

THE MARKET AND POTENTIAL DEMAND FOR BLUEBERRIES

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Folks in the southeast who grow blueberries face the same market that nearly two million other farmers deal with – the U.S. consumer.

These consumers are a lucky bunch – as less than 11% of our national disposable income is spent on food – and this food is of the highest quality and lowest cost of any country. And these consumers (us included) are a fickle bunch. We buy food more frequently than most any item and are quick to recognize, and to complain, of food price increases. While we commit to monthly payments (for rent, mortgage, a car or household appliances), we view these items as infrequent purchases -- fixed costs – with little that can be done to change them.

We market our commodities in a typical grocery store that has nearly 26,000 other items on the shelf. In our competition for the consumer's food dollar, we see about 35-cents being spent for all meat (including poultry), 24-cents for fruits and vegetables, 14-cents for all grain products and 13-cents for all dairy products.

In recent years, food price increases have been small due to: 1) the low inflation rate, 2) more of the food dollar going to food eaten away from home, 3) the continued decline in the farm value share of the retail price of most food items, and 4) increasing economies of scale in the farm sector. This is in contrast to the wild food price fluctuations of the 1970's of almost 15% annually – which were due to high energy prices, a high general inflation rate and reduced supplies of domestic produced corn and wheat.

What Determines The Market for Blueberries ?

Economists define a market as a place where transfer of ownership of goods takes place at prices agreed to by both a buyer and a seller. In our discussion here, we are concerned that the price of blueberries will be greater than production costs -- enough to provide the grower a profit that is competitive with other uses of their resources. We will be discussing cultivated blueberries, primarily highbush and rabbiteye berries, for berries grown in Maine are sold primarily for processing. Cultivated berries are sold as fresh market or processed.

Costs of producing blueberries is evasive due to varying cultural practices, irrigation, type of harvest, and yield – a higher yield usually lowering the production costs per pound. The most recent blueberry budget we've seen is 3-4 years old, and indicates the crop is capital intensive when compared to traditional field crops.

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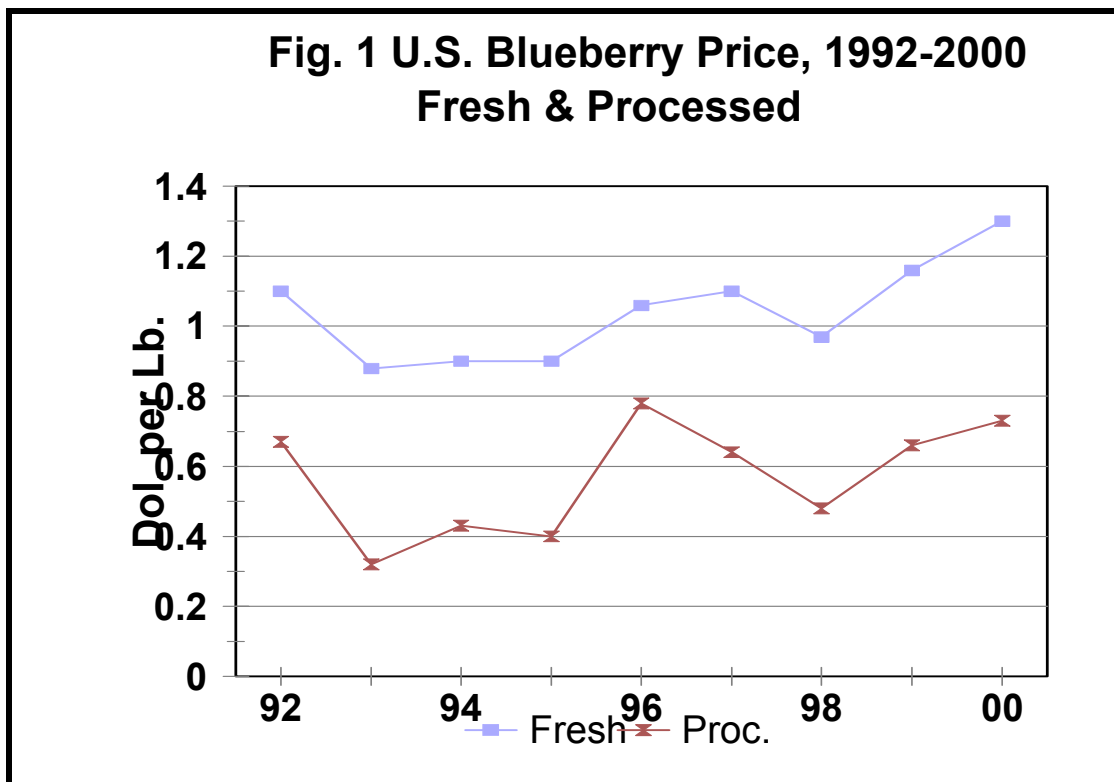
Establishment costs are estimated to be in excess of \$2,000 per acre; and irrigation costs investment (drip) in excess of \$1,000 per acre. These change frequently due to the ever-changing technology of production. These estimates also indicate the production costs per pound to be in the \$0.75 - \$0.85 range. So any profit mandates the sale prices be greater than these production costs.

Looking at figure 1, we see the U.S. annual average price of fresh blueberries in recent years to be greater than our estimated production cost. But the average price of processed berries is generally less than the estimated production price. But both prices cover the cost prior to harvest, and as harvest cost varies by type of harvest and by type of market disposal, it is likely that (for the total crop) we are covering our costs in most years. But, by how much?

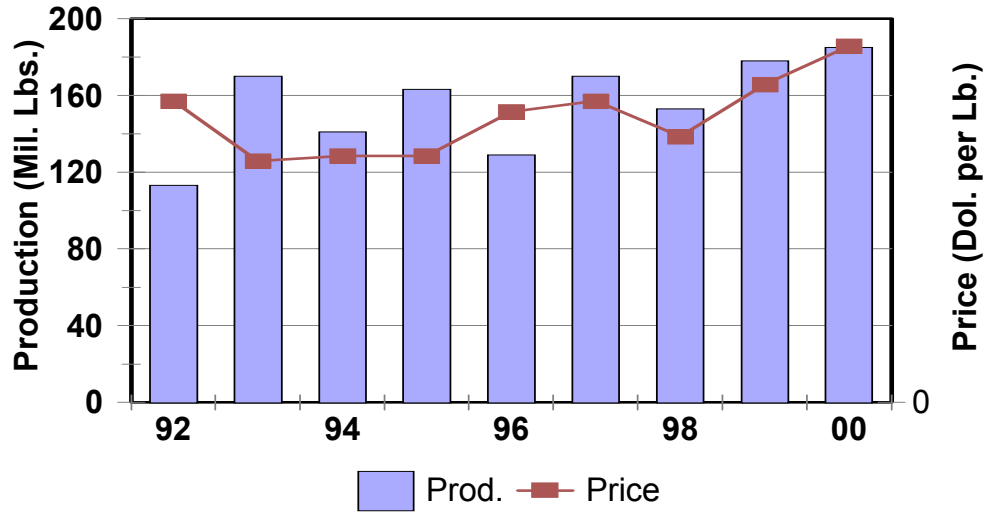
It is interesting to note, that figure 2 indicates blueberry production is generally increasing over time, and the average price received per pound does not necessarily vary with annual production. Production has increased the past three years as has the average price per pound. Does this mean that the demand for blueberries is increasing? For we are told that the price for a commodity is supposed to decline when the production is increased, UNLESS, the demand for that commodity increases, which, then, makes the price received, go up.

Given, this relationship, let's look at :

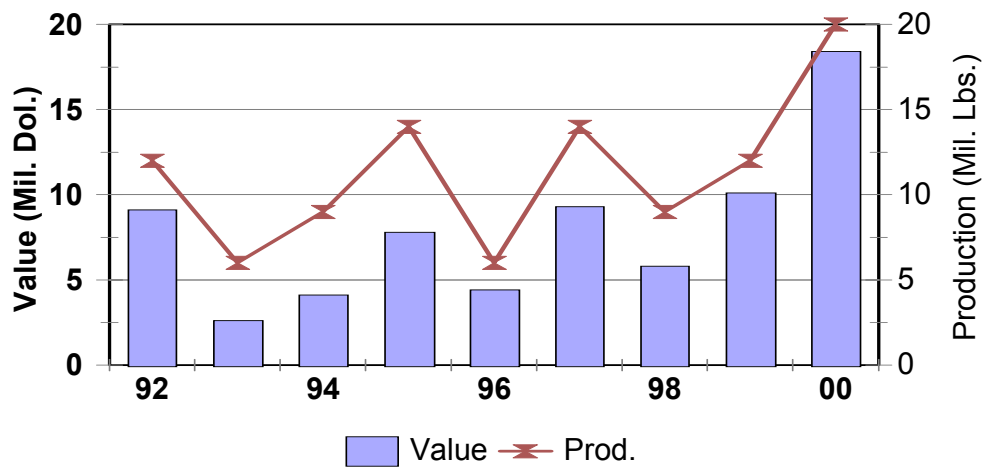
The Blueberry Industry in the U.S. and in Georgia



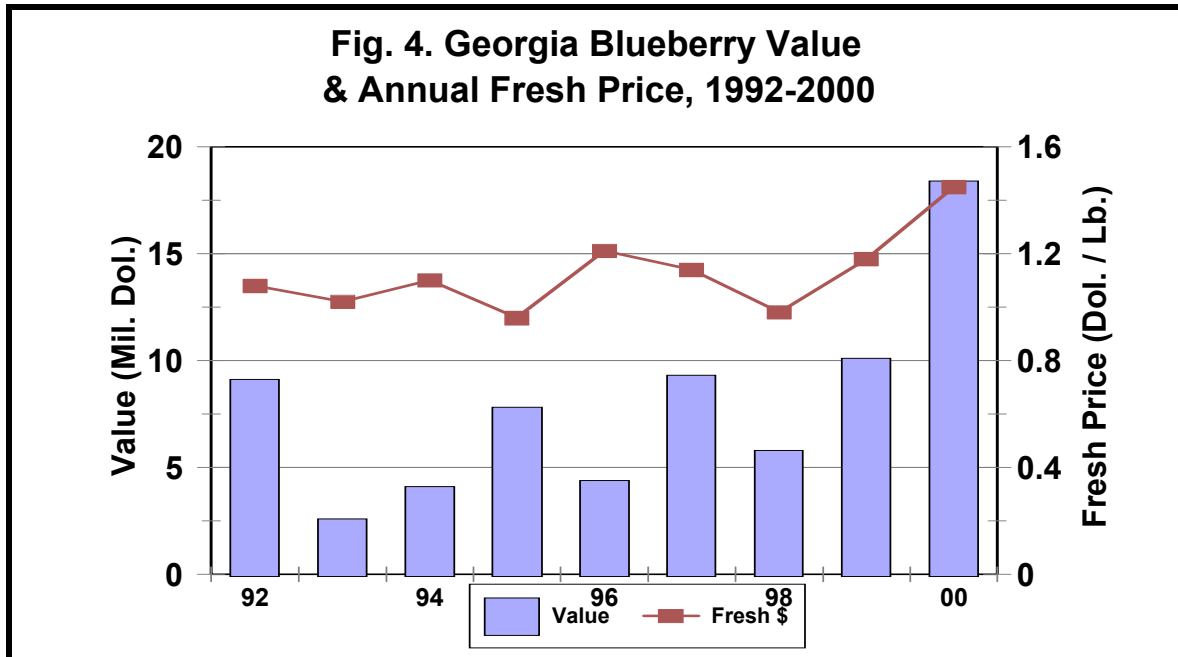
**Fig. 2. U.S. Blueberry Production
Annual Price per Pound, 1992-2000**



**Fig. 3 Georgia Blueberry Value
& Annual Production, 1992-2000**



Information in figure 3 tells us blueberry production in Georgia has fluctuated since 1992, and that the total value of the crop has been more a function of total blueberry production in the state than the price received. The value of blueberry production in Georgia in 1999 and 2000 reached high values, which was brought about by both high output and strong prices (figure 4).



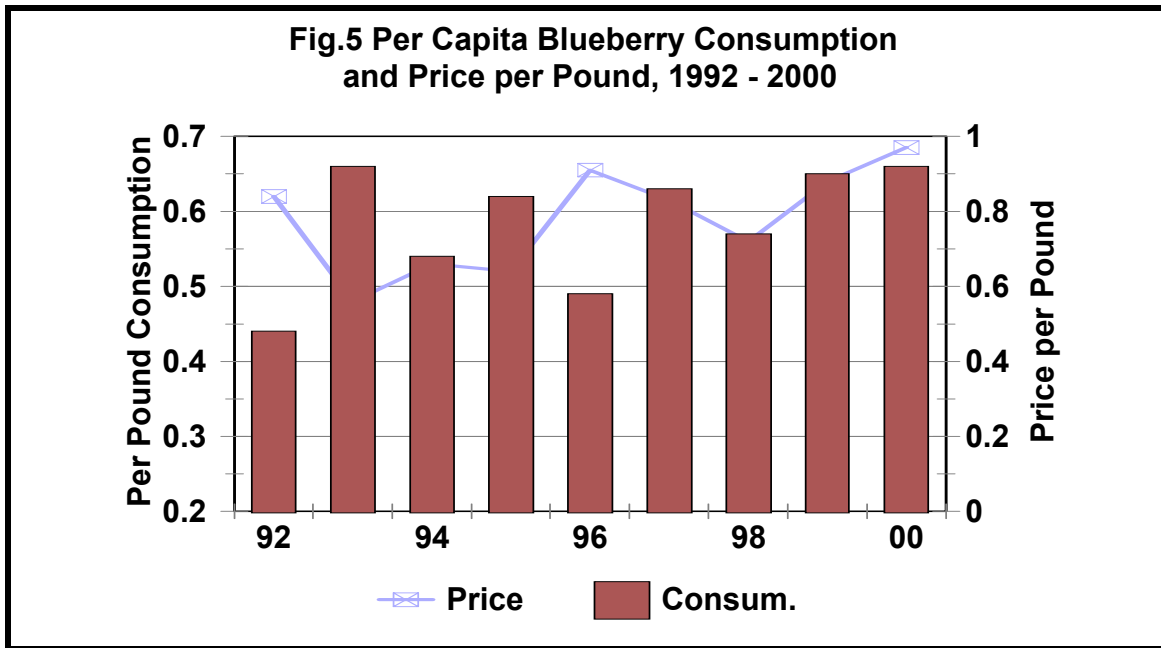
About 1/3 of Georgia's production has been sold as fresh market since 1992 except for 1998 and 1999 when about 1/2 was fresh market. About 1/2 of the U.S. production has historically been fresh market. Both the annual fresh market price and processing price in Georgia generally follows the same pattern as U.S. market (the U.S. market prices shown in figure 1). But the Georgia market has shown to be a bit higher than national prices.

What is the Future Demand for Blueberries ?

Can We Sell More if we Produce Them?

At this point we are trying to define the market – in economic terms – and before we go further let me say I'll try not to be like the economist former President Truman described:

"An economist is one who has a watch chain with a Phi Beta Kappa key on one end and nothing on the other end. I want a one-arm economist for most of those around me say 'On one hand...., and on the other hand'". From: The Wit and Wisdom of Harry Truman.



Currently we consume all of our blueberries in some form. In 1999 and 2000 our consumption of domestic blueberries was .65 lbs. per capita. Total consumption was a bit more (about .10 lb.) – due to imported berries during seasons we don’t produce them domestically.

Total U.S. production in 2000 was an estimated 185.3 million pounds (fig. 2), with 42% (78 mil. lbs.) sold as fresh market and the remainder for processing. Georgia produced a total of 20 mil. lbs. (fig. 3) that year (a record) with 6.4 mil. lbs. sold as fresh market and the remainder as processed. The fresh market berries in Georgia averaged \$1.45 per lb. in 2000 and processing berries averaged \$0.97 per lb. These were the highest prices reported in Georgia since NASS began keeping records on blueberry production in the state.

If our per capita consumption could be raised by .35 lbs. (to 1.0 lbs. per capita), we could theoretically produce, and sell, 285 mil. lbs. But at what price?

Georgia is an island in the blueberry production scheme. Currently we produce about 11% of national output. Michigan and New Jersey are the big players in this industry, producing about ½ the national output. North Carolina is a major producer. So, in effect, we in Georgia are interested in how our production can fit into the marketing “window” between Florida berries and those from North Carolina and further north.

Selling more of a food product involves innovative marketing strategies – for if consumers are spending a given amount on food, and we want to sell more of our commodity, then we have to make the consumer realize our product is either: 1) better for us, 2) it tastes better, 3) is more fun to eat, or 4) some combination of these factors.

Today's retail food market is an extremely competitive market. More and more food processors are becoming vertically integrated with the production phase so they can offer a more consistent final product that has consumer appeal. And, vertical integration gives the processor more control over the production of the raw commodity to better suit the needs of the market. It lets them control quality, quantity and time of delivery. Most of the new food products coming on the market today involve value added to the basic commodities.

It won't be easy gaining this market. But given the current economic status of most major row crops in the state, searching for alternative crops is becoming more common place for farmers. Most row crop producers are surviving today due to government payments. We are told that about 40% of the current profits of U.S. agriculture is due to government payments. And we are all too familiar with the cash flow problems livestock producers experienced 2-3 years ago.

In effect, our aggregate production of food is more than we can consume at profitable prices. Once the human stomach gets full, it has little demand for any more food, and any excess food is hard to give away, thus lowering its value. . We have heard farm commodities described in this term: "*A surplus is worthless and a shortage is priceless*".

Today's supermarket produce departments carry over 400 items— up from 250 in the late 1980's and 150 in the mid-1970's. Total per capita use of the 129 commercially produced fruits and vegetables for which ERS has U.S. data rose from 573 lbs. in 1970 to 711 lbs. in 1997. (Grapefruit, apples and oranges add weight in a hurry). Per capita fruit consumption in 2000 was 298 lbs., and of this, 132 lbs. were fresh fruit and 19.6 lbs. were dried fruit. Most of the rest was in fruit juices.

Most of this increase occurred after the U.S. National Academy of Sciences published its' paper in 1982 emphasizing the importance of including fruits, vegetables and whole grain cereal products in the daily diet. (*These dietary guidelines were consistent with good nutritional practices and likely to help reduce the risk of cancer*). The gain in fruit and vegetable consumption is probably tempered by the fact that fresh fruit and vegetables price increases during the past 15-years were more than double than those for processed items. Despite this, per capita consumption from 1982 to 1997 increased 24% for fresh fruit and 5% for processed fruit.

What Makes the Consumer Change Food Items ?

Given that over ½ of today's housewives work outside the home, we can do well to look at developing food items they can serve with little preparation time. Yogurt (with blueberries) needs no preparation time, nor do fresh market blueberries. This secret, then, is innovative marketing practices that convince families to buy and consume more.

Or new, value added, products will help. We are told that nearly 12,000 new food items are introduced each year – and less than 5% of them stay very long. But nearly all of these are farm commodities with a different twist -- value added.

The poultry industry is a leader in new, value-added products. Per capita consumption of chicken has increased from 26 lbs. (boneless weight) in 1975 to 54 lbs. in 2000. The industry has enjoyed great success catering to consumers – providing scores of new brand-name value added products processed for consumer’s convenience, as well as a host of products for food service operators.

It just may be that the emphasis on Nutraceutical Potential may hold the secret for success. A National Institute of Health Study indicates blueberries may actually reverse the problems of aging. Though blueberries are not a cure all, they contain a number of substances which are thought to have health benefits. These substances include, but are not limited to: fructose, fiber, vitamins, and antioxidants.

Antioxidants thus far, seem to have the most conclusive role in the prevention/delaying of such diseases as cancer, heart disease, and the aging process. While some European nations have studied this for some time, the U.S. is at the beginning of this process. Nutraceuticals have become a focal point for updating the U.S. economic and regulatory system in response to worldwide medical and scientific trends. Other possibilities:

Fresh fruits (blueberries) and vegetables contain many naturally occurring antioxidants to help protect the body against the effects of free radicals and chronic diseases.

In Sweden blueberries are used to treat childhood diarrhea, due to a substance (anthocyanosides) in blueberries believed to be “lethal” to E. Coli (a bacteria sometimes linked to the infection).

Recent evidence has proven the numerous advantages of a high fiber diet. Blueberries are a good source of dietary fibers.

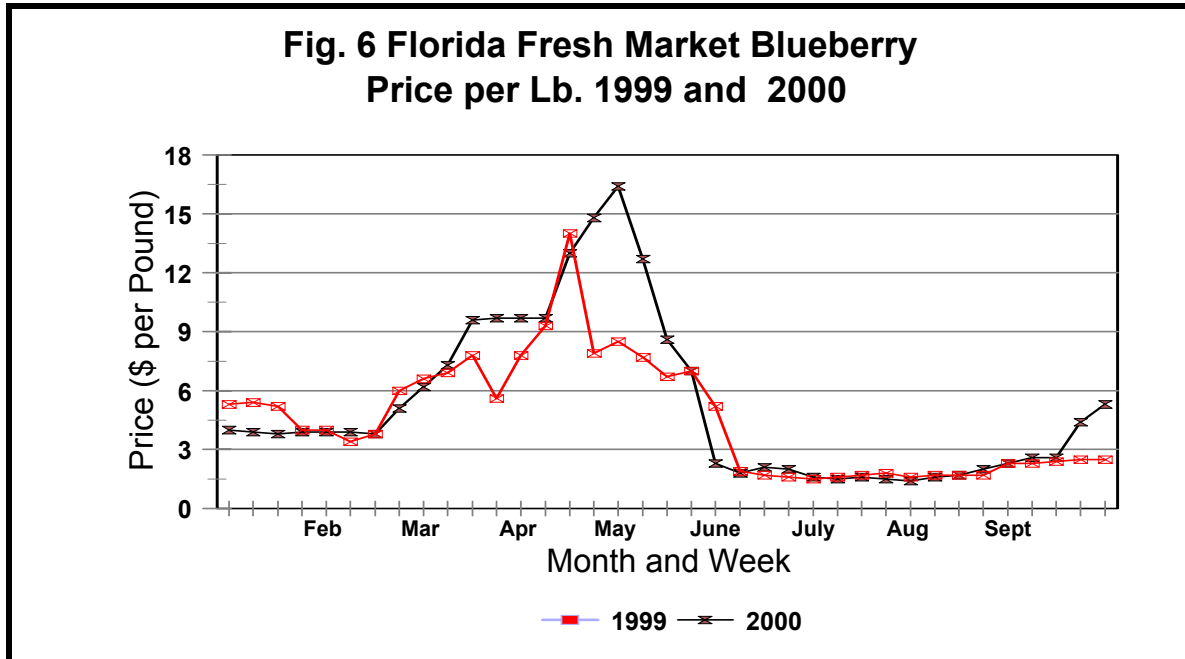
When Competing in the Market...

... *“don’t price the commodity above what consumers think’s it’s worth”.*

Currently a ½ pint of South American produced blueberries is priced at \$3.00 in the grocery we frequent. This amount to \$6.00 per pint, which is about one lb. of blueberries. We buy some of these occasionally... but not frequently. I’m not sure if all on the shelf are sold or if they are removed after they get soft. But fresh blueberries on breakfast cereal is a treat in our house.

In the short run it might be logical to focus of the fresh market during our most advantageous window. This would appear to be after the South American berries have gone from the market in April and before the North Carolina berries come on the market in June.

I am hesitant to share the next figure (no. 6), for fear it can raise unrealistic expectations. It contains data we obtained from a University of Florida web site that showed fresh market prices from February through September, 1999 and 2000. We're not sure how these figures were obtained, or their accuracy.



But it shows there are “windows” for the product, and I suspect our market timing can pretty well identify with the Florida market.

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I know we haven't answered all the questions you have about the blueberry market. This reminds me that we are often asked to identify an alternative crop(s) that farmers can produce and that will give a profit. Well, if the crop were there, we would already be producing it.

The quote that economics is a study about “*There Is No Such Thing As A Free Meal*”, can apply to what we are discussing here. No physical goods are free. Everything has a cost and must be paid. So as we try to expand the market for blueberries, let's keep in mind we're competing for money that's currently being spent somewhere else. And if we succeed in getting some of this money, then it comes as a cost to someone else.