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Post-buyout Structural Change in the Peanut and Tobacco Sectors

Erik Dohlman, Economic Research Service-USDA
Edohlman@ers.usda.gov
202-694-5308

Linda Foreman, Economic Research Service-USDA
Lfarmer@ers.usda.gov
202-694-5566

Michelle Da Pra, Foreign Agricultural Service-USDA
Michelle.Dapra@usda.gov

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ABSTRACT: When longstanding marketing quota systems were eliminated ("bought out") in 2002 for peanuts and 2004 for tobacco, producers lost quota-related price supports and other quota system protections, and were exposed more directly to a market-oriented system. The nature of the peanut and tobacco marketing quota programs, the structure and magnitude of the buyouts, and market dynamics influenced the ensuing structural changes that occurred at the farm, regional, and aggregate market levels. Analysis of USDA's Agricultural Resource Management Surveys (ARMS) on peanut and tobacco producers over a multi-year timeframe provides insights on, and a basis for comparing and contrasting the buyout impacts along multiple dimensions. Notable developments include a consolidation in the number and increased scale of farms, regional shifts in production regions, and increased use of contracting to manage price risk.

Introduction

Until recently, peanuts and tobacco were among a small group of U.S. commodities regulated by marketing quotas. Similar to the sugar and dairy programs still in effect, the peanut and tobacco marketing quota programs were established during the 1930s to support and stabilize growers' incomes. Although the programs provided dependable short-term expectations about prices and output, they tempered growers' ability to adapt to longer term market forces by hindering economies of scale, restricting production location, and distorting trade. The 2002 Farm Act and the Fair and Equitable Tobacco Reform Act of 2004 ended the price support programs and brought about structural change in the peanut and tobacco leaf industries.

The elimination of the marketing quotas is commonly referred to as "buyouts" because quota owners—those with the right to sell the commodity at a regulated support price—were financially compensated for the loss of an asset (quota ownership). Peanut quota owners received buyout payments of around $1.3 billion over 5 years, funded by the Federal Government, whereas tobacco quota owners and active producers receive a total of $9.6 billion over 10 years from assessments on tobacco product manufacturers and importers. Peanut farmers became eligible for the same type of commodity support programs—marketing loans, direct payments, and countercyclical payments—available to producers of other grains and oilseeds, while tobacco producers did not.

The buyouts were enacted in response to many economic factors that were primarily linked to global competition. For peanuts, lower priced imports had made inroads in the domestic market as a result of trade treaties, and producers potentially faced eventual reductions to their quota allocations or lower support prices. U.S. tobacco producers contended with global competition from lower cost foreign producers, which led to falling global demand for U.S. tobacco cigarettes and leaf and an increased share of foreign leaf in U.S. cigarette production. The reduced demand resulted in lower annual marketing quota levels.

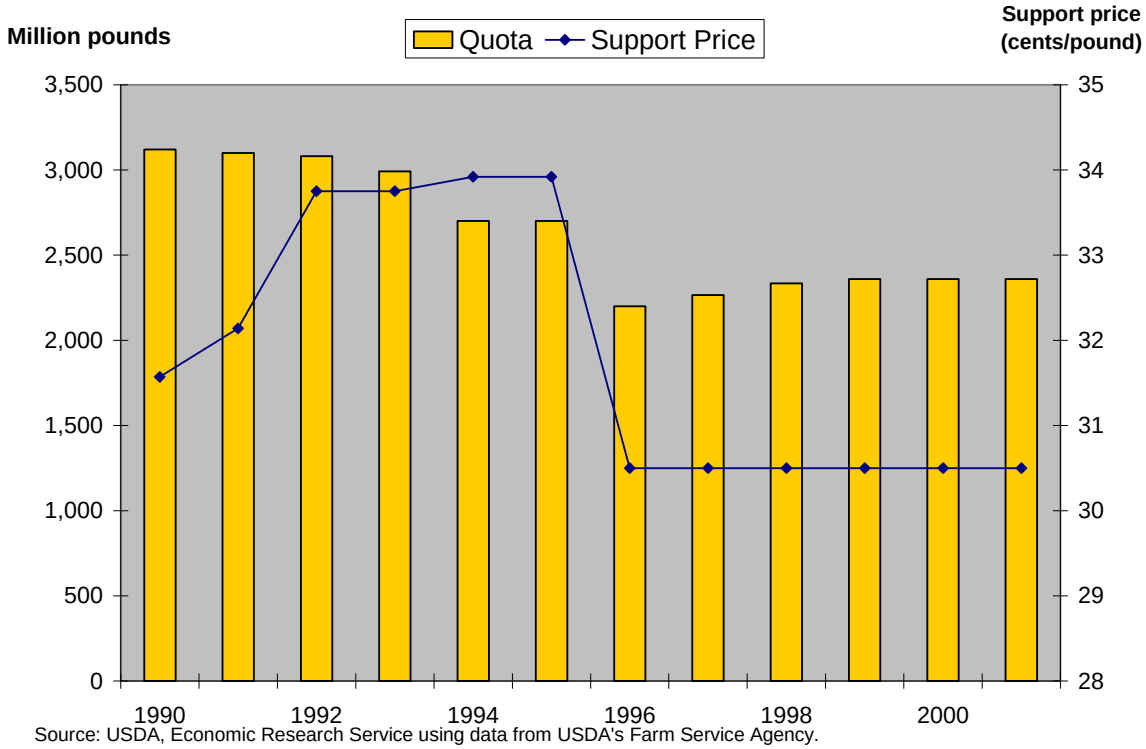
The threat of lower demand for domestically sourced peanuts and tobacco, along with high production costs, made longterm operation of the programs as "no net cost" (i.e., self-paying, without Government expenditures) less viable. In addition, acquiring quota rights raised costs and made it difficult for efficient operators to expand, and restrictions on the transfer of quota between regions prevented new operators from entering the market. In terminating the quota and price support programs, the buyouts also eliminated geographical restrictions on production.

Quota Buyout Provisions

The marketing quota programs for peanuts and tobacco operated under three main Principles – quotas that limited the quantity that could be marketed, government operated loan rates that provided a floor on per-unit revenue, and geographical restrictions on production. After evaluating demand conditions, USDA annually established a national quota level for each crop, and distributed the marketing rights to quota owners in different regions based of their historical share of quota ownership. The quota level was designed to ensure that the market-clearing price would exceed or match the established support price (loan rate). Quota allocations were originally based on acreage, but gradually turned into quantitative limits to keep yield variations from over- or under-supplying the market. However, restrictions remained on the sale or lease of quota rights to farmers across county or State lines.

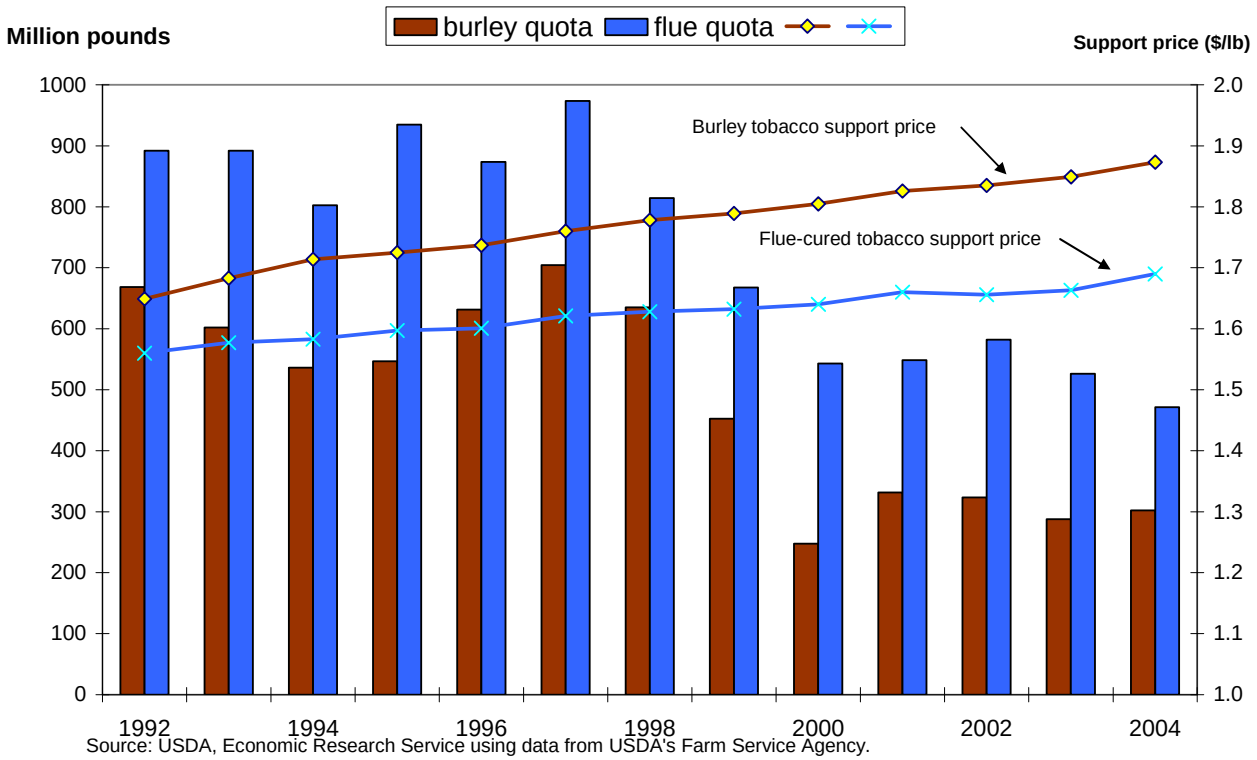
When competitive pressures led to the reduction of support prices for peanuts (figure 1), and to significant reductions to the quota levels for tobacco (figure 2), separate pieces of legislation were enacted in 2002 and 2004 to terminate the quota programs and provide compensation to quota owners for the loss of value to the quota—an asset which provided a rental income stream to those who leased out quota, and ensured higher than free market prices to those who owned and/or produced and marketed quota peanuts and tobacco (Dohlman, Foreman, and Da Pra, 2009).

Figure 1: Peanut support prices were lowered to hold quota steady



Source: USDA, Economic Research Service using data from USDA's Farm Service Agency.
Note: The Quota level refers to the national poundage quota before adjustments. Year refers to marketing year (August-July). Support Price refers to the quota loan rate.

Figure 2: tobacco quotas were lowered to maintain high support prices



Source: USDA, Economic Research Service using data from USDA's Farm Service Agency.
Note: The quota levels refer to basic quota before adjustments. Year refers to marketing year (July-June for flue-cured and October-September for burley).

Although the peanut and tobacco buyout programs were similar in intent, they contrasted notably in their structure, financial size, and Government support. These differences were most evident in the total size of payments, the method of dispersing payments to quota owners and/or farmers, and the source of funds for the buyout payments. The Fair and Equitable Tobacco Reform Act of 2004 eliminated tobacco quotas and price supports effective in 2005, and provided $9.6 billion over 10 years for buyout and transition payments. The tobacco buyout payments were distributed between quota owners (receiving $7 per pound of quota owned) and producers ($3 per pound). The 2002 Farm Act included $1.3 billion in buyout payments to peanut quota owners, with quota owners receiving a total of $0.55 per pound of owned quota. Tobacco growers received no further government support, but peanut growers became eligible for direct and countercyclical payments on newly established peanut base acres, and for a marketing loan program that provides a price guarantee of about 60 percent of what was available under the quota program.[1] Peanut buyout payments (and the new forms of Government assistance) were funded by the Federal Government, while tobacco payments were funded from assessments on tobacco product manufacturers and importers.

[1] Base acres are the peanut acres eligible for some Government commodity programs. For more information on peanut program and other commodity provisions of the 2002 Farm Act and revisions enacted in the 2008 Farm Act, see the Title I provisions in: "The 2008 Farm Bill Side-By-Side Comparison," http://www.ers.usda.gov/FarmBill/2008/. Definitions of specific farm policy terms can be found at http://www.ers.usda.gov/Briefing/FarmPolicy/glossary.htm.

Farm level impacts: Farm numbers shrank but remaining farms grew in scale

Before the buyouts, peanut and tobacco producers were not immune from market forces, but changes in demand were filtered by the Government and market adjustments were somewhat rigid, with the government readjusting quotas and/or support prices on an annual or even less frequent basis (peanut loan rates were set for the duration of the 1996 Farm Act). The marketing quota systems also kept prices artificially high, which undermined the competitiveness of U.S. producers relative to foreign competition and reduced incentives to lower costs and improve efficiency. One drag on productivity was the fragmented nature of quota ownership. In the years preceding the buyouts, the number of quota owners far exceeded the number of active peanut or tobacco producers, since retired farmers typically retained their quota and rented it out to others. In 2002, approximately 75,000 people owned some peanut quota, compared with 8,000 farms growing peanuts. There were more than 350,000 tobacco quota owners in 2004, but only 57,000 tobacco farms (some of which produced tobacco in States that did not participate in the Federal quota program, such as Maryland).

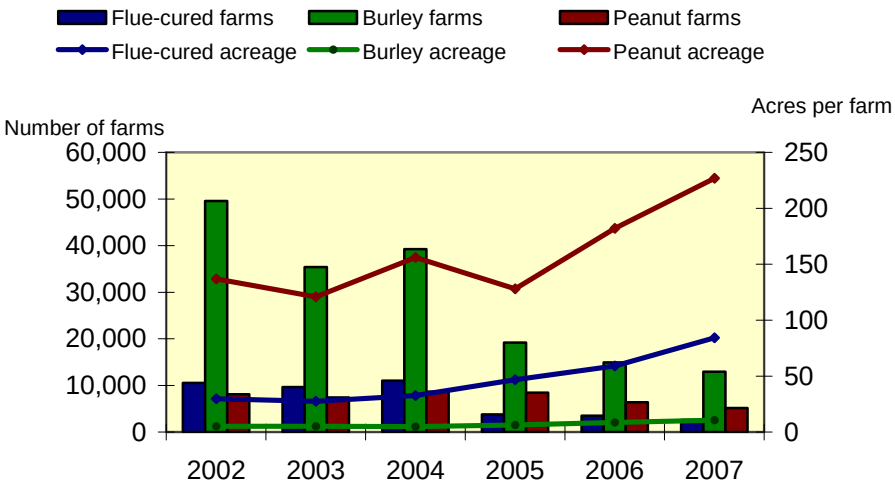
Most peanut and tobacco farmers owned some quota, but about 60 percent of quota production for each crop was from rented quota. Consequently, producers wanting to maintain or expand the scale of their operations had to rent quota rights from quota owners, which added to their cash expenses and management time. The difficulty and expense of acquiring quota rights likely kept the scale of operations smaller than optimal, and may have discouraged investments in specialized equipment or management practices that were economically justified only if used over a larger area.

Although the annual USDA Agricultural Resource Management Survey (ARMS) data does not link data from the same farms between years, and does not track the characteristics of farms that exited a particular farm enterprise (e.g., peanut or tobacco production), it does estimate farm numbers and allows comparison of the characteristics of average peanut and tobacco farms surveyed between years. Drawing upon surveys from the years the buyouts were enacted and ensuing years, the ARMS data does suggest that the buyouts contributed to accelerated growth in the scale of peanut and tobacco farms and that exits among the smaller scale producers, at least initially, was responsible for the increase in average peanut and tobacco acreage, and total operated acres, per farm.

The ARMS data indicate that the number of farmers producing burley and flue-cured tobacco fell by nearly 60 percent between 2004 and 2005, followed by a continued, but slower reduction in the number of farms.[2] By 2007, the number of flue-cured and burley tobacco farms fell to about 15,500, compared with just over 50,000 in 2004 (figure 3). The number of peanut farms declined less rapidly, but fell from about 8,000 to roughly 5,000 between 2002 and 2007. During the same time periods, average peanut acres per farm grew from 137 acres in 2002 to 227 acres in 2007, while total average operated acres per farm expanded from 907 acres to 1,525 acres. Similarly, flue-cured tobacco acreage per farm grew from 33 acres to 84 acres between 2004 and 2007, and burley tobacco acreage rose from 5 acres to 11 acres. Total operated acres rose from 566 acres to 906 acres for flue-cured farms, and from 191 acres to 247 acres for burley farms.

[2] Flue-cured and burley tobacco were the two main types of tobacco that fell within the marketing quota program. These types accounted for over 90 percent of U.S. production.

Figure 3: After the buyouts, farm numbers declined but average acreage climbed



Source: Agricultural Resource Management Surveys (ARMS), USDA, 2002-2007.

With peanut prices declining 30 percent and tobacco prices falling 20 percent immediately after the buyouts, the primary consideration for producer exit, entry, or size of operation decisions was whether the crop enterprise could be profitable in a new lower-priced and more volatile environment. The buyout payments provided some financial flexibility to quota owners who produced their own quota, but they had to weigh whether new or continuing investments would outweigh the risks.[3] Many quota owners may have had a cost structure that was not viable at prices below the quota loan rates available under the quota system, and decided to exit.[4]

In contrast, producers who relied primarily on rented quota may have been sufficiently competitive to remain in operation, or even to expand, because they had been viable producers even with the additional expenses incurred from quota rental fees. The termination of quotas eliminated these costs. Based on changes in the location of production—discussed further in the next section—it appears that the entry of new farms was a more significant factor behind the change in size and other characteristics of peanut farms than for tobacco.

In addition to the reduced number and increased scale of peanut and tobacco farms, the ARMS data reveal that remaining farms in 2007 were in as good, or better financial condition, were more diversified, and made greater use of contracts as a price hedge than the average farm during the year of the buyouts. Total farm and off-farm household income, total farm business net worth, and the percentage of farms falling into the higher sales class were all comparable or higher in 2007 than in

[3] Data from the 2008 Tobacco ARMS indicates that, of tobacco producers who remained in operation, about 40 percent of their buyout payments (which averaged a total of about $135,000 per recipient) were devoted to investments in farm equipment or land to raise tobacco.

[4] Combined data from the 2004 and 2005 ARMS indicates that 41 percent of burley tobacco farmers quit farming entirely the year after the buyout, while 15 percent continued to farm other crops and 44 percent continued to grow burley. Among flue-cured tobacco farmers, 27 percent quit farming, 36 percent continued to grow other crops, and 37 percent continued growing flue-cured tobacco.

2002 for peanuts and in 2004 for tobacco (Table 1, see Appendix tables for more detailed data). While data are not conclusive and are highly variable from year to year, total household incomes increased for the sample of peanut and tobacco farms surveyed by ARMS, with increases coming mostly from farm activities rather than off-farm income. This is consistent with the observation that operators of larger farms tend to devote most of their time to farming activities and rely less on off-farm work to supplement incomes. While the debt-asset ratio declined significantly only for peanut farms, total farm business net worth and the share of farms operating in the largest sales class of $500,000 annually rose substantially for both peanut and tobacco producers.

Table 1: Characteristics of peanut and tobacco farms changed rapidly after the quota buyouts

	Peanuts		Flue-cured tobacco		Burley tobacco	
Item	2002	2007	2004	2007	2004	2007
Number of farms	8,086	5,134	11,062	2,639	39,215	12,973
Farm size (*acres per farm*):						
Total operated	907	1,525	566	906	191	247
Peanut	137	227	NA	NA	NA	NA
Tobacco	NA	NA	33	84	5	11
Sales totaling $500,000 or more (*percent of farms*)	14	33	12	31	NA	NA
Percent of farms with peanut marketing contracts	40	65	NA	NA	NA	NA
Percent of farms with tobacco marketing contracts	NA	NA	47	83	31	49
Household income per farm (1,000 *dollars*)	77	111	105	140	54	60
Farm income per farm	21	65	66	110	10	9
Off-farm income per farm	55	46	39	30	43	51
Farm assets per farm (1,000 *dollars*)	938	2,129	928	1,575	465	651
Farm debt per farm (1,000 *dollars)*	162	185	88	138	37	43
Farm business net worth per farm (1,000 *dollars*)	776	1,944	840	1,437	428	608
Debt/asset ratio (*percent*)	17	9	9	9	8	7
Number of commodities per farm	3.7	4.9	3.3	4.6	2.8	4.1

Source: USDA, Economic Research Service using data from ERS and National Agricultural Statistics Service. Agricultural Resource Management Survey, 2002, 2004, and 2007.
NA = Not applicable.

Tobacco and peanut producers approached their risk management strategies similarly following the buyouts—by increasing their use of marketing contracts to lock in prices and by maintaining a diversified commodity mix to spread risk. The use of contracts to set terms on prices, output, and other conditions has been a growing trend throughout agriculture, but contracts were not widely used for peanuts and tobacco until the 2000s because the marketing quota system and other institutions (e.g., tobacco auctions and farmer cooperatives) served a similar purpose.

Some tobacco and peanut producers used contracts prior to the buyouts. Tobacco contracts sometimes offered higher prices than auctions. Peanut producers growing nonquota peanuts for export or

crushing—about one-quarter of production—relied mostly on marketing contracts.[5] Nevertheless, the percentage of farms using marketing contracts increased significantly following the buyouts. By 2007, 65 percent of peanut farms used marketing contracts, compared with 40 percent in 2002.

Less than 10 percent of tobacco farms used tobacco marketing contracts in 2000, but this percentage rose in the years leading up to the tobacco buyout. By 2007, 83 percent of flue-cured tobacco farms and 49 percent of burley tobacco farms used tobacco marketing contracts. Data from the recent 2008 Tobacco ARMS indicates that 93 percent of tobacco farms used marketing contracts with tobacco companies to market their tobacco. The same survey indicates that marketing options have declined for tobacco producers since 2004, with the mean number of marketing options declining from 4.1 in 2004 to 2.6 in 2008. Since peanut and tobacco farms are larger following the buyouts, they also tend to be more diversified in their commodity mix and better able to spread risk.

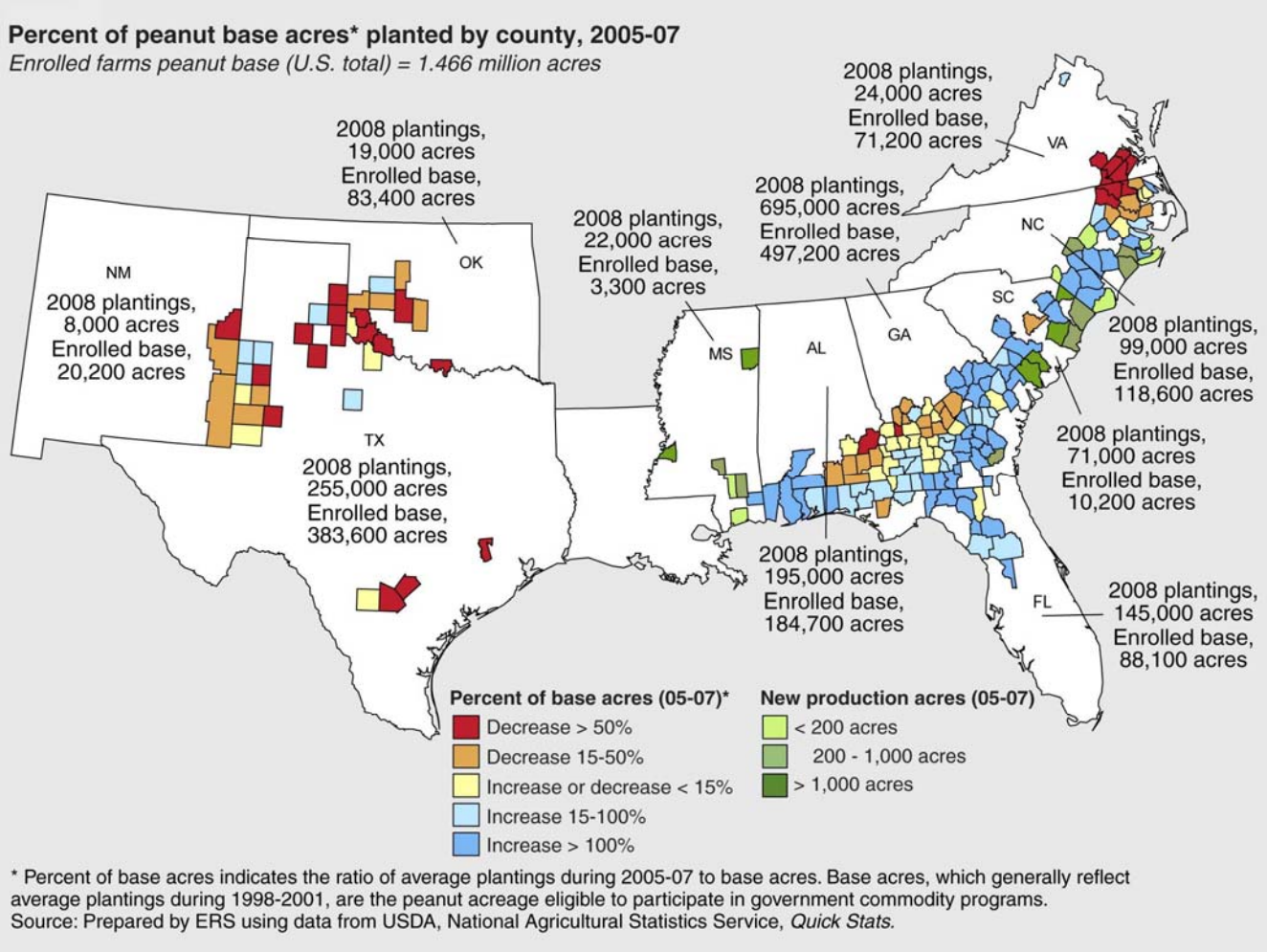
Regional Shifts in Production

In addition to the declining number and changing characteristics of the average peanut and tobacco farm measured by the ARMS data, county-level and crop reporting district acreage data collected by USDA shows that changes in the regional location of production has been another significant departure from the pre-buyout period. With the elimination of marketing quotas, geographic restrictions ended, resulting in significant shifts in production area between counties and States as some traditional production regions declined and others expanded. Lower, post-buyout prices no longer supported profitable production in high cost areas. This trend was most notable for peanuts, where production migrated away from the Southwest and Mid-Atlantic but remained strong in the Southeast (figure 4). Many counties in the Southeast saw increased plantings, and production spread to some Southeastern counties with no significant production history. As a result, the Southeast's share of national peanut acreage grew from about half before the buyout to nearly three-quarters.

Tobacco production did not increase substantially in any production location, but it did become more concentrated in parts of the two largest tobacco-producing States—North Carolina for flue-cured tobacco and Kentucky for burley tobacco (Figure 5). Burley acreage remained strongest in central and western Kentucky, while flue-cured tobacco acreage became more concentrated in eastern North Carolina.

Figure 4:

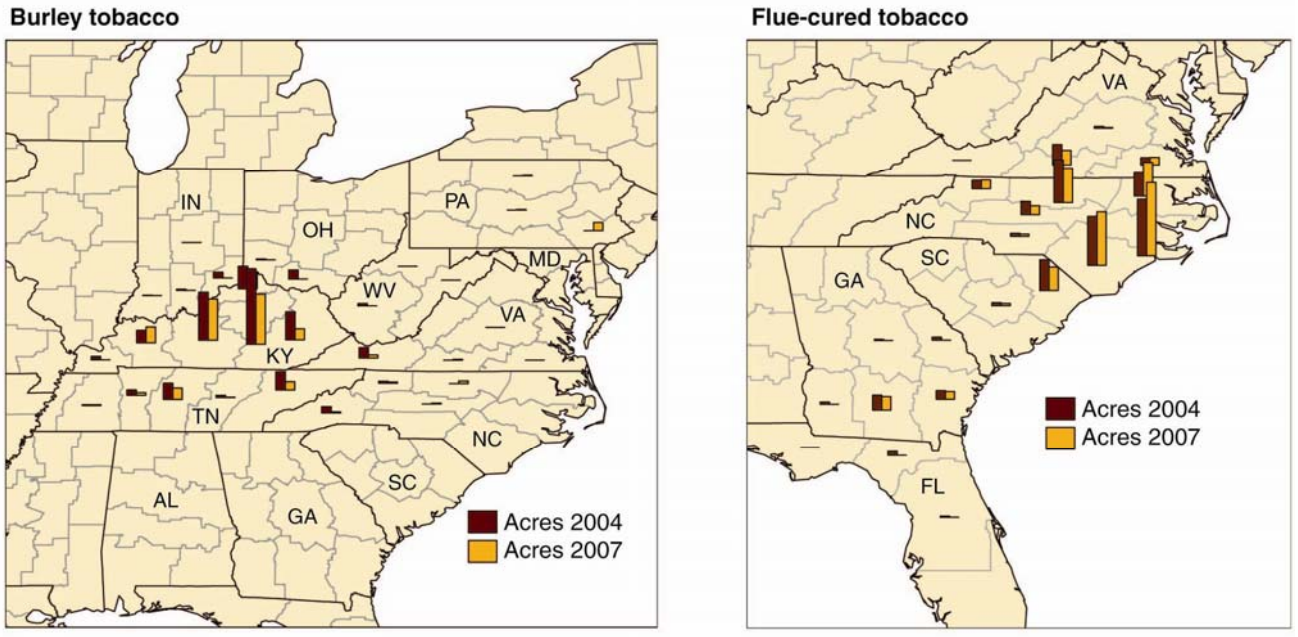
[5] Peanut producers were permitted to produce and market non-quota peanuts (so-called "additionals") if they were destined for non-food uses, such as crushing, or were exported. States such as New Mexico (64.5%), Texas (62.5%), and Florida (57.9%) produced a majority of their peanuts outside of the quota system in the 3 years preceding the peanut buyout.



* Percent of base acres indicates the ratio of average plantings during 2005-07 to base acres. Base acres, which generally reflect average plantings during 1998-2001, are the peanut acreage eligible to participate in government commodity programs.
Source: Prepared by ERS using data from USDA, National Agricultural Statistics Service, *Quick Stats.*

Figure 5:

Harvested acres of burley and flue-cured tobacco by NASS county districts before (2004) and after (2007) the buyout



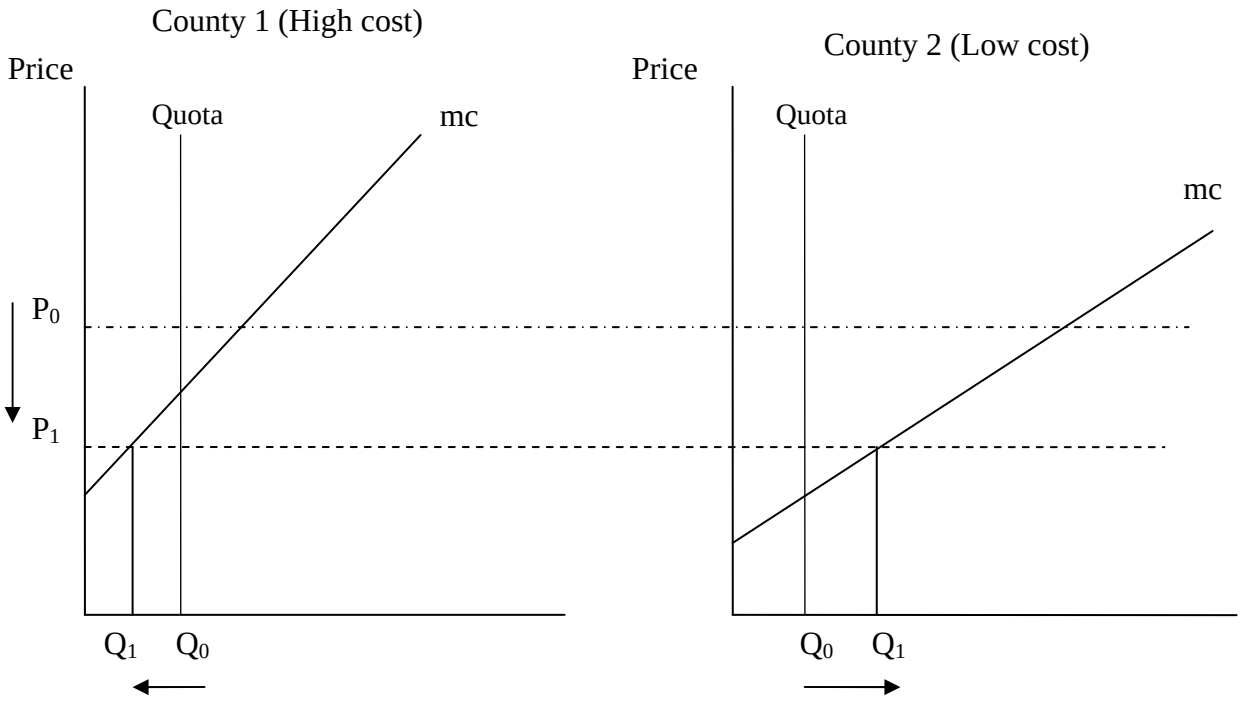
Note: The tobacco buyout was enacted in 2004, but took effect in 2005.
Source: Economic Research Service, USDA, using data from *Quick Stats,* National Agricultural Statistics Service, USDA.

Drawing on the analysis of Brown, Rucker, and Thurman (2007), the intuition behind the observed shifts in production regions can be illustrated with a simple two-county model, one representing a high cost region and the other a low cost region. Although the first county has higher marginal costs of production, marginal costs do not equilibrate across counties because quota could not (or was difficult) to transfer between counties. In practice, quota rental rates may also have been lower in the high cost counties, reducing the difference in marginal costs.

Under the marketing quota system, the price and quota allocated to each county is represented by P_0 and Q_0, respectively. Each county produces its allocated quota and sells the crop at the quota support price. When the quotas are removed, the equilibrium price declines to a price of P_1, based on aggregate demand and the combined marginal cost curves of each county (not depicted). As quota restriction were removed, production declines in the high cost county, and increases in the low cost county, resulting in overall gains to consumer surplus (assuming an unchanged demand curve), producer surplus losses County 1, producer surplus gains in County 2, and a more efficient reallocation of production across counties.[6]

Figure 6:

[6] Changes in producer surplus are abstracted from the impacts on quota owners, who unambiguously are worse off. For the purposes of this illustration, one can assume that all the quota is rented. The outcomes are depicted in more detail, and somewhat differently, in Brown, Rucker, and Thurman (2007), pp. 640-641.



The impacts of greater planting flexibility and market orientation, and the regional shifts in production, appear to have contributed to increased efficiency and improved yields, particularly for peanuts. Since the buyout, areas with a history of stronger yields have been gaining acreage at the expense of areas with poorer yields, and national peanut yields averaged 17 percent higher during 2003-08 than during 1996-2002. This could be the result of better growing conditions in the new areas, and perhaps different crop management practices employed by the larger operations, such as longer crop rotations and better use of inputs. Tobacco yields have shown little if any discernible upward trend since the tobacco buyout, but ARMS data indicate that areas that have retained the most acreage historically have higher and less variable yields than those that have lost acreage.

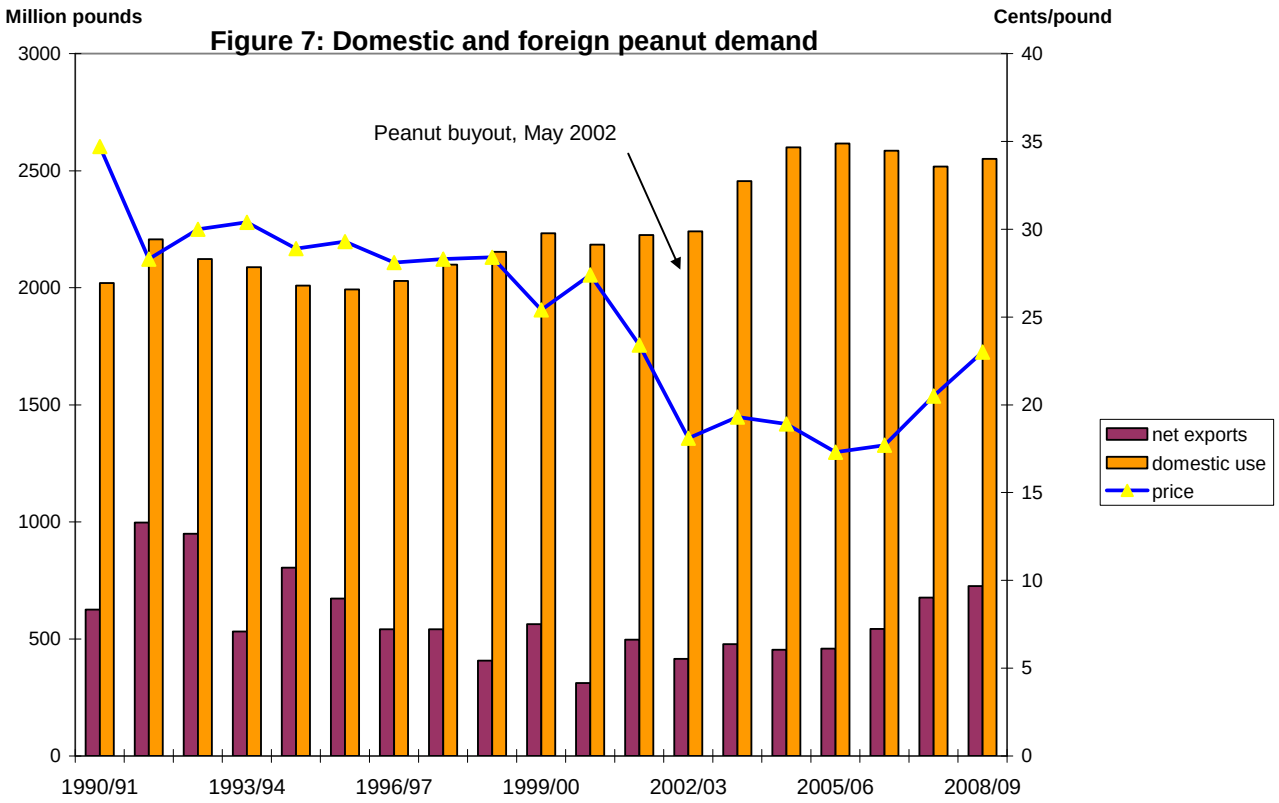
Aggregate Market Developments

The peanut and tobacco buyouts marked the beginning of a major transition for producers and other stakeholders in the marketing quota system. Producers faced lower prices, more risk, and pressures to contain costs and improve productivity. Prices initially declined—30 percent for peanuts and 20 percent for tobacco—and production immediately fell. At the same time, the buyouts forced restructuring in both sectors that left producers better poised to respond to and take advantage of market opportunities. Several years after the buyouts, total acreage and prices remain below pre-buyout levels, but more efficient production and competitive prices have established some of the conditions for demand growth, particularly in export markets.

Peanut acreage has been somewhat volatile, but higher yields have boosted production—including a record crop in 2008—and domestic demand is stronger than before the buyout (Figure 7). U.S. peanuts have also become more competitive both in the domestic market and abroad. Before the buyout, U.S.

peanut imports had been on a steady upward path due to market access agreements that were part of the 1994 NAFTA and WTO treaties. However, lower post-buyout prices caused imports to taper off. Lower prices reinforced by a generally weaker dollar since 2002 reversed the decline in peanut exports that preceded the buyout, and exports reached a 13-year high in 2008.

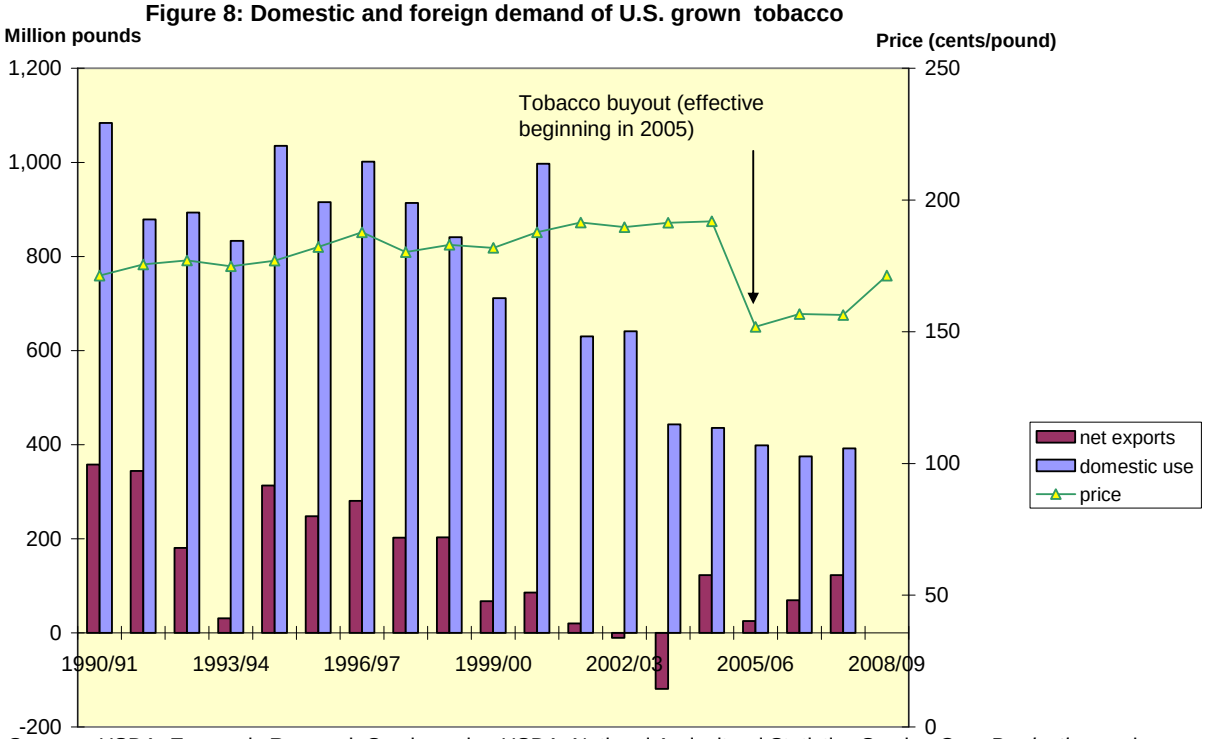
Figure 7: Domestic and foreign peanut demand



Sources: USDA, Economic Research Service using USDA, National Agricultural Statistics Service *Crop Production, Quickstats,* and *Peanut Stocks and Processing;* and Census Bureau, U.S. Department of Commerce.
Note: Net exports refers to exports minus imports. Domestic use refers to food use. Years are marketing years (August-July).

Tobacco export demand also has gained momentum with a weakened dollar and a narrowing of the traditionally large gap between U.S. and foreign tobacco leaf prices. However, domestic demand for U.S. tobacco leaf continues to drop, but more slowly than prior to the tobacco buyout (Figure 8). The continued drop reflects the ongoing decline in domestic per capita smoking rates, relatively steady tobacco leaf imports, and reduced exports of U.S. cigarettes. Even with lower U.S. tobacco leaf prices, domestic demand has been constrained by high retail cigarette prices that largely reflect costs other than tobacco leaf (e.g., manufacturing, promotion, and taxes). Only in some specialized categories—such as dark tobacco used in snuff and smokeless tobacco—has increased demand led to higher acreage.

Figure 8: Domestic and foreign demand of U.S. grown tobacco



Sources: USDA, Economic Research Service using USDA, National Agricultural Statistics Service *Crop Production* and *Quickstats;* and Census Bureau, U.S. Department of Commerce. Factors for converting tobacco stocks to farm weight takes from USDA, Agricultural Marketing Service *Tobacco Quarterly Stock Report*, various years.
Note: Net Exports refers to exports minus imports. Prices are a simple average of flue-cured and burley tobacco prices. Years are marketing years (July-June for flue-cured and October-September for burley).

Conclusion

Although not all recent changes in the peanut and tobacco sectors can be attributed to the buyouts, they clearly represented landmark events that influenced many of the structural changes that followed. Decisions on whether to increase, continue, reduce, or drop out of production—or even to begin production for the first time—are now based more on market-determined net returns from alternative crop choices, and are no longer affected by geographic restrictions on production. Regional production shifts, farm consolidation, and increased exports suggest that the buyouts and planting flexibility have enhanced overall economic efficiency and responsiveness to market developments.

References:

Agricultural Resource Management Survey Database (http://www.ers.usda.gov/Briefing/ARMS/) annual survey of farm and ranch operators administered by USDA's National Agricultural Statistics Service (NASS).

Brown, Blake A., Randal R. Rucker, and Walter N. Thurman. "The End of the Federal Tobacco Program: Economic Impacts of the Deregulation of U.S. Tobacco Production" *Review of Agricultural Economics*, Vol. 29, Number 4, Winter 2007.

Dohlman, Erik, Linda Foreman, and Michelle Da Pra. "Removal of Government Controls Opens Peanut and Tobacco Sectors to Market Forces." *Amber Waves*, Economic Research Service, USDA. December 2009.

Dohlman, Erik, Linda Foreman, and Michelle Da Pra. "The Post-Buyout Experience: Peanut and Tobacco Sectors Adapt to Policy Reform." Economic Research Service, USDA. Economic Information Bulletin No. 60. November 2009.

U.S. Department of Agriculture, National Agricultural Statistics Service, Quick Stats: Agricultural Statistics Data Base (http://www.nass.usda.gov/QuickStats/).

U.S. Department of Agriculture, Economic Research Service, Costs of production. http://www.ers.usda.gov/Data/CostsAndReturns/.

Appendix

Appendix table 1—Characteristics of peanut farms, 2001, 2002, 2004, 2006, and 2007

Item	2001 (A)	2002 (B)	2004 (C)	2006 (D)	2007 (E)
Farm size (*acres per farm*):					
Operated	*860	907 E	*894 E	1,054	1,525 BC
Owned	*356	398	a437	524	*726
Peanut acreage and yield:					
Harvested (*average peanut acres per farm*)	*120 E	137 E	156 E	182 E	227 ABCD
Yield (*pounds per acre*)	2,605	2,352 CDE	3,022 B	2,980 B	3,148 B
Percent of peanut production value under marketing contracts	a24 CDE	38 CDE	81 ABDE	63 ABC	57 ABC
Other crop acreage (*average per farm*):					
Cotton	*161 DE	231	193 DE	308 AC	300 AC
Corn for grain	*76	38 E	53 E	50 E	*158 BCD
Soybeans	*26 DE	41 E	43 E	54 A	*94 ABC
Wheat	*19 E	*48	*24	23	*86 A
Tobacco	a2 BE	*6 A	a7	*4	*7 A
Production specialty[1] (*percent of farms*):					
Peanut	*53 E	41 DE	41 E	27 B	*18 ABC
Cotton	a24	*12 D	*14 D	35 BCE	*19 D
General crop	a9 CE	*25	26 A	18 E	32 AD
Tobacco	a4	a9	a8	*2	*2
Cattle	a1	a5	a4	*5	a6
Sales class (*percent of farms*):					
$500,000 or more	*8	a14	15	22	33
$250,000-$499,999	*12	*15	*27	26	26
$100,000-$249,999	*38	*20	*20	20	16
$40,000-$99,999	a22	*29	*24	14	*17
$39,999 or less	a19	*21	*14	17	a8
Regions[2] (*percent of farms)*:					
Mid-Atlantic	a24	19	10	10	13
Southeast	*45	67	69	84	75
Southwest	a30	*11	*20	a6	*12

[1] The production specialty refers to the commodity that accounted for 50 percent or more of the farm's value of production. General crop farms did not have a single commodity that met this criterion.

[2] The Mid-Atlantic region consists of Virginia and northeastern counties in North Carolina. The Southeast region includes the southeastern counties in North Carolina and all of South Carolina, Georgia, Alabama, Mississippi, and Florida. The Southwest region includes Texas and Oklahoma.

Coefficient of **V**ariation = (Standard Error/Estimate)x100. ***** indicates that CV is greater than 25 and less than or equal to 50.
a indicates that CV is above 50.
Letters A, B, C, D, and E indicate significant column difference tests based on t-statistics at a 90-percent confidence level or higher.
Rounded percents may not add precisely to 100.
Source: 2001, 2002, 2004, 2006, and 2007 USDA Agricultural Resource Management Survey.

Appendix table 2 – Characteristics of peanut farms after the peanut buyout for selected years

Item	2002 (A)	2004 (B)	2006 (C)	2007 (D)
Number of peanut farms	8,086 D	8,608 D	6,386 D	5,134 ABC
Percent with a peanut marketing/production contract	40 BCD	79 AC	55 AB	65 A
Peanuts as percent of value of production	28	32	25	28
Peanut acres per farm	137 D	156 D	182 D	227 ABC
Operated acres per farm	907 D	*894 D	1,054	1,525 AB
Owned and operated	*387	[a]423	497	*707
Rented	520D	427 D	556 D	816 ABC
Cropland acres	676 D	606 D	798 D	1,050 ABC
Operator occupation (*percent*):				
Farming	85	79	82	87
Nonfarm	[a]7	14 C	[a]2 BD	*13 C
Retired	[a]8	*7 CD	0 B	0 B
Operator age (*mean*)	50	53	55 A	54
Less than 50 years (*percent*)	52 CD	40	32 A	29 A
65 or more (*percent*)	24	*20	19	*18
Operator education (*percent*):				
Completed high school	90	87 D	95	97 B
Completed college	*19	*24	25	28
Farm organization (*percent*):				
Sole/family proprietor	80	86 A	82 A	84 A
Partnership	*12	[a]8	9	12
Family corporation	[a]5	5 C	*1 BD	*5 C
Number of commodities per farm	3.7 D	3.5 D	3.4 D	4.9 ABC
Number of farms raising:				
Corn	38 D	41 D	32 D	59 ABC
Hay	*32	27	25	33
Cotton	57	55	61	62
Soybeans	23	21 D	22	31 B
Cattle	42	44	36	38
Household income/farm family (*dollars*)	76,643	*109,938	117,878	*110,912
Farm income/farm family	[a]21,264 BC	*74,224 A	62,088 A	*65,427
Off-farm income/farm family	55,380 B	35,714 A	*55,790	45,485
Average value in dollars per farm:				
Farm assets	*937,706 CD	*1,173,570	1,673,032 A	2,128,666 A
Farm debt	*162,009	*140,065	133,057	184,620
Farm business net worth	*775,697 CD	*1,033,505	1,539,976 A	1,944,046 A
Business debt/asset ratio	17 CD	*12	8 A	9 A

Coefficient of **V**ariation = (Standard Error/Estimate)x100. ***** indicates that CV is greater than 25 and less than or equal to 50. **a** indicates that CV is above 50.

Letters A, B, C, and D indicate significant column differences based on *t*-statistics at a 90-percent confidence level or higher.

Source: 2002, 2004, 2006, and 2007 USDA Agricultural Resource Management Survey

Appendix table 3 – Comparison of burley tobacco farms before and after tobacco buyout[1]

Item	2004 (A)	2005 (B)	2006 (C)	2007(D)
Number of tobacco farms	39,215 BCD	19,233 A	13,443 A	*12,973 A
Percent with a tobacco marketing/production contract	31 BC	78 AD	71A	49 B
Tobacco as percent of value of production	43	a21	33	39
Operated acres per farm	191 C	215	328 A	247
Owned and operated	116 CD	138	169 A	190 A
Rented	*70	*56 C	*136 BD	a44 C
Cropland acres operated	106 C	*133	215 A	124
Tobacco acres per farm	5.0 C	*6.3	10.1 A	*10.5
Percent of total labor expenses:				
Operator and unpaid labor[2]	84 BC	69 A	59 A	79
Operator occupation (*percent*):				
Farming	41	*50	42 A	*34
Retired	*18 CD	a16 CD	0 AB	0 AB
Operator age (*mean*)	57 CD	55	49 A	50 A
Less than 50 years (*percent*)	37	46	*37	47
65 or more (*percent*)	34 CD	*23	a8 A	a8 A
Operator education (*percent*):				
Completed high school	68 CD	84	97 A	88
Completed college	a9 B	0 AC	*6 B	a7
Farm organization (*percent*):				
Sole/family proprietor	92	97	95	86
Partnership	a8	*3	a4	a14
Number of commodities per farm	2.8 D	2.3 D	2.8 D	4.1 ABC
Percent of farms with one	*12 BD	*32 AD	a16	0 AB
Percent of farms with two	27	33	a29	*19
Percent of farms with three	42 B	*18 A	a38	*39
Percent of farms with four or more	18	17	13	41
Percent of farms raising:				
Corn	*16	*18	*17	*26
Hay	73	57	78	73
Soybeans	*4 C	*9	*13 A	a8
Cattle	59	*35	*52	*43
Household income/farm family (*dollars*)	53,597	54,495	80,436	60,175
Farm income/farm family	*10,414 C	*20,022 C	47,414 ABD	a 8,741 C
Off-farm income/farm family	43,183	34,474 D	33,022 D	51,434 BC
Average value in dollars per farm:				
Farm assets	465,056 C	557,464	802,981 A	651,486
Farm debt	37,068	*19,488 C	*79,395 B	a43,254
Farm business net worth	427,988 CD	537,976	723,586 A	608,233
Business debt/asset ratio	8 B	*3 AC	*10 B	a7

[1] Tobacco quotas and price supports ended after 2004 when the tobacco buyout program began. Table includes all farms raising tobacco in the traditional burley tobacco production region. Most of these farms raise only burley tobacco, but some may also raise dark or flue-cured tobacco.

[2] An imputed wage rate is used to value unpaid labor hours.

Coefficient of **V**ariation = (Standard Error/Estimate)x100. ***** indicates that CV is greater than 25 and less than or equal to 50. **a** indicates that CV is above 50.

Letters A, B, C, and D indicate significant column differences based on *t*-statistics at a 90-percent confidence level or higher.

Source: 2004–07 USDA Agricultural Resource Management Survey.

Appendix table 4—Comparison of flue-cured tobacco farms before and after tobacco buyout[1]

Item	2004 (A)	2005 (B)	2006 (C)	2007 (D)
Number of tobacco farms	11,062 BCD	3,766 A	3,469 A	*2,639 A
Percent with tobacco marketing/production contract	34 BCD	88 A	74 A	85 A
Tobacco as percent of value of production	45	37	47	47
Operated acres per farm	566 D	690	662	906 A
Owned and operated	*275	222	218	272
Rented	275 BD	456 A	428	615 A
Cropland acres operated	355 BD	547 A	489	694 A
Flue-cured tobacco acres per farm	32.6 CD	46.9 D	59.1 AD	84.2 ABC
Percent of total labor expenses:				
Operator and unpaid labor[2]	50 CD	43 D	35 AD	28 ABC
Operator occupation (*percent*):				
Farming	81 C	92	97 A	94
Nonfarm	*11 BC	a2 A	a1 A	a6
Retired	a8 CD	a6	0 A	0 A
Operator age (*mean*)	54	53	53	52
Less than 50 years (*percent*)	*33	34	*25	38
65 or more (*percent*)	*14	*17	*9	a16
Operator education (*percent*):				
Completed high school	83 D	86 D	93	95 AB
Completed college	*11 B	0 ACD	*21 B	*16 B
Farm organization (*percent*):				
Sole/family proprietor	89	81	85	82C
Partnership	*7	*15	*5	a 9
Family corporation	*4 BC	a1 AD	a1 AD	*8 BC
Number of commodities per farm	3.3 D	3.7 D	3.4 D	4.6 ABC
Number of farms raising:				
Corn	32	38	39	*48
Hay	*32	35	*29	*24
Cotton	*28	14	22	*22
Soybeans	44 B	65 A	60	62
Peanuts	*13	9	10	*11
Cattle	*34	26	*24	*21
Household income/farm family (*dollars*)	104,771	133,394	*111,662	139,934
Farm income/farm family	65,990 BD	104,674 A	*78,265	109,740 A
Off-farm income/farm family	38,781 B	28,720 A	*32,397	30,193
Average value in dollars per farm:				
Farm assets	927,587	1,208,370	1,201,051	1,574,797
Farm debt	*88,030	77,606 D	91,900	138,104 B
Farm business net worth	839,556	1,130,764	1,109,151	1,436,693
Business debt/asset ratio	*9	6	8	9

[1] Tobacco quotas and price supports ended after 2004 when the tobacco buyout program began. Table includes all farms raising tobacco in the traditional flue-cured tobacco production region. Most of these farms raise only flue-cured tobacco, but some may also raise dark or burley tobacco.

[2] An imputed wage rate is used to value unpaid labor hours.

Coefficient of **V**ariation = (Standard Error/Estimate)x100. ***** indicates that CV is greater than 25 and less than or equal to 50. **a** indicates that CV is above 50.

Letters A, B, C, and D indicate significant column differences based on *t*-statistics at a 90-percent confidence level or higher.
Source: 2004–07 USDA Agricultural Resource Management Survey.