

Table 1. Plant stand, seedling vigor, height, and canopy of eighteen hard red spring wheat cultivars during 2003 in a certified organic field near Richardton, ND.

Variety	Plant Stand		Seedling vigor ¹		Plant height			Plant canopy	
	May 22	May 28	May 22	May 28	May 28	June 26	July 29	PAR ²	Ground ²
	-----no./ft ² -----				----- inches-----			-----%-----	
AC Cadillac	31	33	7.3	7.9	5	19	31	74	34
Acadia	27	26	6.6	7.3	5	19	31	69	28
Alsen	34	31	7.4	7.5	4	18	27	72	34
Backup	31	29	7.1	7.6	5	20	29	79	28
Chris	37	39	6.5	7.4	4	16	31	73	31
Coteau	34	34	7.5	7.8	4	14	32	68	29
Dapps	32	27	7.0	6.9	4	19	30	79	33
Glupro	26	30	5.8	6.6	5	15	31	63	28
Gunner	34	36	8.0	8.5	4	14	30	76	34
Ingot	33	32	7.4	8.0	5	21	31	81	39
Marquis	34	31	6.9	7.8	4	18	35	68	31
Oklee	31	29	7.5	7.8	5	18	25	69	33
Parshall (CON) ³	32	32	7.5	7.8	5	18	29	72	32
Parshall	33	33	7.8	8.1	4	19	30	78	36
Red Fife	33	32	7.1	7.8	5	18	36	85	36
Reeder	32	33	7.4	7.8	5	18	28	76	39
Stoa (CON) ³	32	28	6.6	7.0	4	17	30	62	28
Stoa	32	29	7.5	7.6	5	18	31	72	33
Waldron	35	34	7.6	8.1	5	19	31	66	33
Walworth	33	32	7.6	7.8	5	20	27	68	39
Mean	32	32	7.2	7.6	5	18	30	72	33
CV %	8.2	15.7	4.9	4.6	4.4	4.3	4.3	15.1	19.2
LSD	4	NS	0.5	0.5	0.3	1	2	NS	NS

¹ 1 = good vigor; 9 = poor vigor

² PAR = light interception by the plant canopy; Ground = percentage ground coverage

³(CON) = seed lots produced under conventional management; seed lots of other variety treatments generally were produced under organic management.

Table 2. Days to heading, spike density, insect rating, competitiveness, grain yield and quality of eighteen hard red spring wheat cultivars during 2003 in a certified organic field near Richardton, ND.

Variety	Days to heading	Spike density	Wheat stem maggot ¹	Competition ²	Grain			
					Yield	Protein	Test Weight	Kernel weight
	-----no.-----	----no./ft ² ----	-----%-----	----%----	- bu/acre -	- % -	- lbs/bu -	- kernels/lb -
AC Cadillac	61	31	1	64	29.0	13.5	62.6	15,611
Acadia	62	30	1	66	29.2	12.9	61.3	16,068
Alsen	60	38	1	50	30.2	13.8	63.5	15,445
Backup	58	36	0	50	24.9	16.3	63.6	16,973
Chris	62	38	2	54	26.4	14.6	61.4	18,707
Coteau	65	34	4	61	28.6	15.4	59.4	17,322
Dapps	59	34	1	49	27.1	15.3	60.8	16,095
Glupro	63	30	8	46	18.5	17.2	58.0	16,324
Gunner	63	31	4	60	31.7	14.1	63.0	17,693
Ingot	57	35	1	50	32.3	14.3	64.0	16,411
Marquis	64	33	3	72	24.9	13.6	61.0	17,310
Oklee	58	32	0	49	30.5	14.7	62.4	16,607
Parshall (CON) ³	60	32	1	53	30.2	13.6	62.5	15,715
Parshall	60	36	1	59	33.2	14.0	63.0	16,603
Red Fife	66	33	1	74	27.7	13.1	60.8	16,714
Reeder	60	34	5	48	36.6	13.7	62.4	15,513
Stoa (CON) ³	63	30	2	49	29.5	13.5	61.4	17,166
Stoa	62	28	1	46	32.7	13.0	61.5	17,415
Waldron	61	35	0	66	29.2	13.7	60.5	16,149
Walworth	59	37	1	50	34.2	13.9	62.0	16,586
Mean	61	33	2	56	29.3	14.2	61.7	16,621
CV %	1.2	15.3	97.9	16.0	6.0	3.0	0.8	4.5
LSD	1	NS	3	13	2.5	0.6	0.7	1064

¹Visual estimate of the percentage of plants infested with wheat stem maggot.

²Visual estimate of the weed density in plots compared with a prostrate winter wheat check plot expressed as a percentage.

³(CON) = seed lots produced under conventional management; seed lots of other variety treatments generally were produced under organic management.