

Values-Based & Value-Added Value Chains in the Northeast, Upper Midwest, and Pacific Northwest

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Table of Contents

Introduction	3
Objectives	4
Methods	5
Results	6
Conclusions	10
References	13

Introduction

Over the past few decades, American agriculture has become increasingly consolidated as certain farmers adopt new technologies to increase efficiency, output, and profits. Other farmers note these increased returns and utilize the same technologies. In the long run as enough farmers adopt these technologies, farm commodities increase driving down their price assuming all other things are equal. In order to achieve further increases in output and profits and to remain competitive, the adopting farmers continue to use even newer technologies, boarding what Cochrane (1979) called a “technology treadmill.”

Early adopters of technologies like tractors, pesticides, herbicides, and biotechnology are at a competitive advantage to those that do not adopt. Farmers that do not board this technology treadmill are subsequently forced out of commodity farming. As more and more farmers go out of business over the years, there is an increase in such “farm cannibalism” (*Ibid.*). The end result is that there are fewer farmers and those remaining farmers manage increasingly larger crop acreages to remain competitive. Farmers that cannot consolidate cannot compete and must stop farming.

An alternative to getting bigger or getting out is for farmers to focus on niche markets, to add value to their products, and to market directly to consumers. Recently, there has been an increase in the number of farms in certain areas of the country as former commodity farmers and newer farmers use these different approaches. This increase in farm numbers is demonstrated in Maine where these alternative farms tend to be smaller and more diversified than commodity farms (Smith et al., 2004). However, these alternative farms may not be large enough to attain economies of scale.

Unfortunately, this dualism in American agriculture makes it difficult for mid-sized family farms, farms that are nostalgically idolized as the bedrock of rural America. Kirschenmann et al. (2004) explore the consequences of losing these types of farms and argue compelling recommendations to save them. These mid-sized family farms have between \$100,000 and \$250,000 of gross annual sales. They are too small, are lacking resources, and/or do not want to expand to compete effectively in industrial, commodity agriculture. Yet they are too big to direct market all farm products to consumers.

These current trends in American agriculture will result in continued decline of mid-sized family farms. This will have a negative impact on rural areas as larger, industrial farmers are more likely to purchase inputs and to support agricultural infrastructure far away from local communities. Disappearance of this agriculture of the middle would further hollow out rural American communities. Shifting from mid-sized farms to larger commodity farms would put more farmland into non-perennial, short-rotation crop monocultures resulting in more erosion, non-point source pollution, and less genetic diversity (*Ibid.*).

Establishing new supply chains better suited for mid-sized family farms may stem their loss from the agricultural landscape. Supply chains involve firms that produce, process, and transport food products and sell these products to consumers. A typical supply chain may involve farmers → suppliers → processors → distributors → retailers. Mid-sized

farms can produce more efficiently than smaller, diversified farms since these mid-sized farms are usually larger. Mid-sized farmers are also better able than larger, commodity farmers at altering production systems to meet changing consumer food preferences.

Stabilizing the loss of U.S. mid-sized family farms can be accomplished by supporting the growth of supply chains that are “value-added” with different product attributes and that are “values-based.” Supply chains are synonymous with value chains. Value-added describes not only products with higher market prices from processing, but also agricultural products that have certain sustainability, location, food safety, or utility attributes (Stevenson and Pirog, 2006). Examples include organic, rBST-free, identity-preserved, non-GMO, free trade, locally produced, non-irradiated, and preservative-free.

Values-based value (supply) chains have relationships between farmers, suppliers, processors, distributors, and retailers based on trust, transparency, and relationship building. Companies in value-based value chains may disclose information, including financials, to meet common objectives. Relationships between firms are “expressly based in an articulated set of values” (*Ibid.*). This learning-based model contrasts quite sharply with “channel masters” in a supply chain that focus solely on profit maximization at the expense of other firms in the supply chain (Stevenson and Pirog, Forthcoming).

Values-based value chains not only produce value-added products with desirable social and environmental attributes, but they also cultivate relationships more supportive of mid-sized farmers and their rural communities. However, mid-sized family farmers will not be helped if consumers do not purchase these value chains’ products. Painter and McCluskey (2007) find consumers are more likely to pay for certain product attributes if they are tangible (better quality and taste) rather than intangible (local, sustainable, fair trade). Yet they found that younger consumers are more supportive of these intangibles.

Objectives

Given value-added and values-based value chains can stabilize the loss of mid-sized family farms, this research component of the Ag of the Middle Project sought to:

- 1) Identify more values-based value chains (VBVC’s) in the Northeast, Upper Midwest, and Pacific Northwest in addition to the original thirteen VBVC case studies on the Ag of the Middle project website (AOTM, 2004).
- 2) Determine value-added value chains that could evolve into VBVC’s in each of these three geographic regions of the United States.

These values-based and value-added value chains identified by this Ag of the Middle research are confidentially documented in Hoshide (2007). Information collected on each value chain includes products produced, name of primary company in the chain, type of relationship between value chain firms, and total annual sales. In most cases, the primary company is the processor. In one case it is the distributor and in another case the retailer. A company contact list was compiled. Farmers, suppliers, processors, distributors, and retailers in each value chain are also described in addition to their working relationships.

Methods

Aside from the 13 national and regional case studies of values-based value chains in the U.S. found on the Ag of the Middle project website (AOTM, 2004), there is no list of these types of supply chains available. Additional values-based and value-added value chains were identified by finding food products produced in the Northeast, Upper Midwest, and Pacific Northwest¹ regions of the U.S. A local consumer food cooperative, a central Maine natural foods store, and a food coop website listing natural food manufacturers and distributors were used to identify food products (SCFCI, 2005).

Value-added food products with different attributes were selected such as organic, rBST-free, identity-preserved, non-GMO, free trade, locally produced, non-irradiated, and preservative-free. Information about the farmers and firms in each product's value chain was first collected from the website of the primary company in the chain. Contacts at these primary companies were then interviewed over the phone from June to September of 2006 and February to March of 2007. Data collected included the type of relationships between value chain firms to see if supply chains were values-based.

Value chains were organized by region and then by state for both the list and contact information documented in Hoshide (2007). In the Value-Based and Value-Added Value Chain List, name of the primary company in the value chain is shown along with products produced and a link to this company's website. Identification and number of farmers, brokers, processors, distributors, and retailers are given when available on the internet or disclosed by each primary company contact. Due to the confidential nature of some of these data, this list and contact information is not publicly available.

Table 1: Value-Added and Values-Based Value Chain Sales Size Classes

Size Class	Abbreviation	Recent Total Annual Sales
Extra-Small	XS	<\$1 million
Small	S	\$1-10 million
Medium	M	\$10-100 million
Large	L	\$100 million - \$1 billion
Extra-Large	XL	>\$1 billion

The Value Chain List also categorizes value chains by recent total annual sales (Table 1) and by using two relationship typologies. The first typology is based on the three definitions of "value" in Stevenson and Pirog (2006). All value chains on the list meet their first and second definitions of value-added where there is (1) a higher market price from processing and (2) production of products that have certain sustainability, location,

¹ The Northeast region includes New Jersey, while the Pacific Northwest includes Idaho and northern California. These are states or parts of states that may not be identified with these regions but they were included in this analysis to provide more value chains.

food safety, or utility attributes. Some value chains on the list are values-based (3) where the emphasis is on developing open relationships between firms in the chain.

The second relationship typology characterizes the nature of the relationship between companies in the chain. Market master is analogous to “channel masters” in Stevenson and Pirog (Forthcoming) where one firm dominates and seeks to maximize profit at the expense of farmers and other value chain companies. Ad-Hoc value chains put more emphasis on relationship building but the commitment to these relationships is not very strong. Learning value chains put a lot of work into cultivating relationships with a high degree of openness and information sharing where all firms in the chain can benefit.

Values-based value chains (VBVC’s) which focus on relationship building are distinguished in the Value Chain List’s “Region” column using the following symbols:

☺ + (VBVC’s with NO Ag of the Middle case studies)

☺ (VBVC’s with Ag of the Middle case studies)

Twelve VBVC’s are in each region. In the Northeast (NE), one already has an Ag of the Middle (AOTM) case study written about it (Farm Fresh Connection) while eleven do not. In both the Upper Midwest (UMW) and Pacific Northwest (PNW), nine VBVC’s do not have AOTM cases studies while three do: Thumb Oilseed Producer’s Cooperative, Ozark Mountain Pork Cooperative, and Organic Valley Family of Farms in the UMW and New Seasons Market, Oregon Country Beef Cooperative, and Tillamook County Creamery Association in the PNW (AOTM, 2004).

Results

Value chain geographic distribution was split fairly equally between the NE (26), UMW (25), and the PNW (24) for a total of 75. Value chain food product types include dairy/eggs, fruit, grain/corn, meat, potato, soy, tropical/sweeteners, and vegetables/other (Table 2). Food products produced by value chains range from farm produce to value-added products. Tropical products include chocolate, coconut, and cane sugar products. The vegetable/other category includes fresh, frozen, and pickled vegetables, entrees, hops, tea, plus personal care and mixed food products.

The NE value chains are quite diverse in food product type, while the UMW value chains are mostly produce dairy, grain/corn, and soy products. The PNW has many chains that produce dairy, grain, and vegetable/other products. Most NE value chains that were chosen produce products in Maine, Vermont, and Massachusetts, while most UMW value chains are distributed throughout Wisconsin, Minnesota, Michigan, Iowa, and Illinois. Value chains chosen in the PNW are concentrated in Oregon (Table 2), followed by northern California and Washington state.

Table 2: Value-added and values-based^a value chains by food product category.

REGION & State	Dairy &/or Eggs	Fruit	Grain/ Corn	Meat	Potato	Soy	Tropical/ Sweeteners	Vegetables/ Other	TOTAL
<u>NORTHEAST</u>									
Connecticut	-	-	-	-	-	-	-	1(0)	1(0)
Massachusetts	-	-	-	-	1(1)	3(0)	-	1(1)	5(2)
Maine	1(1)	2(1)	1(1)	2(2)	1(0)	-	-	2(1)	9(6)
New Hampshire	1(0)	-	-	-	-	-	-	-	1(0)
New Jersey	-	-	-	1(1)	-	-	-	-	1(1)
New York	-	-	-	-	-	1(0)	-	1(0)	2(0)
Rhode Island	1(1)	-	-	-	-	-	-	-	1(1)
Vermont	3(2)	-	1(0)	-	-	-	1(0)	1(0)	6(2)
TOTAL NE	6(4)	2(1)	2(1)	3(3)	2(1)	4(0)	1(0)	6(2)	26(12)
<u>UPPER MIDWEST</u>									
Illinois	1(0)	-	2(0)	-	-	1(0)	-	-	4(0)
Iowa	-	-	-	2(2)	-	2(1)	-	-	4(3)
Michigan	-	1(1)	1(0)	-	-	1(1)	-	1(1)	4(3)
Minnesota	1(1)	-	2(0)	-	1(0)	-	-	2(1)	6(2)
Missouri	-	-	-	1(1)	-	-	-	-	1(1)
Wisconsin	5(3)	-	-	-	-	-	1(0)	-	6(3)
TOTAL UMW	7(4)	1(1)	5(0)	3(3)	1(0)	4(2)	1(0)	3(2)	25(12)
<u>PACIFIC NORTHWEST</u>									
California (Northern)	2(1)	-	2(1)	-	-	-	-	1(0)	5(2)
Idaho	-	-	-	-	1(0)	-	-	-	1(0)
Oregon	2(2)	-	2(1)	1(1)	2(1)	2(0)	3(1)	1(1)	13(7)
Washington	2(1)	-	-	1(1)	-	-	-	2(1)	5(3)
TOTAL PNW	6(4)	0(0)	4(2)	2(2)	3(1)	2(0)	3(1)	4(2)	24(12)
Total All Regions	19(12)	3(2)	11(3)	8(8)	6(2)	10(2)	5(1)	13(6)	75(36)

^a Value-added value chains are inclusive of values-based value chains.

In Table 2, the number of value chains are in bold, followed by a number in parentheses denoting how many of these are values-based value chains. For example, Maine has two value chains that produce fruit products. Of these two chains, one is a values-based value chain focusing on relationship building. The other is just a value-added value chain with more formalized, contractual relationships with less focus on relationship building. The frequency of values-based value chains by food product type is consistent with total value chains with the exception of soy in the NE and PNW and grain/corn in the UMW.

As shown in Table 3, the 75 value chains are split between conventional (39) and some level of organic (36) production. Fifteen value chains produce a mix of conventional and organic products, while 21 are entirely organic. The NE and Maine in particular had more conventional value chains chosen. Value chains are evenly split between those labeling their food products as not using genetically engineered ingredients (38) compared to those not specifying this (37). More value chains studied in the UMW do not use genetically engineered inputs compared to other regions.

Table 3: Value-added and values-based^a value chains by farm production attributes.

REGION & State	Conventional ^b	Conventional/Organic	Organic	TOTAL	No GMO's ^c	No rBST ^d	Not Specified ^e	TOTAL
<u>NORTHEAST</u>								
Connecticut	-	1(0)	-	1(0)	1(0)	-	-	1(0)
Massachusetts	1(1)	-	4(1)	5(2)	4(1)	-	1(1)	5(2)
Maine	8(5)	1(1)	0(0)	9(6)	0(0)	1(1)	8(5)	9(6)
New Hampshire	-	1(0)	-	1(0)	-	1(0)	-	1(0)
New Jersey	-	-	1(1)	1(1)	-	-	1(1)	1(1)
New York	-	1(0)	1(0)	2(0)	1(0)	-	1(0)	2(0)
Rhode Island	1(1)	-	-	1(1)	-	-	1(1)	1(1)
Vermont	5(2)	-	1(0)	6(2)	1(0)	2(1)	3(1)	6(2)
TOTAL NE	15(9)	4(1)	7(2)	26(12)	7(1)	4(2)	15(9)	26(12)
<u>UPPER MIDWEST</u>								
Illinois	4(0)	-	-	4(0)	2(0)	1(0)	1(0)	4(0)
Iowa	2(2)	-	2(1)	4(3)	2(1)	-	2(2)	4(3)
Michigan	1(1)	1(1)	2(1)	4(3)	3(2)	-	1(1)	4(3)
Minnesota	2(0)	1(0)	3(2)	6(2)	5(2) ^f	-	1(0)	6(2)
Missouri	1(1)	-	-	1(1)	-	-	1(1)	1(1)
Wisconsin	2(1)	1(1)	3(1)	6(3)	3(2) ^f	-	3(1)	6(3)
TOTAL UMW	12(5)	3(2)	10(5)	25(12)	15(7)	1(0)	9(5)	25(12)
<u>PACIFIC NORTHWEST</u>								
California (Northern)	3(0)	1(1)	1(1)	5(2)	1(1)	2(1)	2(0)	5(2)
Idaho	-	1(0)	-	1(0)	-	-	1(0)	1(0)
Oregon	6(2)	5(4)	2(1)	13(7)	4(3)	2(2)	7(2)	13(7)
Washington	3(2)	1(1)	1(0)	5(3)	1(0)	1(1)	3(2)	5(3)
TOTAL PNW	12(4)	8(6)	4(2)	24(12)	6(4)	5(4)	13(4)	24(12)
Total All Regions	39(18)	15(9)	21(9)	75(36)	28(12)	10(6)	37(18)	75(36)

^a Value-added value chains are inclusive of values-based value chains.

^b Conventionally produced agricultural products may be labeled as “natural.”

^c Not containing any genetically modified organisms (GMO's).

^d Not containing any recombinant bovine somatotropin (rBST).

^e Not specified if the product does not use GMO's nor rBST.

^f One dairy value chain in Minnesota and all three dairy value chains in Wisconsin do not use rBST in addition to not using any GMO's.

Value chains in all three regions are mostly in the smaller to medium-sized total annual sales categories. The NE is the only region with extra-small value chains with eight. This is likely due to the author's familiarity with the NE. The UMW and PNW may very well have values-based value chains in this smallest size class. There is only one extra-large chain in both the NE and UMW. These size trends are similar for values-based value chains. Most value chains are in the small (26) to medium (27) size categories with a combined annual sales range of \$1 to \$100 million (Table 4).

Table 4: Value-added and values-based^a value chains by recent total annual sales.^b

REGION & State	XS (<\$1 million)	S (\$1-10 million)	M (\$10-100 million)	L (\$100 million- \$1 billion)	XL (>\$1 billion)	TOTAL
<u>NORTHEAST</u>						
Connecticut	-	-	-	-	1(0)	1(0)
Massachusetts	2(1)	-	3(1)	-	-	5(2)
Maine	4(3)	1(1)	4(2)	-	-	9(6)
New Hampshire	-	-	-	1(0)	-	1(0)
New Jersey	-	-	1(1)	-	-	1(1)
New York	-	1(0)	-	1(0)	-	2(0)
Rhode Island	-	1(1)	-	-	-	1(1)
Vermont	2(0)	1(1)	1(0)	2(1)	-	6(2)
TOTAL NE	8(4)	4(3)	9(4)	4(1)	1(0)	26(12)
<u>UPPER MIDWEST</u>						
Illinois	-	3(0)	1(0)	-	-	4(0)
Iowa	-	2(1)	2(2)	-	-	4(3)
Michigan	-	2(1)	1(1)	1(1)	-	4(3)
Minnesota	-	3(1)	1(1)	1(0)	1(0)	6(2)
Missouri	-	1(1)	-	-	-	1(1)
Wisconsin	-	3(2)	2(0)	1(1)	-	6(3)
TOTAL UMW	0(0)	14(6)	7(4)	3(2)	1(0)	25(12)
<u>PACIFIC NORTHWEST</u>						
California (Northern)	-	1(0)	4(2)	-	-	5(2)
Idaho	-	1(0)	-	-	-	1(0)
Oregon	-	5(1)	4(3)	4(3)	-	13(7)
Washington	-	1(0)	3(2)	1(1)	-	5(3)
TOTAL PNW	0(0)	8(1)	11(7)	5(4)	0(0)	24(12)
Total All Regions	8(4)	26(10)	27(15)	12(7)	2(0)	75(36)

^a Value-added value chains are inclusive of values-based value chains.

^b Most total annual sales from 2005 or 2006 with oldest value chain sales information from 1999.

Table 5 summarizes both value chain typologies. Slightly less value chains are values-based (36) than value-added (39) according to Stevenson and Pirog's (2006) definition of "value." This holds true for all regions except the UMW which had one more values-based value chain selected. At the state level, Maine had proportionally more values-based value chains (VBVC's) chosen than the NE region as a whole. For the UMW region, this was true for Iowa, Michigan, and Wisconsin, while Oregon had proportionally more VBVC's selected than the PNW region as a whole.

The relationship typology that was the most frequent over all three regions was Learning (30) followed by Ad-Hoc (26) and Market Master (19). The NE region had a higher number of Ad-Hoc than other value chain relationship types, while the UMW had less. The region with the most value chains with Learning relationships between firms is the UMW (12) followed closely by the PNW (10) and the NE (8). The states with the largest number of value chains with Learning relationships are Oregon with six, followed by Maine, Iowa, Michigan, and Wisconsin with three a piece.

Table 5: Value-added and values-based^a value chains by relationship typology.

REGION & State	- Value Category -		TOTAL	--- Value Chain Relationship---			TOTAL
	Value- Added	Values- Based		Market Master	Ad-Hoc	Learning	
<u>NORTHEAST</u>							
Connecticut	1(0)	-	1(0)	1(0)	-	-	1(0)
Massachusetts	3(0)	2(2)	5(2)	2(0)	2(1)	1(1)	5(2)
Maine	3(0)	6(6)	9(6)	2(0)	4(3)	3(3)	9(6)
New Hampshire	1(0)	-	1(0)	-	1(0)	-	1(0)
New Jersey	-	1(1)	1(1)	-	-	1(1)	1(1)
New York	2(0)	-	2(0)	1(0)	1(0)	-	2(0)
Rhode Island	-	1(1)	1(1)	-	-	1(1)	1(1)
Vermont	4(0)	2(2)	6(2)	-	4(0)	2(2)	6(2)
TOTAL NE	14(0)	12(12)	26(12)	6(0)	12(4)	8(8)	26(12)
<u>UPPER MIDWEST</u>							
Illinois	4(0)	-	4(0)	2(0)	2(0)	-	4(0)
Iowa	1(0)	3(3)	4(3)	1(0)	-	3(3)	4(3)
Michigan	1(0)	3(3)	4(3)	-	1(0)	3(3)	4(3)
Minnesota	4(0)	2(2)	6(2)	3(0)	1(0)	2(2)	6(2)
Missouri	-	1(1)	1(1)	-	-	1(1)	1(1)
Wisconsin	2(0)	4(3)	6(3)	1(0)	2(0)	3(3)	6(3)
TOTAL UMW	12(0)	13(12)	25(12)	7(0)	6(0)	12(12)	25(12)
<u>PACIFIC NORTHWEST</u>							
California (Northern)	3(0)	2(2)	5(2)	2(0)	1(0)	2(2)	5(2)
Idaho	1(0)	-	1(0)	1(0)	-	-	1(0)
Oregon	6(0)	7(7)	13(7)	1(0)	6(1)	6(6)	13(7)
Washington	3(1)	2(2)	5(3)	2(0)	1(1)	2(2)	5(3)
TOTAL PNW	13(1)	11(11)	24(12)	6(0)	8(2)	10(10)	24(12)
Total All Regions	39(1)	36(35)	75(36)	19(0)	26(6)	30(30)	75(36)

^a Value-added value chains are inclusive of values-based value chains.

Conclusions

Of the 75 value chains explored by this part of the Ag of the Middle Project, 36 were identified as either being or having strong potential to be VBVC's in the Northeast (NE), Upper Midwest (UMW), and Pacific Northwest (PNW). Beyond these 36, there are an additional 20 value chains that have Ad-Hoc relationships between firms in the chain (Table 5). While not values-based, these Ad-Hoc value chains could evolve into having more Learning-based intra-firm relationships. Most of these 36 values-based value chains have total annual sales between \$1 to \$100 million.

Utilization of alternative supply chain management techniques encourage development of strong, open relationships between value chain firms. A value chain in the NE producing organic packaged meat products does not own production and storage facilities, trucks, and other overhead, instead relying on state-of-the-art computer software packages for supply chain coordination. A Japanese subsidiary in the UMW that produces soy

products used by other processors employs Just In Time supply chain management which requires strong communication and relationships between supply chain partners.

Cooperative farmer ownership of the processor also encourages development of values-based relationships. Nine examples include a large cooperative and a small processor producing cheese and butter in the NE, one making berry products and three making dairy products including Organic Valley Family of Farms plus Ozark Mountain Pork and Thumb Oilseed Producer's Cooperative in the UMW, and Oregon Country Beef Cooperative in the PNW. Two regional potato chip producers forge strong relationships with other value chain firms to maintain adequate supply and distribution channels.

Processors and retailers that have had more time to cultivate relationships with other supply chain firms can find the transition to a values-based value chain easier. Examples include a multigenerational dairy processor in the NE plus four value chains in the PNW. Tillamook County Creamery Association and a large dairy and egg processor have been around for almost 100 years. A VBVC involving a fast food retailer was established soon after the birth of fast food during the early 1960's. Finally, a value chain producing hops was founded by farmers, some of who have been in the area for over 130 years.

Many VBVC's have been successful at promoting local agriculture and regional consumption of their products. Farm Fresh Connection links mid-sized farmers with institutional buyers in Maine. Also in Maine, a meat value chain's sales are only in-state since it is very small, while a fruit wine value chain's distribution is limited by state liquor laws. A Maine artisan bakery purchases some grain from local farmers. A NE pickled vegetable producer intentionally restricts the company's distribution to the NE and Mid-Atlantic to reduce negative environmental impacts from transport of products.

Many VBVC's work toward environmental and socially conscious objectives. Examples include a Rhode Island dairy VBVC promoting its products as conserving scarce farmland and controlling suburban sprawl. A PNW chocolate VBVC emphasizes full circle sustainability with a focus on quality, ecology, farmer equity, and farm community development in the developing world where the cacao that is used is grown. A PNW values-based bread producer focuses on worker equity where everyone spends some time working on the production line and the company is communally owned.

Value chains have been driven by consumer demand for natural meat and dairy products produced without hormones and antibiotics. In addition to the meat and dairy value chains already mentioned, there is a medium-sized packaged beef producer in the NE, a gourmet pork processor in the UMW, and a natural beef, pork, and lamb producer based in the UMW and also the PNW. Three additional natural dairy processors make both natural and organic products, a small organic and natural cheese producer in the UMW plus two medium-sized PNW dairies, one of which also produces soy products.

The natural beef, pork, and lamb producer in the UMW and PNW mentioned above brings farmers and end users of its meat products together for enhanced farm to fork understanding. This VBVC hosts an annual appreciation dinner open to cooperating

farmers and ranchers as well as high-end chefs using the chain's meat products. Response to this has been extremely positive with farmers gaining a better understanding of how their meat is prepared for consumers as well as chefs learning more about how the ingredients to their dishes are raised. Other VBVC's could follow this model.

Organic agriculture is an opportunity for mid-sized family farmers to transition their operations to capture a fast growing market. About 28% of the 75 value chains selected exclusively produce organic products, while 48% have a mix of natural and organic products. Other organic value chains aside from the ones already mentioned are a producer of a wide range of products plus a frozen vegetable processor in the UMW. A grain processor in the PNW mills both organic and conventional grains. The only VBVC with a retailer as the primary company in the chain is New Seasons Market in the PNW.

There are many factors that can stabilize the loss of mid-sized family farms from the Ag of the Middle. Encouraging sustainable agricultural production can maintain farm productivity into the future. Developing values-based relationships within and between value chain companies can maintain the viability of mid-tier supply chains more suited to AOTM farmers. Cooperatives and alternative supply chain management can also play a role. Consumers demand food production attributes mid-sized farmers can more easily accommodate such as being local and free from hormones, antibiotics, and GMO's.

Increased consolidation and industrialization of farms challenges the viability of the disappearing Ag of the Middle. Mid-sized family farms may find transition to organic and/or to direct marketing difficult due to their larger size compared to the typically smaller farms that supply these niche markets. More expensive VBVC products limit purchases from the poor. Maintaining values-based relationships is more challenging when there are more companies involved in the chain due to higher transactions costs. It would be easier for consumers to support VBVC's if their products are labeled.

In addition to farm consolidation, mergers and buyouts of VBVC processors may challenge environmental and social agendas. A PNW organic frozen vegetable and fruit value chain was recently bought by a major food processor. Product sourcing has expanded internationally to countries like China with questionable adherence to organic standards. A NE ice cream value chain went through a similar buyout. Their historical social and environmental activism has not been supported as much by the parent company. Similarly, processor consolidation may challenge values-based objectives.

Like markets for commodities and direct-marketed foods, retail outlets for VBVC products need to be fostered and developed. However, a contact for a processor in one of the value chains studied expressed deep concern about consolidation at the retail end of supply chains. For example, recent purchase of Wild Oats by Whole Foods has made marketing more challenging for regional value chains. Larger retailers such as Whole Foods need to insure mid-sized VBVC's can competitively market their products at a regional level and not be forced to market nationally, which may not be feasible.

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