



Department of Agronomy

Soil Science News & Views

Vol. 19, No. 4, 1998

No Tillage Use for Crop Production in Kentucky Counties in 1997

G.R. Haszler

Three years ago (1994) and again last year (1996), we reported the status of no-tillage adoption in Kentucky counties. Now, CTIC[†] has published the

whereas in 1996, that figure had reached 51% . It dropped to 48% in 1997. The results for 1994, 1996 and 1997 are shown in Table 1. The

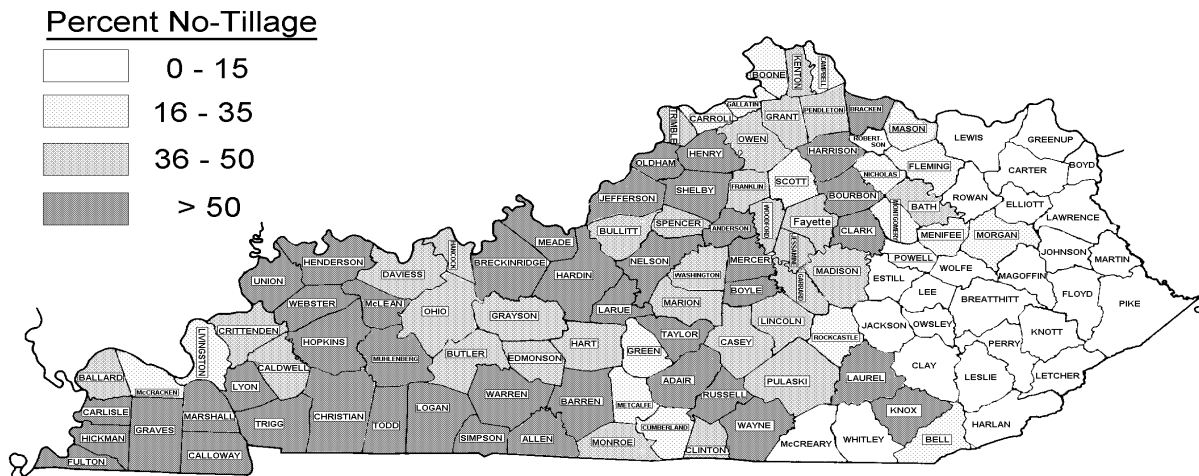


Figure 1: The Percentage of No-Till Agriculture for each County for Corn, Soybeans, and Small Grains.

results for 1997. As before, Kentucky leads the nation in percent of all crops produced under no tillage, but the percentage has slightly decreased from 1996. In 1994, 44% of all crops were produced under no tillage in Kentucky,

[†] 1996 National Crop Residue Management Survey. Conservation Tillage Information Center, West Lafayette, IN.

percentage of major grain crops (corn, soybeans and small grains) grown under no tillage in each county is shown in Figure 1. Even with a slight decrease for all crops under no-tillage, the major grain crops have continued to increase from 54% in 1996 to 58% in 1997, Fig. 2.

Results by crop with average NT percentages for each county and for the state are shown in Table 2.

Among crops, double-cropped soybeans have stayed almost the same, 93% in 1994, 94% in

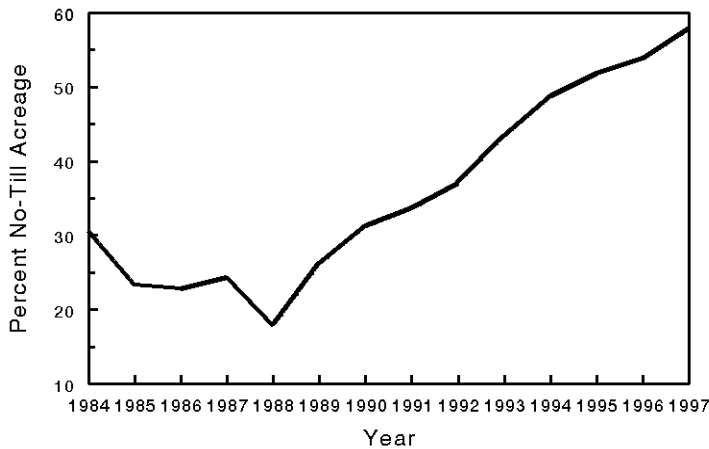


Figure 2: Percent No-Till Acreage for the Major Grain Crops in Kentucky from 1984 to 1997.

1996 and 94% in 1997. This is probably the maximum achievable level. In the case of full-season soybeans, the 1997 percentage under no-till remained the same as 1996 at 49%. Full-season corn, increased from 49% in 1994 to 55% in 1996 but dropped slightly to 52% in 1997. Small grains, which are mostly planted under minimum tillage, increased from 1994 (22%) to 1996 (27%) and remained at 26% in 1997.

Surprisingly, the Bluegrass Region of the state had the largest increase (37% to 43%) in no-tillage in 1996 and 1997. Ten counties increased their acreage by double digits as Madison led the way with a 29% increase while Pendleton and Franklin had a 24% increase. In the Western Coalfield, which contains many soils which are not ideal for no tillage, the percentage under no tillage on average increased 7% with McLean and Henderson increasing by 19% and 12%, respectively. Hopkins and Webster counties decreased from 1996 to 1997 by 8% and 9%. Finally, in the Pennyryle region, where no-tillage

had its start in Kentucky, 25 counties increased their no-tillage acreage while 7 had a slight decrease. Logan county led with a 21% increase while Simpson and Christian had a 19% and 18% increase, respectively.

The leading 11 counties in Kentucky, in terms of no-tillage adoption of the major grain crops, are listed in Table 3. As can be seen, these counties average well above 70% under no tillage production, which is a very impressive figure.

Extension Soils Specialist

Table 1: Leading States in Percent of Cropland Acres Planted to No-Till in 1996 and 1994.

State	% No Tillage		
	1997	1996	1994
Kentucky	48	51	44
Maryland	45	46	41
Tennessee	43	44	42
West Virginia	39	39	37
Delaware	38	38	37
Ohio	36	37	35

Table 3: Eleven Leading Counties in Percentage of Major Grain Crops Produced Under No Tillage in 1997.

County	% No Till
Hickman	85
Logan	85
Larue	81
Trigg	80
Nelson	79
Warren	79
Simpson	79
Meade	76
Mercer	74
Hardin	74
Russell	74

Table 2: No-Till Planting of Corn, Soybeans, and Small Grains in Kentucky - 1997.

	Acreage of corn, soybeans, and small grains			% No-Till Planted			Small Grains
	Total	NT	%	Corn	Soybeans		
	Acres	Acres	NT	Full Season	Full Season	Double Crop	
Adair	7,500	4,300	57	61	50	50	34
Allen	3,960	1,400	35	27	45	70	60
Anderson	2,850	2,050	72	73	67	0	0
Ballard	60,500	29,000	48	41	39	90	13
Barren	37,500	24,150	64	65	50	90	39
Bath	14,500	5,400	37	32	32	100	0
Bell	310	50	16	17	0	0	0
Boone	2,732	550	20	17	22	50	18
Bourbon	18,350	10,850	59	49	83	100	18
Boyd	503	0	0	0	0	0	0
Boyle	10,500	7,160	68	69	63	100	45
Bracken	1,525	1,050	69	70	0	0	0
Breathitt	314	0	0	0	0	0	0
Breckinridge	53,000	33,000	62	56	50	86	40
Bullitt	10,250	4,000	39	38	25	75	0
Butler	47,000	18,700	40	33	42	70	0
Caldwell	34,000	17,000	50	47	29	100	29
Calloway	85,050	45,225	53	38	28	98	15
Campbell	671	225	34	23	48	100	0
Carlisle	54,500	35,925	66	70	50	88	65
Carroll	3,030	1,100	36	36	38	0	0
Carter	1,675	50	3	3	0	0	0
Casey	13,000	5,625	43	42	47	75	22
Christian	120,090	78,000	65	50	30	93	2
Clark	6,690	4,640	69	72	59	100	7
Clay	2,000	0	0	0	0	0	0
Clinton	5,300	2,125	40	37	50	83	71
Crittenden	25,000	11,000	44	44	39	100	33
Cumberland	3,480	1,200	34	38	20	67	9
Daviess	158,000	73,000	46	45	33	90	13
Edmonson	8,400	4,100	49	43	51	100	40
Elliott	725	85	12	12	0	0	0
Estill	4,655	330	7	5	13	0	0
Fayette	8,400	4,200	50	58	29	0	0
Fleming	8,450	1,507	18	18	20	20	0
Floyd	560	0	0	0	0	0	0
Franklin	1,950	925	47	48	31	100	5
Fulton	80,704	57,485	71	57	71	93	50
Gallatin	1,600	250	16	16	0	0	0
Garrard	4,075	1,975	48	48	63	100	20
Grant	475	182	38	41	14	100	16
Graves	133,000	94,600	71	70	60	92	10
Grayson	31,850	14,500	46	47	36	100	37
Green	5,051	1,528	30	25	40	90	25

	Acreage of corn, soybeans, and small grains			% No-Till Planted			Small Grains
	Total	NT	%	Corn	Soybeans		
	Acres	Acres	NT	Full Season	Full Season	Double Crop	
Greenup	3,200	0	0	0	0	0	0
Hancock	19,655	9,288	47	50	34	100	22
Hardin	57,874	42,715	74	65	84	96	17
Harlan	150	0	0	0	0	0	0
Harrison	10,000	6,000	60	54	60	100	0
Hart	6,065	2,720	45	50	0	100	54
Henderson	151,000	97,550	65	55	65	100	13
Henry	13,000	8,500	65	61	20	100	10
Hickman	78,700	66,895	85	75	85	95	60
Hopkins	58,500	32,000	55	50	53	89	22
Jackson	2,400	260	11	11	0	0	0
Jefferson	2,900	1,520	52	35	57	80	26
Jessamine	1,817	725	40	32	40	100	19
Johnson	760	0	0	0	0	0	0
Kenton	280	115	41	40	50	0	0
Knott	625	0	0	0	0	0	0
Knox	4,450	2,000	45	43	50	67	67
Larue	23,500	19,100	81	80	75	100	49
Laurel	4,175	2,305	55	59	73	100	0
Lawrence	1,233	65	5	5	0	0	0
Lee	925	45	5	5	0	0	0
Leslie	350	0	0	0	0	0	0
Letcher	100	0	0	0	0	0	0
Lewis	12,200	1,200	10	15	0	0	0
Lincoln	7,000	2,500	36	38	25	50	0
Livingston	14,350	4,450	31	33	22	69	33
Logan	110,531	93,802	85	80	30	98	15
Lyon	9,075	6,550	72	65	80	91	67
McCracken	4,446	1,400	31	34	0	0	0
McCreary	2,000	0	0	0	0	0	0
McLean	23,790	12,095	51	47	54	50	46
Madison	28,800	13,200	46	54	25	100	13
Magoffin	75	0	0	0	0	0	0
Marion	8,975	3,465	39	37	67	50	13
Marshall	34,400	18,300	53	61	39	100	0
Martin	423	0	0	0	0	0	0
Mason	84,500	24,000	28	26	24	89	2
Meade	18,408	14,034	76	70	55	100	35
Menifee	1,175	375	32	20	100	0	0
Mercer	13,300	9,900	74	76	80	100	73
Metcalfe	7,700	1,650	21	16	33	37	20
Monroe	8,300	3,600	43	44	33	75	32
Montgomery	5,700	1,235	22	25	15	0	0
Morgan	1,600	520	33	33	0	0	0
Muhlenberg	32,000	18,000	56	60	50	100	20
Nelson	14,200	11,200	79	71	80	100	90

	Acreage of corn, soybeans, and small grains			% No-Till Planted			Small Grains
	Total	NT	%	Corn	Soybeans		
	Acres	Acres	NT	Full Season	Full Season	Double Crop	
Nicholas	1,810	350	19	23	0	0	0
Ohio	66,050	23,800	36	43	30	75	50
Oldham	7,400	4,925	67	60	71	82	72
Owen	837	326	39	41	0	0	15
Owsley	1,490	0	0	0	0	0	0
Pendleton	3,150	1,550	49	48	50	57	0
Perry	75	0	0	0	0	0	0
Pike	220	0	0	0	0	0	0
Powell	1,257	0	0	0	0	0	0
Pulaski	16,100	7,905	49	38	67	85	41
Robertson	375	50	13	17	0	0	0
Rockcastle	4,043	935	23	18	60	66	42
Rowan	2,100	200	10	13	0	0	0
Russell	8,350	6,150	74	68	100	100	0
Scott	4,091	1,226	30	30	30	0	30
Shelby	37,000	24,300	66	64	57	95	94
Simpson	65,200	50,805	78	60	75	98	20
Spencer	8,640	3,540	41	40	30	84	40
Taylor	20,400	14,450	71	76	60	72	32
Todd	84,865	61,240	72	61	65	100	48
Trigg	27,300	21,800	80	72	75	100	40
Trimble	5,800	2,400	41	40	38	80	24
Union	132,000	72,000	55	50	51	100	50
Warren	55,500	43,700	79	69	79	95	47
Washington	4,800	2,300	48	50	43	57	57
Wayne	25,043	14,257	57	59	60	40	10
Webster	97,760	49,388	51	35	60	95	10
Whitley	3,200	450	14	20	0	0	0
Wolfe	1,080	90	8	8	0	0	0
Woodford	4,320	1,700	39	38	17	100	15
State Total	2,648,538	1,541,558					
	State Average %		58	52	49	94	26