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Trends in U.S. Tobacco Farming

Tom Capehart

Abstract

Tobacco farms are becoming fewer in number and U.S. tobacco acreage has declined since the 1950s. Because of tobacco buyout legislation passed by Congress in October 2004, interest in the tobacco sector is heightened. This article provides a snapshot of tobacco farm characteristics as of 2002. The number of farms growing tobacco in the United States dropped from 512,000 in 1954 to 56,977 in 2002, with 37,013 classified as tobacco farms, that is, tobacco constituted at least 50 percent of their sales. All farms producing tobacco averaged about 7.5 acres in 2002, compared with 9.0 acres in 1997. Tobacco farms averaged only 62 acres of harvested cropland and 175 acres of total farmland. Total sales from tobacco farms averaged \$41,816. Sixty-two percent of tobacco farms were owned by their operators, 29 percent were partly owned, and 9 percent were rented or leased.

Keywords: Tobacco, tobacco farms, tobacco acreage, farm characteristics.

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The author is an agricultural economist with the Economic Research Service, U.S. Department of Agriculture.

Introduction

Total U.S. tobacco production grew from 300 million pounds in the mid-1860s to over a billion pounds in 1909. Production continued to climb and topped 2 billion pounds in 1946 as cigarette consumption grew. During the early 1900s production spread to several regions. Appreciable acreage is now grown in 17 States (fig. 1). However, the location of tobacco production has changed little since the 1930s when the tobacco production control program began. But tobacco farm structure could quickly become more dynamic since Congress has passed legislation terminating the tobacco marketing quota and price support program beginning with the 2005 crop year.

Techniques used for producing, harvesting, curing, and packaging, while slow to change, have, over time, led to increased acreage per farm and fewer, larger tobacco farms (fig. 2). During the 1960s, producers of flue-cured tobacco switched from the labor-intensive hand-tying of leaves to loose leaf preparation for marketing. Labor-saving harvesting techniques such as mechanical harvesters for flue-cured were also adopted. In the 1970s burley tobacco was also sold loose on sheets. During the past decade, baled flue-cured and burley have become the norm.

With the recent passage of legislation authorizing a tobacco buyout <<http://www.fsa.usda.gov/buyout/assets/facts/hr4520.pdf>>, the structure of the sector is of timely interest. The numbers in this article reflect recently published data from the 2002 Census of Agriculture.¹ This article describes

¹For more information, see www.nass.usda.gov/census.

Figure 1

Number of Tobacco Farms by County

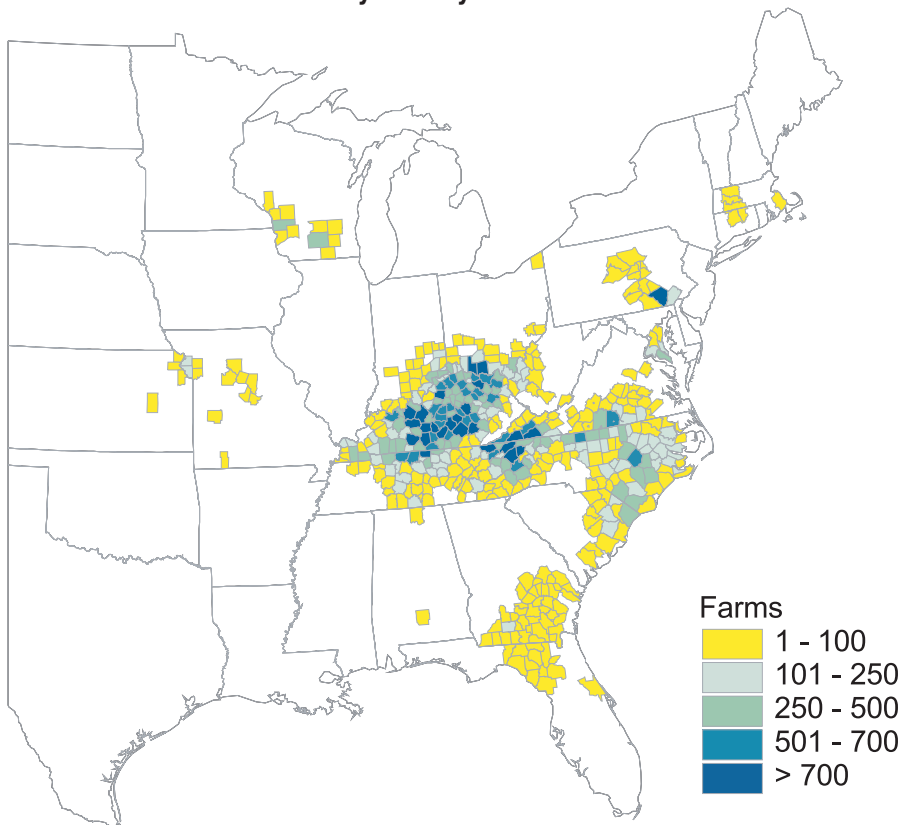
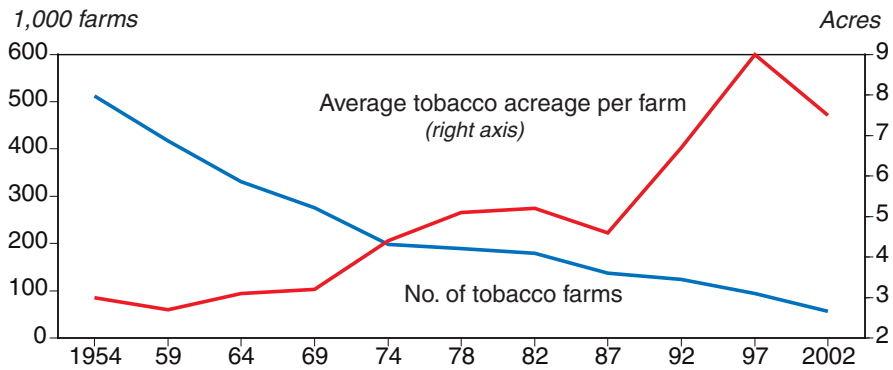


Figure 2

U.S. tobacco farms and average acreage, 1954-2002



changes in numbers of tobacco growers and summarizes characteristics of tobacco farms.

Farms Producing Tobacco

The number of farms growing tobacco in the United States fell from 512,000 in 1954 to 56,977 in 2002 (table 1). They fell by 39 percent during the 5-year period 1997-2002, by far the greatest percentage decline in the past 50 years. Tobacco farm numbers fell 27 percent between 1992 and 1997 and 9 percent between 1987 and 1992. In North Carolina, the major flue-cured growing State, farms growing tobacco declined by 95 percent, from 150,000 in 1954 to 7,850 in 2002.

Several policy factors account for the shift in tobacco farm numbers. Between 1961 and 1987, lease and transfer of quota between farms within counties enabled tobacco acreage to be aggregated. Since 1982, sales of flue-cured tobacco quota within counties have been allowed and non-farm related holdings by institutions and corporations have been forbidden, both of which increased flue-cured farm size. The decline accelerated in 1997-2002 because growers in Tennessee were allowed to lease and transfer quota across county lines beginning in 1991. The number of farms in Tennessee declined by 35 percent while production in Tennessee declined only 23 percent. Cross-county leasing is permitted in Virginia, Indiana, and Ohio. Sales of burley quota have been permitted since 1991, also contributing to aggregation of tobacco acreage in larger farms.

Furthermore, new technologies, such as bulk barns and mechanical harvesters, greatly reduced labor requirements. A shift to selling all flue-cured untied in the late 1960s also hastened the consolidation in quotas and the reduction of farms growing tobacco. Now, baled flue-cured and burley leaf has further increased marketing efficiency.

The number of producers in Kentucky, the major burley-growing State, has declined significantly but not as dramatically as in States that produce flue-cured tobacco such as North Carolina. Mechanization has not been adopted on burley farms to the same extent because topography limits farm size and burley harvesting is more difficult to mechanize. Sales of burley loose on

Table 1—Number of all farms growing tobacco, selected States, 1954-2002

Year	North Carolina	Kentucky	Other States	United States
	<i>Thousands</i>			
1954	150	136	224	512
1959	111	119	187	417
1964	88	96	147	331
1969	64	91	121	276
1974	44	71	83	198
1978	38	74	77	189
1982	30	74	75	179
1987	22	62	54	137
1992	18	59	47	124
1997	13	47	34	94
2002	8	29	20	57

Source: U.S. Census of Agriculture, Bureau of the Census, National Agricultural Statistics Service (NASS), USDA.

sheets did not begin until the late 1970s. Since the 1980s nearly all burley has been sold in bales.

In 1954, 29 percent of the farms that grew tobacco were in North Carolina; by 2002, that number had fallen to 14 percent. Kentucky accounted for 27 percent of tobacco-growing farms in 1954 and 51 percent in 2002. The relative decline in tobacco-growing farms in Kentucky was much smaller than in North Carolina. Similar changes occurred in other States: large declines in States growing flue-cured tobacco, smaller declines in States growing burley.

Tobacco area on farms growing tobacco averaged 7.5 acres in 2002, compared with 9.0 acres in 1997, 6.7 acres in 1992, and 2.7 acres in 1959 (table 2). However, average tobacco acreage varied widely between States and types of tobacco. In 2002, average tobacco acreage per farm by State varied from 34.6 acres in South Carolina to 2.5 acres in West Virginia (table 3). Acreage varies by type of tobacco, tenure arrangements, topography, technology, competing crops, and availability of labor. Acreage, both per farm average and U.S. total, fell in 2002 (after rising during 1992-97) because quotas were reduced: so even though producers have accumulated quota and farm size has increased, the quantity of tobacco that they can market has declined by about half during 1997-2002.

Characteristics of Tobacco Farms

Seventy-nine percent of the farms that grew tobacco in 2002 were in North Carolina, Kentucky, or Tennessee. These States, along with South Carolina, Virginia, and Georgia, had about 90 percent of tobacco-growing farms, about the same as in 1997. These six States accounted for about 94 percent of total U.S. tobacco production, also the same as in 1997. Since nearly all tobacco production falls under marketing quotas, which have been geographically restricted since the 1930s, distribution of acreage and production is static.

The Census of Agriculture does not provide detailed information about all farms selling tobacco, only those termed "tobacco farms." An operation is considered a tobacco farm if tobacco makes up at least 50 percent of its sales.

Table 2—Number of all farms growing tobacco and tobacco acreage

Year	Farms	Tobacco	Average tobacco
acreage		acres	per farm
	<i>Thousands</i>	<i>----- Acres -----</i>	
1954	512	1,547	3.0
1959	417	1,108	2.7
1964	331	1,025	3.1
1969	276	877	3.2
1974	198	877	4.4
1978	189	963	5.1
1982	179	932	5.2
1987	137	633	4.6
1992	124	831	6.7
1997	94	837	9.0
2002	57	429	7.5

Source: U.S. Census of Agriculture, Bureau of the Census, National Agricultural Statistics Service (NASS), USDA.

Table 3—Farms growing tobacco, number and acreage by State, 2002

	Farms	Tobacco	Average tobacco
		acreage	acreage per farm
	<i>Number</i>	<i>----- Acres -----</i>	
Alabama	8	199	24.9
Connecticut	80	1,925	24.1
Florida	115	3,851	33.5
Georgia	822	25,060	30.5
Indiana	1,282	4,034	3.1
Kentucky	29,237	110,734	3.8
Maryland	159	1,162	7.3
Massachusetts	50	1,113	22.3
Missouri	338	1,460	4.3
North Carolina	7,850	167,677	21.4
Ohio	1,845	5,764	3.1
Pennsylvania	897	5,470	6.1
South Carolina	873	30,241	34.6
Tennessee	8,206	35,960	4.4
Virginia	4,184	30,308	7.2
West Virginia	544	1,373	2.5
Wisconsin	452	1,517	3.4
Other states ¹	35	434	12.4
United States	56,977	428,631	7.5

¹Illinois, Iowa, Kansas, Louisiana, Mississippi, and New York are not included in average acreage calculation to avoid disclosure.

Source: U.S. Census of Agriculture, Bureau of the Census, National Agricultural Statistics Service, USDA.

In 2002, 65 percent of the farms that grew tobacco were classified as tobacco farms. They accounted for 37,013 of the 56,977 farms that grew tobacco, a smaller proportion than in 1997. One explanation for the decline is that smaller farms (tobacco farms are usually smaller than other crop farms) often have limited incentives or possibilities for expansion.

Tobacco farms (those that earn most of their income from tobacco) are relatively small. They averaged 175 acres in size in 2002 and 62 acres of cropland. Average tobacco acreage was 8.4 acres, down from 9.9 acres in 1997. Tobacco acreage per farm varied significantly among States (table 4).

Burley tends to be grown on smaller farms due to its labor-intensive production requirements and the hilly topography of the States where it is grown. Tobacco farms in Kentucky (mostly burley) averaged 3.9 acres of tobacco, while those in Georgia (all flue-cured) averaged 39.4 acres.

Tobacco farms were larger in 2002 than in 1997 although they were growing fewer acres of tobacco. The average value of all farm products sold from tobacco farms was \$41,816 in 2002, compared with \$32,700 in 1997. The average ranged from \$18,795 in Kentucky to \$212,071 in Georgia. There was also considerable difference among States in the value of land and buildings, the market value of machinery and equipment, and expenditures on inputs per farm (table 4). Value of land and buildings rose 66 percent in the 5-year period, while value of products sold slipped 44 percent, reflecting, in part, lower tobacco quotas.

The proportion of tobacco farms operated by full-owners in 2002 fell slightly from 1997 as the proportion of part-owners increased. Sixty-two percent of tobacco farms were operated by full-owners, and 29 percent were operated by part-owners. Nine percent were operated by tenants. Full ownership was highest in States with smaller average tobacco acreage per farm, notably the burley-growing States. Flue-cured States had higher rental and tenancy rates (table 5).

Table 4—Selected characteristics of farms primarily growing tobacco, selected States and United States, 2002

	Unit	North Carolina	South Carolina	Georgia	Virginia	Kentucky	Tennessee	United States
Farms	Number	5,876	700	362	2,814	18,494	5,782	37,013
Average per farm:								
Land in farms	Acres	327	604	534	207	132	100	175
Cropland harvested	Acres	169	332	244	43	32	29	62
Value of land and buildings	Dol.	903,158	927,303	885,573	374,306	232,929	253,961	375,418
Value of machinery and equipment 1/	Dol.	109,209	178,583	211,030	48,711	30,922	43,296	51,396
Tobacco harvested:								
Acres	No.	21.4	37.2	39.4	9.2	3.9	4.8	8.4
Proportion irrigated	Pct.	27	3	7	52	15	10	25
Yield per acre	Lb.	2,130	1,912	2,065	2,205	1,953	2,067	2,700
Quantity	Lb.	45,552	71,211	81,384	20,272	7,684	9,922	22,584
Value of all products sold ²	Dol.	108,294	170,849	212,071	41,666	18,795	24,125	41,816
Value of tobacco sold	Dol.	81,535	129,870	148,925	35,414	14,362	19,341	32,390
Expenditures for:								
All farm production expenses	Dol.	95,011	165,775	202,333	34,348	15,124	15,668	35,043
Agricultural chemicals ³	Dol.	13,053	24,565	27,815	3,095	824	1,380	4,298
Fertilizer ³	Dol.	13,057	27,813	28,624	4,288	1,713	2,029	4,702
Energy and petroleum products ³	Dol.	7,716	15,484	16,399	3,699	917	900	2,668
Hired labor ³	Dol.	24,041	29,567	35,295	14,171	3,965	4,874	11,478

¹Estimated market value of all machinery and equipment.

²Includes Government payments.

³Per farm.

Source: U.S. Census of Agriculture, Bureau of the Census, National Agricultural Statistics Service, USDA.

Three percent of tobacco farmers were non-white (table 5). The proportion of non-white growers was highest in South Carolina and lowest in Kentucky and Tennessee.

Fifty-three percent of tobacco growers worked off the farm, about 10 percent fewer than in 1997. The proportion varied from 38 percent in Georgia to 58 percent in Kentucky. Growers with smaller acreage were more likely to work off the farm. Of the 53 percent of growers who worked off the farm, 70 percent worked off-farm for 200 days or more per year.

The average age of tobacco growers in the United States in 2002 was 54.7 years, 1.2 years older than in 1997. The average age was highest in South Carolina (56.7) and lowest in Tennessee (54.0). About 24 percent of operators were 44 or younger in 2002, about the same as in 1997. Twenty-five percent of tobacco growers were 65 or older in 2002, slightly higher than in 1997.

Conclusions

The number of farms growing tobacco has declined rapidly during the last 50 years. From 1997 to 2002, farm numbers declined by a larger percentage than in any other 5-year period since 1950. Acreage and production both declined due to smaller quotas. The trend toward fewer larger farms will likely continue, but the future rate of change and location of production will depend on several factors: the impact of the tobacco buyout, U.S. and world consumption of tobacco, and alternative crop and off-farm income opportunities for tobacco growers.

Table 5—Selected characteristics of tobacco farm operators, selected States and United States, 2002

	North Carolina	South Carolina	Georgia	Virginia	Kentucky	Tennessee	United States
	<i>Percent</i>						
Farms operated by:							
Full-owners	39	45	36	58	71	63	62
Part -owners	49	46	54	34	21	28	29
Tenants	13	9	10	7	8	9	9
Farms operated by:							
White race	94	88	94	92	98	97	97
Black and other races	6	12	6	8	2	3	3
Operators working off the farm	40	36	38	50	58	56	53
Age of operator:							
Under 25 years	1	1	2	0	1	3	1
25-34 years	5	4	5	5	6	6	6
35-44 years	16	12	18	18	20	19	17
45-54 years	27	28	24	26	29	23	25
55-64 years	29	27	30	24	26	24	25
65 years and over	22	28	21	27	18	25	25
Average age	55.1	56.7	54.1	55.5	54.8	54	54.7

Source: U.S. Census of Agriculture, Bureau of the Census, National Agricultural Statistics Service, USDA.