, procurement officers on base could not select local even if they were incentivized.

Activities Undertaken in 2014-2015

Based on findings from Year 1, NCGT staff undertook the following in Year 2:

1. To address the high costs of aggregation and distribution, research was conducted to investigate alternate aggregation and distribution options:

a. Farm delivery => food hub delivery => stores

b. Farm delivery => food hub delivery => warehouse crossdock and delivery => stores

c. Farm delivery => consolidation/cooling center => warehouse-distributor pickup => stores or base

The presentations given by the research teams on these topics at the April 22 NCGT Research Symposium are housed on the NCGT website: ncgrowingtogether.org/Research/. See these studies: *Scaling a "Local to Local" Solution: Supply Chain Analysis for Delivering Local Fresh Produce to Local Grocery Stores* (http://www.cefs.ncsu.edu/ncgt/local-to-local.pdf) and *A Crossdock Consolidation Center for Sourcing Local Foods* http://prezi.com/nnqqfkvygja1/cefs-presentation/?utm_campaign=share&utm_medium=copy

2. The assumptions that "local" product would garner a higher price from grocery consumers or differential demand from the military base were found to be incorrect. Thus the issue at hand is that the price paid for the product is a "commodity" price (referred to by wholesalers as the "market price") and the cost to obtain the product is higher both due to the smaller scale of the operations (higher per unit production cost and aggregation and distribution costs), and higher transaction costs related to the time and costs for setting up additional vendors. As a result of these findings, growers are being advised to differentiate their products from commodity alternatives by using packaging (e.g., a clamshell with UPC rather than loose product). An MBA-student team at the Supply Chain Resource Cooperative at NC State also conducted a feasibility study of a value-added frozen bagged produce operation for food hubs. For the findings of the study, which calculated costs/returns for two North Carolina food hubs, and to access spreadsheets that can be used for analysis in different contexts, see: the NCGT website: ncgrowingtogether.org/Research/: *Supply Chain Analysis for Grower-Based Distributors: Feasibility of Bagged Frozen Produce for Sale in Grocery Chain Retailers.*

While the per unit cost of local product is very often greater than that of non-local product, research conducted in conjunction with NCGT by an MBA-team at the Consumer Innovation Consortium at NC State found that stores that stocked source-identified local meat are judged by consumers to have a more e staff, be cleaner, and have a better décor. Further, high income shoppers spend 8% more at checkout if the store carries source-identified local meats. Thus, retailers that carry local food items are likely to increase purchasing by their high income shoppers, and strengthen consumer loyalty among all shoppers. For more details on this study see ncgrowingtogether.org/Research/: *The Good Food Schema: Effects of Compelling Messaging for Locally Sourced Meat Products in Grocery Store Settings*

In the summer of 2014 another means to differentiate local product was piloted in 35 of Lowes 98 stores. Five food hubs packed and delivered Consumer Supported Agriculture (CSA) – type boxes in their geographic footprint. NCGT conducted an evaluation of the program and provided this to Lowes Foods. Based on this and sales reports, Lowes is in the process of tweaking the program for the 2015 season.

3. In addition to research efforts, the project is also directing more resources to the support of upgrading producer products and lowering transaction costs: increasing value of the product with farmers trainings/information dissemination on improving post-harvest handling to

improve quality and lengthen shelf life, and working with food hubs and through extension Farm schools and other programs to amplify this work to reach more producers. In 2014 NCGT generated a UPC/PLU 'How-To" fact sheet for growers, *Tips for Produce Growers Marketing Fresh Produce to Retail Grocers: Understanding PLU and UPC Codes*, http://content.ces.ncsu.edu/tips-for-produce-growers-marketing-fresh-produce-to-retail-grocers-understanding-plu-and-upc-codes.pdf; a product specification manual to provide information on product pack sizes and quality for NCGT-partner retailers and wholesalers, Wholesale and Retail Product Specifications: Guidance and Best Practices for Fresh Produce, http://www.cefs.ncsu.edu/ncgt/wholesale-and-retail-product-specs-2.pdf; and a visual walkthrough to inform producers on the procedures for successful delivery of product to a regional distribution center, *Process Walkthrough at a Regional Produce Distribution Center,* http://www.cefs.ncsu.edu/ncgt/process-walkthrough-regional-produce-distribution-center.pdf. NGCT also supported six GAPs (food safety) training workshops, training over 100 producers on food safety principles.

4. The project is also providing practical training to current and recently graduated college students to create the next generation of food system professionals. In 2013-2014 two interns were placed at Lowes Foods to assist the NCGT Retail Liaison and two interns were placed at food hubs. A more formalized intern program is planned for the Summer of 2015 with a cohort of six interns working in food hubs and with mainstream market partners to bridge the knowledge gaps that exist between local food growers and mainstream market buyers. One intern will also be placed with Cooperative Extension in Cumberland County to work on building awareness of and demand for local foods by those who work at Fort Bragg.

5. The project focused in 2014 on supporting Fort Bragg in holding its first on-base farmers market, and created a set of recommendations, shared with legislators and others, on suggested ways to bring more locally-sourced foods from small and mid-scale producers onto the Base.