

Sweet Potatoes Provide Economic Opportunities for a Community (Case Study)

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Sweet Potatoes are an herbaceous perennial vine that has an edible long tuberous root. Their smooth root range in colors from red, purple, brown to white, while the flesh ranges in color from white, yellow, orange to purple. They are native to the tropic Americas and where domesticated there around 5000 years ago. They are throughout the tropical and warm temperate regions where ever there is sufficient water to support their growth.

World wide production o sweet potatoes are over 140,000,000 million tons per year. In the United States, North Carolina is the leading producer. Also Mississippi, Louisiana and Arkansas have substantial sweet potato production. Studies have indicated sweet potatoes raised in Arkansas seem to have a higher sugar value and better color. Currently over 80 percent of all sweet potato production comes from China. China produces over 100 varieties. Sweet Potatoes are generally planted in May and harvested in September. Sweet Potatoes have an average growing period of 135 days.

Sweet Potatoes rank number one in nutrition. In a recent study, the Center for Science in the Public Interest (CSPI) ranked the sweet potato number one of all vegetables. With a score of 184, sweet potatoes outscored the next-highest vegetable by nearly 100 points. CSPI nutritionists recommended choosing foods that are near the top of the chat and eating less of the foods that have negative values or near the bottom. A varied die, composed mainly of grain products and fresh vegetables and fruits are the best. According to CSPI nutritionists, the single most important dietary change for most people would be to replace fatty foods with foods rich in complex carbohydrates such as sweet potatoes. Below is a chat that outlines the nutrition of several foods.

The higher the score, the more nutritious the food

SWEET Potato Baked	184
Potato Baked	83
Spinach	76
Kale	55
Mixed Vegetables	52
Broccoli	52
Winter Squash Baked	44
Brussels Sprouts	37
Cabbage Raw	34
Green Peas	33
Carrot	30
Okra	30
Corn on the Cob	27
Tomato	27
Green Pepper	26
Cauliflower	25
Artichoke	24
Romaine Lettuce	24

Sweet potatoes are rich in antioxidants and minerals. They grow well in sandy loam soil. They are very popular in developing countries as human and livestock food. They are particularly well-suited to southern United States.

The next chart indicated the 2004 production of sweet potatoes by country.

<u>Rank</u>	<u>Country</u>	<u>Production (Metric Tons)</u>
1	China	107,176,100
2	Uganda	2,650,000
3	Nigeria	2,516,000
4	Indonesia	1,840,248
5	Viet Nam	1,550,000
6	Japan	1,050,000
7	Tanzania, United Rep of	970,000
8	India	900,000
9	Rwanda	885,648
10	Burundi	834,394
11	United States of America	698,000

Sources: **USDA National Agricultural Statistics Service and UN Food and Agricultural Organization**

According to USDA surveys, Arkansas is the fastest growing U.S. sweet potato producer. The following chart outlines the growth in sweet potato production.

China	10.41 Percent
U.S	14.75 Percent
Arkansas	726.83 Percent

In spite of its fast growth in sweet potato production, Arkansas lags behind:

North Carolina	1
California	2
Louisiana	3
Mississippi	4
Florida	5
Alabama	6
Texas	7

Source: USDA National Agriculture Statistics Service

One of the most impoverished areas in the United States, the Arkansas Delta region is a prime sweet potato potential growing area. The U.S. Department of Agriculture Federal-State Marketing Improvement Program awarded \$285,000 plus in grants to the Arkansas State Plan Board from 2000 to 2005 to help mostly minority farmers market their produce. A 1.9 million sweet potato storage facility in Helena-West Helena was completed in 2007. The received a \$500,000 grant from the U.S. Department of Commerce. This curing and storage facility was designed to accommodate 120,000 bushels of sweet potatoes for up to 12 months and can be expanded to accommodate 300,000 bushels. The first expansion of the facility was completed in 2009. This facility is temperature controlled and must be carefully monitored. It is expensive to store and cure the sweet potatoes.

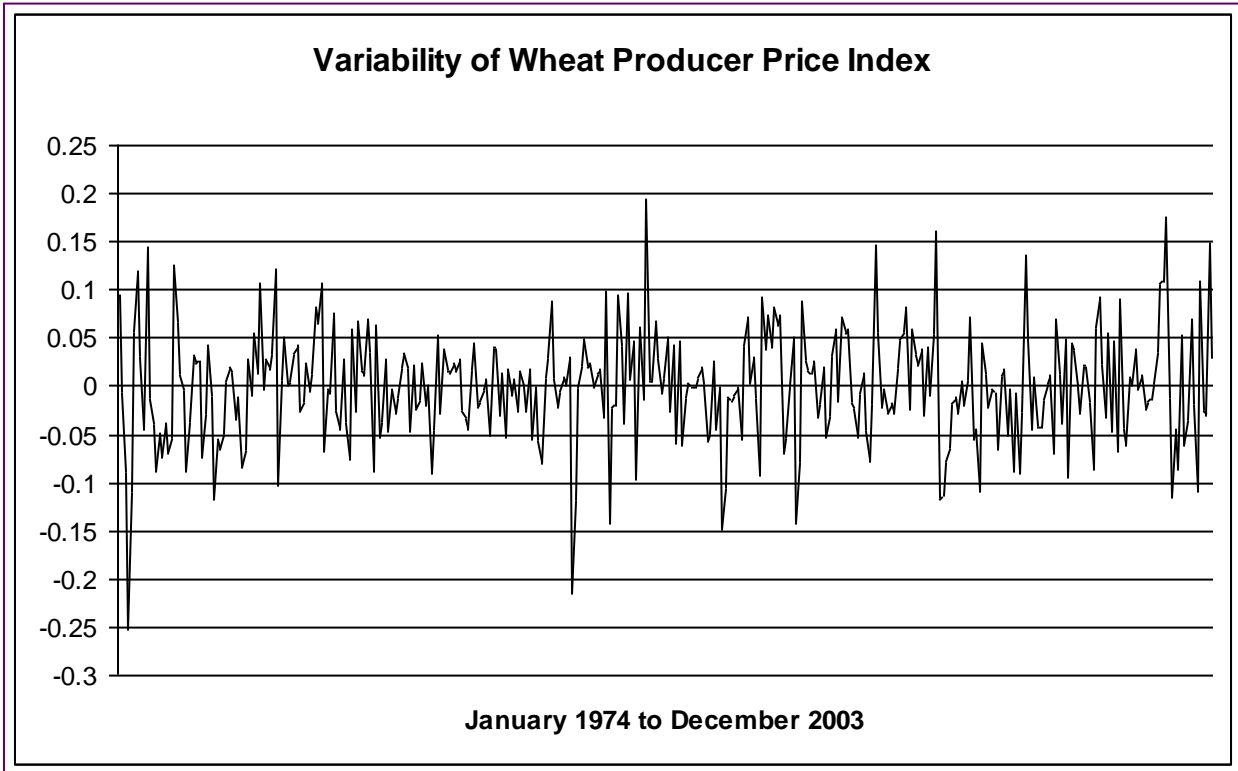
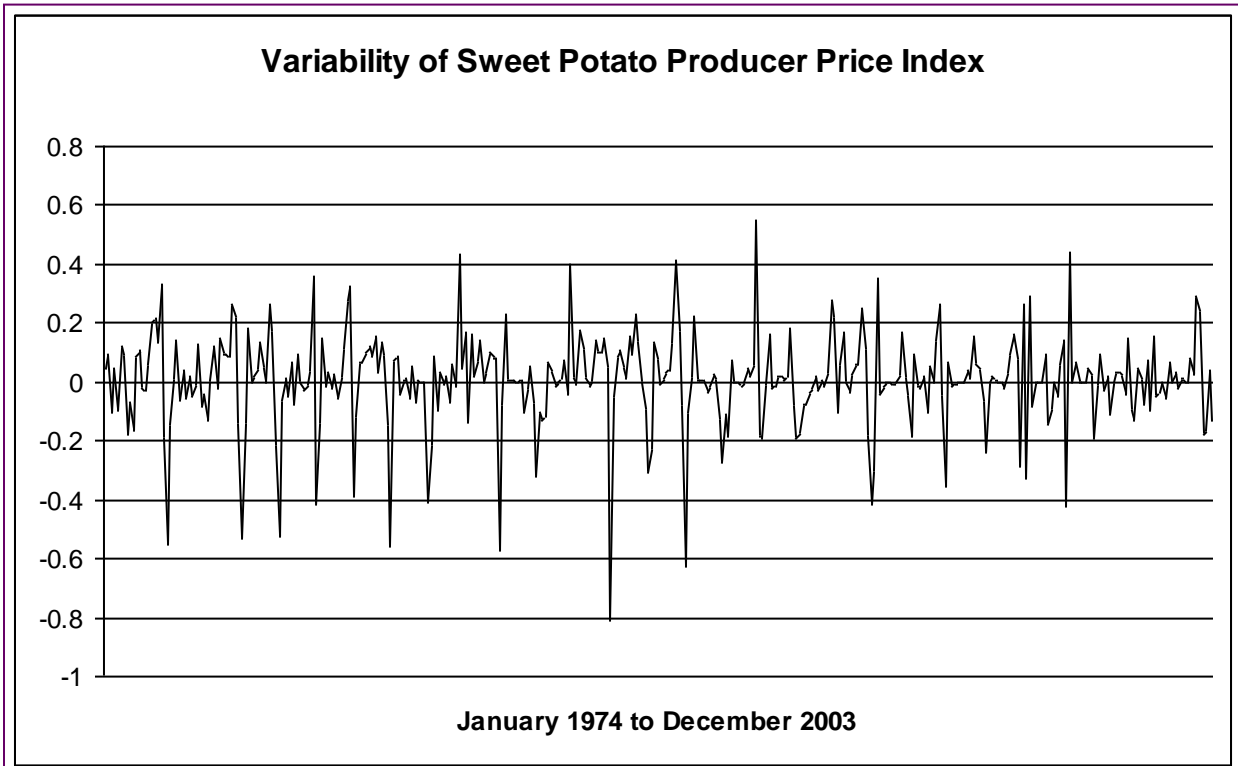
Working capital for Arkansas Delta Marketing LLC is provided by Southern Bankcorp, a non-profit financing company.

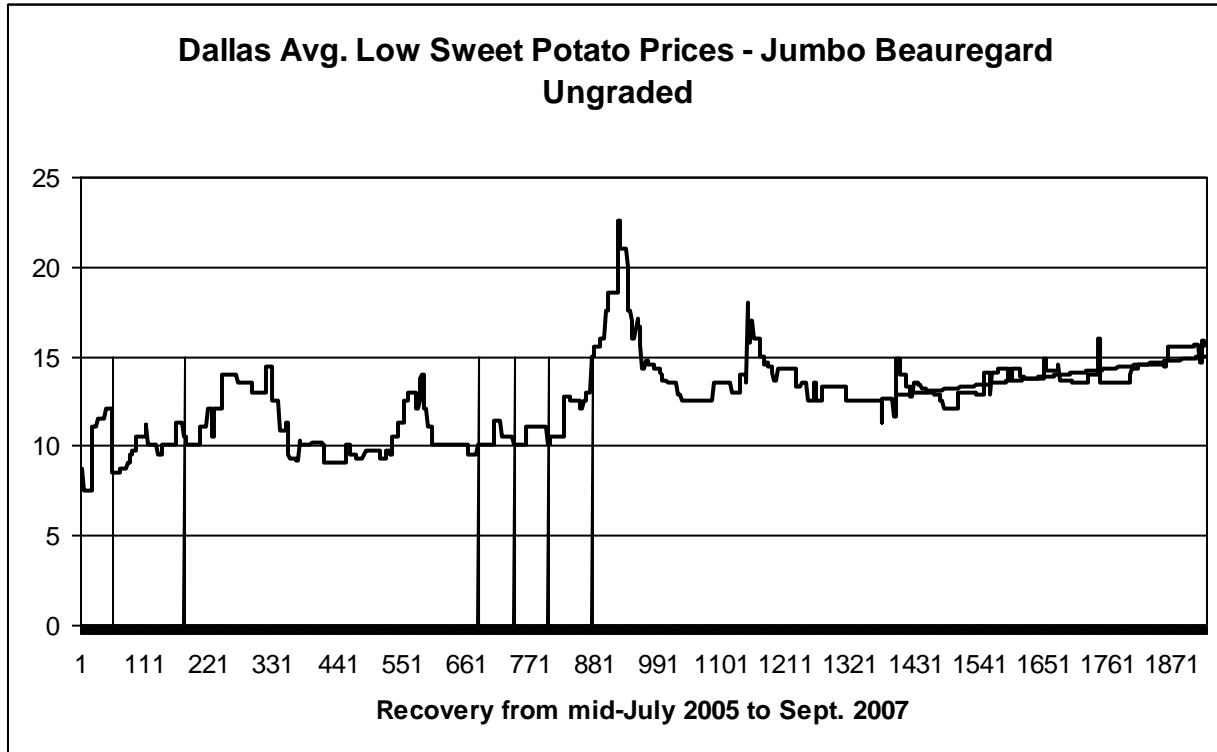
Three end-retailers of sweet potato producers have agreed to purchase the produce from Arkansas Delta Marketing LLC. These are Gerber Foods for its Fort Smith baby food plant, Glory Foods for its Dallas soul food plant, and Bright Harvest for its Clarksville frozen food productions plant. Winrock International has provided negotiation services in helping farmers with marketing agreements for their products.

The primary purpose of storage is to reduce price volatility. This function is filled by futures markets in commodities such as wheat, corn and oats. No future market exists in sweet potatoes. Some of the issues are low volume and extremely seasonal production.

Sweet Potato processors are seeing a strong demand for the product. From sweet potato fries, to mashed in a ready to steam bag, ready to bake or microwave, demand seems to be going up. Also, companies are using t sweet potatoes in frozen dinners like Healthy Choice. Also, the nutrition value is being recognized.

Farmers will receive approximately 20cents per pound for #1 sweet potato and 5 cents per pound net for their imperfect potatoes.





The following chart outlines Sweet Potato Price Volatility

December 1988-September 2007	19.58 Percent
December 1998-mid August 2003	23.58 Percent
Mid-August 2003-September 2007	14.97 Percent

Dallas Fresh Market

Recently the storage/curing facility operations were taken over by a company that is a major sweet potato processor. This will bring additional expertise to the operations. This operation is providing an economic opportunity for many farmers, and jobs in the community.

Questions

1. What are some ideas you have that could be used to help the farmers improve the price of the sweet potatoes they are selling, especially, the imperfect sweet potatoes?
2. It would seem that the price of sweet potatoes would increase in October through December for the Thanksgiving and Christmas seasons. Do you see this in the numbers? Also, if so, what could you do to help the farmers with this, and if not, why would you not see this trend?
3. Is volatility a function of more stable end-user demand (baby food, soul food, health food processors)?
4. If Arkansas sweet potato farmers consider selling outside Arkansas, what considerations must they evaluate?
5. Should farmers just sell raw sweet potatoes versus placing them in the curing facility?