

Boone Brothers' Farms, LLC¹

Warren and Josh Boone are partners in an Idaho potato farm. The Boone's moved to south-western Idaho after selling their California vegetable farm and partnered with a local grower in 1993. The venture proved very successful. The operation was originally 3,500 acres. Since then the operation has grown to 8,000 acres and the brothers have taken it over completely.

The Boone's operation centers on processed potatoes, but they also produce fresh potatoes and a small acreage of seed potatoes (55/40/5 percent, respectively). Their staff of 16 is considered one of the best in the region and quite efficient for the size of the operation. However, the potato industry is changing (see Exhibit 1) and the Boone brothers are facing some major decisions.

Through his association with an industry group, Josh met a potato grower from the Mid-West. Several of their conversations were about the potato industry there, specifically in North Dakota, the 6th largest potato producing state in the US. The basic resources seem to be available – land at a reasonable cost, a lack of urban pressure, water for irrigation given permit applications, and good soils. The major selling point is that the area is closer to the markets of the east. In fact, Josh has come to believe that if there was an opportunity in the industry to expand, North Dakota might be the place.

The alternative is to focus on growing the current operation; the Boones know the market and already have a very firm base from which to grow. The problem is that recent consolidation in the region's potato production has increased the competition for land intensely. Warren has said for quite some time that they need to grow considerably if they want to continue to be on the processor's radar screen, but doing that in their current area would be difficult.

Before making significant decisions the partners usually try to reassess their strategic health. They last did this four years ago. Josh believes it is time to revisit their strategic position: the farm is clearly at a crossroads. Should the Boone brothers expand their business by creating a new operation in an area new to them, or should they stay where they are and focus on their current operation? Ultimately, Warren and Josh know that whichever opportunities they chose, they must take advantage of their strengths and make sound financial decisions for the business.

Farm Background

The Boone brothers were raised on a vegetable operation in California. Warren earned a horticulture degree and Josh an engineering degree from respected universities. Despite their family's roots in California vegetables, Josh and Warren both believed that their move to Idaho was the right choice. The urban pressure surrounding their original farming operation had grown to the point that farming was becoming difficult, and the value of the land for development purposes could no longer be ignored. While their father was not enthusiastic about the move, he had been ready to retire, and the sale of the land provided him with a comfortable retirement. The sale also left the boys enough equity to get a great start in a new area.

¹ Copyright 2003, Purdue University, West Lafayette, Indiana 47907. All rights reserved. This case was prepared as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. It was developed by Cole Ehmke, Allan Gray and Michael Boehlje of Purdue University's Department of Agricultural Economics.

The Boone brother's limited liability partnership owns and leases farm ground primarily southwest of the Magic Valley area. The 8,000-acre farming operation was focused on potato, wheat and corn production in rotation, until recently when the brothers began to experiment with hay production as the number of dairies moving into Idaho increased. The farm uses a three year rotation on potato production and currently produces 2,600 acres of potatoes. Corn, wheat, and hay are the primary rotation crops (about 1,500-2,000 acres on average). Warren, as Chief Operating Officer, and the two farm managers have maintained the operation to this point by using custom farm operators on some of the grain and hay production where necessary. The brothers are hoping to increase this production, particularly for processing potato contracts, but land is increasingly difficult to obtain.

Over the years, Boone Brothers' has been near the top of the region in potato yields – yields average 11 percent higher than the surrounding county averages. Warren attributes their growth to farming efficiently and competitively while following best management practices. This high productivity results in an operation that Josh believes to be financially sound. An abbreviated set of financial statements for the last year are shown in Exhibit 2.

Warren and Josh share managerial responsibilities for the operation fairly equally. Over the last three years Josh has moved into the role of general manager. "It took a couple years for me to get used to it all and really feel comfortable," Josh said. "It was challenging for me – and I grew up on a farm. Now I feel confident in the decision making." He has held primary responsibility for marketing the operation and its products and has worked hard to communicate with neighbors, customers, and even competitors. Warren and Josh both believed their relationships in the community were key to their operation's success in terms of favorable land rental arrangements, access to quality seasonal labor, and reasonable custom rates for their grain production.

Josh also developed a good a working relationship with J.R. Simplot. Because of this relationship, the Boones had been moving their production out of fresh potatoes and into processing potatoes as quickly as Simplot would allow. Local Simplot management told Josh that over the next few years they would like to reduce the number of producers with which they contract, and they would be interested in contracting 85 percent or more of the Boones' production.

Warren focuses on managing the field operations. "Growing potatoes is an art," Warren said. "You need to have an eye for the plants and an eye for diseases. It's always a challenge to produce good quality product and please your customers. In this competitive market, the more you please your customers, the more your customers will please you." Warren supervises two farm managers that direct the operations on two 4,000 acre farm units. He focuses much of his energy on determining proper crop rotations, developing strong relationships with input suppliers, and negotiating with custom operators. Warren also spends a good bit of time scouting the potatoes.

Each of the farm managers has good late model technology and equipment, a full-time crew as well as seasonal help when needed for planting and harvesting. While Warren is actively involved in the crop rotation and input purchasing decisions, both farm managers are generally left with the responsibility of day-to-day operations and management of farm employees (including job descriptions, salaries, raises, and bonuses).

The office staff consists of Josh and Warren as well as an accountant and an office assistant. Josh is primarily responsible for financial analysis but Warren joins Josh once a month to review the financials and discuss problem areas. In addition, any changes in the farm's strategic direction in terms of products, growth, etc. are jointly determined between the brothers. Both had agreed that no major decisions would be made unless both of them agreed on it.

Their vision statement and goals are the following:

Vision/Mission Statement

Boone Brothers strives to be the relationship company of the potato production industry. We are committed to being a leader in the potato industry of tomorrow. Boone Brothers will be known for quality products, dedicated employees, and integrity in business and community relationships.

Goals

1. Sustained profitable growth in sales through enhanced product value, cost control, and asset growth,
2. Return to investors/owners in line with the 10-year average of the stock market,
3. Maintain strong relationships with neighbors and other farmers in the region, and
4. Be considered a leader in the potato production industry.

Buying into the Expansion

Creating operating units outside of the center of operations is not an untested idea in potatoes. A number of producers have moved to locations like Nebraska with some success in the last 10 years. Making a success of potatoes in the Mid-West would require two things: business sense and a contract. Josh and Warren's background, and their balance sheet, shows they had business sense. Preliminary phone conversations with an expanding range of contacts in North Dakota indicate that getting a contract might be difficult.

Having a contract would provide an intermediate level of price risk protection. Boone Brothers would have some confidence in their market security and income stability as well as access to capital. Considering the heavy investment in current crop that the partnership had at the beginning of the year having some certainty about revenues is almost essential to obtain financing. Josh views growing tablestock potatoes as a very risky business since he found less certainty in the market, and would rather have some assurance of what to expect.

An expanding area of processed potato production is in central North Dakota. The potato industry in North Dakota is briefly described in Exhibit 3. A significant number of growers from further north in the Red River Valley have joint ventured with the newest plant, owned by Cavendish Farms, to add irrigation to land and begin producing potatoes. In response neighboring plants expanded capacity. In the seven intervening years the contracting arrangements have started to solidify and today there is not a rapid change in acreage use.

Josh has heard that processing potatoes from the area could be sold to a Simplot fry processing plant on the eastern North Dakota border (Grand Forks). Given that their partnership already contracted with Simplot, Josh wants to explore the idea. Other contractors are a fry processor, Cavendish Farms, in Jamestown and an RDO flaker plant in Grand Forks.

Like many large processors Simplot is trimming its number of contracts and centering its sourcing on a small number of producers. Becoming one of those producers would be difficult. Many growers contract 300 to 400 acres of potatoes. Larger growers in the area produce 3,000 to 3,500 acres. To be seriously considered Josh expects to have to produce about 1,000 acres of potatoes.

Josh's conversations on the Simplot plant leave him optimistic. He'd heard that Simplot was quality conscious and had a strong relationship with retailers. He didn't really expect more than that; processing plants held most of the cards after all. Knowing that a business arrangement with them would be tough but fair was comforting news. Also, having two other potato contractors in the area helped ensure a competitive price.

Fitting into the processor's system would be important, and it would begin by meshing with the company representative in the area. "Working with the processor is a year-round commitment, even when I don't need anything," Josh said. "I want to be in constant contact to head off problems and be the first-in on opportunities." It's possible that Josh's relationship with the local Simplot representative could be leveraged to gain contacts at the North Dakota plant.

While it is unusual for much land to be for sale in the area, a conversation with a Farm Credit Services banker turned up a rare opportunity. The banker mentioned that a large farm would be going out of business very soon. The operation, located in Kidder County, has been well-organized production-wise, but apparently has expanded too rapidly and the owners cannot repay their debt.

Josh has explored the operation with the banker and believes that the 4,000 acre operation, ND Potato, Inc., could be considered a serious acquisition target. The Boone Brothers' want to keep the operation intact – including management. Josh and Warren envision taking over the capital assets of the farm and directing the marketing operations while the current operators stay on to manage the actual production. They absolutely do not want to take on any of the operation's debt.

The banker believes that the current owners will consider selling the entire operation. Josh has set about gathering information on the value of ND Potato.

North Dakota Operations

Josh's banking contact has fairly accurate information on ND Potato, Inc. Therefore, after talking to the banker and canvassing contacts in North Dakota, Josh felt comfortable putting pen to paper and developing some rough estimates of what his bid for the ND Potato operation might look like. The crop rotation has generally consisted of three years alternating potatoes, corn and wheat. Official yields in Kidder County for the last five years have averaged 345 cwt/acre. Josh's banker indicated that ND Potato management had been conscientious about production practices and that potato yields were about 10 percent above average, making yields about 380 cwt/acre.

Josh expects an irrigated quarter section of land (130 acres irrigable land) to run about \$1,200 per acre (including a pivot). Based on this information ND Potato, Inc. probably had \$4.2 million worth of land. The machinery is described as either late model or well maintained if it isn't new. The machinery and buildings are estimated at about \$800,000 – a harvester, a couple of windrowers, a couple tractors, several boxes for trucks plus a number of new shop buildings.

Additionally the farm put in a brand new Hanson Rice 250,000 cwt storage facility just a year ago.

Josh must certainly visit the operation to develop a more complete proposal – but pending an onsite review and interviews his bid is the following:

4,000 acres at \$1,200/acre	= \$4,800,000
Machinery, buildings, storage	= <u>\$1,000,000</u>
Total	= \$5,800,000

For revenue estimation Josh assumed the farm would continue producing potatoes, corn (for grain) and wheat. Price estimations projected for 10 years were developed by reputable university observers. The potato contract price he assumed would have a base of about \$4.55 with quality incentives worth another 50 to 60 cents/cwt.

Josh estimated that one-third of the acreage would be in each of the crops (about 1,300 acres). For potatoes he estimated fixed costs at about \$179 per acre and variable costs at \$1,273 per acre. Fixed expenses for corn and wheat were \$133 and \$109 per acre respectively, while variable expenses for corn and wheat were \$205 and \$12, respectively. Gross revenues were \$315 and \$210 for corn and wheat. These he based on budgets developed by North Dakota State University and his own estimations. He expected expenses and yields to grow at about 2 percent a year. Josh was concerned about the profitability of the farming operation alone so when he thought into the future he resisted adding land appreciation into his assumptions of profitability.

Josh intends to make a presentation of his findings and get feedback from the rest of the management team at the next monthly management meeting. He knows that Warren is lukewarm to the idea of creating a new farm far from the Idaho base of operations. Nevertheless Josh feels their options are limited: either grow incrementally in their current area, or replicate their operation elsewhere. The meeting is going to be full of discussion Josh thought.

Discussion Questions

1. Is the expansion to North Dakota a good strategic fit for Boone Brothers?
2. If the investment is profitable, are Boone Brothers' financially capable of the expansion?
3. Would growth in North Dakota be preferable to growth in Idaho?
4. What additional growth alternatives should Boone Brothers' explore?

Exhibit 1. The US Potato Industry

Processors used 251 million hundredweight (cwt) of potatoes from the 2001 crop, of which 60 percent was frozen (mostly as french fries), 22 percent was chipped, 16 percent was dehydrated, and the remainder canned or used to produce potato starch or flour. About 85 percent of the 2001 crop was used for human consumption with the remainder going for seed (7 percent), livestock feed, on-farm use, and/or for diversion programs (1 percent), or was lost due to shrinkage, spoilage, etc. (7 percent).

The most significant long-term trend over the last 30 to 40 years has been the reduction in fresh product sold and the increase in frozen product. Frozen potato product growth had been driven by the fast food industry, both foreign and domestic. By the 1970s domestic processing capacity couldn't keep up with demand, so Canada and Europe began processing. Today, the US still ranks as the largest producer of frozen french fries in the world, producing an estimated 3.6 million metric tons (mmt) of fries in 2000. The Netherlands ranked second in 2000, producing 1.2 mmt, while Canada was third with 1.1 mmt. Despite the global appeal of french fries they are primarily sold in North America, the EU and Japan.

Domestic demand of potatoes rose from the late 1970s to the mid-1990s, but growth has slowed. Consumer preferences are becoming more sophisticated and more convenience-oriented products are demanded. Additionally, dietary movements toward healthier eating have motivated a search for low-fat alternatives to the ubiquitous side order of french fries at fast food restaurants.

Although the domestic market appears to be maturing, international frozen potato consumption has shown continued growth. Like the North American market, international consumption has centered on the french fry. Much of the growth has come from Pacific Rim countries that are developing a westernized palette and prefer American products as they obtain increased purchasing power. So international growth is available, particularly in markets such as South Korea and Japan. However, foreign competition is from other potato product exporters like the Netherlands and Canada may meet some of this demand.

US processors, or fryers, are limited primarily to three: Simplot, McCain and Lamb Weston (a ConAgra company). Contracts with these firms are limited. The situation is not helped by an overproduction of potatoes. With limited contracts available some farmers grow potatoes for the spot market, which tends to be a volatile price market. Processors are generally shifting to a preference for a small number of large producers.

As big as the processors may be, the retailer is in control – that is to say, the large fast food restaurants. A food service giant will offer a contract to a processor which the processor can either take or leave. If they take it, they end up putting price pressure on the grower, which is essentially the only place that there has been any price flexibility since the processor's highest cost is the potato feedstock.

Processing and production have moved north, with more crop dug in Canada. A few producers from the U.S. have shifted production to western Canada to be near those processors. Other processing trends include joint ventures of large producers with processors. Smaller and medium

sized growers are increasingly unable to produce the amount needed to be considered a preferred provider.

At the retail level fresh potatoes have fallen from 1st to 6th in revenue generated per foot. Research results show that grocery stores believe that the potato is moving toward a value-added convenience product with minimal preparation. With time as a limiting factor in food preparation, potato products are viewed as too time consuming, particularly among such categories as DINKS (dual income, no kids). Retailers are increasingly coordinated with shippers. Consolidation among supermarkets has created buying desks responsible for acquiring a large volume of product. In turn processors have also consolidated with packing sheds responsible for marketing the potatoes needed by supermarkets. Many of these processor-supermarket relationships are long-term associations which present entry barriers for new grower-shippers.

Growers usually sell fresh potatoes on consignment, though this practice has changed drastically in the last 10 years. Larger growers have invested together to run their own packing sheds. The prices are based on Federal/State market news services.

Since the early 1970s, the grower/packer share of retail price for fresh potatoes has declined as the retailer's share has risen. In the 1990s, the grower/packer share of retail prices averaged 20 percent, while the remaining 80 percent went to retailers. During the 1980s, the grower/packer share of retail price averaged 25 percent², down from 29 percent in the 1970s.

² Potatoes, fresh: Retail price, marketing spread, and grower-packer return per pound for sales in the United States, 1980-2001. www.ers.usda.gov/Briefing/Potatoes/Data/MarketSpread.XLS

Exhibit 2. Boone Brothers Financial Statements

Income Statement: Boone Brothers

2002

Revenue	
All crops	\$8,167,438
Expenses	
Operating Expenses	\$5,672,183
Depreciation	\$ 490,042
Interest	\$ 395,868
Total	<u>\$6,558,093</u>
Net Income	<u>\$1,609,345</u>

Balance Sheet: Boone Brothers

12/31/2002

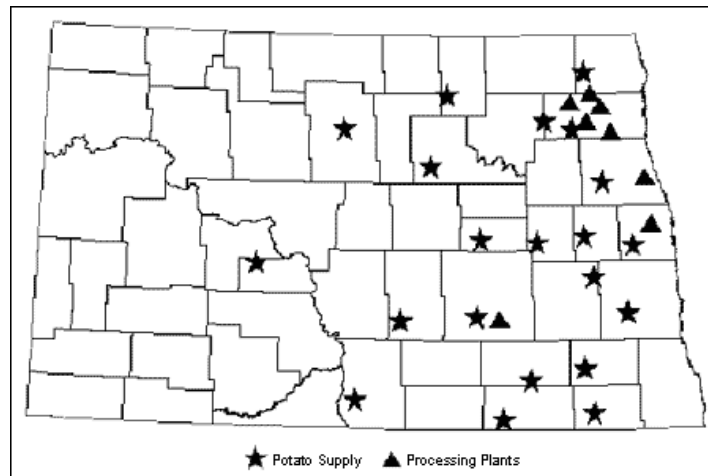
Assets		Liabilities	
Current assets	\$5,500,000	Current liabilities	\$2,300,000
Noncurrent assets	<u>\$19,249,812</u>	Noncurrent liabilities	<u>\$3,355,267</u>
Total farm assets	<u>\$24,749,812</u>	Total farm liabilities	<u>\$5,655,267</u>
		Owner's equity	\$19,094,545

Exhibit 3: Potato Production in North Dakota³

North Dakota potato acreage was 118,000 acres in 2003, unchanged from both 2002 and 2001, according to the North Dakota Agricultural Statistics Service. Nationally, the area planted to fall potatoes was estimated at 1.11 million acres. Russets accounted for 45 percent of the total acreage, up from 44 percent last year. Whites decreased to 33 percent of the total compared to 40 percent in 2002. Reds accounted for 22 percent of the total, up from 16 percent last year.

Historically potato production has focused in the fertile Red River Valley and centered on dryland fresh potatoes. The result of a mammoth glacial lake, the Red River Valley has rich, black soil and was flat and virtually free of stones, with few hills and slopes – making it ideal for consistently producing good potato crops. It could grow a high volume of fresh, chip, process and seed potatoes. Large portions of the potatoes produced in North Dakota are used for processing and are grown under contract.

The marketplace has changed significantly over the last 10 years with expanding production in irrigated processed potatoes and a move toward more production in the center of the state. With the arrival of a large processing plant seven years ago a significant processing industry is now in place. Key areas of supply and demand are presented in the map below.



Potato chips are processed at the source of final demand because chips are bulky and fragile. Potatoes used for chipping and other snacks are transported to urban centers before being processed. Red River Valley potatoes used for chipping usually move toward large eastern markets.

Frozen, dehydrated, and flaked potato products are produced more efficiently closer to the production. North Dakota is home to three potato processing facilities J. R. Simplot, RDO,

³ Much of the discussion of processors comes from “North Dakota Potato Industry” by Mark Berwick.

Cavendish Farms (formerly Aviko) and Western Polymer Corporation, a starch extraction company.

The J.R. Simplot Company is the largest potato processing facility in North Dakota and is a privately held agribusiness corporation. Simplot's food processing division operates a french fry processing plant at Grand Forks, North Dakota. Potatoes for processing are stored at Simplot's facility in Grand Forks and also at producers' warehouses. Simplot operates year round and the majority of their raw potatoes are grown in North Dakota with most of the production being sold out of state. The byproducts are used as livestock feed in various forms throughout North Dakota.

RDO is a dehydration plant also located in Grand Forks. Because of the extreme competition in the flaking industry raw materials must be purchased at the lowest possible price. RDO attempts to buy excess North Dakota and Minnesota potato supply at reduced prices. RDO will only forward contracts with potato producers in years of anticipated strong demand or low supply. The finished product is sold out of state and the potato by-products are used for cattle feed in North Dakota and Minnesota.

In 1995 an unsuccessful attempt to develop a grower owned and operated potato processing plant led to the construction of the privately owned Cavendish Farms potato processing plant in Jamestown, North Dakota. The plant in Jamestown processes potatoes into french fries. Most of Cavendish Farms' contracted potato production is grown within a 100 mile radius of Jamestown. Cavendish Farms strives to contract enough potatoes to operate the plant year round. Harvested potatoes are stored both with producers and at the processing plant with the finished product being transported out of state.

Western Polymer Corporation operates a starch extracting plant in Park River, North Dakota. The process uses potato water taken from potato processors in Grand Forks, North Dakota and Perham, Minnesota. The water is transported in tanker trucks to the Park River plant. Starch is extracted from the water and shipped to Moose Lake, Washington by rail car for further processing.

Estimates of production costs are presented in the following tables.

North Dakota Potato Production Estimates

Gross Revenues	Quantity/Acre	Price/unit	Acres	Total
Potato	380	5.25	1,300	2,593,500
Corn, grain	140	2.25	1,300	409,500
Wheat	60	3.5	1,300	273,000
Total			3,900	3,276,000

Fixed Costs	Cost per Acre	Acres	Total
Potato	179.36	1,300	233,168
Corn	133.43	1,300	173,459
Wheat	109.37	1,300	142,181
Total			548,808

Variable Costs	Quantity/Acre	Acres	Total
Potato	928.23	1,300	1,206,699
Corn	205.4	1,300	267,020
Wheat	124.71	1,300	162,123
Total			1,635,842

Operating Interest	Cost per Acre	Acres	Total
Potato	35.35	1,300	45,955
Corn	9.28	1,300	12,064
Wheat	5.7	1,300	7,410
Total			65,429

Depreciation	Cost per Acre	Acres	Total
Potato	210	1,300	273,000
Corn	155	1,300	201,500
Wheat	128	1,300	166,400
Total			640,900

Total Cash Expenses	Cost per Acre	Acres	Total
Potato	1449.59	1,300	1,884,467
Corn	340.1	1,300	442,130
Wheat	235.3	1,300	305,890
Total			2,632,487

Price and Yield Projections

Year	2002-3	2003-4	2004-5	2005-6	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	2012-13
POTATOES: North Dakota/Minnesota											
Yield	380	387.6	395.4	403.3	411.3	419.6	427.9	436.5	445.2	454.1	463.2
Projected Price	5.31	4.62	4.76	4.92	5.11	5.33	5.38	5.57	5.77	5.84	5.92
WHEAT											
Projected Price	3.725	3.16	3.025	2.99	3	3.06	3.115	3.185	3.26	3.305	3.35
Yield	60	58.8	60.1	61.4	62.8	64.1	65.6	67.0	68.5	70.0	71.5
Government direct	27,581	27,581	27,581	27,581	27,581	27,581	27,581	27,581	27,581	27,581	27,581
Government CCP	-	10,343	18,100	20,111	19,536	16,089	12,929	8,906	4,597	2,011	-
GVT total, wheat	27,581	37,924	45,681	47,692	47,117	43,670	40,509	36,487	32,178	29,592	27,581
CORN											
Projected Price	2.375	2.15	2.1	2.12	2.17	2.2	2.24	2.24	2.275	2.325	2.33
Yield	140	142.8	145.7	148.6	151.5	154.6	157.7	160.8	164.0	167.3	170.7
Government direct	30,940	30,940	30,940	30,940	30,940	30,940	30,940	30,940	30,940	30,940	30,940
Government CCP	-	24,420	31,603	28,730	21,548	17,238	11,492	11,492	6,464	-	-
GVT total, corn	30,940	55,360	62,543	59,670	52,488	48,178	42,432	42,432	37,404	30,940	30,940