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The Development of United Potato Growers Cooperatives

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The Development of United Potato Growers Cooperatives

Joseph F. Guenther

Abstract:

A nation-wide movement in cooperative potato marketing began when Idaho farmers founded United Potato Growers of Idaho (UPGI) in 2004. Potato growers in other states quickly formed similar regional cooperatives and helped develop a national federated cooperative – United Potato Growers of America (UPGA). UPGA's mission was to manage supplies to bring profitable prices to fresh potato growers. Although prices rose to record-high levels they also became more volatile. The development of UPGA was analyzed through the lenses of two cooperative pioneers: Aaron Sapiro and Edwin Nourse. Growers organized UPGA in the model of Sapiro who advocated nation-wide marketing control for all producers of a commodity. Nourse claimed that agricultural cooperatives should instead focus on efficiency. It is likely that Nourse would not have approved of UPGA, while Sapiro would have encouraged them.

Key words: Fresh potatoes, inelastic demand, price volatility, supply control, United

Introduction

Potato growers have become united. After more than a century of local cooperative activity, growers founded a system of nation-wide marketing cooperatives – United Potato Growers of America (UPGA). Since United was founded in 2004, fresh-market potato prices rose to profitable levels for five out of six years. This paper describes United's founding, accomplishments, and future challenges. It also analyzes United through the lenses of two cooperative pioneers – Aaron Sapiro and Edwin Nourse – who each had different opinions about marketing co-ops.

Aaron Sapiro

During the 1920s, California attorney Aaron Sapiro brought new ideas and enthusiasm to the cooperative movement. His cooperative development plans became known as the "Commodity Method" or the "California Plan". Sapiro helped establish several successful fruit marketing cooperatives in California. He was a gifted speaker and relentless organizer whose ideas spread across North America.

According to Sapiro (1923), agricultural production was done by individual farmers, but "*marketing can be done sanely only on a collective basis*

and through organized effort." (p 82). He split cooperatives into two types: (1) producer marketing and (2) consumer buying. The consumer movement, also known as the Rochdale movement, began in England where Sapiro claimed that a lack of natural resources made them a manufacturing and consuming nation. He said that US agricultural cooperative development with the Rochdale model *"has been one of the most egregious blunders committed in agricultural America."* (p 83) Why would Sapiro feel so strongly? Sapiro's California Plan was for cooperatives to organize along commodity lines. The traditional method of organizing in localities had led to cooperatives competing with other cooperatives in the marketplace. Organizational efforts, he said, should be focused on all producers of a commodity rather than only on the local ones.

Some industries, Sapiro said, were not possible to organize. He cited potatoes in California's San Joaquin Delta, where *"they raise an enormous quantity of potatoes, sometimes half of the potatoes raised are controlled by one man, a Japanese."* (Sapiro 1923 p 83) He claimed that the Japanese belief in a feudal system dominated by powerful regional families was a barrier to cooperative development. More than 80 years later, a Japanese-American became the leader of the United potato cooperative movement. Idaho grower Albert Wada was a founder of both United Potato Growers of Idaho (UPGI) and UPGA and served as the first CEO of both cooperatives.

Regarding supply management, Sapiro recognized that marketing cooperatives could control time and place. He referred to these two types of utility as "movable factors" and discussed using storage and routing to manage them to the advantage of grower members. He also advised cooperatives to experiment with packaging, which is the "form" type of economic utility.

Sapiro advocated advertising to expand demand. He cited rapid increases in demand for both California prunes and oranges due to advertising by the California Fruit Growers' Exchange. He said that this was accomplished after previous marketers *"reported that the markets would take no more and that overproduction was the problem."* (Sapiro 1923 p 86) In an analysis of Sapiro's theories, Ginder (1993) said *"It is possible that Sapiro underestimated the capacity for chronic overproduction in storable crops ... and the production controls necessary to eliminate the problem of surplus."* (p 97) Although Sapiro may not have realized the magnitude of the oversupply problem for some commodities, his ideas of expanding demand could help growers avoid the situation of continually shrinking their industry to get higher prices.

Sapiro put contracts at the heart of his model. He advocated long, tight contracts with growers to lock in supply and thereby gain market power. Some contracts between fruit producers and their marketing cooperatives were as long as 15 years. Sapiro also implied that marketing cooperatives could use long-term

contracts with buyers, which would reduce price volatility. Decades later, research by Bruynis et al (2000) found marketing agreements contribute to the success of marketing cooperatives. Sapiro's idea about multi-year contracts fit with another of his ideas – to consolidate sales. The purpose of his model was to control marketing of a particular commodity, which includes centralized sales by the cooperative and no independent sales by individual members.

Ginder's (1993) analysis of Sapiro's ideas also led him to the conclusion that they are more likely to fit specialty crops than the large staple crops. He said that what works for a fruit crop in California does not work as well for a grain crop in the Midwest, which may have been organized for social as well as business reasons. Ginder did recognize the value of Sapiro's ideas regarding a consumer-oriented approach to marketing. He said that new product development could bring premium prices *"in a situation that encourages contract production of 'designer' crop and livestock products."* (p 101).

One of the Sapiro-style cooperatives that has enjoyed a long history of success is Sunkist – a cooperative of California and Arizona citrus growers. In 1907, they began advertising and in 1908, developed the Sunkist label for their top quality oranges. In 1916, Sunkist advertising suggested that people should "drink an orange" to promote their new product – orange juice. While "drink a potato" probably wouldn't work for United, it seems important that they become involved in product development to increase demand for fresh potatoes.

Edwin Nourse

Another powerful voice for cooperatives in the first half of the 20th century, Edwin Nourse (1942) said that a cooperative's objective *"is not to supersede other forms of business, but to see that they are kept truly competitive."* (p 106) He used the terms "pilot plant" and "competitive yardstick" as the place for agricultural cooperatives in US economy. He saw efficiency as the focus of a cooperative's business and thought that both the farmer and the consumer should be well served by agricultural cooperatives.

A contemporary of Sapiro, Nourse described two objectives for the cooperative movement: (1) centralized control of the market and (2) decentralized business activities. He preferred the second objective and did not mince his words regarding the first. Perhaps in response to Sapiro's activities he wrote:

"... the outlook for cooperative marketing after the first of these patterns is extremely bad. Several specific projects ... aiming to ... "control" or "stabilize" the market ... pinning an enormous and naïve faith to promises of vast improvement in prices to be brought about through ... supply manipulation of dubious efficacy..."
(Nourse 1922 p 81)

Nourse said that some agricultural cooperatives should terminate operations once they have set a competitive standard for other businesses to follow. In a critique of this notion, Coffey (1992) asked “*Who is going to take the write-down in assets from terminating operations?*” (p 111). Instead of write-downs, Nourse was more concerned about abuse of power. He said that cooperatives should be like “economic architects” rather than “commercial Napoleons” and that they “*should improve the lot of both the farmer and consumer by improving the efficiency of the economic machine, not by using group force to exact the largest possible return for a special interest.*” Further he stated that “*a democratic monopoly is no better than an autocratic monopoly.*” (Nourse 1942 p 108)

Nourse was quite critical of what he called the “Sapiro Doctrine” with its root function of gaining market power. He said that temporary gains may be costly in the long run. His concern was about farmers losing their independence if the cooperative “controlled production”. He claimed that public outrage would “*eventually kick the props out from under any such artificial economic structure.*” (Nourse 1942 p 109)

Potato Industry Background

Market Channels

The history of the US potato industry is a tale of two markets. Fresh potatoes have been staples in the American diet since the country was founded. Processed potatoes are a relatively recent development. When Idaho potato pioneer J R Simplot began to supply McDonald’s owner Ray Kroc with potatoes in the 1950s, processing grew rapidly along with the quick service restaurant (QSR) industry. The processed share of the US potato market increased from less than 20% in the early 1960s to 68% in 2009 (USDA 2010).

The two markets have different price discovery mechanisms. Fresh potato growers individually negotiate prices with buyers who may be packers, brokers, wholesalers, retailers, or foodservice firms. This pricing method contributes to a wide range of prices due to differences in not only potato quality, but also differences in the skills of buyers and sellers (Kohls and Uhl, 2002).

Potato processors contract about 90% of their raw product needs. In an attempt to gain market power, potato growers use bargaining associations to negotiate contracts. During the mid-1970s, five US bargaining associations served processed potato growers (Phillips, et al 1976). A study in the 1980s found that seven potato bargaining associations negotiated contracts with US processors (Biggs 1985). The typical procedure for contract negotiation consisted of a series of meetings between processors and bargaining associations during the winter for the crop to be planted in the spring. When an agreement

was reached, grower members were free to sign contracts. The contract price did not change until the next year.

The two potato market channels also differ in terms of demand elasticity. Guenther, Levi and Lin (1991) found that demand was elastic for US processed potato products, but fresh potato demand was quite inelastic. Those results were confirmed in other studies in both developed and developing countries (Guenther, 2001). The combination of individually negotiated prices, along with inelastic demand, creates price volatility in the fresh potato market.

For example, the average Idaho fresh potato price was \$3.14 per hundredweight (cwt) for the 1987 crop. The next year it more than doubled to \$7.35, then jumped to \$10.30 in 1989. Two years later the price tumbled to \$2.45 (Figure 1). Meanwhile during those same years, the processing potato price was within a much smaller range from \$3.97 to \$5.60.

History of Potato Cooperatives

To reduce the risks of unprofitable prices in a volatile market, fresh potato growers have been developing local marketing cooperatives for more than a century. The Eastern Shore of Virginia Produce Exchange was one of the earliest (Bomberger 1928; Mercker 1931). The co-op was established in 1900 and regularly exported potatoes to Canada and Cuba. According to Jesness (1925), growers in Michigan and Minnesota also operated successful fresh potato marketing cooperatives in the 1920s.

Goldsborough (1951, p 2), identified four historical periods of potato cooperative activity in the first half of the 20th century:

- (1) slow development of locals (1900-1918)
- (2) rapid development and merger of locals (1919-1924)
- (3) dissolution of many local, state and national co-ops (1925-1930)
- (4) rebuilding and renewal (1931-1950)

Goldsborough's inventory found 114 US potato marketing cooperatives in 1950. He described cooperatives in Michigan, Colorado, Maine, Pennsylvania, Idaho, Virginia, and Florida. Curiously, he found no potato cooperatives in Wisconsin, where cooperative activity was booming for other commodities (Lawless 2002).

Biggs (1970) studied potato marketing cooperatives in Colorado, Idaho and Maine, finding that growers who used the cooperatives received higher prices. He recommended that the co-ops recruit new members, provide services for larger growers, strengthen marketing efforts, consider processing potatoes, and improve member relations. Fifteen years later, Biggs (1985) conducted another

study of potato cooperatives. He found that potato bargaining cooperatives had 3000 members who produced nearly 60 percent of the US processing potato crop. Fresh potato marketing cooperatives handled 8 percent of the country's fresh potatoes.

United Potato Growers Cooperatives

Development

Several times during the 1990s, groups of Idaho growers attempted to develop fresh potato marketing cooperatives. They were successful in that several local cooperatives were born during that period, but not on the large scale that some growers had envisioned. What was missing was the involvement of the state's biggest growers. They chose to remain independent and were not interested in joining a cooperative.

That situation changed in November 2004, when hundreds of growers attended a meeting in Idaho Falls. Growers understood that the following economic forces were affecting their ability to survive financially:

- (1) production costs were increasing
- (2) consumer demand for fresh potatoes was stagnant or declining
- (3) new technology had put potato yields on an upward trend

They also understood they could not simply band together and demand higher prices. They needed to reduce fresh potato supplies. Growers, including large growers, quickly joined the founders and formed a new cooperative – United Potato Growers of Idaho (UPGI). The co-op announced that their members produced 85% of Idaho's fresh potatoes.

Growers in other states soon followed Idaho's lead and formed regional cooperatives in Colorado, the Klamath Basin (Oregon and California), Washington/Oregon, and Wisconsin. Leaders of the regional co-ops got together in March 2005 to develop a national federated cooperative –UPGA. Growers in other regions joined the national co-op movement by forming new entities in Central California, Montana, the Red River Valley (Minnesota and North Dakota), and the Southwest (Northeast Colorado, Kansas, Nebraska, New Mexico, Oklahoma, and Texas). UPGA operates as a federated regional cooperative and currently includes 10 cooperatives. Grower members belong to one of the regional cooperatives.. In 2006 UPGA leaders helped Canadian growers form a sister organization – United Potato Growers of Canada (UPGC). UPGC has a data sharing arrangement with UPGA. United Potato Marketing Association of North America, a bargaining association that represents process growers, has an alliance with UPGA.

UPGI's mission was to manage supplies so that fresh potato prices were profitable to its members. UPGI used several supply management tools to accomplish its objective. The first program was aimed at removing excess supplies from the 2004 potato crop in storage during the spring and summer of 2005. Using a combination of potato donations to charities and a USDA procurement contract, UPGI removed about 8% of stored-potato stocks.

The second program focused on 2005 plantings. Using 2004 as the base year, UPGI founders voluntarily agreed to reduce plantings 15%. Individual growers submitted bids regarding the compensation at which they would reduce plantings. UPGI accepted the best bids and paid growers with funds from UPGA. Overall Idaho potato plantings declined 8.5% from 2004 to 2005. Due to lower yields production decreased 10.4%.

In subsequent years, United used a planting target program. With 2003-2004 cropping histories as a base, growers were rewarded or penalized for going off target with their plantings. For example, growers who reduced plantings by the recommended 15% did not have to pay the \$50 per acre membership assessment. Those who reduced plantings less than 15% paid a pro-rated share of the \$50/acre assessment. Growers who increased plantings paid a \$100 per acre fee on all acres planted, including the base. Idaho plantings ranged from 325,000 to 350,000 acres for the 2005-2007 crops, down from 415,000 acres in 2000.

UPGI also used market flow and market information tools. In January 2006, UPGI implemented a program to coordinate the flow of fresh potatoes and reduce the price volatility inherent in uncoordinated marketing. Shippers were provided target prices and quantities on UPGI's websites. Weekly conference calls at state and national levels helped disseminate market intelligence and establish price/quantity targets. These tools were in line with those recommended by Hinman and Ricks (1992) for supply management in the fresh cherry industry.

Impacts on Grower Prices

Fresh potato prices had followed a six-year cyclical pattern since the 1980s (Figure 1). Between spikes in 1983, 1989, 1995, and 2001, Idaho fresh potato prices dropped to break-even or money-losing prices. Growers had become accustomed to market risks and understood that profitable years would be infrequent but would carry them through difficult years. Grower tolerance for this price pattern waned, leading to the development of the United cooperatives.

UPGI's programs helped increase fresh potato prices. From the beginning of the harvest for the 2005 crop to the end of the storage season for the 2007 crop, the Idaho monthly-average price ranged from \$5.80 to \$9.00. This price range was relatively stable and profitable. For those three crops, production costs for

typical Eastern Idaho growers ranged from \$4.79 per cwt in 2005 (Patterson, Bohl, and Smathers 2005) to \$5.67 in 2007 (Patterson 2007)

Kalamani, et al (2008) studied Idaho fresh potato prices before and after UPGI began its supply control programs. They found that both grower and shipper prices were more stable when UPGI was in the market. Thompson (2009) confirmed that prices became more stable. Another study (Bolotova et al 2008) showed that United contributed not only to stable prices but also higher prices. US and Idaho growers enjoyed profitable, stable prices for three consecutive crop years. That was unprecedented in the US fresh-potato market.

The 2008 crop brought more excitement as Idaho growers reduced plantings by 13%. Idaho fresh potato prices reached a record-high \$19.00 per cwt average for early-harvested varieties in August 2008. Some individual growers sold for prices that exceeded \$20.00. Prices then dropped sharply in October when growers began to harvest the main crop with its record high yields. By the end of the marketing season in the summer of 2009, prices had fallen below \$6.00 per cwt. Production and storage costs were estimated at \$7.61 per cwt (Patterson 2009a).

In spite of UPGI guidelines, Idaho growers increased plantings 5% in 2009. Yields set another record and production went up 13%. Growers were optimistic in August 2009 when prices reached \$8.00 per cwt. When the main potato harvest began in October, prices plummeted to \$4.90. The downward trend continued, and by March 2010, average prices were \$2.90. Some growers with poor quality sold for prices under \$1.00 per cwt and others dumped poor-quality lots they could not sell at any price. Financial losses were huge.

The pattern of stable, profitable prices was broken. Prices for the 2008 and 2009 crops were extremely volatile. In an 18-month period, the average Idaho price ranged from a high of \$19.00 in August 2008 to \$2.90 in March 2010 (Figure 2). That 18-month price range of \$16.10 was the largest in the history of the Idaho potato industry.

During the fall of 2009, UPGI conducted its annual membership drive and announced that they met their goal of controlling 80% of Idaho production. At the annual fall meeting, UPGI discussed its main objectives of managing plantings as well as collecting and analyzing data. During this turbulent time of declining prices, UPGA's CEO resigned.

UPGI's and UPGA's officers and members understood that prices became unprofitable because too many potatoes were produced. Both UPGI and UPGA agreed on recommended planting guidelines for 2010. They encouraged growers to plant 70-75% of their 2004 base acreage. In terms of plantings, this reduction would be a large shrinkage of the fresh potato industry. Increasing yields mean

that that fewer acres are needed, but reduced demand for fresh potatoes was also part of the problem.

The impact of declining demand became clear when the 2010 crop was harvested. Idaho growers had reduced plantings 8% and US growers cut back 5%. Due to lower yields, production was down 8% in the US and down 14% in Idaho. Despite a crop that was the smallest since 1989, Idaho growers received an average price of \$6.60 at harvest October 2010, below the production cost of \$6.95 estimated by Patterson (2009b).

United Challenges

UPGA's members faced the question: what do we do after three years of success followed by disastrously low prices in face of declining demand? UPGA leaders will need to respond to changing economic conditions and challenges, including the following.

Demand

Shrinking plantings by the 2010 UPGA recommendation of 25-30% would have brought back higher prices, but continual reductions in supply shrink the industry. To prevent that, demand for fresh potatoes needs to expand. Growers contribute check-off funds to the US Potato Board whose mission is to expand potato demand. Idaho growers also fund advertising and promotion efforts of the Idaho Potato Commission. In the future, UPGA might focus some of its resources on demand expansion in cooperation with these existing entities.

Consumers consider convenience when they purchase potato products. In the foodservice sector, processed fries and chips fit into convenient away-from-home meals. Although a few QSRs have baked potato bars, most do not serve fresh potato products. In retail markets, fresh potato displays have changed little for decades. Supermarkets use bulk and bagged displays sorted by skin color but not by variety like apples. Meanwhile, other fresh produce industries have brought convenient products to market. Peeled baby carrots and bagged salads are two examples. Recently-developed potato products with breathable film packaging for convenient microwave cooking could help boost demand.

Supply

Farmers respond to prices when they decide what to plant. Although Guenther (1992) found that potato supply was inelastic in all US production areas, when prices increase, growers will plant more potatoes. UPGA tried to control potato plantings, but some critics claim that the supply adjustments would have occurred without the cooperative. The cyclical pattern would likely have continued without UPGA, but three consecutive years of profitable prices would have been unlikely. After these three years, the pent-up incentive to plant more appeared in

2008. UPGA could not control the normal economic supply response among non-members, former members, and even some current members.

Prices

Complete control of the fresh potato supply is not possible. Since UPGA membership is voluntary, non-members are free to produce potatoes without following UPGA guidelines. An incentive exists to operate opposite the UPGA recommendations and increase plantings when UPGA members are cutting back. Even within the realm of members' production, uncertainties exist about yields, packouts, and storage shrink. Since fresh potato demand is inelastic, small changes in supply will continue to cause large changes in prices. Perhaps United's biggest challenge is the small margin of supply-management error that can separate profitable from unprofitable crops.

Discussion

Idaho growers organized UPGI in the Sapiro model. They sought to manage the supply of fresh Idaho potatoes, a branded product for which consumers paid price premiums. Realizing that other potatoes were close substitutes for Idaho potatoes, they expanded their cooperative movement to the national level forming UPGA, again along the lines of Sapiro's model.

If he were alive today, Sapiro likely would have supported UPGA's mission. His ideas of marketing cooperatives are consistent with the efforts of UPGI and UPGA. Most UPGA growers did indeed want to affect prices. As reflected in their mission statements, the cooperatives wanted prices to be profitable and stable. Some probably wanted the "vast improvement in prices" that Nourse wrote about. They got them in August 2008 when Idaho fresh potato prices set a new record -- \$19.00 per cwt.

UPGA could not maintain the high prices. Nourse got to the heart of the matter when he wrote about "*supply manipulation of dubious efficacy*". UPGA used several supply management tools to keep fresh potato prices at profitable levels for three consecutive crops. Then the volatility returned, and prices went from record highs to disastrous lows in a short time. The supply management problem was exacerbated by the inelastic demand for fresh potatoes. Perhaps UPGA supply management can be effective in the short run, but in the long-run, it will face continual efficacy challenges.

Seeing what advice Nourse would have for the UPGI and UPGA potato cooperatives if he were alive today is difficult. He claimed that the proper economic role of farmers and ranchers is to raise crops and livestock. Nourse said that the only reasons to venture beyond that are when "*that service is inadequate or unduly high in cost*". (Nourse 1942 p 106). Since the purpose of the

development of the UPGI and UPGA co-ops was to manage supply, rather than enhance efficiency, Nourse may not have approved of their existence.

It seems that according to Nourse, both he and the general public would have been against United's efforts to manage supply. Perhaps he would have supported UPGI owning and operating some fresh potato packing facilities to serve as a competitive yardstick. If so, he might have advocated UPGI liquidating them after they had established a competitive standard. Under Nourse's guidance, United's mission of price enhancement would have been difficult.

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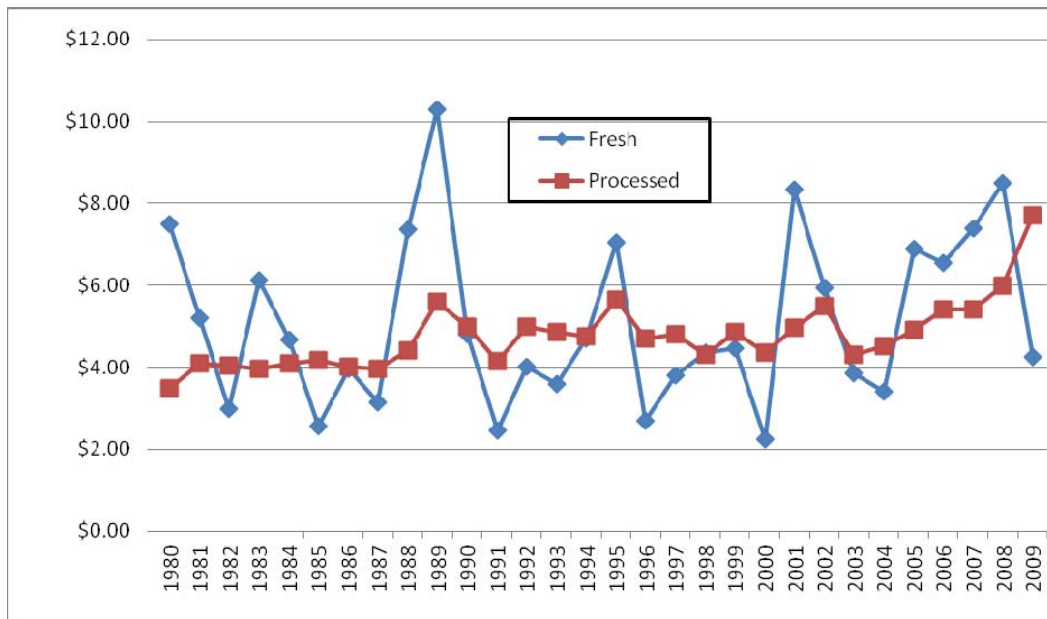


Figure 1. Idaho fresh and processing potato prices, grower-level, annual crop-year averages, 1980-2009.

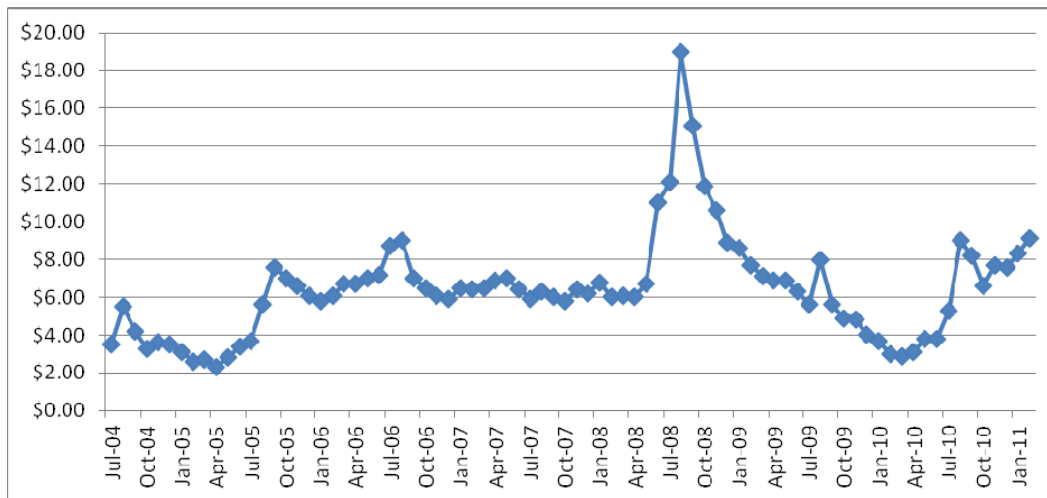


Figure 2. Idaho fresh potato prices, grower-level, monthly average, July 2004 – October 2010.