

Report on the Feasibility of a Peanut Processing Facility in Santa Rosa County, Florida



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Executive Summary

Nut Cracker Farms, LLC, an established independent peanut producer group, is proposing to locally add value to the peanut crop by establishing a peanut shelling and certified seed production facility in Santa Rosa County, Florida.

Peanuts are grown in nine U.S. states, with Florida accounting for 8.5 percent of production. In Santa Rosa County, some 57 million pounds are produced annually and the county ranks second in the state in peanut production. Neighboring counties in Alabama also produced a significant amount of peanuts. Prior to the 2002 Farm Act, the peanut program's marketing quota system placed a limit on the amount of peanuts that could be sold for the domestic food-use market. Any peanuts produced beyond the specific quota level had to be exported, or diverted into the lower value crush market. All peanut growers can receive marketing assistance loans (a per unit revenue floor) of \$355 per ton for current production.

The prime market for U.S. peanuts is edible consumption. Food use of peanuts comprises two main categories. Shelled peanuts include those used for peanut butter (about 48 percent of peanut food use), snack peanuts (21 percent), and peanut candy (21 percent). Roasted in-shell peanuts account for about 10 percent of U.S. food use of peanuts. Domestic food use for peanuts in the United States rose over 9 percent last year. Researchers attribute this jump to growth in both peanut butter and snack peanut consumption resulting from greater production promotion, advertising, stressing of health benefits, and lower shelled prices generated by the 2002 farm bill. But although domestic demand has been rising, the outlook for U.S. exports is uncertain. Peanut producers have been exporting a significant amount of peanuts for decades, with exports typically accounting for 15 – 25 percent of overall production.

The 2002 Farm Bill shifted peanut sales from a process controlled by government quotas to a market oriented system supported by a floor price. This has led to the beginnings of consolidation and vertical integration within the industry as producers seek to control production costs in light of reduced prices. The proposed project mirrors this industry development.

The preferred location is located within 30 miles of the majority of the producers and has ample access to needed inputs. Project developers have significant industry experience and control sufficient supplies of raw peanuts to support shelling operations of the size proposed. The suggested product pricing structure appears realistically attainable and is within current demand prices. Consideration should be given to the legal issues involved in seed production, although project developers have experience in this area.

Project Outline

Nut Cracker Farms, LLC, is an established independent peanut producer group made up of three local producers with a combination of over 75 years production experience. Collectively they raise and ship over 10,000 tons of peanuts per year. The proposed project is threefold – the purchase and operation of peanut shelling equipment; the production of certified peanut seed; and the export and marketing of shelled peanuts to Panama and other markets. Project partners are proposing to locally add value to the peanut crop through processing, i.e. grading, cleaning, shelling, and containerizing for national and international distribution as well as distribution to local companies to support the food industry. Additionally, they plan to further process a portion of their peanuts for marketing as “certified seed”. Lastly, an international market for processed peanuts is being developed through the efforts of the local Small Business Development Center (SBDC), with Santa Rosa County being selected by the SBDC and a Panamanian delegation as their point of domestic marketing.

Industry Background

Peanut Growing Requirements

A minimum of 3,000 growing degree-days (with a base of 50°F) is required for proper growth and development for peanuts. A peanut crop will not reach optimum maturity for a marketable yield to justify commercial production in areas with fewer heat units during the growing season. Peanuts have a very low water requirement early in the season, but need about 2 inches of water per week during the peak period of growth. Irrigation is used where rainfall can not reliably supply requirements. Soil for peanut production should be a light-colored, light textured with good drainage, and moderately low amounts of organic matter. Such soil is preferred since it is usually loose and friable, permitting easier penetration of roots and pegs, better percolation of rainfall, and easier harvesting. Light-colored soils reduce staining of pods which ensures greater eye appeal when the crop is used for unshelled nuts.

The major disease concern for peanuts is aflatoxin. Aflatoxin is a naturally-occurring mycotoxin produced by two types of mold: *A. flavus* and *Aspergillus parasiticus*. Aflatoxin costs peanut growers in the Southeast U.S. in excess of \$27 million in an average year and the cost to the peanut shelling and manufacturers has neared \$100 million in years where drought has been a significant factor.

Types of Peanuts

U.S. peanuts fall into four basic types: Runner, Virginia, Spanish and Valencia. Each of these peanuts is distinctive in size and flavor. Runners have become the dominant peanut type grown in the U.S. due to the introduction in the early 1970’s of a new variety, the

Florunner, which was responsible for a spectacular increase in peanut yields. Runners have rapidly gained wide acceptance because of their attractive kernel size range; a high proportion of runners are used for peanut butter. Runners, grown mainly in Georgia, Alabama, Florida, Texas and Oklahoma, account for 80 percent of total U.S. production. Virginias have the largest kernels and account for most of the peanuts roasted and eaten as in-shells. When shelled, the larger kernels are sold as salted peanuts. Virginias are grown mainly in southeastern Virginia and northeastern North Carolina and West Texas. Virginia-type peanuts account for about 15 percent of total U.S. production. Spanish-type peanuts have smaller kernels covered with a reddish-brown skin. They are used predominantly in peanut candy, with significant quantities used for salted nuts and peanut butter. They have higher oil content than the other types of peanuts which is advantageous when crushing for oil. They are primarily grown in Oklahoma and Texas. Spanish-type peanuts account for 4 percent of U.S. production. Valencias usually have three or more small kernels to a pod. They are very sweet peanuts and are usually roasted and sold in the shell; they are excellent for fresh use as boiled peanuts. Because of the greater demand for other varieties, Valencias account for less than 1 percent of U.S. production and are grown mainly in New Mexico.

Peanut Production Costs and Returns

In the short run, annual production decisions are typically based on the relationship between operating costs (seed, fertilizer, pesticides, fuel, etc.) and expected prices. As the planning span increases and capital assets have to be replaced, producers must consider both operating and asset ownership costs (including the annualized cost of maintaining the capital investment in machinery, equipment, facilities, and costs for property taxes and insurance) in relation to prices.

To provide insight on how U.S. peanut production costs per planted acre compare with its accompanying returns per planted acre (excluding government payments) under the marketing quota system and under the new program, the below table shows production costs and returns for crop years 1995 – 2003. From 1995 -2001, the total value of production less operating costs averaged \$307.71 per planted acre, but from 2002 – 2003, that statistic dropped to \$190.87. When asset ownership costs (value of production less total costs) are included, however, from 1995 -2001 the average peanut planted acre lost \$96.49 and from 2002 – 2003, the average peanut planted acre lost \$157.53. Assuming this trend holds constant, it is expected to foreshadow a gradual consolidation of farms growing peanuts. Producers with operating costs exceeding expected revenue are likely to be the first to exit peanut production, while others may exit as fixed assets fully depreciate and must be replaced. Farmers with lower production costs, more modern operations, and a more favorable financial position could assume increased production, thus offsetting declines by other peanut producers.

Table 1 - U.S. Peanut Production Costs

U.S. peanut production costs and returns per planted acre, excluding Government payments, 1995-2003 1/

Item	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Dollars Per Planted Acre								
Gross value of production:									
Primary product: Peanuts	620.60	635.18	604.24	641.94	613.34	539.19	593.40	437.76	562.68
Secondary product: Peanut hay	10.35	13.01	13.30	12.74	11.27	13.18	13.75	13.88	13.60
Total, gross value of production	630.95	648.19	617.54	654.68	624.61	552.37	607.15	451.64	576.28
Operating costs:									
Seed	72.88	74.80	74.29	75.48	72.89	72.71	73.72	73.57	75.26
Fertilizer 2/	43.47	42.50	39.80	39.52	39.49	37.25	41.84	39.09	48.50
Chemicals	97.83	99.02	98.22	97.96	97.92	93.00	93.73	92.18	99.82
Custom operations	8.44	9.77	9.67	9.93	9.63	8.04	10.64	9.92	10.00
Fuel, lube, and electricity	34.84	40.61	39.54	34.60	33.25	46.46	46.55	41.62	48.52
Repairs	25.18	25.30	27.50	30.40	27.74	28.62	29.74	30.93	31.60
Interest on operating inputs	8.20	7.77	7.82	7.31	7.01	8.64	5.3	2.60	1.66
Commercial drying	14.95	17.04	16.65	17.31	17.00	13.61	18.15	17.16	23.76
Total, operating costs	305.79	316.81	313.49	312.51	304.93	308.33	319.67	307.07	339.12
Allocated overhead:									
Hired labor	31.97	32.86	35.06	35.14	37.72	39.10	41.45	42.51	41.62
Opportunity cost of unpaid labor	74.82	78.10	81.26	83.60	85.64	89.75	90.49	93.00	94.38
Capital recovery of machinery and equipment	113.99	108.00	122.02	120.89	121.91	122.62	122.97	123.85	124.91
Opportunity cost of land	43.98	40.32	42.86	42.32	45.49	38.24	41.17	46.44	48.78
Opportunity cost of quota 3/	89.56	88.53	89.80	86.40	87.66	80.42	83.47	na	na
Taxes and insurance	18.47	18.85	19.27	20.57	19.66	20.42	21.47	22.22	22.37
General farm overhead	15.69	16.32	16.96	16.91	17.51	18.65	19.04	18.70	18.01
Total, allocated overhead	388.48	382.98	407.23	405.83	415.59	409.20	420.06	346.72	350.07
Total costs listed	694.27	699.79	720.72	718.34	720.52	717.53	739.73	653.79	689.19
Value of production less total costs listed	-63.32	-51.60	-103.18	-63.66	-95.91	-165.16	-132.58	-202.15	-112.91
Value of production less operating costs	325.16	331.38	304.05	342.17	319.68	244.04	287.48	144.57	237.16
Supporting information:									
Peanut yield: lbs/acre	2,140	2,443	2,324	2,469	2,359	1,997	2,580	2,304	3,126
Peanut price: dollars/lb	0.29	0.26	0.26	0.26	0.26	0.27	0.23	0.19	0.18
Production practices: 1/									
Irrigated (percent)	32	32	32	32	32	32	32	32	32
Dryland (percent)	68	68	68	68	68	68	68	68	68
Land tenure: 1/									
Acres owned (percent)	35	35	35	35	35	35	35	35	35
Acres cash rented (percent)	55	55	55	55	55	55	55	55	55
Acres share rented (percent)	10	10	10	10	10	10	10	10	10
Land rent basis 4/	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.	Comp.

1/ Developed from survey base year, 1995.

2/ Commercial fertilizer and soil conditioners.

3/ Changes to the peanut program in the 2002 Farm Act mean that prod. no longer market peanuts under a quota system.

4/ Method used to determine the opportunity cost of land.

Source: USDA, Economic Research Service

Current Production and Use of Produced Products

Until 2002, peanuts were among a small group of U.S. commodities regulated by marketing quotas. Similar to the tobacco and sugar programs, the peanut program was

established during the Great Depression to support and stabilize grower incomes through supply limitations and price supports. With passage of the Farm Security and Rural Investment Act of 2002 (2002 Farm Act), however, the longstanding price support system for peanuts was scrapped. As part of the new program, peanut quota owners received peanut quota buyout payments and peanut producers are now eligible for the same set of supports (marketing loans, direct payments, and counter-cyclical payments) available to producers of other mainstream crops.

The 2004 peanut crop estimated yield for the U.S. was 3,057 pounds per acre and harvested acreage is estimated at 1.39 million acres in the U.S. resulting in 4.3 billion pounds of production or 2.1 million tons. Nine states account for 100 percent of all peanuts grown in the U.S. Georgia (42.9 percent) grows the major proportion of all peanuts followed by Texas (18.2 percent), Alabama (13.1 percent), Florida (8.5 percent), North Carolina (8.4 percent), South Carolina (2.6 percent), Virginia (2.4 percent), Oklahoma (2.4 percent), and New Mexico (1.4 percent). There are approximately 25,000 peanut farmers in the major producing regions. The peanut growing regions of the U.S. have direct access to port facilities of the Atlantic Ocean and the Gulf of Mexico.

Table 2 - U.S. Peanut Production 1995 – 2004

	Production (1,000 Pounds)									
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Alabama	483,360	449,805	372,490	411,600	448,050	271,180	547,250	379,800	508,750	557,200
Florida	196,800	236,160	228,060	220,000	260,380	213,710	261,450	197,800	345,000	364,000
Georgia	1,421,900	1,433,770	1,333,830	1,537,000	1,400,800	1,328,400	1,689,600	1,313,000	1,863,000	1,830,000
New Mexico	43,000	37,950	46,710	55,000	61,600	54,990	66,700	54,000	45,900	59,500
North Carolina	352,800	367,500	329,640	400,000	298,840	338,250	369,000	210,000	320,000	357,000
Oklahoma	200,900	195,210	184,800	172,500	189,600	120,600	187,500	159,600	98,000	102,300
South Carolina	29,700	32,550	30,450	24,725	25,300	29,500	30,450	19,140	57,800	112,200
Texas	553,500	689,000	822,150	900,450	926,800	698,500	855,000	868,000	810,000	775,500
Virginia	195,800	219,260	191,250	210,000	218,120	210,375	232,500	119,700	95,700	104,000
United States	3,477,760	3,661,205	3,539,380	3,931,275	3,829,490	3,265,505	4,239,450	3,321,040	4,144,150	4,261,700

Source: USDA, National Agricultural Statistics Service

In 2004, there was an estimated 1.39 million acres harvested for peanuts. Georgia (43.8 percent) possessed a large proportion of total area harvested and was followed by Texas (16.9 percent) and Alabama (14.3 percent). These three states contain 74.9 percent of the total United States peanut harvested area. After years of minor fluctuation in acreage harvested, Florida has seen a substantial increase in the amount of planted and harvested peanut acreage. Between 2002 and 2004, the amount of harvested acreage in Florida grew by over 51 percent.

Table 3 - U.S. Peanut Acres Harvested 1995 – 2004

	Area Harvested (1,000 Acres)									
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Alabama	212.0	191.0	193.0	196.0	206.0	182.0	199.0	180.0	185.0	199.0
Florida	82.0	82.0	84.0	88.0	94.0	86.0	83.0	86.0	115.0	130.0
Georgia	590.0	533.0	519.0	530.0	544.0	492.0	512.0	505.0	540.0	610.0
New Mexico	20.0	16.5	17.3	20.0	22.0	26.0	23.0	18.0	17.0	17.0
North Carolina	144.0	125.0	123.0	125.0	124.0	123.0	123.0	100.0	100.0	105.0
Oklahoma	98.0	81.0	77.0	75.0	79.0	67.0	75.0	57.0	35.0	33.0
South Carolina	11.0	10.5	10.5	11.5	11.0	10.0	10.5	8.7	17.0	33.0
Texas	270.0	265.0	315.0	345.0	280.0	275.0	300.0	280.0	270.0	235.0
Virginia	89.0	76.0	75.0	75.0	76.0	75.0	75.0	57.0	33.0	32.0
United States	1,516	1,380	1,414	1,466	1,436	1,336	1,401	1,292	1,312	1,394

Source: USDA, National Agricultural Statistics Service

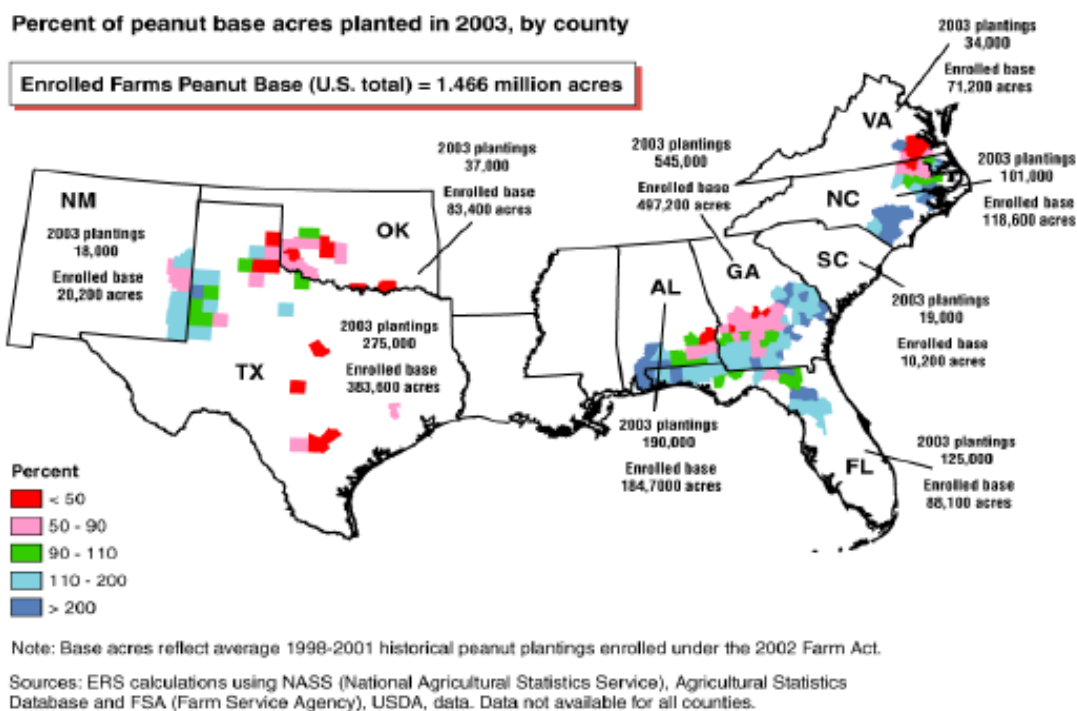


Figure 1 - Peanut Base Acres by County 2003

Planted acreage in 2004 was up 6 percent at 1.429 million acres. The increase is a reversal of a downward trend occurring since the 1996 Farm Bill. The increase comes from the Southeast showing 121,000 more acres. Alabama, Florida, Georgia and South Carolina all increased acreage in 2004. Production acreage is forecasted to be over 1.6 million acres for 2005 with a record harvest of 5.14 billion pounds projected.

In Santa Rosa County, peanuts production in 2003 accounted for \$10.2 million in total value, with 16,672 planted acres. Production in 2004 was estimated at over 57 million pounds, making the county the second leading peanut producer in the state behind Jackson County.

Table 4 - Florida Acreage, Yield and Production by County 2004

PEANUTS: Acreage, yield and production, by county, 2004				
District and county	Planted for all purposes	Harvested for dry peanuts	Yield per acre	Production
	Acres		Pounds	
DISTRICT 10				
Calhoun	5,100	4,600	2,780	12,788,000
Escambia	9,000	7,700	3,340	25,718,000
Gadsden	800	700	2,140	1,498,000
Holmes	4,000	3,500	2,800	9,800,000
Jackson	35,200	31,700	2,630	83,366,000
Jefferson	1,700	1,200	2,315	2,778,000
Okaloosa	5,600	4,800	3,220	15,456,000
Santa Rosa	19,500	17,700	3,260	57,702,000
Walton	4,300	3,600	2,210	7,956,000
Washington	2,500	2,100	3,060	6,426,000
Total	87,700	77,600	2,880	223,488,000
DISTRICT 30				
Columbia	4,000	3,000	2,110	6,330,000
Hamilton	1,600	1,400	2,730	3,822,000
Madison	3,000	2,500	2,710	6,775,000
Suwannee	4,700	3,700	2,530	9,361,000
Total	13,300	10,600	2,480	26,288,000
DISTRICT 50				
Alachua	5,800	5,600	2,420	13,552,000
Gilchrist	4,500	4,400	2,110	9,284,000
Levy	19,300	18,600	2,970	55,232,000
Marion	9,200	8,800	2,780	24,464,000
Sumter	900	800	2,670	2,136,000
Total	39,700	38,200	2,740	104,668,000
OTHER	4,300	3,600	2,655	9,556,000
STATE TOTAL	145,000	130,000	2,800	364,000,000
Source: Florida Agricultural Statistics Service				

Production in neighboring Alabama Counties is also significant and represents a portion of the anticipated market share for certified seed and a source of supply of raw peanuts.

Table 5 - Peanut Production Selected Alabama Counties 2003

Alabama Counties	Harvested Acres 2003	Yield in pounds per acre	Production in pounds
Escambia	11,450	3,335	38,191,000
Covington	8,600	3,000	25,783,000
Baldwin	24,150	2,930	70,795,000
Source: 2004 Alabama Agricultural Statistics Annual Bulletin			

U.S. Peanut Supply

According to the 2002 Economic Census Industry Series Report, there were 163 establishments that produced roughly \$4.6 billion in the sales of canned, cooked, dried, roasted, and salted nuts, processed grains and seeds, or peanut butter.

Table 6 - Domestic Peanut Supply and Use 1967 – 2003

Peanuts: Supply and use

Year	U.S. population, January 1 of following year	Supply				Use						
		Production	Imports	Beginning stocks	Total supply	Exports	Seed, loss, shrinkage, and residual	Crush	Ending stocks	Food disappearance		
										Farmers' stock basis	Kernel basis	Per capita
Millions		Million Pounds										
1967	199.808	2,477	1	372	2,850	198	236	644	353	1,419	1,067	5.3
1968	201.760	2,547	2	353	2,902	105	317	654	357	1,469	1,105	5.5
1969	203.849	2,535	1	357	2,893	140	321	581	353	1,498	1,126	5.5
1970	206.466	2,983	1	353	3,337	290	277	799	453	1,518	1,141	5.5
1971	208.917	3,005	2	453	3,460	552	187	814	392	1,515	1,139	5.5
1972	210.985	3,275	2	392	3,669	521	257	850	429	1,612	1,212	5.7
1973	212.932	3,474	1	429	3,904	709	247	683	553	1,712	1,287	6.0
1974	214.931	3,668	1	553	4,222	740	82	590	1,146	1,664	1,251	5.8
1975	217.095	3,847	1	1,146	4,994	434	313	1,447	1,060	1,740	1,308	6.0
1976	219.179	3,739	1	1,060	4,800	783	666	1,108	608	1,635	1,229	5.6
1977	221.477	3,715	1	608	4,324	1,025	556	487	581	1,675	1,259	5.7
1978	223.865	3,952	1	581	4,534	1,141	521	527	586	1,759	1,323	5.9
1979	226.451	3,968	1	586	4,555	1,057	522	571	628	1,777	1,336	5.9
1980	228.937	2,303	401	628	3,332	503	505	446	413	1,465	1,102	4.8
1981	231.157	3,982	2	413	4,397	576	795	573	757	1,696	1,275	5.5
1982	233.322	3,440	2	757	4,199	681	463	342	864	1,849	1,390	6.0
1983	235.385	3,296	2	864	4,162	744	564	387	611	1,856	1,395	5.9
1984	237.468	4,406	2	611	5,019	860	199	625	1,424	1,911	1,437	6.1
1985	239.638	4,123	2	1,424	5,549	1,043	826	812	845	2,023	1,521	6.3
1986	241.784	3,697	2	845	4,544	663	291	514	1,003	2,073	1,559	6.4
1987	243.981	3,616	2	1,003	4,621	618	539	560	833	2,071	1,557	6.4
1988	246.224	3,981	2	833	4,816	688	217	814	843	2,254	1,695	6.9
1989	248.659	3,990	2	843	4,835	989	209	624	701	2,312	1,738	7.0
1990	251.889	3,603	27	701	4,331	652	287	689	683	2,020	1,519	6.0
1991	255.214	4,927	5	683	5,615	997	253	1,103	1,055	2,207	1,659	6.5
1992	258.679	4,284	2	1,055	5,341	951	27	891	1,350	2,122	1,595	6.2
1993	261.919	3,392	2	1,350	4,744	553	372	670	1,061	2,088	1,570	6.0
1994	265.044	4,247	74	1,061	5,382	878	315	982	1,198	2,009	1,511	5.7
1995	268.151	3,461	153	1,198	4,812	824	238	999	758	1,993	1,498	5.6
1996	271.360	3,661	127	758	4,546	666	364	692	795	2,029	1,526	5.6
1997	274.626	3,539	141	795	4,475	681	303	544	848	2,099	1,578	5.7
1998	277.790	3,963	155	848	4,966	562	399	460	1,392	2,153	1,619	5.8
1999	280.976	3,829	180	1,392	5,401	743	479	713	1,233	2,233	1,679	6.0
2000	283.933	3,266	216	1,233	4,715	527	359	548	1,097	2,184	1,642	5.8
2001	286.838	4,277	203	1,097	5,577	700	483	693	1,476	2,225	1,673	5.8
2002	289.703	3,321	75	1,476	4,872	490	409	857	875	2,241	1,685	5.8
2003	292.527	4,144	35	875	5,054	510	379	588	1,121	2,456	1,847	6.3

Source: USDA/Economic Research Service

In Florida, while the number of farms producing peanuts shrank between 1997 and 2002, the quantity harvested increased 3 percent.

Peanut Consumption

Unlike other countries where the end products are peanut oil, cake and meal, the prime market for U.S. peanuts is in edible consumption, and the marketing and production focus is in that direction. Only 15 percent of U.S. production is normally crushed for oil. Peanuts are the 12th most valuable cash crop grown in the U.S. Farm market revenues from peanut production (excluding government payments) fell from an annual average of about \$1 billion during the years 1996 – 2001 to just over \$600 million in 2002, nearly \$800 million in 2003, and \$835 million in 2004.

While vegetable oil extraction drives peanut demand in some countries, such as India and many other developing countries, the dominant source of U.S. peanut demand (about 67 percent of total domestic use during 2000 – 2002) is direct consumption (food use). Lower quality peanuts used for crushing (for peanut oil and meal) made up 21 percent of domestic use during the period. Seed and residual uses accounted for the remaining 12 percent. Food use of peanuts comprises two main categories. Shelled peanuts include those used for peanut butter (about 48 percent of peanut food use), snack peanuts (21 percent), and peanut candy (21 percent). Roasted in-shell peanuts account for about 10 percent of U.S. food use of peanuts.

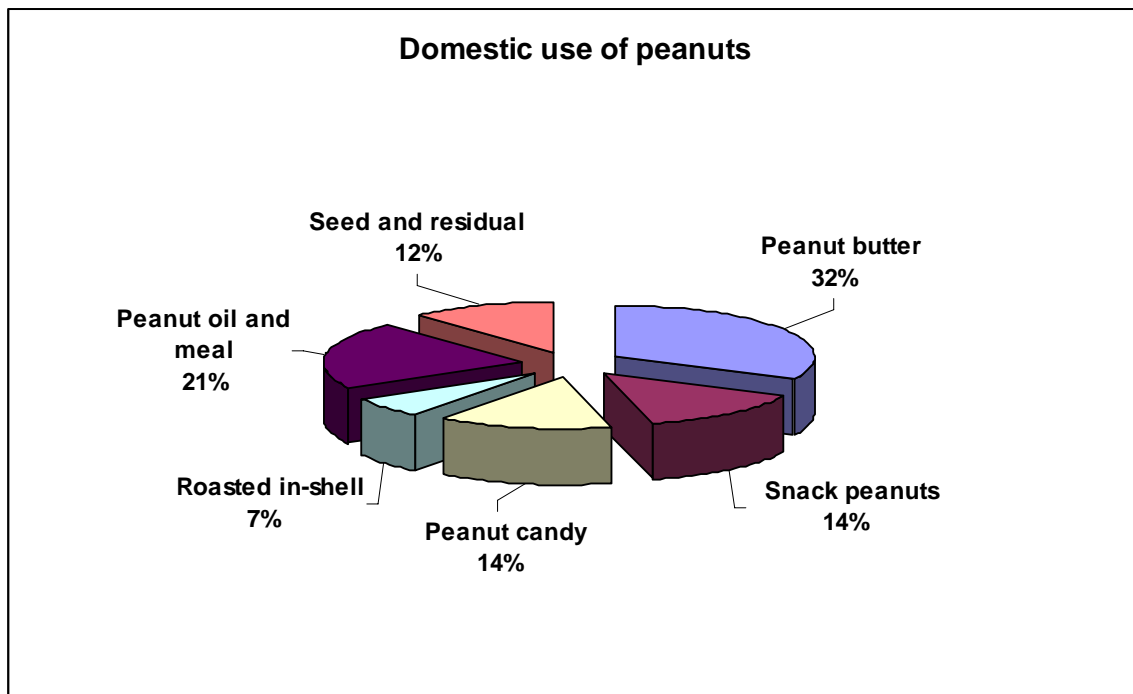


Figure 2 - Domestic Use of Peanuts

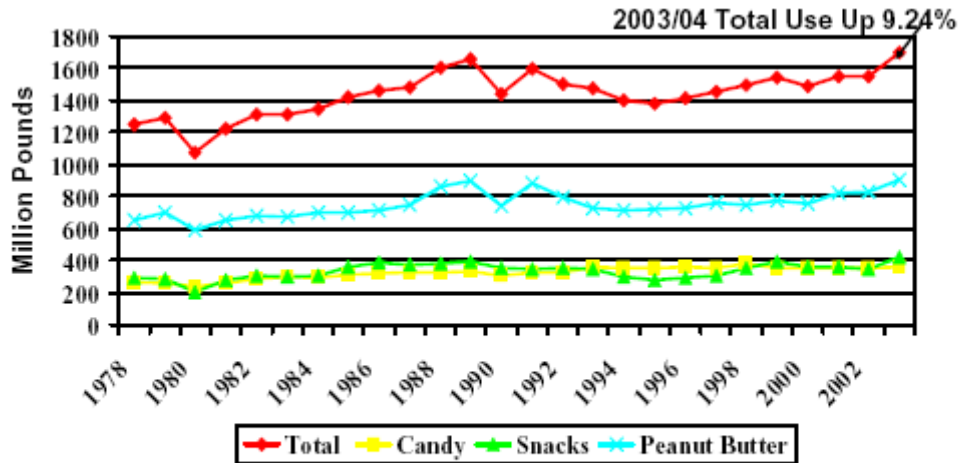
Table 7 - U.S. Per Capita Consumption by Product 1967-2003

Peanuts: Per capita consumption, by type of product

Year	U.S. population, January 1 of following year	Peanuts		Consumed in products			Total
		Snack peanuts	Cleaned in shell	Peanut butter	Peanut candy	Other	
	Millions			Pounds			
1967	199.808	1.2	0.3	2.7	1.1	0.1	5.4
1968	201.760	1.2	0.4	2.7	1.1	0.1	5.5
1969	203.849	1.2	0.4	2.8	1.2	0.1	5.6
1970	206.466	1.2	0.4	2.7	1.2	0.1	5.6
1971	208.917	1.2	0.3	2.8	1.2	0.1	5.5
1972	210.985	1.2	0.4	2.9	1.2	0.1	5.8
1973	212.932	1.3	0.3	3.2	1.2	0.1	6.1
1974	214.931	1.3	0.4	3.1	1.0	0.1	5.9
1975	217.095	1.4	0.4	3.1	1.1	0.1	6.1
1976	219.179	1.2	0.5	2.9	1.1	0.1	5.7
1977	221.477	1.2	0.4	2.9	1.1	0.1	5.8
1978	223.865	1.3	0.4	3.1	1.2	0.1	6.1
1979	226.451	1.3	0.5	3.2	1.1	0.1	6.2
1980	228.937	0.9	0.3	2.7	1.0	0.1	5.0
1981	231.157	1.2	0.4	2.9	1.1	0.1	5.7
1982	233.322	1.3	0.5	3.0	1.2	0.1	6.1
1983	235.385	1.3	0.4	3.0	1.3	0.1	6.0
1984	237.468	1.3	0.4	3.0	1.2	0.1	6.1
1985	239.638	1.5	0.5	3.0	1.3	0.1	6.4
1986	241.784	1.6	0.4	2.9	1.3	0.2	6.5
1987	243.981	1.5	0.3	3.1	1.3	0.2	6.4
1988	246.224	1.5	0.4	3.5	1.3	0.1	6.9
1989	248.659	1.6	0.3	3.6	1.3	0.1	7.0
1990	251.889	1.4	0.3	2.9	1.2	0.2	6.1
1991	255.214	1.4	0.3	3.5	1.3	0.1	6.5
1992	258.679	1.4	0.4	3.1	1.3	0.1	6.2
1993	261.919	1.3	0.4	2.8	1.4	0.1	6.0
1994	265.044	1.1	0.5	2.7	1.3	0.1	5.7
1995	268.151	1.0	0.5	2.7	1.3	0.1	5.6
1996	271.360	1.1	0.5	2.7	1.3	0.1	5.7
1997	274.626	1.1	0.5	2.8	1.3	0.1	5.8
1998	277.790	1.3	0.5	2.7	1.4	0.1	5.9
1999	280.976	1.4	0.5	2.7	1.3	0.1	6.0
2000	283.933	1.3	0.6	2.7	1.3	0.1	5.8
2001	286.838	1.3	0.5	2.9	1.2	0.1	5.9
2002	289.703	1.2	0.5	2.9	1.2	0.1	5.8
2003	292.527	1.4	0.5	3.1	1.3	0.1	6.3
	Total	47.4	15.6	108.9	45.2	3.6	220.7

Source: USDA/Economic Research Service

Domestic food use for peanuts in the United States rose over 9 percent last year. Researchers attribute this jump to growth in both peanut butter and snack peanut consumption resulting from greater production promotion, advertising, stressing of health benefits, and lower shelled prices generated by the 2002 farm bill.



Source: USDA/NASS Peanut Stocks and Processing Report, August 2004

Figure 3 - Domestic Food Use for Peanuts 2003/04

Peanut Prices

Prior to the 2002 Farm Act, the peanut program’s marketing quota system placed a limit on the amount of peanuts that could be sold for the domestic food-use market. Any peanuts produced beyond the specific quota level had to be exported, or diverted into the lower value crush market. Producers who owned or rented quota rights were assured of receiving high prices based on a government-established “quota loan rate” of \$610 per ton (during 1996 - 2001). The quota loan rate was well above average production costs, giving producers a strong economic incentive to produce the amount of peanuts they had been allocated under the quota system. The quota level (set at 2.36 billion pounds in 2001 - 2002) was established annually by the USDA, based on anticipated demand, and then allocated among quota holders.

The 2002 Farm Act eliminated the supply-limiting marketing quota program for peanuts, and all producers (whether former quota holders or not) are now allowed to sell their peanuts in the domestic market for food use (i.e., peanut butter, snacks, candy, in-shell peanuts). Producers are now also eligible for the same kinds of government payments that are available to growers of such crops as grains, oilseeds, and cotton. All peanut growers can receive marketing assistance loans (a per unit revenue floor) of \$355 per ton for current production. The 2002 Farm Act governs federal farm programs over a six-year period (2002 – 2007).

Table 8 - U.S. Price Per Pound and Value of Production 1995-2004

	Price per Pound (In Dollars)									
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Alabama	0.288	0.278	0.274	0.296	0.268	0.264	0.242	0.164	0.183	0.189
Florida	0.271	0.281	0.238	0.298	0.232	0.252	0.215	0.178	0.185	0.187
Georgia	0.295	0.297	0.270	0.303	0.272	0.265	0.228	0.175	0.187	0.190
New Mexico	0.336	0.305	0.300	0.329	0.274	0.296	0.275	0.190	0.230	0.240
North Carolina	0.298	0.275	0.267	0.269	0.276	0.265	0.252	0.219	0.229	0.216
Oklahoma	0.298	0.300	0.298	0.308	0.280	0.290	0.275	0.170	0.183	0.188
South Carolina	0.298	0.245	0.287	0.276	0.267	0.223	0.257	0.167	0.216	0.210
Texas	0.287	0.248	0.235	0.246	0.206	0.227	0.233	0.182	0.195	0.202
Virginia	0.300	0.285	0.256	0.273	0.275	0.258	0.255	0.233	0.229	0.216
United States	0.293	0.281	0.261	0.284	0.254	0.257	0.234	0.182	0.193	0.196
Per Ton:	586	562	522	568	508	514	468	364	386	392

	Value of Production (In 1,000 Dollars)									
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Alabama	139,208	125,046	99,955	127,995	120,077	71,977	132,435	62,287	93,101	105,311
Florida	52,463	66,361	54,778	69,464	60,408	51,688	56,212	35,208	63,825	68,068
Georgia	417,390	425,830	360,839	458,031	381,018	354,901	385,229	229,775	348,381	347,700
New Mexico	14,448	11,575	14,013	20,411	16,878	17,760	18,343	10,260	10,557	14,280
North Carolina	103,418	101,063	86,508	106,835	82,480	94,526	92,988	45,990	73,280	77,112
Oklahoma	60,160	58,563	60,434	49,203	53,088	37,889	51,563	27,132	17,934	19,232
South Carolina	9,178	7,975	8,739	7,776	6,755	7,694	7,826	3,196	12,485	23,562
Texas	154,980	170,872	190,632	225,803	190,921	153,225	199,215	157,976	157,950	156,651
Virginia	62,078	62,489	51,149	60,401	59,983	55,148	59,288	27,890	21,915	22,464

United States 1,013,323 1,029,774 927,047 1,125,919 971,608 844,808 1,003,099 599,714 799,428 834,380

Source: USDA, National Agricultural Statistics Service

While the price asked for shelled runner peanuts varies due to the size and quality of the kernel and current demand, it typically runs some 13 to 18 cents higher per pound than unshelled peanuts. Prices for shelled peanuts processed into certified peanut seed also vary depending upon the variety, but can add another 35 cents or more per pound in value to raw peanuts.

One issue currently facing the industry is oversupply. With record yields and production, the United States could have a peanut surplus of up to 1 million tons to carry over into next year, or about twice as much as it usually carries. This oversupply could affect price and storage for the 2006 crop.

Exports

Even though domestic demand has been rising, the outlook for U.S. exports is uncertain. Peanut producers have been exporting a significant amount of peanuts for decades, with exports typically accounting for 15 – 25 percent of overall production. Due to stiffening world competition and changes to the peanut program in the 2002 Farm Act, U.S. peanut exports have been on a downward trend since the early 1990s. U.S. peanut exports have slipped from an average of almost 340,000 metric tons annually during the 1990s to an average of almost 200,100 metric tons through the 2000s.

In 2004, world peanut production totaled approximately 33.2 million metric tons per year, with the U.S. being the world's third largest producer, after China, and India. Worldwide peanut exports are approximately 1.25 million metric tons. The U.S. is the world's second leading peanut exporter behind China, with 2004 annual exports of 187,353.3 metric tons worth \$184.4 million. In 2004, Canada, Netherlands, Mexico, and the United Kingdom accounted for 76.4 percent of U.S. exports. During 2000 – 2001 to 2002 – 2003, China (with 49 percent of global exports), the U.S. (13.5 percent), Argentina (13 percent), India (7 percent), and Vietnam (5 percent) were the world's leading peanut exporters. The European Union (EU) is by far the leading importer of peanuts, with about 38 percent of global imports during 2000 – 2001 to 2002 – 2003. The EU is followed by Japan, Indonesia, Russia, Canada, and Mexico.

Demand for peanuts in North America and Europe has been steady, although competition within a dynamic snack market continues to put pressure on peanuts to compete with a growing range of products (potato chips, extruded snacks, tree nuts, and baked snacks). In addition, quality specifications, food safety concerns and import requirements continue to require the implementation of improved monitoring and quality control standards at origin. In response to customer demands, U.S. producers, shellers and processors implement oversight and inspection procedures at each stage of production to ensure that the highest quality standards are achieved.

Table 9 - U.S. Peanut Exports 1995 - 2004

United States Export Statistics											
UDG: Peanut Total, kernel, inshell, pb, processed											
Annual Series: 1995 - 2004											
Partner Country	Unit	Quantity									
		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
World	T	345,074	255,196	288,772	226,694	223,311	272,815	178,869	272,558	164,320	213,632
Canada	T	77,662	73,849	84,359	75,599	70,424	76,247	63,349	75,030	61,978	74,551
Netherlands	T	72,992	37,893	58,725	39,985	40,352	68,726	30,956	58,509	19,452	37,298
Mexico	T	19,592	29,473	32,461	26,476	31,980	42,011	20,733	29,215	15,832	29,274
United Kingdom	T	41,939	24,773	30,395	20,828	24,355	26,434	15,037	27,462	14,575	19,957
Belgium	T	26,000	653	1,161	1,825	666	1,315	2,903	9,798	8,775	9,071
Spain	T	19,776	35,057	17,284	9,541	9,066	9,046	7,470	8,662	6,550	7,267
Japan	T	11,327	7,975	6,233	4,085	7,526	9,844	6,914	7,715	7,217	6,266
Norway	T	4,182	1,306	2,729	2,706	3,753	2,707	3,151	3,123	4,217	5,130
France	T	8,411	3,890	6,817	5,433	5,108	3,464	1,571	6,218	2,902	4,247
Denmark	T	1,419	1,587	1,498	1,865	225	1,474	1,710	1,061	2,402	2,394
Other	T	61,774	38,740	47,110	38,351	29,856	31,547	25,075	45,765	20,420	18,177

Source: American Peanut Council

Value Chain

Peanut growers sell peanuts to local buying points operated by shellers, independent dealers, or warehouse owners. These "first handlers" dry, clean, purchase, or accept for price support the harvested peanuts they receive. At buying points, peanuts are inspected and graded for quality - a process that determines the price level for commercial sales and price support loans. Shellers also separate kernels from the peanut shell, screen them for size, inspect for rejects, and either sell the best-quality peanuts (usually using the services

of a broker) to domestic processors or place them into refrigerated storage. With respect to further marketing, processors use edible-quality peanuts to manufacture various products for retail sale or export. Also, shellers sell roasted and ballpark in-shell peanuts to outlets for retail sale, engage in exporting shelled and crushed peanuts, and sell lower-quality and non-quota peanuts to crushers for conversion into oil and meal, some of which is also exported.

Shelling begins with separating the foreign material with a series of screens, blowers, and magnets. The cleaned peanuts are then sized with screens (size graders). Sizing is required so that peanut pods can be crushed without also crushing the peanut kernels. Next, shells of the sized peanuts are crushed, typically by passing the peanuts between rollers that have been adjusted for peanut size. The gap between rollers must be narrow enough to crack the peanut hulls, but wide enough to prevent damage to the kernels. A horizontal drum, with a perforated and ridged bottom and a rotating beater, is also used to hull peanuts. The rotating beater crushes the peanuts against the bottom ridges, pushing both the shells and peanuts through the perforations. The beater can be adjusted for different sizes of peanuts, to avoid damaging the peanut kernels. Shells are aspirated from the peanut kernels as they fall from the drum. The crushed shells and peanut kernels are then separated with oscillating shaker screens and air separators. The separation process also removes undersized kernels and split kernels. Following crushing and hull/kernel separation, peanut kernels are sized and graded. Sizing and grading can be done by hand, but most mills use screens to size kernels and electric eye sorters for grading. Electric eye sorters can detect discoloration and can separate peanuts by color grades. The sized and graded peanuts are bagged in 45.4-kg (100-lb) bags for shipment to end users, such as peanut butter plants and nut roasters. Some peanuts are shipped in bulk in rail hopper cars.

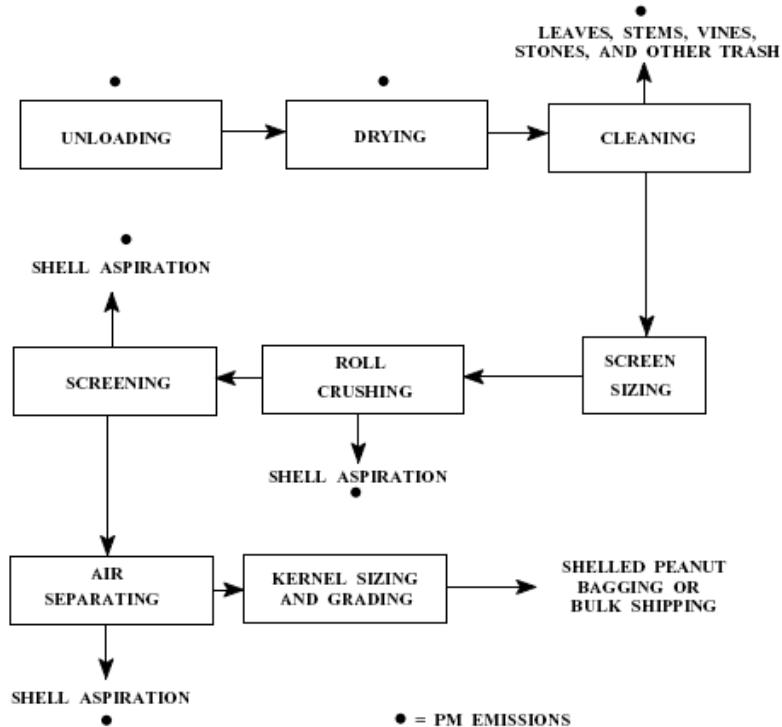


Figure 4 - Peanut Shelling Process

Seed Production

The production of high-quality peanut seed begins with the selection of both the land and the seed. High-quality seed is seed that is capable of establishing full stands of vigorous, uniform seedlings that will grow into mature, productive plants. "Foundation" or "Registered" seed must be planted to produce certified seed. Peanut seed are generally produced by growers under contract to commercial companies that buy, store, shell, and treat the seed. For high-quality peanut seed, slow, uniform drying immediately after harvest is critical.

All peanuts saved for seed should be cleaned before storage. An additional cleaning at shelling time is generally used. After this cleaning, the peanuts are passed through the sheller and the gravity table. The gravity table is used to separate small, unshelled peanuts from the good seed. The unshelled peanuts are elevated back into the sheller. Screens under the sheller are also used to remove splits and small peanuts from the seed.

Color-sorting equipment, commonly called "electric eyes," is used extensively in shelling plants. The electric eyes can be adjusted to separate dark (nut-grass tubers) and light

(splits and seed without seed coats) products from the seed. In most plants, peanut seed also pass over a continuous belt (picking table) and are visually inspected. Any material that the electric eyes missed may be removed by hand.

The seed are then passed through sizing equipment to again remove splits and small, inferior-quality seed. After preliminary quality evaluations have been made, the peanut seed are then treated with a fungicide, bagged, and tagged. At bagging, final germination samples are pulled as the seed are being readied for sale. Peanut seed cannot be stored from season to season and is used as it is produced.

Legal Issues

With the exception of the original Florunner variety, most peanut varieties produced and sold have one or more forms of legal protection limiting or preventing producers from saving and using their own seed. There are two different types of legal protection for seed. The first is PVP seed, which are protected under the USDA's Plant Variety Protection Act of 1970. It was amended in 1994 and states that seed of a variety may not be sold, marketed, offered for sale, delivered, consigned, or exchanged without the explicit consent of the owner of the variety. It is illegal to condition (shell) the variety for the purpose of propagation. A producer may save seed for the sole purpose of planting his holdings, but a producer may not save seed to plant more acres than the acres from which the saved seed were produced. The other legal issue is for seed of varieties protected by a US Utility Patent issued by the United States Patent and Trademark office. Seed from any variety protected by a patent may not be saved for planting and there is no farmer exception. The only legal provision for peanut seed production of varieties covered by a patent is by a licensing agreement with the patent owner. It is illegal to condition (shell) a patent protected variety for the purpose of propagation. Shellers and seed suppliers typically make royalty payments of between 3 and 7 cents per pound on peanut seed.

Project Analysis

Production Feasibility

The preferred location for the sheller facilities is Jay Industrial Park. Located on Booker Lane near state Highway 4, the park is a 40 acre site with access to needed amounts of electricity, water and sewer. It is located within 8 miles of railroad service, 35 miles of east west interstate access and 25 miles to north south interstate access. It is readily accessible to trucking and to the Port of Pensacola via rail or truck. Due to the presence of existing facilities in the area, much of the infrastructure required for the proposed venture is already in place and according to participants will only need some slight modifications. Therefore, the proposed requirements for this project consist of the purchase of a peanut sheller (separator, cleaner, sheller, and associated conveyor belts) and a large cooler for temporary seed storage until transportation.

Once the equipment is installed, 4 full-time employees will initially be needed to operate the sheller. Employment needs are anticipated to climb to 8 to 10 positions, paying in a salary range of \$25,000 to \$50,000 per year. Labor with the skills needed to fill these positions is readily available in the community.

Competitive advantages

- Conditions in Santa Rosa County and the surrounding area have proven to be ideal for quality runner peanut production.
- Disease levels in the county are low
- Local production yields are not reliant on irrigation
- Project participants control the necessary raw material
- Operating costs such as electricity and wages are low

Marketing Feasibility

The 2002 Farm Bill shifted peanut sales from a process controlled by government quotas to a market oriented system supported by a floor price. Buying points handle and store peanuts for shellers and several also provide farm inputs and supplies. Some are independently owned but typically buy exclusively for one buyer. The primary method of marketing peanuts is contracting with shellers, with the marketing loan program being utilized through sheller contracts which are based off the loan repayment rate. Producers are offered so many dollars above the loan repayment rate for their peanuts. These contracts are termed “option contracts” that give the sheller the right to purchase a producer’s peanuts during a specified time period in exchange for the option price. The producer is essentially guaranteed the loan rate for the peanuts plus the option price. For example, last year a typical option price for runner peanuts was \$25 above the loan repayment rate. The producer receives \$25 plus the loan repayment rate which was \$355 for most of last year. The net price to the producer is \$380 per ton. Presently two shelling companies, Birdsong Peanuts and Golden Peanut Company, had a combined 72 percent of the market for shelling in the Southeast as recently as 2003. Other marketing alternatives available to peanut growers include cash sales at harvest and cooperative marketing associations.

Since 2002 there have been increasing signs of vertical integration in the peanut market with the starting of grower-owned shelling facilities. The American Peanut Growers Group, an organization representing approximately 60 growers in Georgia and Florida, opened a state of the art shelling facility in Donalsonville, Georgia. The plant sits on a 45-acre site adjacent to a public refrigerated warehouse with 80,000 square feet of storage space in the Donalsonville/Seminole County Industrial Park. It has a rail spur for bulk loading of peanuts into railcars, which is required by major manufacturers of peanut products.

The producer group associated with the proposed project controls approximately 5,200 acres of production in Santa Rosa County and about 10,000 tons of peanuts per year. Two

of the members own and operate the only two peanut buying points within a 5 county production area. Raw peanuts can be shipped to this facility within a 30 mile radius. The proposed shelling equipment has a production rate of approximately 2.5 tons per hour. The pricing point for the shelled peanuts is projected to be the price of in-shell peanuts paid at the buying point plus 20 percent. When distribution costs are included, the proposed shelled peanut selling price is estimated at \$0.35 per pound.

The producer group estimates the market demand for seed in the area to be 129,400 bags per year, and anticipate capturing some 15 percent of the market in the first year, or some 31,650 bags. The pricing point for the certified seed is \$23 per bag, or some \$5 below currently paid prices. The cost savings needed to make a profit at this lower price is expected to be generated by reduced transportation, warehousing and distribution costs. Additionally, the project partners have relationships with producers and major seed companies such as United Agri Products (UAP) and Helena Chemical that should enable them to market their product.

The export market for the producer group would need further development. At the present time interest has been shown from Central and South America for purchasing shelled product for the candy industry.

Financials

The project partners are both contributing existing capital and facilities to the project as well as seeking capital for the purchase of additional equipment. Estimated capital costs and value of existing equipment/storage being committed to the project are outlined below.

Estimated Project Costs

	CASH	IN-KIND
Warehouse/sheller/cleaner/bagger		\$356,000
Cooler (50 ton capacity)	\$45,000	
Computer (software and hardware)	5,000	
Sheller (separate/clean/shell)	700,000	
Seed cleaner, treat, bagging facility		<u>60,000</u>
	<u>\$750,000</u>	<u>\$416,000</u>
 TOTAL PROJECT	 \$1,166,000	

Additional expected expenses would include personnel costs of approximately \$150,000, operating costs for the nine month shelling season, and marketing costs. While sufficient data to perform a full financial feasibility analysis has not been provided, the gross revenue potential based on the price differential between raw and shelled peanuts and raw and seed peanuts for 10,000 tons is approximately \$7.3 million. This example assumes

that royalty payments for seed production have been accounted for in the seed production and price asked and is based on average prices paid in 2004.

Example	
	10,000 tons raw stock
\$	380 per ton farmer price
\$	3,800,000 cost of goods
	9,200 tons selling shelled
	800 tons selling seed
\$	6,440,000 gross revenue shelled @ \$.35 per pound
\$	880,000 gross revenue seed @ \$.55 per pound
\$	7,320,000 Total gross revenue

Economic Impact of the Project

It is important to note that the total direct economic impact being considered includes the impact of the peanut production required to supply the plant as well as the shelling process itself. Since the peanuts required of the plant are currently grown in the area, some may not view peanut production as an impact of the plant itself. However, many studies suggest that peanut production may not be retained in an area unless producer markets are assured locally. To the extent that a new, producer-owned peanut shelling plant will secure the future peanut production of the area, the peanuts produced for the plant can be thought of as extending the economic impact of the operation even if the production is not new to the area. Thus, the economic, employment and tax impacts can be viewed as being retained through development of an integrated peanut shelling operation.

While impacts of retention of peanut growers might be felt thorough out a multi-state region, the primary area of interest for the purposes of this study is the project’s effect upon Santa Rosa County. Thus the study area used was limited to Santa Rosa County. Using the projected project figures and information on employment in the peanut industry in the area, an IMPLAN input-output model was generated. Based on the model results, it’s estimated that the annual economic impact generated from the project and the retention of peanut production in Santa Rosa County will be slightly over \$5 million.

	Direct	Indirect	Induced	Total
Output	\$ 3,183,003	\$ 532,588	\$ 1,329,279	\$ 5,044,870
Employment	37.3	6.7	18.9	62.9

Identification of any Limits or Constraints

As with any agricultural endeavor, uncertainties over weather conditions and its effects on crop yields and price are limiting factors in long-term project success. Additionally, given the concentration of the market share for shelling into two large companies and the growing use of option contracts, one possible constraint for the project is insuring a sufficient supply of peanuts in the future to keep shelling operations economical.

Another constraint for long-term project success is possible limitations on demand for both shelled peanuts and peanut seed. Continued growth in peanut demand could be contingent upon the success in developing anti-allergic peanut strains, opening new markets abroad or in the development of new product uses.

In the short run, however, both constraints should have a limited effect. The project participants easily control enough peanuts given the size of the planned shelling operation to provide for its operation and the acreage in production of runner peanuts has been increasing and is projected to continue to do so in the near-term. Planted peanut acreage in the United States grew by 15 percent between 2004 and 2005. This should have positive impacts both on the availability of raw peanuts and the demand for seed.

Conclusions and recommendations

The proposed project mirrors industry developments and trends. The preferred location is located within 30 miles of the majority of the producers and has ample access to needed inputs. Project developers have significant industry experience and control sufficient supplies of raw peanuts to support shelling operations of the size proposed. The suggested product pricing structure appears realistically attainable and is within current demand prices. Vertical integration of the production will aid in cost controlling needed to maximize profits. Additional profits from production of seed peanuts will help smooth out potential fluctuations in demand for shelled peanuts. While consideration should be given to the legal issues involved in seed production, the project developers have sufficient familiarity with the issues to insure compliance with peanut variety protection laws and sufficient experience to obtain the necessary licenses.

References

About the Peanut Industry, American Peanut Council, www.peanutsusa.com

Baldwin, John and John Beasley. "Saving Peanut Seed" University of Georgia website <http://commodities.caes.uga.edu/fieldcrops/Peanuts/pu2005/savingseed.htm> accessed September, 2005.

Ground-breaking grower-owned peanut processing facility starting up., Georgia Peanut Producers Association website, <http://www.georgiapeanuts.org/articles/su03-ground-breaking.html>, accessed August, 2005.

Hollis, Paul L. *Peanut consumption encouraging*, Southeast Farm Express, November 17, 2004.

Hollis, Paul L. *Peanut marketing options increase*, Southeast Farm Express, June 4, 2003.

McKissick, John C. and Davis Waters. *An Economic Impact Analysis of a New Peanut-Shelling Facility in The Donalsonville Georgia Area.*, Prepared for the American Peanut Growers Group, LLC by the Center for Agribusiness and Economic Development, The University of Georgia, February, 2003.

Peanut Processing, EPA, <http://www.epa.gov/ttn/chief/ap42/ch09/final/c9s10-2b.pdf>.

Smith, Nathan B. *Peanut Situation and Outlook 2004/2005*, Southern Region Agricultural Outlook Conference, Atlanta, GA September 27-29, 2004.

Trice, Joey. *Good Manufacturing Processes for Shelling Plant Operations*, American Peanut Council Good Management Practices, approved 6/19/02.

U.S. Appears Headed for a Peanut Surplus, Associated Press accessed at Forbes.com, September 2005.

World Peanut Market: An Overview of the Past 30 Years, The Georgia Agricultural Experiment Stations, College of Agricultural and Environmental Sciences, The University of Georgia, Research Bulletin Number 437, May, 2002.

Whitty, E.B. *Peanut Variety Protection.*, Institute of Food and Agricultural Sciences, University of Florida Extension Bulletin SS-AGR-186.

Yancy, Cecil H., Jr. *Peanut co-ops finding market niche*, Southeast Farm Express, November 19, 2003.