

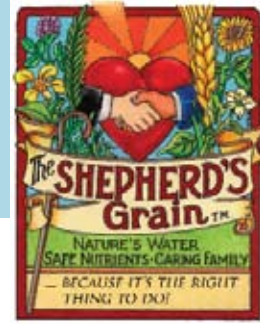
Values-based food supply chains: Shepherd's Grain

Steve Stevenson, CIAS June, 2009

Spokespersons: Karl Kupers and Fred Fleming

Interview Dates: 02/19/07, 04/21/08 and 09/29/08

Website: www.shepherdsgrain.com¹



Historical development

Introduction. Shepherd's Grain is a value-chain business in the Pacific Northwest that markets high-end wheat flour grown sustainably by the Columbia Plateau Producers. An introduction to Shepherd's Grain and the Columbia Plateau Producers can be found on the Shepherd's Grain website under "Our Story" <www.shepherdsgrain.com/story.htm>. Also recommended are the articles and stories found on the "Newsworthy" page of this website <www.shepherdsgrain.com/new.htm>.

Geological context. Agricultural sustainability challenges in inland Washington and the Pacific Northwest began during the last ice age, when glaciers created huge ice dams. When these ice dams broke, vast amounts of water-borne topsoil from as far east as Montana rushed down and collected in the mouth of the Columbia River gorge. These soils were then blown back to eastern Washington, Oregon and parts of Idaho. Repeated sequences of flooding, silting and blowing created rolling-to-steep hills of sandy loam soils with 70 to 80 feet of topsoil held in place for centuries by short grass prairies (See photographs on the home page of the Shepherd's Grain website <www.shepherdsgrain.com>). Farmers began tilling these extremely fertile but fragile soils in the 1880s and 1890s. Their primary crop was winter wheat because the area receives 20" to 22" of cool-season rain from October to March. For the past century, conventional farming systems in the region have emphasized a monoculture of winter and spring wheat tilled and grown year after year. This monoculture has resulted in two contemporary sustainability challenges: *soil erosion* and *soil degradation* (See the "Sustainability" page of the Shepherd's Grain website <www.shepherdsgrain.com/sustainability.htm>).

Strategic and philosophical goals. Shepherd's Grain's goals largely stem from the thinking and experiences of two Washington wheat farmers over

the past thirty years. Karl Kupers and Fred Fleming founded the Columbia Plateau Producers and developed the Shepherd's Grain label. In the mid-1980s, after farming wheat conventionally for ten years, Karl set two ten-year goals for his farm: 1) To develop a farming business that is economically sustainable without depending on federal commodity subsidies; and 2) To develop cropping systems that address the region's primary agro-ecological sustainability challenges of soil erosion and soil degradation. According to Karl, "*The two goals were interrelated as government commodity subsidies support monocultures which are the bases for most of our environmental problems*" (Karl Kupers, founder, interview, 02/19/07).

Over the next two decades, Karl and his colleagues developed alternative cropping systems based on crop rotations and "direct seed" tillage technologies.

They also created an alternative business model based on marketing regionally identified, high-quality, differentiated food products through strategic business partnerships. These partnerships were built on value chain principles that included cost of production pricing and transparency. As Fred Fleming put it thirty years later, "*Our kind of farming rewards innovators, saves farms and can change an ecosystem*" (Fred Fleming, founder, interview, 02/19/07).

Early experiments with alternative cropping and marketing systems. From the mid-1980s to the late 1990s, Karl and his colleagues, who later became the Columbia Plateau Producers, experimented with new crops, crop rotations and newly developed direct-seed techniques called "no-till." Mixing warm

"Our kind of farming rewards innovators, saves farms and can change an ecosystem."—
Fred Fleming, founder

¹All websites referenced in this document were accessed on 4/23/09. Links in pdf are live.

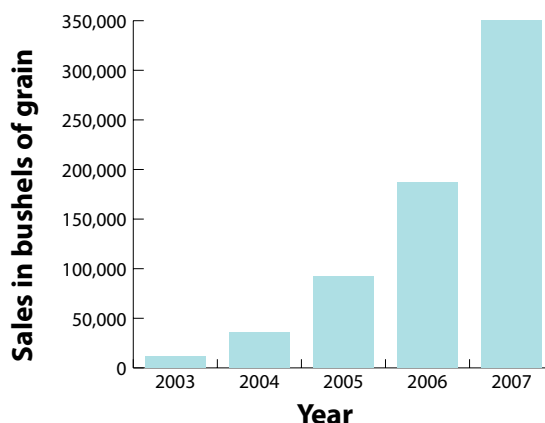
season and cool season grasses and broadleaf crops, the farmers experimented with canola, reclamation grasses, sunflowers, beans, lentils, spring barley and the traditional winter wheat. Financial assistance for this experimentation was provided by the USDA Sustainable Agriculture Research and Education (SARE) program and coaching by a direct-seed expert from the University of South Dakota. By the late 1990s, it was clear that the combination of crop rotations and direct-seeding was not only feasible in eastern Washington, but resulted in good yields of high-quality crops and, equally important, containment and reversal of soil erosion and degradation.

“What we do well is grow high-quality wheat and tell good stories.”—Fred Fleming, founder

By the mid-to-late 1990s, Karl was confident that his farm could make it financially without government commodity payments. In 1999, Karl and Fred met and began exploring markets for the diverse products grown under direct-seed farming systems. Initial efforts were unsuccessful. They got farther exploring wheat products used by specialty bakers. Assisted by a baker at the Grand Central Bakery in Portland, Oregon <www.grandcentralbakery.com> and the Wheat Marketing Center in Portland, Oregon <www.wmcinc.org>, a specially blended baking flour made from two wheat varieties grown by the Columbia Plateau Producers was developed over a two-year experimental period. This flour met the baker's standards for taste, performance and consistency. With the assistance from the Food Alliance <www.foodalliance.org>, potential customers for the new flour were identified. The first sale in 2003 was to Hot Lips Pizza, a specialty pizza chain in Portland, Oregon <www.hotlipspizza.com>.

Contacts and value chain business relationships were developed over the next several years with a range of food companies, including those featured as value chain partners for this case study: St. Honoré Bakery <www.sainthonorebakery.com>; Hearth Bread Bakehouse <www.hearthbreadbakhouse.com>; the Bon Appétit Management Company <www.bamco.com>; and Hot Lips Pizza. The current Shepherd's Grain product line includes high gluten flour for breads and pizza dough, low gluten flour for pastries,

Shepherd's Grain product sales



whole wheat flour for all-purpose baking, garbanzo beans, red beans and lentils (See the “Products” page on the Shepherd's Grain website: <www.shepherdsgrain.com/products.htm>).

Historical growth indicators.

Bushels of wheat sold and sales figures: 2003: 12,000 bushels of grain were sold under the Shepherd's Grain label; 2004: 36,000 bushels; 2005: 92,000 bushels (\$640,000 sales); 2006: 187,000 bushels (\$1.6 million sales); 2007: 350,000 bushels (\$4.0 million sales). Projections for 2008 expect to reach 550,000 bushels, with a goal of selling 1 million bushels of wheat in 2010 (Karl Kupers and Fred Fleming, interview, 04/21/08).

Farmers and acreage: In 2008, Shepherd's Grain added ten new farmers to the Columbia Plateau Producers, bringing its total number of farmers to 33. These farmers work over 100,000 acres of cropland using crop rotations and direct-seed tillage (Karl Kupers and Fred Fleming, interview, 04/21/08) (See cross-case study observations #1 and #11 on page 11).

Current dynamics

Creating and marketing differentiated, high value food products. Value chains are predicated on producing and marketing significant volumes of differentiated, high value products (See Appendix A on page 13).

Product differentiation and branding.

“What we do well is grow high-quality wheat and

tell good stories” (Fred Fleming, interview, 04/21/08).

With its original, smaller customers— St. Honoré Bakery and Hot Lips Pizza—Shepherd’s Grain differentiated itself through story→quality=price (Karl Kupers, interview, 02/19/07). For these customers, the Shepherd’s Grain story was the most important differentiating characteristic, followed by product quality and, finally, price. This hierarchy is the reverse of what is found in most commodity food systems where competition is based on price and then quality, and products are not differentiated based on unique stories.

The key dimensions of the Shepherd’s grain *story* are: a) environmentally friendly farming systems characterized by soil retention and regeneration, use of fewer pesticides and carbon sequestration (See “Sustainability” section of the Shepherd’s Grain website <www.shepherdsgrain.com/sustainability.htm>); b) family farms, with some Shepherd’s Grain farms managed by fourth or fifth generation family members; and c) a regional focus that supports the economy in the Pacific Northwest through local sourcing, shorter transportation routes and a reduced carbon footprint. (See cross-case study observation #2).

The key dimensions of product *quality* are: a) a unique flavor that surpasses the taste of conventional wheat flours and is critical for many artisan breads; b) nutritious whole wheat products; and c) consistency across farms, batches and years. “*Flour consistency is huge in the baking industry!*” (Karl Kupers, interview, 02/19/07). This consistency is a function of grain genetics, region, weather, milling, and grain and flour handling. High quality and consistency save bakers money due to reduced waste.

Price was less important than story and quality for the original, smaller customers. “*Given our story and the quality of Shepherd’s Grain flour, price was not a factor for many of our early customers*” (Karl Kupers, interview, 02/19/07) (See Appendix B on page 18). Flour costs are a relatively small part of the overall cost structures for many of these specialty baking companies.



Harvesting wheat on a Shepherd’s Grain farm.

In contrast, the hierarchy of differentiating qualities for larger and more recent Shepherd’s Grain customers—Hearthbread Bakehouse and Bon Appétit—is: quality→story=price. According to Karl Kupers, “*Maintaining our story and identity are important to us ... if that’s not important to the ‘big guys,’ then they can go somewhere else*” (Karl Kupers, interview, 02/19/07). During 2008, Shepherd’s Grain parted ways with a large customer because it was “only interested in price” (Karl Kupers and Fred Fleming, interview, 09/24/08).

Standards and certification. Food value chains that are larger and more complex than direct-to-consumer marketing require clearly communicated standards, and often third-party certification (See Appendix A).

The farms associated with Shepherd’s Grain are certified through the Food Alliance on a range of environmental and social standards <www.foodalliance.org>. One of Shepherd’s Grain’s primary distribution partners, Food Service of America, became a Food Alliance certified handler in 2008. During 2007, Shepherd’s Grain also became a member of the Whole Grains Council <www.wholegrainscouncil.org>. “*We believe that high standards and third party certification are important to prevent ‘green washing’ ... as long as there aren’t too many labels in the marketplace*” (Karl Kupers, interview, 02/19/07).

Identity preservation through the value chain. A feature of the value chain model is that farmers and ranchers have the right to maintain their product

identities and brands as deeply into the supply chain as they choose. This may include co-branding with strategic partners (See Appendix A). For an example of co-branding, see below.

Nearly all of Shepherd's Grain's sales are direct wholesale, which means the brand identity of Shepherd's Grain depends on the customers who use its products in their baking or food service enterprises.² Strategies for maintaining brand identity range from a picture of Shepherd's Grain farmers on the Hot Lips Pizza website <www.hotlipspizza.com>, to a video about the Shepherd's Grain business relationship produced by the Hearth Bread Bakehouse, to farmer visits at Bon Appétit cafes.

Shepherd's Grain is venturing into retail sales of its flour at supermarkets in the Pacific Northwest through *co-branding* with the regional Stone-Buhr Flour Company <www.stone-buhr.com>. Under the partnership, Shepherd's Grain will profit from increased wholesale flour sales and a small percentage of the retail sales, as well as increased brand recognition.

Interaction with, and feedback from, customers. Shepherd's Grain communicates with its customers through 1) a monthly newsletter (See examples on the "Newsworthy" page of the Shepherd's Grain website, including archived newsletters <www.shepherdsgrain.com/new.htm>); 2) direct feedback from Shepherd's Grain salespeople (See the story of Shepherd's Grain quickly responding to an insufficient gluten blend in Hearth Bread Bakehouse flour, Appendix B); and 3) special meetings with value chain partners. In 2008, for example, a special meeting was held to create a pricing formula that was based on farmers' costs of production. This formula addressed the impacts of inflation and volatile grain markets on both farmers and customers (See "Achieving economic sustainability," page 6) (See cross-case study observation #3).

Creating effective internal organizational forms. Successful value chain businesses aggregate and market products through effective organizational structures, and develop

and/or hire competent leadership and management (See Appendix A).

Enterprise structure. The Columbia Plateau Producers were organized in 2003 as a "closed" limited liability corporation (LLC), rather than a cooperative, for tax and flexibility purposes (Karl Kupers and Fred Fleming, interview, 04/21/08). Until recently, the enterprise consisted of ten farmer owners and six additional farmer participants. Similar to "closed co-ops," the Columbia Plateau Producers seek new growers only when market demand exceeds the present group's production capacity. Ten new producers were added in 2008, bringing the number of farmers selling wheat through Shepherd's Grain to 33 (See cross-case study observation #1).

Competent leadership and management. As indicated above, leadership and management skills have been internally generated. Karl retired from active farming in 2003 and took on marketing and customer relations for Shepherd's Grain. This followed an early discovery that, while the Food Alliance could identify potential customers, the follow-up work, on-the-street selling and customer service had to be done by Karl. While continuing to farm and manage a small wheat seed company, Fred focuses on farmer relations, product aggregation and the logistics of transporting wheat to the mill in Spokane, Washington. During 2006, roughly 20 truckloads of wheat moved each month from Columbia Plateau Producers' farms to the mill. Karl's wife, Lexie, handles the recordkeeping and



Fred Fleming and Karl Kupers founded the Columbia Plateau Producers and developed the Shepherd's Grain label.

² For more information on the ways in which Shepherd's Grain is identified by its strategic business partners, contact the author for the separate case analyses of Shepherd's Grain's value chain partners (Appendix B): gwstevens@wisc.edu.

accounting work for Shepherd's Grain at the Kupers' home office.

The first year that sales of Shepherd's Grain products were high enough for the management team to draw wages was 2006. Shepherd's Grain has reached the stage where management structures and policies need to be developed to support the management team and the professional growth of the enterprise (See "Future dynamics," below)³ (See cross-case study observation #4).

Selecting markets and value chain partners.

Successful value chain partners have similar values, different competencies and complementary business models (See Appendix A).

Farmer partners. Columbia Plateau Producers has grown to 33 members. Karl and Fred select farmers they think will best fit the collective enterprise. "We pick the best farmers and the best marketers ... so we expect a lot from them and they expect a lot from us. Fred and I each have one veto" (Karl Kupers, interview, 02/19/07)⁴ (See cross-case study observation #7).

Retail/food system partners. Shepherd's Grain developed customers and business partners in three waves: 1) *early partners* for whom the story was paramount and price was not (Hot Lips Pizza, St. Honoré Bakery and Cascade Baking); 2) *larger customers* engaged in the last few years for whom quality and consistency was foremost, with price beginning to rival the story in importance (Hearthbread Bakehouse, Rizzuto's Pizza Crust and Stone Buhr Flour); and 3) *large, mainstream potential customers* for whom quality, reliability, traceability and price ranked uppermost, with the story remaining important (Mostly Muffins <www.mostlymuffins.com> and Full Bloom Bakery <www.fullbloom.com>) (See cross-case study observation #8).

Processing and distribution partners. Shepherd's Grain markets three types of flour: high-gluten unbleached, low-gluten unbleached and whole wheat. All three flours are processed at the Archer Daniels Midland (ADM) Mill in Spokane. This is the only significantly sized flour mill in the region.⁵ The ADM partnership contributes several values to the Shepherd's Grain enterprise. The first is assurance of flour quality. ADM Milling has a superior technical capacity for flour milling.⁶ Second, the reputation of ADM provides credibility in the marketplace. This credibility is particularly important for the new, very large accounts that Shepherd's Grain is engaging. Finally, ADM provides a safety net, as it takes ownership of Shepherd's Grain wheat delivered to the Spokane mill and assumes responsibility for the quality of the milled flour (Karl Kupers, interview, 02/19/07) (See cross-case study observation #12).

"We pick the best farmers and the best marketers ... so we expect a lot from them and they expect a lot from us ..." —
Karl Kupers, founder

Shepherd's Grain will establish a business relationship with any distributor that works with a good customer. Distributors like Food Service of America <www.fsafood.com>, however, are strategic value chain partners who act as sales agents for Shepherd's Grain products. These distributors do not have authority to make big sales that would seriously impact the quantity of flour produced by Shepherd's Grain and ADM. The Food Service of America website <www.fsafood.com> provides a good example of the key characteristics for mid-scale, value-chain-type companies: regionally focused, privately owned, with an emphasis on quality and reliability stressing seasonality and specialty products, and recent Food Alliance certification. (See cross-case study observation #9).

³The organizational development of Shepherd's Grain bears similarities to the early enterprise development of Country Natural Beef and Organic Valley. In all cases, competent and impassioned entrepreneurial farmer and rancher founders came to recognize that they needed particular kinds of professional assistance. For Shepherd's Grain, this is likely to lead to a leadership mix similar to Country Natural Beef and Organic Valley.

⁴See Appendix D of the Red Tomato case study for characteristics of preferred producer partners.

⁵For a separate analysis of ADM, contact the author for the separate case analyses of Shepherd's Grain's value chain partners (Appendix B): gwsteven@wisc.edu.

⁶For an example of rapid re-blending of flour, see the separate analytical outline of Hearthbread Bakehouse in Appendix B.

Strategic partnerships replace capital and expertise. Shepherd's Grain recognizes that partnerships can replace capital and expertise, particularly in the early stages of enterprise development when resources are meager and keeping debt manageable is wise. Examples include early assistance in assessing wheat varieties and flour qualities, as well as assistance in locating customers. Current (and larger) strategic partnerships offer increasingly powerful venues for sharing the Shepherd's Grain story (See cross-case study observation #10).

"...he's an invested partner who is trusted to unload from producers' storage bins even if no one is home"—Fred Fleming, founder

Developing effective supply chain logistics. In addition to values-based business relationships, successful value chains require

increasingly sophisticated logistical systems as they grow larger and more complex (See Appendix A).

Production and aggregation. At the heart of the Shepherd's Grain story and values are the agricultural production systems employed by the Columbia Plateau Producers. These systems feature direct-seeding techniques and crop rotations (See the "Sustainability" <www.shepherdsgrain.com/sustainability.htm> and the "Newsworthy" <www.shepherdsgrain.com/new.htm> pages of the Shepherd's Grain website). Crops that work well in rotation with wheat include sunflowers, buckwheat and legumes like lentils and beans (Karl Kupers and Fred Fleming, interview, 04/21/08).

The aggregation of sufficient product begins two years in advance. At this time, the farmers commit to planting given acreages of specified wheat varieties. Required acreages and product volumes are determined through close communication between Karl and Fred, as well as communication among all farmers at annual meetings of the Columbia Plateau Producers. The amount of product committed to Shepherd's Grain varies from producer to producer, with a recommendation that each farm commit no more than 50 percent of their crop to Shepherd's Grain to ensure sufficient market diversification (Karl Kupers, interview, 02/19/07).

Shepherd's Grain wheat is stored until needed on participating farms in 10,000 to 20,000 bushel bins that are designed to maintain grain quality (Fred Fleming, interview, 04/21/08). When needed, the grain is transported to the ADM flour mill in Spokane by a regional trucking firm. This value chain partner has grown with Shepherd's Grain and dedicates trucks for this business. *"He's an invested partner who is trusted to unload from producers' storage bins even if no one is home"* (Fred Fleming, interview, 04/21/08).

Processing and distribution. To fill orders for Shepherd's Grain flour, Shepherd's Grain is responsible for delivering the specified volumes and varieties of wheat to the Spokane ADM mill. This is accomplished through farm pick-up coordination by Fred Fleming and trucking as described above. Buyers of Shepherd's Grain flour either pick up their orders at the ADM mill or arrange for delivery with trucking firms of their choice.

Accounting. Columbia Plateau Producers purchases wheat from individual farmers and re-sells it to ADM Spokane at an agreed upon price. ADM, in turn, mills it into flour and sells it to customers at a price determined by Shepherd's Grain that includes the ADM milling fee. While invoicing for final sales is done by ADM, tracking and accounting of all transactions up to, and including, sales to ADM are currently done by Karl's wife, Lexie (See cross-case study observation # 16).

Logistical coordination. Coordination of Shepherd's Grain logistics is primarily done by Karl, Fred and Lexie. Karl is in regular contact with ADM Milling and closely tracks orders and sales of Shepherd's Grain flour throughout the year (See cross-case study observation #15).

Achieving economic sustainability. In successful value chains, commitments are made to the economic welfare of all strategic partners (See Appendix A).

Pricing philosophy. After discussions with a miller and a baker, an early decision was made to price Shepherd's Grain wheat on a *"cost of production plus a reasonable rate of return"* basis, rather than charging a premium above commodity wheat prices (Karl Kupers, interview, 02/19/07). Thus the price

of Shepherd's Grain flour picked up at the ADM mill reflects payments to producers, transportation costs to the mill, Shepherd's Grain administrative costs and ADM's milling fee. Additionally, it is Shepherd's Grain's policy to charge the same rate to both small and large buyers of its flour at the ADM mill in Spokane. "*This creates honest distributors ... as buyers know what price distributors paid for our flour*" (Karl Kupers, interview, 02/19/07) (See cross-case observation #11).

Until recently, prices for each upcoming year were determined during the summer. Prior to 2007, Shepherd's Grain prices remained stable for a year, a practice highly valued by Shepherd's Grain's business partners (See Appendix B). In 2006, the cost of Shepherd's Grain flour at the mill was \$19.28, \$15.73 and \$16.36 per hundredweight for high gluten, low gluten and whole wheat flour, respectively (Shepherd's Grain Newsletter #32; back calculated from 2007 numbers).

New pricing model. 2007 presented the following new challenges and opportunities for negotiating a path toward economic sustainability through value chain-oriented pricing practices (Shepherd's Grain Newsletters #32-#35 <www.shepherdsgrain.com/archive/archive.htm>):

- A six-month exercise, undertaken with a farm management specialist from Washington State University Extension, measured the true costs of production for the Columbia Plateau Producers. This analysis revealed that the Shepherd's Grain producers had "... been selling for far less than their costs" (newsletters #32 and #33);
- Because poor weather conditions during the 2007 growing season caused an average 20 percent reduction in yields, costs of production per bushel increased significantly. This led to 21-26 percent price increases for Shepherd's Grain flours (newsletter #32); and
- Prices for commodity wheat spiked in 2007, reaching levels 60 percent higher than Shepherd's Grain paid to its producers. This led to psychological pressure from family members and/or landlords to increase the prices paid by Shepherd's Grain to its farmers. The higher price of conventional wheat also reduced the capacity of Shepherd's Grain producers to compete with



The same price is charged to both small and large buyers of Shepherd's Grain flour at the ADM mill.

their conventionally farming neighbors for leased land (newsletters #32-#35).

Shepherd's Grain addressed these challenges and opportunities by:

- Assuring Shepherd's Grain customers that prices would be stable through November, 2007 (newsletter #32);
- Convening a meeting of producers, customers and ADM representatives to create a framework for "developing a pricing mechanism that maintains our sustainable goal of covering our cost of production and providing the buyer with a stable and fair price" (newsletter #34). "Again, our goal is sustainability for everyone in our value chain and that is foremost in all our decisions" (newsletter #32); and
- Developing a pricing model for periods of extreme commodity market volatility that can be "proactive for all participants." This pricing model will give "both the producer and the buyer early indications of price for planning decisions," including planting decisions for farmers, with the aim to "ensure adequate supply and provide buyers with pricing forecasts for year-long contracts" (newsletter #35).

New pricing model specifics: A new pricing protocol was developed by Shepherd's Grain with ADM Spokane and several of the larger, mainstream value chain partners during the fall and winter of 2007-08.⁷ This protocol was designed to protect all value chain partners by maintaining cost of production-based pricing and building in allowances for inflation and highly volatile grain

⁷In all these discussions regarding the determination of Shepherd's Grain prices, see the value chain commitments to inclusion, transparency and attention to the economic welfare of all strategic partners.

commodity markets.

- a) Prices paid to Shepherd's Grain producers are determined twice a year and hold for six months. Initial prices are set in February for March through August; subsequent prices are set in August for September through February.
- b) February-set prices paid to Shepherd's Grain producers are based on: 1) the previous year's average cost of production for a representative sample of Shepherd's Grain producers; 2) an inflation factor, based on changes from the previous year in producer's input costs; and 3) a reasonable profit margin. Shepherd's Grain profit margins are comparable to those of other key value chain partners (Karl Kupers and Fred Fleming, interview, 09/29/08).
- c) August-set prices paid to Shepherd's Grain producers are based on February-set prices plus an indexing of the average commodity wheat prices over the previous 6 months (150 market days). Three outcomes are possible based on prices and a \$1/bushel "inflation cushion":
 1. If the 150-day average commodity wheat price is within \$1/bushel of the Shepherd's Grain February-set price, the price remains the same for the next six months (September through February);
 2. If the 150-day average commodity wheat price is more than \$1/bushel higher than the Shepherd's Grain February-set price, the August-set price (September through February) is adjusted upwards by 70 percent of the difference between the two prices (*protection for producers*); and
 3. If the 150-day average commodity wheat price is more than \$1/bushel lower than the Shepherd's Grain February-set price, the upper limit for the next inflation cushion is raised by 70 percent of the difference, so that indexing in the next six-month period begins with a difference higher than \$1/bushel (*protection for customers*).
- d) As indicated above, the price charged to customers at the ADM-Spokane docks is the sum of the cost of payment to producers, transportation costs to the ADM mill, Shepherd's Grain administrative costs and ADM's milling

fee. Prices are transparent within the value chain: prices for 50-lb. bags of flour are the same for small and larger customers. Prices are lower, however, when flour is purchased in bulk (railroad car loads), as is being increasingly done by Shepherd's Grain's newer, larger, mainstream customers⁸ (See cross-case study observation #13).

Payment practices. ADM directly deposits payments into the Columbia Plateau Producer's bank account. As a result, Lexie Kupers is able to write payment checks to farmers within three weeks of the wheat leaving their farms (Karl Kupers and Fred Fleming, interview, 04/21/08).

Communicating sustainable economics in the marketplace. A theme that emerged from the 2008 meetings on price determination was a "... desire by the buyers, the mill and the producers to forge ahead in an organized way to advance awareness of the term 'sustainability' in the marketplace," including communicating with consumers the values and true costs contained in sustainably raised food products (newsletter #34). Ideas for communicating sustainability values and developing relationships between Shepherd's Grain producers and customers through "adoption" conversations were voiced at the March 2008 Food Alliance meeting (newsletter #36) (See cross-case study observation #2).

Securing technical support. Shepherd's Grain leaders received financial and technical support for developing direct-seed crop rotations, wheat varieties and flour blends. Technical support included assistance from a Washington State farm management economist with analyzing costs of production for wheat rotations; ongoing research by a WSU agronomist on new wheat varieties that express the desired taste qualities; milling and testing small batches of these experimental wheat varieties at the USDA's Western Wheat Quality Laboratory <www.wsu.edu/~wwql/php/index.php>; a relationship with the Spokane Community College in which culinary students experimented with new Shepherd's Grain flour blends and provided feedback to Karl and Fred; and a new consultation with the Cooperative

⁸ Compare the adjustable pricing policy that Shepherd's Grain is adopting and Red Tomato's seasonally adjusted pricing model.

Development Services regarding organizational structures for the Columbia Plateau Producers.

Future dynamics

Internal organizational issues. As Shepherd's Grain has grown, it has had to strengthen its organization with formal policies and procedures. To that end, Shepherd's Grain held a facilitated meeting of its farmers during the spring of 2008 focused on the organizational structure of the Columbia Plateau Producers. Both spouses of farm families participated.⁹ The farmers expressed strong support for the Shepherd's Grain enterprise. The group decided to explore a new organizational structure, featuring a nine-person Board of Management charged with assisting Karl and Fred with policy development for the Shepherd's Grain enterprise and procedures to guide its staff. In addition to Karl and Fred, the new Board of Management includes four producer-owners and three non-owning stakeholders (Karl Kupers and Fred Fleming, interview, 09/29/08).

The three non-owning stakeholder representatives on the Board of Management are recruited from the wholesale baking, food service and retail market sectors of the Shepherd's Grain value chain. This business plans to work during the next year with an organizational consultant from the Cooperative Development Services to explore new structures, policies and procedures. *"Fred and I are smart enough to know we need help as we think about the future of Shepherd's Grain ... We're hoping to build a wider foundation on which Shepherd's Grain can become great"* (Karl Kupers and Fred Fleming, interview, 09/29/08).

Regarding administrative support, the business decided in 2008 to provide Lexie Kupers with some accounting support, and Karl and Fred assistance with some of the day-to-day administrative tasks "... so we can escape the 'tyranny of the present' and spend more time thinking of the future and doing a better job of being the face of Shepherd's Grain" (Karl Kupers and Fred Fleming, interview, 09/29/08).

Issues with supply chain partners. Based on the growth of Shepherd's Grain markets, ten new wheat farmers were invited to join the Columbia

Plateau Producers in 2008, bringing the number of participating farmers to 33. *"We had no problem recruiting these new farmers. There is considerable 'producer envy' of Shepherd's Grain producers. These folks had been preparing for membership in our group by getting Food Alliance certification"* (Karl Kupers and Fred Fleming, interview, 09/02/08).

Business with mid-sized customers continues to grow. The co-branding, retail product experiment with the Stone-Buhr Flour Company appears to be successful. A new line of all-purpose flour milled from Shepherd's Grain wheat is increasingly found on supermarket shelves across the Pacific Northwest. The five-pound Stone-Buhr flour packages carry the Shepherd's Grain and Food Alliance labels

"Fred and I are smart enough to know we need help as we think about the future of Shepherd's Grain ... We're hoping to build a wider foundation on which Shepherds' Grain can become great."—
Karl Kupers, founder

<www.stone-buhr.com>. *"Shepherd's Grain has decided not to get directly into retail sales, but we can have a retail presence through co-branding with Stone Buhr"* (Karl Kupers, interview, 04/21/08).

Shepherd's Grain has entered into new partnerships with several large, mainstream regional baking companies including Mostly Muffins in Seattle, Washington <www.mostlymuffins.com> and Full Bloom Bakery in Newark, California <www.fullbloom.com>. Relationships with these larger companies confirm the differentiating dimensions important to larger firms discussed in the "Product differentiation" section on page 2; quality, reliability, traceability, price and story remain important. See parallel values-based stories affirmed on the Full Bloom Bakery website above (See cross-case study observations #5 and #6).

Economics and efficiencies. The inflation formula described in the above section on "Achieving economic sustainability" was employed once during 2008 to adjust the price of the hard red winter wheat that is used for low gluten flour. Land rental prices in eastern Washington are increasing in response to high commodity prices (Karl Kupers and Fred Fleming, interview, 09/29/08) (See discussion of

⁹ For an example of a conscious organizational commitment to support the participation of farm and ranch women in business meetings, see the Country Natural Beef case study.

Shepherd's Grain's new pricing model in the section on "Achieving economic Sustainability," page 6).

Strategies for increasing markets and growth of Shepherd's Grain. Shepherd's Grain decision makers see increased growth for the enterprise in the near-to mid- future. "*One million bushels of wheat sold in 2010 is well within our reach*" (Karl Kupers and Fred Fleming, interview, 04/21/08). To reach those quantities will require developing the company's large, mainstream accounts and engaging the following organizational issues: internal management structures, logistical capacity and new producer recruitment and education.

A mature Shepherd's Grain: What does Shepherd's Grain want to look like when it grows up? As with Red Tomato, Shepherd's Grain is just beginning to look at issues of organizational maturity, as its early years were focused primarily on growth. Organizational structures are being put in place to more effectively address issues that will affect Shepherd's Grain's future. "*We can envision a time when Shepherd's Grain will reach a plateau in terms of volume and the emphasis will shift to making sure that customers are using our products for the right reasons ... We also can see replicating the Shepherd's Grain idea in other areas. It's better to move the idea, than move the wheat*" (Karl Kupers and Fred Fleming, interview, 09/29/08) (See cross-case study #14).

Positioning value chains in a troubled (and contracting) economy. Like other enterprises in these case studies, Shepherd's Grain has little experience with contracting economies. Some initial thoughts: "*We will likely see more separation between price sensitive and value sensitive customers ... We are also seeing the emergence of new areas of value differentiation, highlighted by the growing importance of food safety and carbon footprints*" (Karl Kupers and Fred Fleming, interview, 09/29/08).

Cross-case study observations

1. A key strategy of all four enterprises—Organic Valley, Shepherd’s Grain, Oregon Country Beef and Red Tomato—is balancing supply with markets through membership numbers. This is relatively easy to do when markets are stable or expanding predictably (see observation #11, below).
2. It is a challenge to communicate the deeper, more complex values that differentiate these businesses. These include land stewardship, fair prices and diverse farm and ranch structures. Shepherd’s Grain is a leader in communicating land stewardship values.
3. Enterprises vary in the degree to which they employ farmers and ranchers as business representatives, storytellers and listeners. Country Natural Beef is a leader in employing producers in these roles.
4. The two relatively mature cases—Organic Valley and Country Natural Beef—exhibit the importance of developing leadership structures that couple farmers and ranchers with food system professionals, and implementing leadership succession strategies that maintain managerial competency and company culture.
5. Convergence toward an “honest broker/fair trader” business role can be seen in all four enterprises. The three farmer and rancher-based enterprises developed respect and responsibilities for serving as honest brokers for their supply chains, while Red Tomato has assumed a fair trader business role.
6. In their key roles of facilitating and stewarding the integrity of value chain business relationships for all strategic partners, the four case enterprises are good examples of business models designed for the protection of a range of collectively important spaces, or “commons.” See Peter Barnes. 2006. *Capitalism 3.0*. San Francisco: Berrett-Koehler Publishers.
7. The screening of potential new producer-members by existing members is an important process in all four enterprises.
8. Value chain strategies differ with regard to “pioneer/smaller/niche” partners vs. “follower/larger/mainstream” partners. See the “Selecting value chain partners” section of the Shepherd’s Grain case study. With a few exceptions, the value chain partners of the four enterprises are privately owned and not subject to Wall Street pressures.
9. For the three enterprises that deal with processed food products (Country Natural Beef, Organic Valley and Shepherd’s Grain), access to appropriately scaled and located processing facilities has been critical to their success.
10. All four case enterprises differ when it comes to investing in bricks and mortar. Organic Valley’s decision to build a new headquarters and distribution center contrasts with alternative strategies employed by Country Natural Beef and Red Tomato.
11. All four enterprises employ pricing systems based on two principles: 1) supply management and stable pricing, and 2) cost of production-based pricing.
12. All four enterprises demonstrate the importance of selling a high percentage of products as identity-maintained, differentiated, higher-value products; and having commodity market options available as back ups for unsold product. Both Country Natural Beef and Shepherd’s Grain sell their products to processors, yet retain identity, pricing and marketing authority. Their processors can sell their extra inventory into commodity markets, if necessary.
13. Creative work is being done to adapt value chain pricing mechanisms to volatile commodity markets. Shepherd’s Grain is a leader in engaging volatile commodity prices.

14. Several of the case study enterprises are exploring business expansion models based on multi-regional growth and autonomy that use core company competencies and infrastructure. CROPP is a leader in such expansion models.
15. In all cases, competent logistics managers are the pivot persons around whom complex and time-sensitive logistical strategies are engaged.
16. As value chain enterprises grow and become more complex, the accounting functions (bookkeeping, invoicing and paying producers) are often the first to be separated off from the logistical bundle.
17. Value-chain-linked enterprises are particularly susceptible to perceived contradictions within their practices and/or the practices of strategic partners. Examples include Beef Northwest's labor issues for Country Natural Beef and the family farming flap associated with a large Texas organic dairy farm for Organic Valley (see the "Future dynamics" section of the Organic Valley case study).

Appendix A

Values-Based Food Supply Chains: Strategies for Agri-Food Enterprises-of-the-Middle

Steve Stevenson (gwstevenson@wisc.edu) and Rich Pirog (rspirog@iastate.edu)
www.agofthemiddle.org

Definitions and distinctions

The terms *value* and *values* are used in different ways when referring to food production and food business networks.

1. *Value-added* is used to characterize food products that are converted from a raw state through processing that gives the resulting products an incremental value in the market place. An incremental value is realized from either higher price or expanded market. For example, jams, cheeses and pre-cooked meats are considered value-added products.
2. *Value-added* is also used to characterize food products that gain incremental value in the marketplace through differentiation from similar products based on attributes such as geographical location, environmental stewardship, food safety or functionality. Examples of this type of higher value product include locally grown produce, organic or IPM-grown fruits, antibiotic and/or hormone free meat, or functionally specified hops and baking flours.
3. The words *value* and *values* are also used to characterize the nature of certain business relationships among interacting food business enterprises. In general, this collection of relationships is known as a supply chain (see below). When these relationships are expressly based in an articulated set of values, they are becoming known as *values-based supply chains* or *value chains*.

Some people in the agri-food business community use the term value chain to focus on supply networks that deal with food products given incremental value through processing and/or attribute differentiation (#1 and #2 above). **In the Agriculture of the Middle (AOTM) and Association of Family Farms (AFF) initiatives, the term values-based value chain embraces both product differentiation and the characteristics of the business relationships within a food supply network.**

A *food supply chain* is a network of food-related business enterprises through which products move from production through consumption, including pre-production and post-consumption activities. Typical links in the supply chain are:

inputs → producer → processor → distributor → wholesaler → retailer → consumer

For example, a food supply chain featuring pork products might include feed suppliers or veterinarians, a cooperative of farmers, meat packing and fabrication plants, food distributors, marketers, supermarkets and consumers. Pre-production activities might include university-based research and development, and post-consumption activities could include waste disposal and recycling, while government regulations would likely be engaged throughout the chain. Increasingly, supply chain analyses also are including such pre-production links as agricultural research (e.g., genetics) and post-consumer links such as waste disposal and recycling <www.valuechains.org/valuechain.html>.

Conventional food supply chains exhibit the following key characteristics:

1. Business relationships within the supply chain are often framed in win-lose terms, with resulting levels of inter-organizational mistrust. Relationships are constructed as competitive, even adversarial, whereby each company seeks to buy as cheaply and to sell as expensively as possible.
2. Farmers, ranchers and fishers are treated as interchangeable and exploitable input suppliers, often operating in restricted markets or under short-term contracts where they usually bear the risks.
3. The benefits and profits from the selling of finished food products are unevenly distributed across the supply chain, with food processors and marketers usually receiving a disproportionately higher share.

4. Operations are increasingly located and coordinated on a national and international scale, with food production, processing and marketing sited according to short-term economic gains for those parties who dominate the chain.

Traditional food supply chains can handle both undifferentiated (commodity) and *value-added* food products.

Values-based food supply chains differ from traditional food supply chains in the following important ways:

1. Business relationships among *strategic partners* within value chains are framed in win-win terms, and constructed on collaborative principles that feature high levels of interdependence and inter-organizational trust. All value chain partners have a strategic interest in the performance and well-being of other partners.
2. As producers of differentiated food products, farmers, ranchers and fishers are treated as strategic partners with rights and responsibilities related to value chain information, risk-taking, governance and decision-making.
3. Commitments are made to the welfare of all strategic partners in a value chain, including appropriate profit margins, living wages and business agreements of appropriate duration.
4. Operations can be effectively located and coordinated at local, regional, national and international scales.

These *values-based food value chains* are distinguished from traditional food supply chains by the combination of how they differentiate their products (food quality and functionality, and environmental and social attributes) and how they operate as strategic partnerships (business relationships). **Value chains can be smart from both business and ethical perspectives.**

Mid-tier food value chains are values-based strategic alliances between midsize, independent (often cooperative) food production, processing, distribution and sales enterprises that seek to create and retain more value on the front (farmer/rancher) end of the chain, and effectively operate at regional levels with significant volumes. Significant volumes for these value chains normally range between quantities handled by commodity systems and amounts produced for direct marketing. Regionality will vary with geography, geographic identities, food products and market demographics.

General characteristics of values-based value chains

Value chains have the capacity to combine scale with product differentiation, and cooperation with competition, to achieve collaborative advantages in the marketplace.

Value chains are successfully employed in such higher-volume, complex product industries as cars and trucks, consumer electronics and high-end apparel. The automobile industry provides good examples of cooperation within supply chains and competition between chains.

The Toyota value chain¹ is a good example of distinguishing between strategic (value adding) partners and non-strategic suppliers—makers of engines and transmissions contrasted with makers of belts and hoses:

- a. Successful value chains choose strategic partners that bring distinctive competencies but similar values, visions and goals.

Value chains contrast with two other models for complex business networks:

- a. Competitive bidding (arm's-length) relationships with suppliers; and
- b. Internal ownership of business activities (vertical integration).

¹For more information on Toyota, see:

Dyer, Jeffrey. 2000. *Collaborative Advantage: Winning Through Extended Enterprise Supplier Networks*. New York: Oxford University Press.

Handfield, Robert, and Ernest Nichols Jr. 2002. *Supply Chain Redesign: Transforming Supply Chains into Integrated Value Systems*. Upper Saddle River, NJ: Prentice Hall.

Value chains outperform other complex business models in rapidly changing markets.

Value chains emphasize high levels of performance and inter-organizational trust.

High levels of performance are essential to consistently deliver high quality products and services:

- a. Develop appropriate standards and conduct performance evaluations across the entire value chain;
- b. Employ quality assurance systems (with realistic allowances for surprise events);
- c. Employ continuous improvement systems and target support for underperforming partners in the value chain.

Inter-organizational trust among strategic business partners is pivotal:

- a. Inter-organizational trust is the mutual confidence that business partners will fulfill their agreements and commitments and will not exploit each other's vulnerabilities;
- b. Inter-organizational trust is different from interpersonal trust: the trust will still be in place even if key people leave their respective organizations;
- c. Inter-organizational trust is built upon the fairness, stability and predictability of agreements among strategic partners.

Value chains emphasize shared values and vision, shared information (transparency) and shared decision-making among the strategic partners.

Strategic partners need to share common values and a common vision regarding product quality, partner relationships and customer treatment.

Successful value chains develop effective systems for sharing information and governance:

- a. Shared information (transparency) improves productivity, enables rapid response to market changes and effectively engages discriminating customers. The Dell computer company, which has eliminated retail outlets and middlemen by selling custom-made computer systems directly to customers over the internet, employs a particularly effective information system to communicate with customers and strategic business partners;

- b. Shared governance means all strategic participants benefit from the value chain's business, and all have a say in business developments.

Value chain governance can be framed in familiar terms and mechanisms:

- a. Legislative (setting standards for the chain);
- b. Judicial (monitoring performance in the chain);
- c. Executive (coordinating procedures and flows in the chain).

In successful value chains, all partners experience an authentic sense of fairness and justice:

- a. Distributive justice, where rewards and profits are distributed fairly among all value chain partners;
- b. Procedural justice, where rules of business in the value chain are experienced as fair by all partners.

Value chains make commitments to the welfare of all strategic partners in the chain, including appropriate profit margins, fair wages, and long-term business agreements.

Partners in Japanese value chains express their relationships as "co-existence and co-prosperity:"

- a. Partners have strategic interests in the others' welfare;
- b. Together, they race to the top instead of the bottom.

Strategic partners are rewarded through agreed-upon formulas for adequate profit margins above production and transaction costs, and for adequate returns on investment:

- a. Cost-based pricing in which profit margins of strategic partners are built in from the beginning;
- b. Living wages and supportive workplaces for employees of strategic partners;
- c. Community-supporting business practices, e.g., opportunities for local community investment in value chain businesses

Cost-based pricing requires a high degree of information sharing regarding sensitive economic data:

- a. Sharing economic information can be a challenge for new value chains;
- b. All partners are required to know their true cost structures (production and transaction costs);
- c. Ongoing cost reduction strategies across the chain result in shared benefits.

Successful value chains are built upon long-term strategic partnerships:

- a. Agreements and contracts are for appropriate, extended time periods;
- b. Extended agreements provide confidence for investment in new productive or cost-saving assets;
- c. Legal contracts are often relaxed with development of substantial trust in mature value chains. Strategic relationships are increasingly held together by mutual obligations and opportunities, not legal force.

Additional applications to mid-tier food value chains

Mid-tier food value chains are appropriate for situations in which regionally oriented markets are developing for significant volumes of differentiated, value-adding food products.

1. The combination of significant volume and differentiated food products corresponds to the needs of a growing food service sector of the U.S. economy. Examples include Bon Appétit Management Company <www.bamco.com>, Hot Lips Pizza <www.hotlipspizza.com>, Sysco <www.sysco.com> and Shepherd's Grain <www.shepherdsgrain.com>.
2. Regional supermarket and restaurant chains seeking to distinguish themselves from national chains are also likely candidates for value chain partnerships. Examples include New Seasons Market <www.newseasonsmarket.com>, Burgerville <www.burgerville.com> and Oregon Country Beef <www.oregoncountrybeef.com>.
3. As evidenced by these four case studies, significant opportunities are emerging for farms-, ranches- and fisheries-of-the-middle.

Horizontal collaborations are often required to assemble sufficient volumes of differentiated food products for mid-tier value chains.

1. Multi-lateral collaborations such as co-ops and Limited Liability Corporations (LLCs). Examples include Organic Valley <organicvalley.coop> and Thumb Oilseed Producers <www.thumboilseed.com>.
2. Bi-lateral collaborations such as aggregating firms. Examples include Niman Ranch <www.

nimanranch.com> and Laura's Lean Beef <www.laurasleanbeef.com>.

Appropriate standards and efficient methods of third-party certification are applied throughout the value chain.

1. Standards related to key value chain dimensions (for example, food quality, environmental stewardship, animal welfare, workplace conditions and business ethics);
2. Efficient, computer-based certification systems.

Farmers and ranchers can maintain ownership and control of brand identities on food products throughout the value chain.

1. Development and defense of regionally meaningful identities and brands;
2. National seal to support regional and local brands.

Given historically adversarial business models in traditional U.S. food supply chains, it will likely take time for all strategic partners in new food value chains to become comfortable with alternative business models based on trust and organizational interdependence.

1. Participatory governance structures will be particularly important for food value chains that engage strategic partners of differing size and experience;
2. Non-strategic partners will likely be rare in mid-tier food value chains.

Challenges faced by farmers, ranchers and fishers when constructing mid-tier food value chains

Farmers, ranchers and fishers face several types of challenges in building mid-tier food value chains:

Finding appropriate value-chain partners and developing mechanisms for building trust, transparency and decision-making;

Determining effective strategies for product differentiation, branding and regional identity;

Developing food quality control systems that address weather, seasonality, multiple production

sites and quality-preserving distribution mechanisms;

Determining appropriate strategies for product pricing that are based on understanding true cost structures. Two contrasting strategies are cost-based pricing and paying premiums above commodity market prices;

Building sufficient trust among competing producer groups to form networks of farmers, ranchers and fishers large enough to supply significant and consistent volumes of high-quality, differentiated food products;

Acquiring adequate capitalization and competent management;

Accessing adequate technical, research and development support;

Creating meaningful standards and consistent certification mechanisms across the value chain; and

Developing equal economic power for value chain negotiations.

Appendix B Analytical outlines for five of Shepherd's Grain's value chain partners

Outlines for Archer Daniel Midlands Milling, Bon Appétit Management Company, Hearthbread Bakehouse, Hot Lips Pizza and St. Honoré Bakery are available upon request from author: gwsteven@wisc.edu.

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Organizations involved with this report:

The National Task Force on Renewing an Agriculture of the Middle is concerned with a disappearing sector of mid-scale farms/ranches and related agrifood enterprises that are unable to successfully market bulk commodities or sell food directly to consumers. See www.agofthemiddle.org or contact convening chair Fred Kirschenmann, Iowa State University, 515-294-5588, leopold1@iastate.edu; or administrative chair Steve Stevenson, University of Wisconsin-Madison, 608-262-5202, gwsteven@wisc.edu. The task force has three areas of emphasis:

New business and marketing strategies will seek to create business networks or “value chains” that link farms/ranches-of-the-middle with food system partners to meet a growing demand for differentiated, high-quality food products. Currently operating as the Association of Family Farms.

Public policy changes include those that can be secured in the relatively short term that directly affect middle market development, and more systemic policy changes over an extended period of time that will fully equalize economic environments for farms/ranches-of-the-middle.

Research about and education support from scientists associated with the initiative and land-grant university community on the business and policy strategies, at both the regional and national levels.

The Center for Integrated Agricultural Systems (CIAS) is a research center for sustainable agriculture in the College of Agricultural and Life Sciences, University of Wisconsin-Madison. CIAS fosters multi-disciplinary inquiry and supports a range of research, curriculum and program development projects. It brings together university faculty, farmers, policy makers and others to study relationships between farming practices, farm profitability, the environment and rural vitality. For more information, visit www.cias.wisc.edu or call 608-262-5200.

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