

2008 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 Field Office of USDA's National 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 2008 was up 9.3 percent over 2007. This season was highlighted by a sharp increase in no-till wheat and soybeans. No-till acres for cotton and corn declined, but not in proportion to the total decline for these crops. Actually, the percent of total devoted to no-till rose for corn. Tennessee farmers used the no-till practice on 70.3 percent of the total acreage dedicated to soybeans, corn, sorghum, cotton, and wheat, compared to 69.0 percent in 2007. Other conservation tillage practices accounted for 20.0 percent of the acreage seeded to the state's major crops. Double-cropped acreage for these crops totaled 18.6 percent for 2008, up significantly compared with 11.8 and 8.5 percent in 2007 and 2006, respectively.

The Tennessee Field Office 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: BY CROP, TENNESSEE, 2004-2008

Crop	Year	Total Acres Planted	No-Till ¹		Other Conservation Tillage ²		Conventional Till ³		Double-Cropped ⁴	
			Acres	% of Total	Acres	% of Total ⁵	Acres	% of Total ⁵	Acres	% of Total ⁵
Soybeans	2004	1,210,000	800,000	66.1	260,000	21.5	150,000	12.4	300,000	24.8
	2005	1,130,000	750,000	66.4	260,000	23.0	120,000	10.6	170,000	15.0
	2006	1,160,000	880,000	75.9	180,000	15.5	100,000	8.6	210,000	18.1
	2007	1,040,000	820,000	78.8	160,000	15.4	60,000	5.8	310,000	29.8
	2008	1,410,000	1,110,000	78.7	220,000	15.6	80,000	5.7	540,000	38.3
Corn	2004	680,000	450,000	66.2	140,000	20.6	90,000	13.2	25,000	3.7
	2005	650,000	430,000	66.2	140,000	21.5	80,000	12.3	20,000	3.1
	2006	550,000	400,000	72.7	100,000	18.2	50,000	9.1	20,000	3.6
	2007	870,000	600,000	69.0	170,000	19.5	100,000	11.5	25,000	2.9
	2008	700,000	500,000	71.4	130,000	18.6	70,000	10.0	30,000	4.3
Sorghum	2004	20,000	9,000	45.0	7,000	35.0	4,000	20.0	1,500	7.5
	2005	22,000	9,000	40.9	6,000	27.3	7,000	31.8	1,500	6.8
	2006	14,000	7,000	50.0	4,000	28.6	3,000	21.4	1,000	7.1
	2007	22,000	7,000	31.8	8,000	36.4	7,000	31.8	1,000	4.5
	2008	25,000	11,000	44.0	6,000	24.0	8,000	32.0	1,500	6.0
Cotton	2004	530,000	270,000	50.9	190,000	35.8	70,000	13.2	1,500	0.3
	2005	640,000	310,000	48.4	170,000	26.6	160,000	25.0	1,000	0.2
	2006	700,000	420,000	60.0	170,000	24.3	110,000	15.7	1,000	0.1
	2007	515,000	330,000	64.1	110,000	21.4	75,000	14.6	1,000	0.2
	2008	300,000	190,000	63.3	80,000	26.7	30,000	10.0	500	0.2
Wheat⁶	2004	400,000	150,000	37.5	140,000	35.0	110,000	27.5	-----	----
	2005	240,000	110,000	45.8	70,000	29.2	60,000	25.0	-----	----
	2006	280,000	120,000	42.9	90,000	32.1	70,000	25.0	-----	----
	2007	420,000	220,000	52.4	110,000	26.2	90,000	21.4	-----	----
	2008	640,000	350,000	54.7	180,000	28.1	110,000	17.2	-----	----
Total	2004	2,840,000	1,679,000	59.1	737,000	26.0	424,000	14.9	328,000	11.5
	2005	2,682,000	1,609,000	60.0	646,000	24.1	427,000	15.9	192,500	7.2
	2006	2,704,000	1,827,000	67.6	544,000	20.1	333,000	12.3	232,000	8.5
	2007	2,867,000	1,977,000	69.0	558,000	19.5	332,000	11.6	337,000	11.8
	2008	3,075,000	2,161,000	70.3	616,000	20.0	298,000	9.7	572,000	18.6

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 2008, followed by soybeans, corn or sorghum harvest in the fall of 2008.

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.

TILLAGE PRACTICES: BY CROP, DISTRICT, TENNESSEE, 2008

Crop	District	Total Acres Planted	No-Till		Other Conservation Tillage		Conventional Till	
			Acres	% of Total	Acres	% of Total	Acres	% of Total
Soybeans	10	505,000	385,000	76.2	95,000	18.8	25,000	5.0
	20	600,000	490,000	81.7	90,000	15.0	20,000	3.3
	30	110,000	85,000	77.3	20,000	18.2	5,000	4.5
	40	95,000	75,000	78.9	5,000	5.3	15,000	15.8
	50	70,000	55,000	78.6	5,000	7.1	10,000	14.3
	60	30,000	20,000	66.7	5,000	16.7	5,000	16.7
	State		1,410,000	1,110,000	78.7	220,000	15.6	80,000
Corn	10	160,000	100,000	62.5	35,000	21.9	25,000	15.6
	20	290,000	215,000	74.1	55,000	19.0	20,000	6.9
	30	80,000	60,000	75.0	15,000	18.8	5,000	6.3
	40	75,000	60,000	80.0	9,000	12.0	6,000	8.0
	50	55,000	40,000	72.7	8,000	14.5	7,000	12.7
	60	40,000	25,000	62.5	8,000	20.0	7,000	17.5
	State		700,000	500,000	71.4	130,000	18.6	70,000
Sorghum	10	11,000	5,500	50.0	2,000	18.2	3,500	31.8
	20	11,000	4,700	42.7	3,600	32.7	2,700	24.5
	30 - 60	3,000	800	26.7	400	13.3	1,800	60.0
	State	25,000	11,000	44.0	6,000	24.0	8,000	32.0
Cotton	10	91,000	44,000	48.4	33,000	36.3	14,000	15.4
	20	195,000	135,000	69.2	45,000	23.1	15,000	7.7
	30 - 50	14,000	11,000	78.6	2,000	14.3	1,000	7.1
	60	0	0		0		0	
State	300,000	190,000	63.3	80,000	26.7	30,000	10.0	
Wheat	10	160,000	90,000	56.3	40,000	25.0	30,000	18.8
	20	260,000	145,000	55.8	70,000	26.9	45,000	17.3
	30	65,000	35,000	53.8	20,000	30.8	10,000	15.4
	40	65,000	40,000	61.5	20,000	30.8	5,000	7.7
	50	45,000	20,000	44.4	15,000	33.3	10,000	22.2
	60	45,000	20,000	44.4	15,000	33.3	10,000	22.2
	State	640,000	350,000	54.7	180,000	28.1	110,000	17.2

2008 Tennessee Tillage Systems

- Soybeans
- Corn
- Sorghum
- Cotton
- Winter Wheat



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