

2001 TILLAGE SYSTEMS

Farmers are the original environmentalists and conservationists. In order to maintain a paying farm, they have long recognized soil and water as the foundation of a successful crop. To address the problem of highly erodible soil, many farmers have adopted no-till and other conservation practices as part of their farming operation. The Tennessee Agricultural Statistics Service began making estimates of these alternative tillage systems in 1983 for soybeans, corn, and sorghum. Estimates of major tillage systems used on cotton were added in 1992, and on wheat in 1995.

Potential advantages for no-till or other conservation tillage practices are reduced labor costs, reduced soil compaction and erosion, and increased water infiltration.

No-till usage in 2001 increased moderately from a year ago. This change was due primarily to a tremendous 23 percent increase in no-till cotton acreage coupled with an 8 percent rise in no-till corn. Acreage devoted to no-till soybeans remained steady while wheat dropped. Tennessee farmers used the no-till practice on 61.0 percent of the total acreage dedicated to soybeans, corn, sorghum, cotton and wheat, compared with 55.6 percent in 2000. Other conservation tillage practices accounted for 21.7 percent of the acreage seeded to corn, soybeans, sorghum, cotton, and wheat. Double-cropped acreage for these crops totaled 11.9 percent for this year, compared with 12.5 percent last year.

The Tennessee Agricultural Statistics Service is a cooperative endeavor of the U.S. and Tennessee Departments of Agriculture, who have combined resources to provide a single source of official estimates for Tennessee agriculture.

TILLAGE PRACTICES USED: BY CROP, TENNESSEE, 1997 - 2001

Crop	Year	Total Acres Planted	No-Till ¹		Other Conservation Tillage ²		Conventional Till ³		Double-Cropped ⁴	
			Acres	% of Total ⁵	Acres	% of Total ⁵	Acres	% of Total ⁵	Acres	% of Total
Soybeans	1997	1,240,000	580,000	46.8	290,000	23.4	370,000	29.8	370,000	29.8
	1998	1,250,000	600,000	48.0	310,000	24.8	340,000	27.2	370,000	29.6
	1999	1,250,000	630,000	50.4	280,000	22.4	340,000	27.2	370,000	29.6
	2000	1,180,000	770,000	65.2	180,000	15.3	230,000	19.5	330,000	28.0
	2001	1,080,000	770,000	71.3	180,000	16.7	130,000	12.0	300,000	27.8
Corn	1997	700,000	260,000	37.1	230,000	32.9	210,000	30.0	35,000	5.0
	1998	700,000	320,000	45.7	210,000	30.0	170,000	24.3	40,000	5.7
	1999	630,000	340,000	54.0	180,000	28.6	110,000	17.5	35,000	5.6
	2000	650,000	380,000	58.5	140,000	21.5	130,000	20.0	40,000	6.2
	2001	630,000	410,000	65.1	140,000	22.2	80,000	12.7	35,000	5.6
Sorghum	1997	20,000	7,000	35.0	6,000	30.0	7,000	35.0	500	2.5
	1998	20,000	7,000	35.0	5,000	25.0	8,000	40.0	500	2.5
	1999	20,000	5,000	25.0	6,000	30.0	9,000	45.0	500	2.5
	2000	25,000	5,000	20.0	5,000	20.0	15,000	60.0	500	2.0
	2001	30,000	8,000	26.7	10,000	33.3	12,000	40.0	1,000	3.3
Cotton	1997	490,000	120,000	24.5	60,000	12.2	310,000	63.3	1,000	0.2
	1998	450,000	110,000	24.4	50,000	11.1	290,000	64.4	1,000	0.2
	1999	570,000	180,000	31.6	50,000	8.8	340,000	59.6	1,500	0.3
	2000	570,000	300,000	52.6	50,000	8.8	220,000	38.6	1,500	0.3
	2001	610,000	370,000	60.7	100,000	16.4	140,000	22.9	2,000	0.3
Wheat ⁶	1997	550,000	180,000	32.7	200,000	36.4	170,000	30.9	-----	----
	1998	570,000	160,000	28.1	200,000	35.1	210,000	36.8	-----	----
	1999	500,000	160,000	32.0	190,000	38.0	150,000	30.0	-----	----
	2000	550,000	200,000	36.4	180,000	32.7	170,000	30.9	-----	----
	2001	500,000	180,000	36.0	190,000	38.0	130,000	26.0	-----	----
Total	1997	3,000,000	1,147,000	38.2	786,000	26.2	1,067,000	35.6	406,500	13.6
	1998	2,990,000	1,197,000	40.0	775,000	25.9	1,018,000	34.0	411,500	13.8
	1999	2,970,000	1,315,000	44.3	706,000	23.8	949,000	32.0	407,000	13.7
	2000	2,975,000	1,655,000	55.6	555,000	18.7	765,000	25.7	372,000	12.5
	2001	2,850,000	1,738,000	61.0	620,000	21.7	492,000	17.3	338,000	11.9

¹No-Till - A procedure whereby a crop is planted directly into a seedbed not tilled since harvest of a previous crop, or the planting of a crop into sod, previous crop stubble, or a cover where only the intermediate seed zone is disturbed.

²Other Conservation Tillage - Tillage practices prior to planting which result in a minimum of 30 percent ground cover or residue being retained on the surface following planting. Grass and weed control is accomplished primarily with herbicides. Includes ridge till, strip till, and mulch till.

³Conventional Till - Systems where 100 percent of the surface layer is mixed or inverted by plowing, power tilling, or multiple disking.

⁴Double-Cropped - Two crops harvested from the same field during one year. Example: small grain harvest spring 2001, followed by soybeans, corn or sorghum harvest in the fall of 2001. ⁵Sum of no-till, other conservation tillage and conventional till percents of total may not add to 100 percent due to rounding. ⁶Wheat seeded the previous fall for all intended purposes including grain, cover, silage, hay or any other utilization.

2001 SOYBEAN DISTRICT ESTIMATES BY TILLAGE PRACTICE

Crop	District	Total Acres Planted	No-Till		Other Conservation Tillage		Conventional Till	
			Acres	% of Total	Acres	% of Total	Acres	% of Total
Soybeans	10	405,000	300,000	74.1	60,000	14.8	45,000	11.1
	20	435,000	305,000	70.1	90,000	20.7	40,000	9.2
	30	82,000	55,000	67.1	9,000	11.0	18,000	22.0
	40	78,000	60,000	76.9	15,000	19.2	3,000	3.8
	50	60,000	35,000	58.3	4,000	6.7	21,000	35.0
	60	20,000	15,000	75.0	2,000	10.0	3,000	15.0
	State	1,080,000	770,000	71.3	180,000	16.7	130,000	12.0

2001 CORN DISTRICT ESTIMATES BY TILLAGE PRACTICE

Corn	10	142,000	90,000	63.4	25,000	17.6	27,000	19.0
	20	230,000	155,000	67.4	50,000	21.7	25,000	10.9
	30	76,000	51,000	67.1	15,000	19.7	10,000	13.2
	40	74,000	51,000	68.9	20,000	27.0	3,000	4.1
	50	62,000	36,000	58.1	15,000	24.2	11,000	17.7
	60	46,000	27,000	58.7	15,000	32.6	4,000	8.7
	State	630,000	410,000	65.1	140,000	22.2	80,000	12.7

2001 SORGHUM DISTRICT ESTIMATES BY TILLAGE PRACTICE

Sorghum	10	7,600	2,400	31.6	3,600	47.4	1,600	21.1
	20	19,500	4,500	23.1	5,300	27.2	9,700	49.7
	30-60 ¹	2,900	1,100	37.9	1,100	37.9	700	24.1
	State	30,000	8,000	26.7	10,000	33.3	12,000	40.0

2001 COTTON DISTRICT ESTIMATES BY TILLAGE PRACTICE

Cotton	10	195,000	104,000	53.3	40,000	20.5	51,000	26.2
	20	395,000	260,000	65.8	56,000	14.2	79,000	20.0
	30-50 ²	20,000	6,000	30.0	4,000	20.0	10,000	50.0
	60	0	0		0		0	
	State	610,000	370,000	60.7	100,000	16.4	140,000	23.0

2001 WHEAT DISTRICT ESTIMATES BY TILLAGE PRACTICE

Wheat	10	130,000	60,000	46.2	55,000	42.3	15,000	11.5
	20	180,000	80,000	44.4	85,000	47.2	15,000	8.3
	30	54,000	11,000	20.4	17,000	31.5	26,000	48.1
	40	58,000	13,000	22.4	18,000	31.0	27,000	46.6
	50	43,000	8,000	18.6	8,000	18.6	27,000	62.8
	60	35,000	8,000	22.9	7,000	20.0	20,000	57.1
	State	500,000	180,000	36.0	190,000	38.0	130,000	26.0

¹ Includes Districts 30, 40, 50, and 60. ² Includes Districts 30, 40, 50.

Tennessee 2001 Tillage Systems

P Soybeans

P Corn

P Sorghum

P Cotton

P Winter Wheat



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