2004 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. In response to a need for information regarding these conservation practices in the state, 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.

Total no-till usage for the major crops in 2004 was up 5 percent over 2003.This season was highlighted by a sharp increase in no-till soybeans, while the use of no-till practices remained steady for cotton and corn. Tennessee farmers used the no-till practice on 58.4 percent of the total acreage dedicated to soybeans, corn, sorghum, cotton, and wheat, compared with 55.4 percent in 2003. Other conservation tillage practices accounted for 25.7 percent of the acreage seeded to the state's major crops. Double-cropped acreage for these crops totaled 11.4 percent for 2004, compared with 11.2 percent last year.

Tennessee Agricultural Statistics 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.

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TILLAGE PRACTICES: BY CROP, TENNESSEE, 2000 - 2004

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[5]
Soybeans	2000	1,180,000	770,000	65.3	180,000	15.3	230,000	19.5	330,000	28.0
	2001	1,070,000	770,000	72.0	180,000	16.8	120,000	11.2	300,000	28.0
	2002	1,160,000	790,000	68.1	210,000	18.1	160,000	13.8	300,000	25.9
	2003	1,150,000	710,000	61.7	320,000	27.8	120,000	10.4	290,000	25.2
	2004	1,180,000	800,000	67.8	260,000	22.0	120,000	10.2	300,000	25.4
Corn	2000	650,000	380,000	58.5	140,000	21.5	130,000	20.0	40,000	6.2
	2001	680,000	410,000	60.3	140,000	20.6	130,000	19.1	35,000	5.1
	2002	690,000	470,000	68.1	124,000	18.0	96,000	13.9	35,000	5.1
	2003	710,000	450,000	63.4	140,000	19.7	120,000	16.9	30,000	4.2
	2004	700,000	450,000	64.3	140,000	20.0	110,000	15.7	25,000	3.6
Sorghum	2000	25,000	5,000	20.0	5,000	20.0	15,000	60.0	500	2.0
	2001	25,000	8,000	32.0	10,000	40.0	7,000	28.0	1,000	4.0
	2002	30,000	13,000	43.3	10,000	33.3	7,000	23.3	1,500	5.0
	2003	45,000	13,000	28.9	15,000	33.3	17,000	37.8	3,000	6.7
	2004	30,000	11,000	36.7	10,000	33.3	9,000	30.0	1,500	5.0
Cotton	2000	570,000	300,000	52.6	50,000	8.8	220,000	38.6	1,500	0.3
	2001	620,000	370,000	59.7	100,000	16.1	150,000	24.2	2,000	0.3
	2002	565,000	300,000	53.1	140,000	24.8	125,000	22.1	1,500	0.3
	2003	560,000	270,000	48.2	190,000	33.9	100,000	17.9	1,500	0.3
	2004	570,000	270,000	47.4	190,000	33.3	110,000	19.3	1,500	0.3
Wheat[6]	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	--------	----
	2002	470,000	170,000	36.2	190,000	40.4	110,000	23.4	--------	----
	2003	430,000	160,000	37.2	170,000	39.5	100,000	23.3	--------	----
	2004	400,000	150,000	37.5	140,000	35.0	110,000	27.5	--------	----
Total	2000	2,975,000	1,655,000	55.6	555,000	18.7	765,000	25.7	372,000	12.5
	2001	2,895,000	1,738,000	60.0	620,000	21.4	537,000	18.5	338,000	11.7
	2002	2,915,000	1,743,000	59.8	674,000	23.1	498,000	17.1	338,000	11.6
	2003	2,895,000	1,603,000	55.4	835,000	28.8	457,000	15.8	324,500	11.2
	2004	2,880,000	1,681,000	58.4	740,000	25.7	459,000	15.9	328,000	11.4

[1]No-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.
[2]Other 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.
[3]Conventional Till - Systems where 100 percent of the surface layer is mixed or inverted by plowing, power tilling, or multiple disking.
[4]Double-Cropped - Two crops harvested from the same field during one year. Example: small grain harvest spring 2004, followed by soybeans, corn or sorghum harvest in the fall of 2004.[5]Sum of no-till, other conservation tillage and conventional till percents of total may not add to 100 percent due to rounding.[6]Wheat seeded the previous fall for all intended purposes including grain, cover, silage, hay or any other utilization.

TILLAGE PRACTICES: BY CROP, DISTRICT, TENNESSEE.

Crop	District	Total Acres Planted	No-Till		Other Conservation Tillage		Conventional Till	
			Acres	% of Total	Acres	% of Total	Acres	% of Total
Soybeans	10	440,000	280,000	63.6	120,000	27.3	40,000	9.1
	20	490,000	320,000	65.3	115,000	23.5	55,000	11.2
	30	84,000	65,000	77.4	10,000	11.9	9,000	10.7
	40	83,000	70,000	84.3	8,000	9.6	5,000	6.0
	50	60,000	47,000	78.3	4,500	7.5	8,500	14.2
	60	23,000	18,000	78.3	2,500	10.9	2,500	10.9
	State	1,180,000	800,000	67.8	260,000	22.0	120,000	10.2
Corn	10	170,000	100,000	58.8	41,000	24.1	29,000	17.1
	20	275,000	180,000	65.5	55,000	20.0	40,000	14.5
	30	77,000	54,000	70.1	12,000	15.6	11,000	14.3
	40	72,000	52,000	72.2	8,000	11.1	12,000	16.7
	50	61,000	37,000	60.7	12,000	19.7	12,000	19.7
	60	45,000	27,000	60.0	12,000	26.7	6,000	13.3
	State	700,000	450,000	64.3	140,000	20.0	110,000	15.7
Sorghum	10	10,000	5,100	51.0	3,700	37.0	1,200	12.0
	20	16,000	4,600	28.8	5,500	34.4	5,900	36.9
	30-60 [1]	4,000	1,300	32.5	800	20.0	1,900	47.5
	State	30,000	11,000	36.7	10,000	33.3	9,000	30.0
Cotton	10	190,000	80,000	42.1	55,000	28.9	55,000	28.9
	20	354,000	176,000	49.7	130,000	36.7	48,000	13.6
	30-50 [2]	26,000	14,000	53.8	5,000	19.2	7,000	26.9
	60	0	0		0		0	
	State	570,000	270,000	47.4	190,000	33.3	110,000	19.3
Wheat	10	100,000	40,000	40.0	40,000	40.0	20,000	20.0
	20	150,000	70,000	46.7	65,000	43.3	15,000	10.0
	30	45,000	11,000	24.4	11,000	24.4	23,000	51.1
	40	40,000	13,000	32.5	9,000	22.5	18,000	45.0
	50	31,000	8,000	25.8	8,000	25.8	15,000	48.4
	60	34,000	8,000	23.5	7,000	20.6	19,000	55.9
	State	400,000	150,000	37.5	140,000	35.0	110,000	27.5

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

2004 Tennessee Tillage Systems

- Soybeans
- Corn
- Sorghum
- Cotton
- Winter Wheat

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