

### Field Experiment History

**Title: Silage Plant Density by Hybrid Silage Quality - 1996.**

**Personnel: J. Cusicanqui, J.G. Lauer, K.D. Hudelson**

Experimental Design:		RCB Split Plot													
Replications:		4													
Variables:		5 Plant Densities and 2 Hybrid Silage Qualities													
Location	Cooperators	Soil Type	Previous Crop	Row Width (in)	Planting Date	Harvest Date	Tillage Operations	--Soil Test--			--Nitrogen Fertilizer--		Weed Control	Insecticides	
								pH	P	K	actual	form			time
								--(ppm)--			--(lb/a)				
Arlington	S.Kraak	Plano	Soybean	30	26-Apr	10-Oct	No-Till	6.7	62	205	150	46-0-0	preplant	Bladex 2qts/A	None
		Silt Loam									9	6-24-24	planting	Lasso 2qts/A	
Ashland	M. Mlynarek	Superior	Corn	30	13-May	3-Oct	Moldboard Plow Disk Field Cult.	6.8	175	148	150	46-0-0	preplant	Lasso 2qts/A	None
		Loamy Sand									50	46-0-0	post	Bladex 2qts/A	
Lancaster	T. Wood	Rozetta	Corn	30	6-May	25-Sep	Chisel Plow Soil finisher	6.5	25	120	200	82-0-0	preplant	Dual II 2pts/A	Lorsban 7lbs/A Pounce 6oz/A
	D. Heimdahl	Silt Loam									9	8-32-17	planting	Banvel 1pt/A	
Marshfield	D. Wiersma	Loyal	Corn	30	22-May	15-Oct	Chisel Plow Disk Field Cult. Pulvimulch	6.8	35	128	250	9-23-30	planting	Surpass 2pts/A	Lorsban 7lbs/A
	T. Drendel	Silt Loam													
Spooner Silt Loam	R. Rand	Antigo	Corn	36	10-May	2-Oct	Moldboard Plow Disk/Drag	6.6	22	68	5	5-10-30	planting	Prowl 2pts/A	None
	Y. Berger K. Bergquist	Silt Loam									104	46-0-0	post	Bladex 90DF 1lb/A Accent 0.45oz/A	
Valders	S. Hendrickson J. Maney T.& B. Maney	Kewaunee Clay Loam	Alfalfa	30	15-May	4-Oct	Moldboard Plow Field Cult.(2x)	7.3	53	179	9	6-24-24	planting	Atrazine 1.5lbs/A	None
												12000 gal/A Manure			

Results: Tables E-28 to E-33.

**Table E-28. Silage Plant Density by Hybrid Silage Quality  
Arlington, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		19503	20988	1.0	61	58.6	62.8	41.8	9.6	5.5	4.1
24000		26037	25641	1.5	69	56.1	61.0	41.2	10.9	6.1	4.8
30000		31383	31185	2.5	59	52.7	58.0	40.1	12.1	6.4	5.7
36000		34056	33858	2.3	62	55.3	60.4	40.8	11.6	6.4	5.2
42000		40986	38115	3.3	63	54.9	58.4	40.5	11.5	7.0	4.5
	Cargill 4327 (H)	31363	30928	2.9	58	55.8	61.3	39.4	11.3	6.3	4.9
	Pioneer 3417 (L)	29423	28987	1.4	67	55.2	58.9	42.4	11.0	6.2	4.8
18000	Cargill 4327 (H)	20988	21582	2.1	54	59.8	64.5	40.7	9.6	5.7	3.9
24000	Cargill 4327 (H)	26928	26334	2.1	65	55.3	63.1	39.1	11.3	6.1	5.3
30000	Cargill 4327 (H)	32670	32670	3.0	58	51.8	59.0	38.2	12.2	6.3	5.9
36000	Cargill 4327 (H)	35442	35838	2.7	53	56.9	61.8	38.9	11.7	6.4	5.3
42000	Cargill 4327 (H)	40788	38214	4.4	60	55.5	58.2	39.8	11.4	7.1	4.3
18000	Pioneer 3417 (L)	18018	20394	0.0	68	57.4	61.1	42.8	9.7	5.4	4.3
24000	Pioneer 3417 (L)	25146	24948	0.9	73	57.0	58.9	43.3	10.4	6.1	4.3
30000	Pioneer 3417 (L)	30096	29700	2.0	60	53.7	56.9	42.0	12.0	6.4	5.6
36000	Pioneer 3417 (L)	32670	31878	1.8	71	53.8	58.9	42.3	11.5	6.4	5.1
42000	Pioneer 3417 (L)	41184	38016	2.2	65	54.3	58.7	41.2	11.6	6.9	4.7
	Mean	30393	29957	2.1	63	55.5	60.1	40.9	11.1	6.3	4.9
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	26.8	36.2	0.2	0.1	18.8	<0.1	1.9	3.3
Hybrid (H)		1.6	3.8	12.0	<0.1	45.5	0.4	<0.1	>50	>50	>50
PD x H		>50	>50	>50	14.9	22.7	31.6	38.7	>50	>50	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		3086	2632	NS	NS	0.2	0.2	NS	0.6	0.6	0.8
Hybrid (H)		1258	1494	NS	3.7	NS	0.1	0.1	NS	NS	NS
<b>CV (%)</b>											
		7.5	9.0	135.0	10.7	4.6	3.8	4.0	12.0	12.1	20.2

**Table E-29. Silage Plant Density by Hybrid Silage Quality  
Lancaster, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		18612	18513	0.0	56	59.6	65.9	39.0	6.6	3.0	3.6
24000		22968	21582	0.0	61	60.0	64.8	38.6	6.8	3.3	3.4
30000		29700	26334	0.0	54	56.3	65.2	38.4	8.1	3.5	4.6
36000		35244	31383	0.0	56	56.9	63.4	37.3	8.1	4.1	4.0
42000		40194	32967	0.3	56	58.8	63.4	38.2	7.5	3.8	3.7
	Cargill 4327 (H)	29462	26770	0.0	47	57.8	64.3	34.9	7.5	3.5	4.0
	Pioneer 3417 (L)	29225	25542	0.1	66	58.8	64.8	41.7	7.3	3.6	3.7
18000	Cargill 4327 (H)	19404	19800	0.0	44	60.0	66.0	35.5	6.9	3.3	3.6
24000	Cargill 4327 (H)	24156	22968	0.0	51	58.1	63.2	34.3	7.4	3.5	3.9
30000	Cargill 4327 (H)	29106	26730	0.0	50	55.6	66.3	35.9	8.4	3.4	5.0
36000	Cargill 4327 (H)	32670	29700	0.0	46	55.4	62.6	33.4	7.9	3.8	4.1
42000	Cargill 4327 (H)	41976	34650	0.0	45	59.9	63.5	35.2	7.0	3.6	3.4
18000	Pioneer 3417 (L)	17820	17226	0.0	68	58.9	65.9	42.5	6.3	2.7	3.6
24000	Pioneer 3417 (L)	21780	20196	0.0	70	61.9	66.4	42.8	6.2	3.2	3.0
30000	Pioneer 3417 (L)	30294	25938	0.0	58	57.0	64.2	40.9	7.9	3.7	4.2
36000	Pioneer 3417 (L)	37818	33066	0.0	66	58.4	64.2	41.2	8.3	4.5	3.8
42000	Pioneer 3417 (L)	38412	31284	0.6	66	57.7	63.2	41.2	8.0	4.0	4.0
	Mean	29344	26156	0.1	56	58.3	64.6	38.3	7.4	3.6	3.9
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	44.5	49.4	14.7	>50	13.0	4.2	5.0	16.5
Hybrid (H)		>50	18.3	33.3	<0.1	17.7	>50	<0.1	44.0	>50	29.8
PD x H		12.6	15.5	43.8	39.8	7.4	>50	31.2	12.1	24.6	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		2544	2341	NS	NS	NS	NS	NS	1.0	0.6	NS
Hybrid (H)		NS	NS	NS	7.6	NS	NS	0.1	NS	NS	NS
<b>CV (%)</b>											
		11.5	10.6	632.5	15.1	3.8	5.1	4.5	11.2	17.1	23.7

**Table E-30. Silage Plant Density by Hybrid Silage Quality  
Marshfield, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		18315	20592	5.3	39	43.6	57.1	49.1	6.3	2.3	4.0
24000		23467	24420	3.7	41	52.2	50.6	46.2	5.8	2.8	3.1
30000		26475	26249	3.6	41	49.7	52.0	49.1	5.9	2.7	3.2
36000		34291	33744	4.3	53	52.6	52.4	48.3	6.3	3.2	3.2
42000		39798	39105	2.5	42	53.4	53.6	47.7	6.2	2.9	3.3
	Jacques 4120 (L)	28072	27765	4.3	41	50.1	54.9	45.3	6.0	2.9	3.1
	Pionner 3757E(H)	28946	29955	3.5	46	49.9	51.3	50.6	6.2	2.6	3.6
18000	Jacques 4120 (L)	17226	17622	6.0	34	49.3	53.1	43.8	5.7	2.5	3.1
24000	Jacques 4120 (L)	22711	23357	5.0	36	50.3	48.5	44.4	6.0	2.8	3.2
30000	Jacques 4120 (L)	27720	26664	3.8	42	48.5	48.7	50.2	6.1	2.9	3.2
36000	Jacques 4120 (L)	33609	32890	2.9	50	51.6	51.1	45.9	6.4	3.4	3.0
42000	Jacques 4120 (L)	39006	38016	3.6	41	53.4	53.6	43.4	6.1	3.0	3.1
18000	Pionner 3757E(H)	19404	23562	4.5	44	37.8	61.3	54.3	6.9	2.1	4.8
24000	Pionner 3757E(H)	24222	25483	2.5	46	54.1	52.7	48.1	5.7	2.8	2.9
30000	Pionner 3757E(H)	25542	25938	3.5	41	50.6	54.5	48.3	5.7	2.5	3.2
36000	Pionner 3757E(H)	34973	34599	5.8	56	53.5	52.6	50.6	6.2	3.0	3.3
42000	Pionner 3757E(H)	40590	40194	1.4	43	53.3	53.7	51.9	6.3	2.8	3.5
	Mean	28520	28888	3.9	43	50.2	53.2	48.1	6.1	2.8	3.3
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	43.6	>50	39.8	8.7	>50	>50	4.7	29.4
Hybrid (H)		0.3	<0.1	>50	48.6	>50	0.1	0.3	>50	2.2	32.6
PD x H		>50	34.0	>50	>50	>50	4.4	11.5	>50	>50	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		4197	3759	NS	NS	NS	NS	NS	NS	0.4	NS
Hybrid (H)		868	1238	NS	NS	NS	0.1	0.2	NS	0.2	NS
<b>CV (%)</b>											
		5.5	7.7	112.5	41.2	26.9	4.9	8.9	18.9	12.7	37.9

**Table E-31. Silage Plant Density by Hybrid Silage Quality  
Valders, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		20889	20493	6.7	45	57.2	62.8	40.5	6.4	3.1	3.3
24000		25344	24849	4.7	44	57.3	63.1	41.9	6.8	3.0	3.8
30000		31977	31581	1.9	45	54.7	63.4	40.6	7.9	3.4	4.6
36000		36531	35541	5.3	41	55.4	60.4	40.3	7.3	3.3	4.0
42000		40887	39699	5.1	37	56.5	59.9	39.9	7.4	3.5	3.9
	Jacques 4120(L)	30967	29779	5.2	36	53.7	60.2	37.6	7.2	3.2	4.0
	Pionner 3757E(H)	31284	31086	4.2	49	58.8	63.6	43.7	7.1	3.3	3.8
18000	Jacques 4120(L)	21384	20196	5.7	38	56.7	63.5	38.5	6.0	2.9	3.1
24000	Jacques 4120(L)	24750	23958	4.1	40	54.6	62.0	39.1	7.0	3.0	4.0
30000	Jacques 4120(L)	31680	30690	1.9	36	50.5	60.5	36.3	8.1	3.3	4.9
36000	Jacques 4120(L)	35442	34254	6.6	35	52.7	58.7	37.6	7.4	3.3	4.1
42000	Jacques 4120(L)	41580	39798	7.7	31	53.8	56.5	36.3	7.7	3.7	3.9
18000	Pionner 3757E(H)	20394	20790	7.6	53	57.7	62.0	42.5	6.9	3.4	3.5
24000	Pionner 3757E(H)	25938	25740	5.2	48	60.0	64.3	44.6	6.6	3.1	3.6
30000	Pionner 3757E(H)	32274	32472	1.8	55	59.0	66.2	44.8	7.7	3.5	4.3
36000	Pionner 3757E(H)	37620	36828	4.0	48	58.1	62.0	43.0	7.3	3.3	3.9
42000	Pionner 3757E(H)	40194	39600	2.5	43	59.2	63.3	43.5	7.2	3.2	4.0
	Mean	31126	30433	4.7	42	56.2	61.9	40.6	7.2	3.3	3.9
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	31.0	42.3	46.6	21.7	>50	1.0	25.8	0.7
Hybrid (H)		>50	19.0	44.9	<0.1	<0.1	0.2	<0.1	>50	50.0	40.4
PD x H		>50	>50	42.8	>50	19.5	7.1	8.8	36.5	4.9	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		1350	1847	NS	NS	NS	NS	NS	0.6	NS	0.5
Hybrid (H)		NS	NS	NS	4.6	0.2	0.2	0.1	NS	NS	NS
<b>CV (%)</b>											
		8.5	9.9	85.9	19.5	5.1	4.6	3.8	10.2	9.4	16.0

**Table E-32. Silage Plant Density by Hybrid Silage Quality  
Spooner, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		17325	22770	0.0	16	53.6	60.2	35.6	5.6	2.5	3.1
24000		23265	25938	0.4	20	58.7	59.5	36.3	6.0	3.1	2.9
30000		30294	31581	0.3	8	50.7	54.2	35.6	6.6	3.0	3.6
36000		32472	33660	0.3	8	51.2	53.8	35.4	7.2	3.5	3.7
42000		35937	36135	0.8	9	54.7	56.2	35.7	7.2	3.6	3.6
	Pioneer 3902 (L)	28274	29106	0.0	12	53.6	57.3	36.0	6.6	3.0	3.5
	Pionner 3921 (H)	27443	30928	0.7	12	54.0	56.3	35.4	6.5	3.3	3.3
18000	Pioneer 3902 (L)	17622	19602	0.0	19	56.0	63.0	35.7	5.4	2.5	3.0
24000	Pioneer 3902 (L)	23760	24750	0.0	16	55.9	60.1	36.3	6.4	2.9	3.5
30000	Pioneer 3902 (L)	30888	31878	0.0	9	51.2	52.8	36.3	6.8	3.1	3.7
36000	Pioneer 3902 (L)	33264	33264	0.0	8	50.4	55.7	36.4	7.1	3.1	4.1
42000	Pioneer 3902 (L)	35838	36036	0.0	9	54.5	54.7	35.5	7.1	3.5	3.5
18000	Pionner 3921 (H)	17028	25938	0.0	14	51.2	57.4	35.4	5.8	2.5	3.3
24000	Pionner 3921 (H)	22770	27126	0.9	24	61.6	58.8	36.2	5.7	3.3	2.4
30000	Pionner 3921 (H)	29700	31284	0.7	8	50.2	55.6	34.9	6.5	3.0	3.5
36000	Pionner 3921 (H)	31680	34056	0.6	8	52.0	51.9	34.4	7.3	3.9	3.4
42000	Pionner 3921 (H)	36036	36234	1.6	9	54.9	57.7	35.9	7.3	3.7	3.6
	Mean	27859	30017	0.4	12	53.8	56.8	35.7	6.5	3.1	3.4
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	>50	4.8	12.1	3.3	>50	1.0	<0.1	17.2
Hybrid (H)		2.3	2.4	8.5	>50	>50	42.6	15.4	>50	5.2	31.7
PD x H		>50	6.1	>50	>50	>50	13.1	45.5	>50	12.3	>50
<b>LSD (0.10)</b>											
Plant Density (PD)		2632	2557	NS	7.8	NS	0.4	NS	0.8	0.3	NS
Hybrid (H)		574	1276	NS	NS	NS	NS	NS	NS	NS	NS
<b>CV (%)</b>											
		3.7	7.7	343.3	58.2	11.0	6.6	4.1	14.7	11.3	26.1

**Table E-33. Silage Plant Density by Hybrid Silage Quality  
Ashland, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield		
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a		
18000		20493	29106	0.5	43	58.7	59.7	41.7	6.9	3.8	3.1
24000		27819	32076	0.7	52	58.7	62.9	43.0	8.2	4.5	3.8
30000		34155	37026	0.0	50	56.2	59.7	42.8	9.0	4.8	4.3
36000		40392	40590	0.0	51	52.5	56.3	42.7	9.0	4.4	4.6
42000		47322	46728	0.6	44	50.7	54.7	43.6	9.0	4.3	4.7
	Pioneer 3902 (L)	34096	34808	0.0	42	54.3	58.1	42.4	8.3	4.2	4.1
	Pionner 3921 (H)	33977	39402	0.7	54	56.4	59.2	43.0	8.5	4.4	4.1
18000	Pioneer 3902 (L)	20196	22572	0.0	48	61.7	64.0	42.1	6.6	3.8	2.8
24000	Pioneer 3902 (L)	28116	29898	0.0	45	57.4	64.2	42.6	8.9	4.6	4.3
30000	Pioneer 3902 (L)	34254	35046	0.0	44	53.5	59.6	42.6	9.4	4.5	4.9
36000	Pioneer 3902 (L)	40392	40194	0.0	43	50.1	50.9	41.9	8.9	4.5	4.4
42000	Pioneer 3902 (L)	47520	46332	0.0	31	49.0	51.7	42.8	8.0	3.8	4.2
18000	Pionner 3921 (H)	20790	35640	1.0	39	55.7	55.4	41.3	7.3	3.7	3.5
24000	Pionner 3921 (H)	27522	34254	1.5	59	60.1	61.6	43.3	7.7	4.3	3.3
30000	Pionner 3921 (H)	34056	39006	0.0	56	58.9	59.9	43.0	8.6	5.0	3.6
36000	Pionner 3921 (H)	40392	40986	0.0	59	54.9	61.7	43.6	9.1	4.3	4.7
42000	Pionner 3921 (H)	47124	47124	1.3	58	52.3	57.6	44.1	9.9	4.8	5.1
	Mean	34036	37105	0.4	48	55.4	58.6	42.7	8.4	4.3	4.1
<b>Probability (%)</b>											
Plant Density (PD)		<0.1	<0.1	38.6	>50	<0.1	3.8	>50	0.9	9.2	2.0
Hybrid (H)		>50	<0.1	1.5	0.1	3.7	18.2	25.9	>50	21.9	>50
PD x H		>50	<0.1	29.9	2.7	0.7	<0.1	>50	2.9	12.4	3.2
<b>LSD (0.10)</b>											
Plant Density (PD)		1050	2268	NS	NS	0.3	0.4	NS	1.0	NS	0.8
Hybrid (H)		NS	1033	0.05	5.2	0.2	NS	NS	NS	NS	NS
<b>CV (%)</b>											
		3.0	5.0	230.4	19.6	5.1	4.4	3.6	9.9	11.7	17.2

**Table E-34. Silage Plant Density by Hybrid Silage Quality  
Arlington, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%			tons DM/a			%				%			
18000		18909	15741	0.0	53	63.8	71.0	38.1	7.2	3.6	3.5	7.2	46.9	23.6	75.1	6.6	66.2	35.0	64.0
24000		23859	19107	0.0	53	62.4	67.6	37.4	7.6	3.8	3.8	6.9	45.0	22.6	76.2	5.7	68.9	37.5	63.5
30000		29403	26433	0.0	45	60.8	66.3	37.0	8.1	4.2	3.9	6.5	49.1	25.1	74.4	5.1	68.6	37.3	63.1
36000		35838	30987	0.3	43	54.9	63.9	35.7	9.4	4.6	4.8	6.5	45.3	22.9	75.5	5.5	69.0	37.9	63.0
42000		42174	34551	0.2	48	58.3	65.5	36.8	8.9	4.4	4.6	6.4	47.7	24.7	75.2	5.8	67.4	36.7	63.1
	Cargill 4327 (H)	30373	24116	0.1	42	59.9	68.1	34.5	8.3	4.1	4.2	6.7	45.3	23.3	75.9	5.8	66.9	36.7	63.8
	Pioneer 3417 (L)	29700	26611	0.1	55	60.2	65.6	39.4	8.2	4.2	4.1	6.8	48.3	24.3	74.7	5.7	69.2	37.0	62.8
18000	Cargill 4327 (H)	19206	15642	0.0	45	63.1	71.8	35.1	7.4	3.7	3.7	7.1	44.2	22.2	75.9	6.7	62.7	32.9	65.6
24000	Cargill 4327 (H)	24552	16434	0.0	53	63.0	69.2	35.4	7.4	3.7	3.6	7.0	42.4	21.2	77.6	5.6	68.6	37.8	63.6
30000	Cargill 4327 (H)	29700	25938	0.0	38	60.4	66.0	34.6	8.3	4.4	4.0	6.2	47.7	24.9	75.0	5.5	67.9	37.8	63.3
36000	Cargill 4327 (H)	36243	29898	0.6	34	55.5	65.6	33.1	9.5	4.5	5.1	6.7	45.1	23.3	75.2	5.3	70.7	39.6	62.5
42000	Cargill 4327 (H)	42174	32670	0.0	39	57.6	67.7	34.4	8.6	4.2	4.5	6.5	47.0	24.7	75.8	6.1	64.7	35.5	64.1
18000	Pioneer 3417 (L)	18612	15840	0.0	61	64.4	70.2	41.1	6.9	3.5	3.4	7.4	49.7	24.9	74.3	6.6	69.8	37.0	62.3
24000	Pioneer 3417 (L)	23166	21780	0.0	54	61.9	65.9	39.3	7.9	4.0	3.9	6.9	47.7	23.9	74.9	5.9	69.2	37.1	63.3
30000	Pioneer 3417 (L)	29106	26928	0.0	53	61.3	66.6	39.4	7.9	4.0	3.8	6.8	50.4	25.3	73.7	4.7	69.4	36.9	62.9
36000	Pioneer 3417 (L)	35442	32076	0.0	53	54.3	62.3	38.3	9.2	4.7	4.5	6.3	45.5	22.5	75.8	5.7	67.3	36.2	63.5
42000	Pioneer 3417 (L)	42174	36432	0.5	56	59.0	63.2	39.1	9.3	4.6	4.7	6.4	48.4	24.7	74.6	5.5	70.2	38.0	62.1
	Mean	30036	35364	0.1	49	60.0	66.8	37.0	8.2	4.1	4.1	6.7	46.8	23.8	75.3	5.7	68.0	36.9	63.3
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	>50	1.0	<0.1	2.2	13.3	<0.1	2.7	46.0	7.4	26.9	18.9	43.0	7.7	48.8	17.9	>50
Hybrid (H)		18.5	1.6	>50	<0.1	>50	3.0	<0.1	>50	>50	>50	48.5	4.2	22.5	5.2	>50	0.3	48.6	0.1
PD x H		>50	42.2	33.0	17.5	>50	>50	>50	>50	>50	10.4	1.2	69.1	>50	>50	>50	0.1	0.1	0.1
<b>LSD (0.10)</b>																			
Plant Density (PD)		1758	2783	NS	4.8	2.8	3.3	NS	0.7	0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS
Hybrid (H)		NS	1606	NS	4.1	NS	1.8	1.0	NS	NS	NS	NS	2.4	NS	1.0	NS	1.1	NS	0.4
<b>CV (%)</b>																			
		5.1	11.4	451.7	15.2	5.3	4.8	5.0	12.5	11.1	16.8	3.6	9.3	10.4	2.4	19.8	2.9	3.8	1.3



**Table E-35. Silage Plant Density by Hybrid Silage Quality  
Lancaster, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%			tons DM/a			%				%			
18000		17424	17028	0.6	43	58.2	60.2	35.3	6.4	3.9	2.5	7.6	43.3	20.6	79.0	7.0	64.7	32.9	68.4
24000		24057	23958	4.1	33	56.0	61.0	32.2	7.5	3.7	3.8	7.3	45.7	22.4	78.4	6.9	62.8	31.8	69.4
30000		29106	27324	2.8	32	56.1	59.4	32.8	7.6	4.1	3.5	7.5	42.9	20.7	78.4	6.1	67.1	34.9	66.7
36000		36333	33462	3.8	38	56.8	63.9	35.4	8.1	4.2	3.9	7.7	43.8	21.0	78.9	7.1	65.3	34.3	65.1
42000		41382	37125	4.0	32	51.9	61.2	33.1	8.8	4.4	4.5	7.6	41.9	20.4	78.7	6.4	65.5	34.6	66.6
	Cargill 4327 (H)	30452	28393	3.6	27	56.1	60.0	31.0	7.6	4.2	3.4	7.6	43.5	21.4	78.3	6.4	63.2	33.2	68.7
	Pioneer 3417 (L)	28868	27165	2.6	44	55.5	62.3	36.6	7.7	3.9	3.8	7.5	43.5	20.7	79.1	6.9	66.9	34.2	65.7
18000	Cargill 4327 (H)	18216	17622	0.0	34	59.6	56.6	32.6	6.2	4.5	1.7	7.6	44.9	21.9	77.4	6.6	64.1	33.1	68.9
24000	Cargill 4327 (H)	23760	23958	6.6	24	57.0	60.4	29.7	7.4	3.9	3.5	7.1	48.0	24.1	77.0	6.2	58.4	30.1	71.7
30000	Cargill 4327 (H)	29304	27918	2.0	21	55.9	56.8	29.2	7.6	4.3	3.4	7.6	43.0	21.0	77.9	5.9	66.9	35.6	67.6
36000	Cargill 4327 (H)	37620	34452	3.6	34	58.4	65.7	33.1	8.1	4.2	3.9	7.9	40.6	19.5	80.1	7.1	63.5	33.9	67.2
42000	Cargill 4327 (H)	43362	38016	5.6	24	49.5	60.2	30.2	9.0	4.3	4.7	7.7	41.2	20.4	78.9	6.4	63.2	33.4	68.2
18000	Pioneer 3417 (L)	16632	16434	1.5	53	56.8	63.7	38.0	6.6	3.3	3.2	7.6	41.7	19.4	80.6	7.4	65.3	32.7	67.9
24000	Pioneer 3417 (L)	24354	23958	1.7	43	55.0	61.6	34.7	7.5	3.4	4.1	7.5	43.3	20.8	79.8	7.7	67.1	33.5	67.0
30000	Pioneer 3417 (L)	28908	26730	3.7	43	56.3	62.0	36.5	7.6	4.0	3.6	7.4	42.7	20.5	79.0	6.3	67.4	34.2	65.8
36000	Pioneer 3417 (L)	35046	32472	4.0	43	55.2	62.1	37.6	8.1	4.2	3.9	7.5	46.9	22.4	77.7	7.0	67.1	34.6	62.9
42000	Pioneer 3417 (L)	39402	36234	2.5	40	54.3	62.2	32.0	8.7	4.5	4.2	7.5	42.6	20.4	78.6	6.3	67.7	35.8	65.0
	Mean	29660	27779	3.1	36	55.8	61.1	33.8	7.7	4.1	3.6	7.5	43.5	21.0	78.7	6.7	65.1	33.7	67.2
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	5.2	11.5	7.3	>50	0.9	<0.1	28.5	2.1	>50	>50	>50	>50	33.4	>50	43.5	21.4
Hybrid (H)		2.0	11.0	39.5	<0.1	5.5	19.1	<0.1	>50	12.8	46.2	>50	>50	>50	34.2	17.2	3.1	31.3	1.2
PD x H		19.5	>50	27.2	>50	38.2	>50	>50	>50	30.8	>50	24.0	47.2	47.6	31.3	>50	>50	46.9	>50
<b>LSD (0.10)</b>																			
Plant Density (PD)		1250	1490	NS	NS	NS	NS	1.6	0.7	NS	0.7	NS	NS	NS	NS	NS	NS	NS	NS
Hybrid (H)		1065	NS	NS	4.3	NS	NS	1.3	NS	NS	NS	NS	NS	NS	NS	NS	2.7	NS	2.0
<b>CV (%)</b>																			
		6.5	8.2	110.0	22.0	4.9	8.9	7.0	10.6	15.6	20.3	4.9	14.5	17.0	3.6	17.5	7.6	8.6	4.9

**Table E-36. Silage Plant Density by Hybrid Silage Quality  
Marshfield, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a	tons DM/a	tons DM/a	%	%	%	%	%	%	%	%
18000		18414	18612	2.1	45	60.7	75.0	36.5	5.6	2.0	3.6	8.4	37.6	17.5	84.6	7.3	62.9	31.4	74.0
24000		23265	23067	2.1	49	60.3	69.4	39.2	6.1	2.6	3.4	8.2	38.7	18.0	84.1	7.2	62.5	31.2	74.4
30000		28809	28314	1.1	49	59.9	69.7	40.5	6.2	2.7	3.5	7.8	37.1	17.4	84.8	6.9	61.1	30.2	74.4
36000		33858	32373	3.6	49	60.7	69.4	41.4	5.6	2.6	3.0	7.5	40.6	19.2	83.2	6.8	59.1	29.4	74.0
42000		39996	37917	1.0	48	60.5	68.6	41.3	6.4	3.1	3.4	7.8	39.2	18.4	84.0	7.1	63.8	32.1	73.7
	Jaques 4120 (L)	28948	27878	1.5	49	60.6	68.5	40.0	6.1	3.0	3.2	7.9	41.2	19.3	82.6	6.9	61.7	31.1	73.2
	Pioneer 3757 (H)	28789	28234	2.4	47	60.3	72.0	39.5	5.8	2.3	3.5	7.9	36.1	16.8	85.6	7.2	62.1	30.7	74.9
18000	Jaques 4120 (L)	18216	18246	1.0	43	60.8	69.4	32.7	5.6	2.5	3.1	8.1	39.6	18.6	83.2	6.9	62.4	31.5	72.8
24000	Jaques 4120 (L)	23166	22968	2.5	48	58.8	67.3	39.3	6.0	2.7	3.3	8.1	40.2	18.6	83.1	6.7	62.3	31.3	73.3
30000	Jaques 4120 (L)	28116	27324	0.7	43	59.8	69.3	40.7	6.3	2.9	3.4	8.3	39.8	18.7	83.7	6.7	61.6	30.7	74.0
36000	Jaques 4120 (L)	35442	33462	2.4	58	61.7	68.9	44.2	6.3	3.3	3.1	7.3	43.1	20.4	81.8	7.0	65.1	27.9	73.3
42000	Jaques 4120 (L)	39798	37422	1.1	53	61.7	67.7	43.2	6.5	3.3	3.2	7.9	43.2	20.4	81.5	7.1	66.2	33.8	73.0
18000	Pioneer 3757 (H)	18612	19008	3.1	48	60.7	79.1	40.2	5.7	1.7	4.0	8.8	35.6	16.4	86.0	7.8	63.5	31.4	75.2
24000	Pioneer 3757 (H)	23364	23166	1.7	50	61.8	71.5	39.1	6.1	2.6	3.6	8.2	37.2	17.3	85.1	7.7	62.8	31.0	75.4
30000	Pioneer 3757 (H)	29502	29304	1.4	55	59.9	70.1	40.3	6.1	2.5	3.6	7.3	34.4	16.2	85.9	7.1	60.7	29.8	74.7
36000	Pioneer 3757 (H)	32274	31284	4.9	40	59.8	68.8	38.6	4.8	2.0	2.8	7.6	38.0	18.0	84.6	6.6	62.1	30.9	74.7
42000	Pioneer 3757 (H)	40194	38412	1.0	43	59.3	69.5	39.5	6.3	2.8	3.5	7.7	35.1	16.4	86.4	7.1	61.4	30.4	74.5
	Mean	28868	28056	2.0	48	60.4	70.3	39.8	6.0	2.6	3.4	7.9	38.6	18.1	84.1	7.1	61.9	30.9	74.1
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	24.6	>50	>50	15.2	19.1	40.2	14.3	29.9	5.7	6.1	14.6	37.5	34.4	22.8	29.0	>50
Hybrid (H)		>50	>50	25.1	>50	>50	0.2	>50	14.1	<0.1	>50	>50	< 0.1	< 0.1	<0.1	7.0	>50	>50	1.6
PD x H		23.3	33.7	>50	5.3	6.6	29.5	3.2	13.2	1.7	71.7	21.7	48.2	>50	>50	21.1	49.2	39.5	>50
<b>LSD (0.10)</b>																			
Plant Density (PD)		1350	1104	NS	NS	NS	NS	NS	NS	NS	NS	0.8	NS	NS	NS	NS	NS	NS	NS
Hybrid (H)		NS	NS	NS	NS	NS	0.9	NS	NS	0.2	NS	NS	1.6	0.9	1.0	NS	NS	NS	1.0
<b>CV (%)</b>																			
		6.8	7.1	118.6	20.7	3.0	2.4	9.6	11.2	11.5	18.9	8.7	7.3	8.9	2.1	8.3	9.2	7.7	2.4

**Table E-37. Silage Plant Density by Hybrid Silage Quality  
Valders, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a	tons DM/a	tons DM/a	%	%	%	%	%	%	%	%
18000		18018	18018	6.5	30	61.1	67.7	36.8	6.9	3.6	3.3	7.9	41.6	20.2	80.9	7.0	58.3	29.4	71.8
24000		23859	23463	5.1	36	60.4	67.7	36.6	7.4	3.8	3.6	7.6	40.7	19.7	80.6	6.1	59.7	30.5	72.3
30000		27819	26829	3.3	30	59.7	67.9	35.8	7.6	3.8	3.8	7.0	41.4	20.1	80.8	5.9	58.2	29.7	70.6
36000		32373	29403	4.4	36	60.6	68.1	34.9	7.8	4.1	3.7	7.5	42.0	20.4	80.4	6.4	57.4	29.0	69.8
42000		37224	33066	1.9	35	60.4	66.4	39.2	7.7	4.4	3.3	7.3	43.0	21.1	80.0	6.6	57.0	28.9	73.1
	Jaques 4120 (L)	26888	24196	2.8	36	60.7	66.3	38.5	7.4	4.2	3.3	7.6	42.3	20.4	79.7	6.4	58.1	29.8	71.3
	Pioneer 3757 (H)	28829	28116	5.7	31	60.2	68.8	34.9	7.5	3.7	3.8	7.3	41.1	20.2	81.4	6.5	58.1	29.2	71.7
18000	Jaques 4120 (L)	18216	17424	3.2	30	61.2	66.0	35.2	6.6	3.6	3.0	7.8	42.7	20.8	79.4	6.4	57.7	29.7	72.0
24000	Jaques 4120 (L)	22572	21780	5.5	40	60.5	67.0	38.6	7.3	4.0	3.3	7.4	41.9	20.3	79.8	6.2	59.9	30.9	71.4
30000	Jaques 4120 (L)	26334	25148	2.5	30	58.1	65.4	36.8	8.0	4.1	3.9	7.4	41.8	19.7	80.5	6.0	59.5	30.5	70.8
36000	Jaques 4120 (L)	33264	27918	2.2	45	63.0	67.8	37.6	7.7	4.5	3.2	7.6	43.8	21.1	78.8	6.4	58.3	29.8	70.3
42000	Jaques 4120 (L)	34056	28710	0.6	35	60.6	65.5	44.2	7.7	4.7	3.1	7.6	41.4	19.8	80.1	6.9	55.3	28.2	72.1
18000	Pioneer 3757 (H)	17820	18612	9.7	30	60.9	69.4	38.4	7.2	3.5	3.7	8.0	40.4	19.5	82.4	7.6	59.0	29.0	71.5
24000	Pioneer 3757 (H)	25146	25146	4.8	33	60.3	68.4	34.6	7.6	3.7	3.9	7.8	39.4	19.1	81.5	6.0	59.5	30.0	73.2
30000	Pioneer 3757 (H)	29304	28512	4.1	30	61.3	70.5	34.8	7.2	3.4	3.8	6.6	41.0	20.4	81.0	5.9	57.0	28.9	70.3
36000	Pioneer 3757 (H)	31482	30888	6.6	28	58.2	68.5	32.2	7.9	3.7	4.2	7.3	40.1	19.7	81.9	6.3	56.5	28.2	69.2
42000	Pioneer 3757 (H)	40392	37422	3.3	35	60.2	67.4	34.3	7.7	4.1	3.6	7.0	44.6	22.4	79.9	6.4	58.7	29.6	74.1
	Mean	27859	26155	4.2	34	60.4	67.6	36.7	7.5	3.9	3.6	7.4	41.7	20.3	80.5	6.4	58.1	29.5	71.5
<b>Probability (%)</b>																			
	Plant Density (PD)	<0.1	<0.1	29.9	>50	>50	>50	>50	1.8	2.4	24.8	6.4	>50	>50	>50	4.1	>50	>50	30.4
	Hybrid (H)	13.7	<0.1	7.7	9.4	>50	1.4	11.9	>50	0.4	2.6	14.9	24.7	>50	<0.1	>50	>50	>50	>50
	PD x H	30.9	15.2	>50	24.8	21.1	>50	45.3	>50	>50	>50	8.9	26.8	11.4	21.9	31.4	>50	>50	46.4
<b>LSD (0.10)</b>																			
	Plant Density (PD)	3094	3403	NS	NS	NS	NS	NS	0.4	0.4	NS	NS	NS	NS	NS	0.6	NS	NS	NS
	Hybrid (H)	NS	1581	NS	NS	NS	1.6	NS	NS	0.3	0.4	NS	NS	NS	0.9	NS	NS	NS	NS
	<b>CV (%)</b>	14.0	10.9	113.4	26.4	5.2	4.2	18.8	12.7	11.5	18.3	6.0	7.6	8.0	2.0	13.0	9.8	11.9	3.0

**Table E-38. Silage Plant Density by Hybrid Silage Quality  
Spooner, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	%	tons DM/a			%				%			
18000		17424	18117	0.6	40	58.3	67.6	32.8	5.30	2.46	2.84	6.8	44.5	22.5	77.9	6.0	67.7	36.2	65.6
24000		22869	23067	1.7	33	58.5	67.5	32.7	6.35	2.92	3.43	6.9	47.3	24.3	75.8	5.7	68.8	36.7	64.9
30000		29997	29898	2.0	40	59.5	68.5	34.2	6.95	3.26	3.69	6.8	46.8	23.9	76.6	5.5	70.3	38.2	63.8
36000		32472	32472	1.1	39	61.3	66.9	33.9	6.29	3.12	3.17	6.5	48.9	25.5	75.7	5.6	39.7	37.7	65.0
42000		38610	37719	2.1	41	60.0	65.4	37.2	7.48	3.69	3.79	5.7	47.3	24.7	75.1	5.4	70.3	43.2	64.2
	Pioneer 3902 (L)	28314	27918	1.2	33	59.1	67.7	33.5	6.46	2.94	3.52	6.4	46.5	24.0	76.0	5.7	69.3	37.3	64.4
	Pioneer 3921 (H)	28235	28591	1.8	44	59.9	66.7	34.8	6.48	3.24	3.24	6.7	47.4	24.3	76.5	5.6	69.4	39.5	65.0
18000	Pioneer 3902 (L)	17028	17828	1.2	30	58.1	69.0	32.7	5.33	2.24	3.09	7.1	40.6	20.5	79.1	5.9	67.8	36.1	65.0
24000	Pioneer 3902 (L)	23364	23364	0.9	28	57.3	67.2	33.0	6.37	2.78	3.59	6.6	50.5	26.2	73.9	5.9	69.8	37.4	64.5
30000	Pioneer 3902 (L)	29898	29304	2.9	38	59.3	68.8	33.8	6.71	3.04	3.67	6.7	47.5	24.4	75.5	5.6	70.0	38.1	64.2
36000	Pioneer 3902 (L)	32670	32472	0.6	33	59.1	67.3	33.7	7.09	3.22	3.87	6.4	49.2	25.6	75.3	5.7	69.6	37.6	64.1
42000	Pioneer 3902 (L)	38610	37422	0.6	38	61.8	66.2	34.4	6.82	3.43	3.39	5.3	44.6	23.2	76.2	5.5	69.5	37.3	64.2
18000	Pioneer 3921 (H)	17820	19206	0.0	50	58.5	66.1	32.9	5.27	2.68	2.59	6.6	48.3	24.5	76.7	6.0	67.6	36.3	66.2
24000	Pioneer 3921 (H)	22374	22770	2.5	38	59.8	67.9	32.5	6.32	3.06	3.26	7.2	44.2	22.3	77.7	5.5	67.8	35.9	65.3
30000	Pioneer 3921 (H)	30096	30492	1.4	43	59.7	68.3	34.5	7.20	3.48	3.72	7.0	46.0	23.3	77.7	5.5	70.6	38.3	63.4
36000	Pioneer 3921 (H)	32274	32472	1.7	45	63.5	66.5	34.2	5.48	3.03	2.45	6.5	48.5	25.3	76.1	5.5	69.8	37.8	66.0
42000	Pioneer 3921 (H)	38610	38016	3.6	45	58.1	64.6	40.0	8.14	3.95	4.19	6.1	50.0	26.3	74.0	5.3	71.1	49.2	64.3
	Mean	28274	28255	1.5	39	59.5	67.2	34.2	6.47	3.09	3.38	6.6	46.9	24.2	76.2	5.6	69.4	38.4	64.7
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	>50	27.7	>50	16.8	23.6	2.0	0.7	2.1	16.9	>50	>50	42.5	16.8	4.4	31.6	19.1
Hybrid (H)		>50	41.1	32.4	<0.1	>50	7.0	32.2	>50	2.9	33.5	46.1	>50	>50	>50	22.9	>50	29.1	17.3
PD x H		>50	>50	25.3	40.4	36.3	31.6	>50	27.1	41.4	>50	>50	14.2	18.3	15.1	>50	>50	24.5	39.1
<b>LSD (0.10)</b>																			
Plant Density (PD)		2844	2964	NS	4.4	NS	NS	NS	1.0	0.5	0.7	NS	NS	NS	NS	NS	1.7	NS	NS
Hybrid (H)		NS	NS	NS	NS	NS	NS	NS	NS	0.2	NS	NS	NS	NS	NS	NS	NS	NS	NS
<b>CV (%)</b>																			
		7.2	8.9	142.1	20.4	6.5	2.5	11.4	19.6	12.7	19.1	43.6	11.9	14.0	3.5	8.4	3.4	16.4	2.2

**Table E-39. Silage Plant Density by Hybrid Silage Quality  
Ashland, WI 1996**

Plant Density	Hybrid (H)=High Quality (L)=Low Quality	Final Stand	Ear Density	Broken Stalks	Kernel Milk	Moisture			Yield			Whole plant				Stover			
						Whole Plant	Stover	Grain	Whole Plant	Stover	Grain	Crude Protein	NDF	ADF	Digest.	Crude Protein	NDF	ADF	Digest.
plants/a		plants/a	ear/a	%	%	%	%	tons DM/a	tons DM/a	tons DM/a	%	%	%	%	%	%	%	%	%
18000		17339	18992	0.0	56	66.5	72.4	41.4	8.8	5.3	3.5	8.1	49.1	25.5	72.1	6.8	65.2	36.0	64.1
24000		23958	23522	0.0	63	66.7	72.6	41.7	9.3	5.6	3.7	7.1	50.2	27.1	71.0	5.8	66.5	37.4	62.5
30000		29534	29447	0.0	61	65.0	70.6	43.1	10.4	5.8	4.6	7.2	46.9	25.4	73.6	6.1	70.1	40.1	63.6
36000		35284	32060	0.0	70	66.2	72.4	44.9	10.1	5.9	4.2	7.2	48.8	26.8	70.1	5.4	69.9	40.7	61.1
42000		39988	32671	0.0	63	66.9	69.5	44.7	9.7	6.4	3.3	7.5	53.9	30.2	68.5	6.2	7.7	41.1	60.3
	Pioneer 3902 (L)	29307	26066	0.0	58	66.3	71.5	43.9	9.7	6.1	3.7	7.6	50.2	27.1	71.1	6.5	67.4	38.2	63.4
	Pioneer 3921 (H)	29133	28610	0.0	68	66.2	71.6	42.4	9.6	5.6	4.0	7.3	49.4	26.8	71.0	5.6	69.6	39.9	61.2
18000	Pioneer 3902 (L)	17424	17947	0.0	50	66.2	71.9	41.8	9.1	5.6	3.5	7.7	50.0	26.3	71.4	6.8	65.2	36.0	64.9
24000	Pioneer 3902 (L)	23871	22825	0.0	60	66.8	71.8	43.0	9.3	5.9	3.4	7.4	50.0	26.9	70.3	6.3	66.8	37.5	64.2
30000	Pioneer 3902 (L)	29447	29272	0.0	58	63.7	70.7	43.7	10.8	6.1	4.7	7.3	46.8	25.3	73.7	6.5	68.0	38.5	64.1
36000	Pioneer 3902 (L)	35545	30492	0.0	65	67.1	73.6	45.6	10.1	5.8	4.3	7.5	49.5	27.3	71.1	6.2	69.6	40.4	61.7
42000	Pioneer 3902 (L)	40249	29795	0.0	55	67.9	69.2	45.3	9.4	6.7	2.7	8.1	54.4	30.0	68.5	6.8	67.5	38.7	62.2
18000	Pioneer 3921 (H)	19250	20038	0.0	63	66.8	72.9	41.0	8.5	5.0	3.5	8.5	48.3	24.6	72.7	6.8	65.3	36.1	63.3
24000	Pioneer 3921 (H)	24045	22219	0.0	65	66.7	73.5	40.5	9.2	5.2	4.0	6.9	50.3	27.3	71.2	5.3	66.3	37.3	60.8
30000	Pioneer 3921 (H)	37621	29621	0.0	65	66.2	76.0	42.5	10.0	5.6	4.4	7.0	47.0	25.4	73.6	5.8	78.2	41.6	63.0
36000	Pioneer 3921 (H)	35022	33628	0.0	75	65.3	71.2	44.1	10.2	5.9	4.3	6.8	48.1	26.4	69.1	4.5	70.3	40.9	60.5
42000	Pioneer 3921 (H)	39723	35546	0.0	70	65.9	69.8	44.1	10.0	6.0	4.0	7.0	53.3	30.3	68.5	5.6	73.8	43.6	58.5
	Mean	29220	27338	0.0	63	66.3	71.5	43.2	9.7	5.8	3.9	7.4	49.8	27.0	71.1	6.1	68.5	39.1	62.3
<b>Probability (%)</b>																			
Plant Density (PD)		<0.1	<0.1	>50	20.3	>50	>50	1.5	1.6	6.7	12.1	<0.1	>0.1	1.4	<0.1	41.3	3.8	2.0	<0.1
Hybrid (H)		>50	3.0	>50	<0.1	>50	>50	0.3	>50	0.2	0.7	4.4	28.5	>50	>50	1.2	<0.1	1.3	<0.1
PD x H		>50	>50	>50	>50	>50	15.1	>50	>50	24.3	>50	10.9	>50	>50	>50	>50	1.7	6.7	>50
<b>LSD (0.10)</b>																			
Plant Density (PD)		942	3956	NS	NS	NS	NS	1.9	0.8	NS	NS	0.3	2.7	7.7	1.7	NS	3.2	2.7	1.6
Hybrid (H)		NS	1854	NS	3.7	NS	NS	0.7	NS	0.2	0.5	0.3	NS	NS	NS	0.9	1.1	1.0	1.2
<b>CV (%)</b>																			
		4.0	12.2		10.7	4.6	2.2	3.1	11.3	6.8	17.4	7.1	4.4	6.3	4.2	17.2	2.9	8.4	3.5

# FIELD EXPERIMENT HISTORY

**Title:** Determining Corn Hybrid Maturity - Plant Density by Hybrid.

**Year: 1996**

**Personnel:** J.G. Lauer, K.D. Hudelson

**Supported by:** Hatch

## EXPERIMENTAL PROCEDURE

Exp. Design: RCB

Replicates: 3

Variables: 6 Densities: 12,000, 18,000, 24,000, 30,000, 36,000, 42,000  
 4 Hybrids: Dekalb DK493, NK PX9060, Pioneer 3394, Pioneer 3845

Area Planted: 10' x 25'  
 Planting Equip: Kinze Plot Planter w/seed cones  
 Planting Rate: 40,000 thinned to 28,000 plants/a

Area Harvested: 5' x 22'  
 Harvesting Equip: Gleaner Plot Combine  
 Row Spacing: 30"

## FIELD INFORMATION

Location	Results in Tables	Soil Type	Previous Crop	Plant- ing Date	Harvest Dates	Tillage Operations	--Soil Test--			--Nitrogen Fertilizer--			Weed Control	Insect- icides
							pH	P	K	actual (lb/a)	form	time		
Arlington	E-16, E-17.	Plano Silt Loam	Soybean	26-Apr	8-Nov	Chisel Plow Field Cult.(2x)	6.8	76	215	150 9	46-0-0 6-24-24	preplant planting	Bladex 2qts/A Lasso 2qts/A	None
Hancock Irrigated	E-18, E-19.	Plainfield Sand	Cucumber	13-May	21-Oct	Dyna Drive Moldboard Plow Disk	6.3	110	110	200 9	33-0-0 6-24-24	post planting	Saddle 2qts/A Aatrex 4L 0.75qts/A	None
Lancaster	E-20, E-21.	Rozetta Silt Loam	Corn	6-May	25-Oct	Chisel Plow Soil finisher	7.1	90	275	200 9	82-0-0 8-32-17	preplant planting	Dual II 2pts/A Banvel 1pt/A	Lorsban 7lbs/A Pounce 6oz/A

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		.	8.1	9.8	11.2	87.0
18,000		.	8.0	9.9	11.2	91.6
24,000		.	8.0	9.7	11.2	93.6
30,000		.	8.0	9.8	11.2	94.1
36,000		.	7.9	9.7	11.1	96.6
42,000		.	7.8	9.6	11.0	97.4
	Dekalb DK493	.	7.9	9.5	10.9	89.6
	NK PX9060	.	7.7	9.7	11.0	88.5
	Pioneer 3394	.	8.1	9.8	11.2	95.2
	Pioneer 3845	.	8.2	10.0	11.4	100.2
12,000	Dekalb DK493	.	8.0	9.7	11.1	83.8
12,000	NK PX9060	.	7.9	9.9	11.1	82.0
12,000	Pioneer 3394	.	8.1	9.7	11.3	92.0
12,000	Pioneer 3845	.	8.4	9.9	11.5	90.3
18,000	Dekalb DK493	.	7.8	9.5	10.8	89.1
18,000	NK PX9060	.	7.8	9.8	11.1	86.6
18,000	Pioneer 3394	.	8.2	9.9	11.2	92.5
18,000	Pioneer 3845	.	8.4	10.4	11.8	98.3
24,000	Dekalb DK493	.	8.1	9.5	11.4	89.2
24,000	NK PX9060	.	7.8	9.7	11.0	89.2
24,000	Pioneer 3394	.	8.2	9.8	11.2	92.5
24,000	Pioneer 3845	.	8.1	9.9	11.3	103.4
30,000	Dekalb DK493	.	7.9	9.4	11.0	89.7
30,000	NK PX9060	.	7.8	9.6	11.0	90.7
30,000	Pioneer 3394	.	8.1	9.8	11.2	94.3
30,000	Pioneer 3845	.	8.2	10.2	11.7	101.7
36,000	Dekalb DK493	.	7.8	9.3	10.6	92.3
36,000	NK PX9060	.	7.5	9.5	10.9	90.1
36,000	Pioneer 3394	.	8.1	9.9	11.4	100.5
36,000	Pioneer 3845	.	8.2	9.9	11.4	103.6
42,000	Dekalb DK493	.	7.9	9.5	10.8	93.7
42,000	NK PX9060	.	7.5	9.6	10.9	92.4
42,000	Pioneer 3394	.	8.0	9.5	11.1	99.5
42,000	Pioneer 3845	.	7.9	9.8	11.0	104.0
		151	0.9	1.4	3.3	4.9
		161	2.6	3.9	4.9	10.3
		170	4.7	6.5	7.8	28.3
		177	5.8	8.4	9.6	41.1
		182	7.4	10.2	12.2	68.9
		193	10.5	13.5	15.6	126.3
		200	13.2	15.3	17.0	178.8
		238	18.9	18.9	18.9	288.5

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		151	1.0	1.4	3.3	4.7
12,000		161	2.7	3.9	4.9	10.1
12,000		170	4.6	6.4	7.8	26.3
12,000		177	5.8	8.4	9.6	38.0
12,000		182	7.6	10.3	12.4	60.6
12,000		193	10.6	13.6	15.8	115.6
12,000		200	13.4	15.4	17.0	165.7
12,000		238	18.9	18.9	18.9	275.4
18,000		151	0.9	1.4	3.4	4.8
18,000		161	2.6	4.0	5.0	10.4
18,000		170	4.6	6.5	7.7	28.4
18,000		177	5.9	8.6	9.7	41.5
18,000		182	7.5	10.3	12.2	69.9
18,000		193	10.5	13.7	15.8	119.9
18,000		200	13.3	15.6	17.2	175.9
18,000		238	19.0	19.0	19.0	282.4
24,000		151	0.8	1.2	3.1	4.8
24,000		161	2.6	3.8	4.8	10.4
24,000		170	4.6	6.2	7.6	28.2
24,000		177	5.8	8.3	9.5	39.4
24,000		182	7.5	10.2	12.5	68.3
24,000		193	10.8	13.7	15.9	127.5
24,000		200	13.6	15.5	17.4	182.5
24,000		238	18.9	18.9	18.9	287.7
30,000		151	1.0	1.6	3.4	4.9
30,000		161	2.6	3.8	4.8	10.0
30,000		170	4.7	6.5	7.8	27.7
30,000		177	5.9	8.4	9.7	40.2
30,000		182	7.6	10.4	12.4	68.4
30,000		193	10.4	13.4	15.8	130.6
30,000		200	13.1	15.2	16.9	181.0
30,000		238	19.0	19.0	19.0	290.2
36,000		151	0.9	1.4	3.5	5.1
36,000		161	2.7	3.8	4.8	10.7
36,000		170	4.7	6.8	7.9	29.0
36,000		177	5.8	8.3	9.6	44.0
36,000		182	7.2	10.1	12.0	71.4
36,000		193	10.5	13.4	15.4	132.6
36,000		200	12.9	15.0	16.7	182.5
36,000		238	18.8	18.8	18.8	297.6
42,000		151	0.9	1.3	3.3	5.2
42,000		161	2.6	4.1	4.9	10.4
42,000		170	4.7	6.7	7.8	30.4
42,000		177	5.8	8.2	9.4	43.6
42,000		182	7.2	10.0	11.9	74.8
42,000		193	10.2	13.1	15.1	131.8
42,000		200	12.8	15.0	16.8	185.4
42,000		238	18.7	18.7	18.7	297.6



**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Dekalb DK493	151	0.9	0.8	2.8	4.3
	Dekalb DK493	161	2.3	3.4	4.3	9.0
	Dekalb DK493	170	4.4	6.2	7.4	23.8
	Dekalb DK493	177	5.8	7.9	9.2	36.9
	Dekalb DK493	182	7.3	9.6	11.9	65.1
	Dekalb DK493	193	10.4	13.4	15.5	119.0
	Dekalb DK493	200	13.0	15.2	17.1	170.7
	Dekalb DK493	238	19.4	19.4	19.4	288.3
	NK PX9060	151	0.9	1.5	3.5	4.7
	NK PX9060	161	2.6	4.1	5.0	8.5
	NK PX9060	170	4.7	6.8	7.9	25.0
	NK PX9060	177	5.7	8.7	9.8	41.4
	NK PX9060	182	7.4	10.9	12.9	65.0
	NK PX9060	193	10.5	13.6	15.6	124.3
	NK PX9060	200	13.3	15.2	16.6	175.1
	NK PX9060	238	16.9	16.9	16.9	264.3
	Pioneer 3394	151	1.0	1.5	3.2	5.1
	Pioneer 3394	161	2.7	3.8	4.9	10.7
	Pioneer 3394	170	4.7	6.4	7.6	30.1
	Pioneer 3394	177	5.8	8.1	9.2	41.5
	Pioneer 3394	182	7.3	9.7	11.6	69.7
	Pioneer 3394	193	10.4	13.2	15.6	128.7
	Pioneer 3394	200	12.8	15.2	17.3	177.0
	Pioneer 3394	238	20.3	20.3	20.3	298.9
	Pioneer 3845	151	1.0	1.8	3.8	5.5
	Pioneer 3845	161	2.9	4.3	5.3	13.1
	Pioneer 3845	170	4.9	6.8	8.1	34.4
	Pioneer 3845	177	5.9	8.8	10.1	44.7
	Pioneer 3845	182	7.8	10.7	12.6	75.9
	Pioneer 3845	193	10.7	13.7	15.9	133.3
	Pioneer 3845	200	13.7	15.4	16.9	192.5
	Pioneer 3845	238	19.0	19.0	19.0	302.4
12,000	Dekalb DK493	151	1.0	0.9	2.9	3.8
12,000	Dekalb DK493	161	2.4	3.3	4.2	8.9
12,000	Dekalb DK493	170	4.4	6.3	7.4	22.0
12,000	Dekalb DK493	177	5.8	7.9	9.2	29.6
12,000	Dekalb DK493	182	7.6	10.1	12.1	54.2
12,000	Dekalb DK493	193	10.4	13.9	15.9	105.7
12,000	Dekalb DK493	200	12.8	15.6	17.0	163.4
12,000	Dekalb DK493	238	19.8	19.8	19.8	282.8
12,000	NK PX9060	151	1.0	1.8	3.6	5.1
12,000	NK PX9060	161	2.9	4.4	5.4	8.0
12,000	NK PX9060	170	4.4	6.6	7.9	22.0
12,000	NK PX9060	177	5.8	9.1	10.2	36.4
12,000	NK PX9060	182	7.6	11.1	13.3	55.9

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000	NK PX9060	193	10.9	14.0	15.3	117.9
12,000	NK PX9060	200	13.7	15.2	16.6	161.7
12,000	NK PX9060	238	16.7	16.7	16.7	248.9
12,000	Pioneer 3394	151	1.0	1.3	3.1	4.7
12,000	Pioneer 3394	161	2.6	3.6	4.8	10.2
12,000	Pioneer 3394	170	4.6	6.3	7.6	27.9
12,000	Pioneer 3394	177	5.9	8.1	9.3	42.8
12,000	Pioneer 3394	182	7.3	9.4	11.4	68.6
12,000	Pioneer 3394	193	10.0	13.0	15.9	118.9
12,000	Pioneer 3394	200	13.2	15.6	17.6	176.1
12,000	Pioneer 3394	238	20.3	20.3	20.3	287.0
12,000	Pioneer 3845	151	1.0	1.8	3.8	5.1
12,000	Pioneer 3845	161	3.0	4.1	5.2	13.1
12,000	Pioneer 3845	170	5.0	6.4	8.1	33.0
12,000	Pioneer 3845	177	5.8	8.7	9.8	43.2
12,000	Pioneer 3845	182	8.0	10.6	12.9	63.9
12,000	Pioneer 3845	193	10.9	13.7	16.1	119.9
12,000	Pioneer 3845	200	14.1	15.2	17.0	161.7
12,000	Pioneer 3845	238	19.0	19.0	19.0	282.8
18,000	Dekalb DK493	151	0.9	0.7	2.9	3.8
18,000	Dekalb DK493	161	2.0	3.2	4.2	8.5
18,000	Dekalb DK493	170	4.2	6.1	7.2	23.3
18,000	Dekalb DK493	177	5.7	7.9	9.0	40.6
18,000	Dekalb DK493	182	7.0	9.4	11.3	66.9
18,000	Dekalb DK493	193	10.3	13.7	15.2	115.8
18,000	Dekalb DK493	200	13.1	15.3	17.4	171.9
18,000	Dekalb DK493	238	19.3	19.3	19.3	281.9
18,000	NK PX9060	151	0.9	1.8	3.6	4.2
18,000	NK PX9060	161	2.6	3.9	4.8	8.5
18,000	NK PX9060	170	4.7	6.7	7.8	23.3
18,000	NK PX9060	177	5.9	8.9	10.2	36.4
18,000	NK PX9060	182	7.4	10.9	12.9	69.4
18,000	NK PX9060	193	10.3	13.2	15.4	121.9
18,000	NK PX9060	200	13.3	15.6	16.9	174.4
18,000	NK PX9060	238	17.1	17.1	17.1	254.9
18,000	Pioneer 3394	151	1.0	1.2	3.0	5.1
18,000	Pioneer 3394	161	2.8	3.9	5.0	10.6
18,000	Pioneer 3394	170	4.7	6.2	7.7	32.2
18,000	Pioneer 3394	177	5.9	8.1	9.1	43.2
18,000	Pioneer 3394	182	7.4	10.0	11.7	71.1
18,000	Pioneer 3394	193	10.6	13.6	15.8	122.9
18,000	Pioneer 3394	200	12.9	15.7	17.4	160.9
18,000	Pioneer 3394	238	20.2	20.2	20.2	293.8
18,000	Pioneer 3845	151	1.0	2.0	4.0	5.9
18,000	Pioneer 3845	161	3.0	4.9	5.9	14.0
18,000	Pioneer 3845	170	4.9	7.0	8.1	34.7

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
18,000	Pioneer 3845	177	6.0	9.4	10.6	45.7
18,000	Pioneer 3845	182	8.1	10.9	13.0	72.0
18,000	Pioneer 3845	193	10.8	14.3	16.7	118.9
18,000	Pioneer 3845	200	13.8	15.7	17.0	196.4
18,000	Pioneer 3845	238	19.3	19.3	19.3	298.9
24,000	Dekalb DK493	151	0.7	1.0	2.7	3.8
24,000	Dekalb DK493	161	2.6	3.4	4.6	9.7
24,000	Dekalb DK493	170	4.6	5.9	7.4	24.1
24,000	Dekalb DK493	177	5.9	7.9	9.4	38.1
24,000	Dekalb DK493	182	7.7	9.2	12.9	65.6
24,000	Dekalb DK493	193	10.6	13.6	16.4	120.9
24,000	Dekalb DK493	200	13.4	15.3	17.7	166.8
24,000	Dekalb DK493	238	19.7	19.7	19.7	284.5
24,000	NK PX9060	151	0.8	0.8	3.1	4.7
24,000	NK PX9060	161	2.3	4.0	4.7	8.0
24,000	NK PX9060	170	4.6	6.7	7.7	24.1
24,000	NK PX9060	177	5.4	8.4	9.4	42.8
24,000	NK PX9060	182	7.4	10.8	12.7	61.8
24,000	NK PX9060	193	10.8	14.0	16.1	122.9
24,000	NK PX9060	200	13.9	15.8	17.3	179.5
24,000	NK PX9060	238	16.8	16.8	16.8	270.1
24,000	Pioneer 3394	151	1.0	1.7	3.1	4.7
24,000	Pioneer 3394	161	3.0	3.9	4.9	11.0
24,000	Pioneer 3394	170	4.4	6.1	7.3	29.6
24,000	Pioneer 3394	177	5.9	7.9	9.2	37.3
24,000	Pioneer 3394	182	7.1	9.7	11.4	59.3
24,000	Pioneer 3394	193	10.8	13.6	15.4	128.0
24,000	Pioneer 3394	200	12.9	15.1	17.6	172.7
24,000	Pioneer 3394	238	20.2	20.2	20.2	297.2
24,000	Pioneer 3845	151	0.9	1.4	3.6	5.9
24,000	Pioneer 3845	161	2.7	4.0	5.0	12.7
24,000	Pioneer 3845	170	4.7	6.2	7.9	34.7
24,000	Pioneer 3845	177	5.9	8.9	10.0	39.4
24,000	Pioneer 3845	182	7.7	11.1	12.9	86.4
24,000	Pioneer 3845	193	11.2	13.7	15.7	138.2
24,000	Pioneer 3845	200	14.1	15.7	16.9	210.8
24,000	Pioneer 3845	238	19.1	19.1	19.1	298.9
30,000	Dekalb DK493	151	1.0	1.0	2.9	4.7
30,000	Dekalb DK493	161	2.1	3.1	4.1	8.5
30,000	Dekalb DK493	170	4.6	5.9	7.3	23.7
30,000	Dekalb DK493	177	5.9	8.0	9.7	35.6
30,000	Dekalb DK493	182	7.6	9.9	12.0	66.0
30,000	Dekalb DK493	193	10.1	13.1	15.7	121.9
30,000	Dekalb DK493	200	12.8	14.9	16.9	174.4
30,000	Dekalb DK493	238	19.1	19.1	19.1	282.8
30,000	NK PX9060	151	0.9	1.7	3.7	4.7

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
30,000	NK PX9060	161	2.8	3.8	4.8	8.5
30,000	NK PX9060	170	4.8	6.6	8.0	26.3
30,000	NK PX9060	177	5.8	8.8	9.8	41.5
30,000	NK PX9060	182	7.6	10.8	12.9	66.5
30,000	NK PX9060	193	10.6	13.6	15.7	129.0
30,000	NK PX9060	200	13.1	14.7	16.1	177.8
30,000	NK PX9060	238	17.2	17.2	17.2	271.8
30,000	Pioneer 3394	151	1.0	1.7	3.3	5.1
30,000	Pioneer 3394	161	2.6	3.8	4.9	10.2
30,000	Pioneer 3394	170	4.7	6.2	7.4	26.3
30,000	Pioneer 3394	177	5.8	8.0	9.0	39.0
30,000	Pioneer 3394	182	7.2	9.7	11.4	65.6
30,000	Pioneer 3394	193	10.2	13.4	15.7	128.0
30,000	Pioneer 3394	200	12.7	15.6	17.3	177.8
30,000	Pioneer 3394	238	20.3	20.3	20.3	302.3
30,000	Pioneer 3845	151	1.0	2.0	3.9	5.1
30,000	Pioneer 3845	161	3.0	4.4	5.6	12.7
30,000	Pioneer 3845	170	4.8	7.3	8.4	34.7
30,000	Pioneer 3845	177	6.0	9.0	10.4	44.9
30,000	Pioneer 3845	182	8.0	11.1	13.2	75.4
30,000	Pioneer 3845	193	10.6	13.7	16.0	143.3
30,000	Pioneer 3845	200	13.8	15.6	17.1	193.9
30,000	Pioneer 3845	238	19.4	19.4	19.4	304.0
36,000	Dekalb DK493	151	0.9	0.3	3.0	4.7
36,000	Dekalb DK493	161	2.2	3.2	4.2	8.9
36,000	Dekalb DK493	170	4.3	6.4	7.4	23.3
36,000	Dekalb DK493	177	5.6	7.6	8.8	39.8
36,000	Dekalb DK493	182	6.9	9.4	11.4	69.0
36,000	Dekalb DK493	193	10.2	13.1	14.7	121.9
36,000	Dekalb DK493	200	12.9	15.2	16.4	170.2
36,000	Dekalb DK493	238	19.1	19.1	19.1	300.6
36,000	NK PX9060	151	0.8	1.6	3.6	4.7
36,000	NK PX9060	161	2.6	3.9	4.9	8.9
36,000	NK PX9060	170	4.7	7.0	8.0	25.8
36,000	NK PX9060	177	5.9	8.8	10.3	44.0
36,000	NK PX9060	182	7.2	10.9	12.8	65.2
36,000	NK PX9060	193	10.6	13.6	15.6	131.1
36,000	NK PX9060	200	13.0	14.6	16.1	174.4
36,000	NK PX9060	238	16.6	16.6	16.6	266.7
36,000	Pioneer 3394	151	1.0	1.9	3.4	5.5
36,000	Pioneer 3394	161	3.0	4.0	5.0	11.9
36,000	Pioneer 3394	170	4.8	6.7	8.0	32.2
36,000	Pioneer 3394	177	5.7	8.4	9.4	47.0
36,000	Pioneer 3394	182	7.2	9.8	11.8	74.9
36,000	Pioneer 3394	193	10.6	13.6	15.9	137.2
36,000	Pioneer 3394	200	12.4	14.9	17.2	187.1

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
36,000	Pioneer 3394	238	20.2	20.2	20.2	308.2
36,000	Pioneer 3845	151	1.0	1.7	3.9	5.5
36,000	Pioneer 3845	161	3.0	4.2	5.2	13.1
36,000	Pioneer 3845	170	5.0	7.0	8.1	34.7
36,000	Pioneer 3845	177	6.0	8.4	9.8	45.3
36,000	Pioneer 3845	182	7.6	10.4	12.1	76.6
36,000	Pioneer 3845	193	10.6	13.2	15.6	140.2
36,000	Pioneer 3845	200	13.3	15.2	17.1	198.1
36,000	Pioneer 3845	238	19.1	19.1	19.1	315.0
42,000	Dekalb DK493	151	0.8	0.8	2.7	5.1
42,000	Dekalb DK493	161	2.2	3.9	4.4	9.3
42,000	Dekalb DK493	170	4.4	6.2	7.3	26.3
42,000	Dekalb DK493	177	5.8	7.9	9.1	37.7
42,000	Dekalb DK493	182	7.1	9.7	11.7	68.6
42,000	Dekalb DK493	193	10.4	13.3	15.2	128.0
42,000	Dekalb DK493	200	13.0	15.1	16.9	177.8
42,000	Dekalb DK493	238	19.2	19.2	19.2	297.2
42,000	NK PX9060	151	0.8	1.3	3.7	4.7
42,000	NK PX9060	161	2.7	4.6	5.6	8.9
42,000	NK PX9060	170	4.9	7.2	8.3	28.4
42,000	NK PX9060	177	5.3	8.0	9.0	47.0
42,000	NK PX9060	182	7.2	10.7	12.6	71.1
42,000	NK PX9060	193	10.1	13.3	15.2	122.9
42,000	NK PX9060	200	13.0	15.4	16.8	182.9
42,000	NK PX9060	238	16.9	16.9	16.9	273.5
42,000	Pioneer 3394	151	0.9	1.1	3.1	5.5
42,000	Pioneer 3394	161	2.6	3.6	4.8	10.6
42,000	Pioneer 3394	170	4.8	6.6	7.8	32.2
42,000	Pioneer 3394	177	5.9	8.2	9.3	39.8
42,000	Pioneer 3394	182	7.2	9.7	11.6	78.7
42,000	Pioneer 3394	193	10.0	12.3	14.8	137.2
42,000	Pioneer 3394	200	12.4	14.4	16.9	187.1
42,000	Pioneer 3394	238	20.4	20.4	20.4	304.8
42,000	Pioneer 3845	151	1.0	1.9	3.7	5.5
42,000	Pioneer 3845	161	2.9	4.2	5.0	12.7
42,000	Pioneer 3845	170	4.8	6.8	7.8	34.7
42,000	Pioneer 3845	177	6.0	8.6	10.2	50.0
42,000	Pioneer 3845	182	7.3	9.9	11.7	80.9
42,000	Pioneer 3845	193	10.1	13.3	15.1	139.2
42,000	Pioneer 3845	200	12.9	15.1	16.6	193.9
42,000	Pioneer 3845	238	18.2	18.2	18.2	315.0

**Table E-16. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Arlington, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
Mean			8.0	9.7	11.2	93.4
<b>Probability %</b>						
Plant Density (PD)			29.0	43.8	42.0	< 0.1
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
PD x H			49.8	6.6	2.4	2.9
Days (T)			< 0.1	< 0.1	< 0.1	< 0.1
PD x T			0.4	9.2	1.9	< 0.1
H x T			< 0.1	< 0.1	< 0.1	< 0.1
PD x H x T			> 50	42.6	27.3	10.3
<b>LSD (0.10)</b>						
Plant Density (PD)			NS	NS	NS	2.0
Hybrid (H)			0.1	0.1	0.1	1.3
Days (T)			0.1	0.1	0.1	1.9
<b>CV %</b>						
			6.9	7.5	6.2	7.4

**Table E-17. Determining Corn Hybrid Maturity.**  
**Plant Density by Hybrid - Harvest Data.**  
**Arlington, WI - 1996.**

Plant Density	Hybrid	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
12,000		11615	6.7	25.7	127.7
18,000		17588	7.4	25.1	145.6
24,000		23330	3.8	25.8	175.2
30,000		29269	2.9	24.8	170.5
36,000		35077	3.2	24.6	179.7
42,000		39862	3.2	24.8	181.1
	Dekalb DK493	25936	4.1	24.3	190.1
	NK PX9060	25540	4.4	21.3	132.9
	Pioneer 3394	26816	4.2	31.6	163.0
	Pioneer 3845	26200	5.4	23.3	167.3
12,000	Dekalb DK493	11087	8.6	26.4	148.2
12,000	NK PX9060	11483	2.2	21.5	103.1
12,000	Pioneer 3394	12143	5.6	31.7	134.1
12,000	Pioneer 3845	11747	10.5	23.2	125.2
18,000	Dekalb DK493	17159	5.4	23.7	174.2
18,000	NK PX9060	17951	11.5	21.3	108.4
18,000	Pioneer 3394	18083	8.2	31.4	145.5
18,000	Pioneer 3845	17159	4.6	24.0	154.2
24,000	Dekalb DK493	22835	5.2	23.9	195.6
24,000	NK PX9060	23099	3.4	21.2	146.0
24,000	Pioneer 3394	23891	2.7	35.3	171.1
24,000	Pioneer 3845	23495	3.8	22.7	188.0
30,000	Dekalb DK493	29038	1.4	24.1	208.7
30,000	NK PX9060	28510	2.8	20.8	126.8
30,000	Pioneer 3394	30094	3.5	30.9	168.3
30,000	Pioneer 3845	29434	4.1	23.2	178.3
36,000	Dekalb DK493	34846	1.9	23.5	193.3
36,000	NK PX9060	33790	2.7	21.7	156.0
36,000	Pioneer 3394	35770	4.1	30.4	178.1
36,000	Pioneer 3845	35902	4.0	22.9	191.5
42,000	Dekalb DK493	40654	2.0	24.2	220.4
42,000	NK PX9060	38410	3.8	21.1	156.8
42,000	Pioneer 3394	40918	1.3	30.1	181.1
42,000	Pioneer 3845	39466	5.6	23.7	166.3
Mean		26123	4.5	25.1	163.3
<b>Probability %</b>					
Plant Density (PD)		< 0.1	12.6	25.5	< 0.1
Hybrid (H)		3.5	> 50	< 0.1	< 0.1
PD x H		> 50	38.1	5.9	27.5
<b>LSD (0.10)</b>					
Plant Density (PD)		1133	NS	NS	11.0
Hybrid (H)		714	NS	0.8	8.7
<b>CV %</b>		4.9	85.8	5.8	9.5

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		.	8.1	10.0	11.3	84.7
18,000		.	7.9	9.8	11.1	86.2
24,000		.	8.1	10.0	11.3	87.7
30,000		.	7.9	9.8	11.1	87.1
36,000		.	7.7	9.6	10.8	87.6
42,000		.	7.7	9.6	10.9	88.8
	Dekalb DK493	.	8.0	9.9	11.1	83.3
	NK PX9060	.	7.5	9.5	10.8	83.3
	Pioneer 3394	.	7.9	9.7	11.0	87.7
	Pioneer 3845	.	8.1	10.0	11.4	93.8
12,000	Dekalb DK493	.	8.2	10.1	11.4	79.2
12,000	NK PX9060	.	7.7	9.8	11.1	82.4
12,000	Pioneer 3394	.	8.1	9.9	11.2	87.0
12,000	Pioneer 3845	.	8.2	10.1	11.5	90.2
18,000	Dekalb DK493	.	8.1	10.0	11.2	81.6
18,000	NK PX9060	.	7.5	9.5	10.6	82.8
18,000	Pioneer 3394	.	7.9	9.6	11.1	88.1
18,000	Pioneer 3845	.	8.3	10.0	11.4	92.2
24,000	Dekalb DK493	.	8.0	9.8	11.1	84.0
24,000	NK PX9060	.	7.7	9.8	10.9	82.6
24,000	Pioneer 3394	.	8.2	10.0	11.4	88.0
24,000	Pioneer 3845	.	8.4	10.4	11.8	96.3
30,000	Dekalb DK493	.	8.0	9.8	11.1	84.0
30,000	NK PX9060	.	7.6	9.6	10.8	84.1
30,000	Pioneer 3394	.	7.9	9.7	11.1	86.5
30,000	Pioneer 3845	.	8.1	10.0	11.5	93.9
36,000	Dekalb DK493	.	8.0	9.8	11.0	86.5
36,000	NK PX9060	.	7.3	9.2	10.5	82.2
36,000	Pioneer 3394	.	7.8	9.5	10.7	87.4
36,000	Pioneer 3845	.	7.9	9.8	11.2	94.3
42,000	Dekalb DK493	.	7.9	9.6	11.0	84.1
42,000	NK PX9060	.	7.6	9.5	10.8	86.0
42,000	Pioneer 3394	.	7.6	9.3	10.5	89.1
42,000	Pioneer 3845	.	8.0	9.8	11.1	95.9
		154	2.0	3.1	4.3	7.7
		162	3.2	4.3	6.1	16.4
		170	5.0	7.6	8.6	27.3
		177	5.9	8.6	9.9	46.0
		187	9.2	12.0	14.1	92.5
		196	12.0	14.6	16.3	152.1
		218	18.2	18.2	18.2	267.1



**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		154	2.0	3.0	4.3	7.6
12,000		162	3.2	4.3	6.1	15.6
12,000		170	5.0	7.7	8.7	27.0
12,000		177	5.9	8.8	10.1	44.0
12,000		187	9.4	12.6	14.7	89.3
12,000		196	12.5	15.1	16.8	146.5
12,000		218	18.4	18.4	18.4	262.9
18,000		154	1.9	3.0	4.3	7.6
18,000		162	3.1	4.4	6.1	16.4
18,000		170	5.0	7.6	8.6	27.1
18,000		177	6.0	8.6	9.8	47.0
18,000		187	9.2	12.1	14.3	93.5
18,000		196	12.2	14.7	16.4	143.1
18,000		218	18.2	18.2	18.2	268.6
24,000		154	2.0	3.2	4.4	7.7
24,000		162	3.3	4.3	6.3	16.6
24,000		170	5.0	7.7	8.7	27.8
24,000		177	6.0	8.8	10.1	46.9
24,000		187	9.4	12.4	14.6	95.7
24,000		196	12.3	14.9	16.5	152.8
24,000		218	18.5	18.5	18.5	266.5
30,000		154	2.0	2.9	4.2	7.6
30,000		162	3.1	4.4	6.1	16.6
30,000		170	4.9	7.6	8.7	26.3
30,000		177	5.8	8.6	9.9	45.5
30,000		187	9.2	12.0	14.2	92.4
30,000		196	12.0	14.7	16.4	154.5
30,000		218	18.3	18.3	18.3	266.9
36,000		154	2.0	3.2	4.3	7.9
36,000		162	3.1	4.4	6.0	16.7
36,000		170	5.0	7.4	8.4	27.8
36,000		177	5.8	8.4	9.8	47.0
36,000		187	8.9	11.7	13.7	92.0
36,000		196	11.5	14.2	16.0	154.7
36,000		218	18.1	18.1	18.1	266.9
42,000		154	2.0	3.0	4.4	7.8
42,000		162	3.2	4.3	6.2	16.4
42,000		170	4.9	7.4	8.5	27.5
42,000		177	5.9	8.6	9.8	45.7
42,000		187	8.9	11.6	13.4	92.1
42,000		196	11.4	14.0	15.7	161.1
42,000		218	17.8	17.8	17.8	270.7

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Dekalb DK493	154	2.0	2.9	4.0	7.2
	Dekalb DK493	162	3.0	4.1	5.8	14.1
	Dekalb DK493	170	5.0	7.4	8.5	23.5
	Dekalb DK493	177	5.9	8.7	9.9	41.4
	Dekalb DK493	187	9.2	12.0	14.1	83.1
	Dekalb DK493	196	12.1	14.8	16.6	142.5
	Dekalb DK493	218	19.1	19.1	19.1	270.9
	NK PX9060	154	2.0	3.0	4.2	7.2
	NK PX9060	162	3.1	4.5	6.1	14.8
	NK PX9060	170	5.0	7.7	8.7	25.6
	NK PX9060	177	5.9	8.8	10.0	43.9
	NK PX9060	187	9.2	12.7	14.6	91.8
	NK PX9060	196	12.0	14.4	15.9	153.1
	NK PX9060	218	15.9	15.9	15.9	246.9
	Pioneer 3394	154	2.0	3.1	4.2	8.0
	Pioneer 3394	162	3.1	4.3	6.1	16.8
	Pioneer 3394	170	4.9	7.4	8.4	28.8
	Pioneer 3394	177	5.9	8.3	9.6	49.5
	Pioneer 3394	187	8.9	11.2	13.4	95.5
	Pioneer 3394	196	11.4	14.3	16.1	153.1
	Pioneer 3394	218	19.1	19.1	19.1	262.0
	Pioneer 3845	154	2.0	3.2	4.8	8.5
	Pioneer 3845	162	3.4	4.5	6.6	19.8
	Pioneer 3845	170	5.0	7.8	8.8	31.1
	Pioneer 3845	177	5.9	8.7	10.0	49.4
	Pioneer 3845	187	9.4	12.3	14.4	99.6
	Pioneer 3845	196	12.5	14.9	16.7	159.7
	Pioneer 3845	218	18.7	18.7	18.7	288.4
12,000	Dekalb DK493	154	2.0	3.1	4.1	7.2
12,000	Dekalb DK493	162	3.0	4.2	5.9	13.6
12,000	Dekalb DK493	170	5.0	7.6	8.6	25.0
12,000	Dekalb DK493	177	5.9	9.1	10.2	39.0
12,000	Dekalb DK493	187	9.2	12.4	14.6	72.8
12,000	Dekalb DK493	196	12.8	15.3	17.0	127.0
12,000	Dekalb DK493	218	19.2	19.2	19.2	270.1
12,000	NK PX9060	154	2.0	2.9	4.2	7.2
12,000	NK PX9060	162	3.1	4.7	6.2	14.0
12,000	NK PX9060	170	5.0	8.0	9.1	24.6
12,000	NK PX9060	177	6.1	9.0	10.7	40.6
12,000	NK PX9060	187	9.6	13.2	15.2	90.6
12,000	NK PX9060	196	12.3	14.9	16.4	156.6
12,000	NK PX9060	218	16.0	16.0	16.0	243.0

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000	Pioneer 3394	154	2.0	3.1	4.0	8.0
12,000	Pioneer 3394	162	3.2	4.2	6.0	15.7
12,000	Pioneer 3394	170	5.0	7.4	8.4	27.1
12,000	Pioneer 3394	177	5.7	8.1	9.2	48.7
12,000	Pioneer 3394	187	9.1	11.9	14.1	94.8
12,000	Pioneer 3394	196	12.2	15.1	17.0	152.4
12,000	Pioneer 3394	218	19.6	19.6	19.6	262.5
12,000	Pioneer 3845	154	2.0	3.0	4.7	8.0
12,000	Pioneer 3845	162	3.4	4.1	6.3	19.1
12,000	Pioneer 3845	170	5.0	7.8	8.8	31.3
12,000	Pioneer 3845	177	5.9	8.9	10.2	47.8
12,000	Pioneer 3845	187	9.7	12.8	14.9	99.1
12,000	Pioneer 3845	196	12.7	15.1	16.8	149.9
12,000	Pioneer 3845	218	18.7	18.7	18.7	276.0
18,000	Dekalb DK493	154	1.9	3.0	4.0	7.2
18,000	Dekalb DK493	162	3.0	4.2	5.7	12.7
18,000	Dekalb DK493	170	5.0	7.4	8.4	22.4
18,000	Dekalb DK493	177	5.9	8.7	9.9	41.5
18,000	Dekalb DK493	187	9.3	12.3	14.3	83.8
18,000	Dekalb DK493	196	12.3	15.0	17.0	130.4
18,000	Dekalb DK493	218	19.3	19.3	19.3	273.5
18,000	NK PX9060	154	1.9	3.0	4.1	7.2
18,000	NK PX9060	162	2.9	4.2	5.8	15.2
18,000	NK PX9060	170	4.9	7.7	8.7	25.0
18,000	NK PX9060	177	5.8	8.6	9.6	45.7
18,000	NK PX9060	187	9.2	12.8	14.7	95.3
18,000	NK PX9060	196	12.0	14.6	15.6	149.0
18,000	NK PX9060	218	15.7	15.7	15.7	242.2
18,000	Pioneer 3394	154	2.0	2.9	4.1	7.6
18,000	Pioneer 3394	162	3.0	4.4	6.2	16.9
18,000	Pioneer 3394	170	4.9	7.3	8.3	28.8
18,000	Pioneer 3394	177	5.9	8.2	9.8	49.1
18,000	Pioneer 3394	187	8.9	11.2	13.6	94.8
18,000	Pioneer 3394	196	11.7	14.0	16.1	149.0
18,000	Pioneer 3394	218	19.2	19.2	19.2	270.1
18,000	Pioneer 3845	154	2.0	3.2	4.8	8.5
18,000	Pioneer 3845	162	3.6	4.6	6.7	20.7
18,000	Pioneer 3845	170	5.1	7.8	8.9	32.2
18,000	Pioneer 3845	177	6.3	8.8	9.9	51.7
18,000	Pioneer 3845	187	9.3	11.9	14.6	99.9
18,000	Pioneer 3845	196	12.9	15.1	16.8	143.9
18,000	Pioneer 3845	218	18.6	18.6	18.6	288.7

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
24,000	Dekalb DK493	154	2.0	3.0	4.0	6.8
24,000	Dekalb DK493	162	3.0	3.7	5.9	14.4
24,000	Dekalb DK493	170	5.0	7.4	8.4	22.9
24,000	Dekalb DK493	177	6.0	8.7	9.9	42.3
24,000	Dekalb DK493	187	9.3	12.0	14.2	88.5
24,000	Dekalb DK493	196	11.7	14.4	16.0	146.5
24,000	Dekalb DK493	218	19.1	19.1	19.1	266.7
24,000	NK PX9060	154	1.9	3.1	4.3	7.6
24,000	NK PX9060	162	3.1	4.6	6.2	15.7
24,000	NK PX9060	170	5.0	7.8	8.7	27.1
24,000	NK PX9060	177	5.9	9.0	10.1	44.9
24,000	NK PX9060	187	9.2	13.0	14.9	93.1
24,000	NK PX9060	196	12.4	14.8	16.0	138.9
24,000	NK PX9060	218	16.0	16.0	16.0	250.6
24,000	Pioneer 3394	154	2.0	3.4	4.4	8.5
24,000	Pioneer 3394	162	3.3	4.1	6.2	17.8
24,000	Pioneer 3394	170	5.0	7.7	8.7	29.6
24,000	Pioneer 3394	177	6.1	8.7	10.0	50.8
24,000	Pioneer 3394	187	9.2	11.4	14.0	100.3
24,000	Pioneer 3394	196	11.9	14.9	16.9	154.9
24,000	Pioneer 3394	218	19.7	19.7	19.7	254.0
24,000	Pioneer 3845	154	2.0	3.1	5.0	8.0
24,000	Pioneer 3845	162	3.7	4.8	6.7	18.6
24,000	Pioneer 3845	170	4.9	7.9	8.9	31.8
24,000	Pioneer 3845	177	6.1	9.0	10.3	49.5
24,000	Pioneer 3845	187	9.8	13.0	15.1	100.8
24,000	Pioneer 3845	196	13.1	15.4	17.1	171.0
24,000	Pioneer 3845	218	19.2	19.2	19.2	294.6
30,000	Dekalb DK493	154	1.9	2.7	3.9	6.8
30,000	Dekalb DK493	162	3.0	4.0	5.8	12.7
30,000	Dekalb DK493	170	5.0	7.4	8.6	23.7
30,000	Dekalb DK493	177	5.7	8.7	9.9	40.6
30,000	Dekalb DK493	187	9.2	12.1	14.2	82.6
30,000	Dekalb DK493	196	12.4	15.0	16.7	147.3
30,000	Dekalb DK493	218	18.9	18.9	18.9	274.3
30,000	NK PX9060	154	2.0	2.9	4.0	7.2
30,000	NK PX9060	162	3.0	4.7	6.1	14.4
30,000	NK PX9060	170	4.9	7.4	8.6	23.7
30,000	NK PX9060	177	5.7	8.6	9.9	44.0
30,000	NK PX9060	187	9.0	12.6	14.7	88.9
30,000	NK PX9060	196	12.0	14.4	15.9	160.0
30,000	NK PX9060	218	16.3	16.3	16.3	250.6

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
30,000	Pioneer 3394	154	2.0	2.9	4.2	8.0
30,000	Pioneer 3394	162	3.0	4.3	6.0	17.8
30,000	Pioneer 3394	170	4.7	7.7	8.7	27.5
30,000	Pioneer 3394	177	6.1	8.6	9.7	49.1
30,000	Pioneer 3394	187	8.9	11.0	13.3	95.7
30,000	Pioneer 3394	196	11.4	14.3	16.3	144.8
30,000	Pioneer 3394	218	19.1	19.1	19.1	262.5
30,000	Pioneer 3845	154	2.0	3.2	4.8	8.5
30,000	Pioneer 3845	162	3.4	4.4	6.7	21.6
30,000	Pioneer 3845	170	5.0	7.7	8.9	30.1
30,000	Pioneer 3845	177	5.7	8.8	10.0	48.3
30,000	Pioneer 3845	187	9.6	12.3	14.4	102.5
30,000	Pioneer 3845	196	12.1	14.9	16.9	166.0
30,000	Pioneer 3845	218	18.8	18.8	18.8	280.3
36,000	Dekalb DK493	154	2.0	3.0	4.0	8.0
36,000	Dekalb DK493	162	3.0	4.4	5.6	17.4
36,000	Dekalb DK493	170	5.0	7.4	8.4	25.4
36,000	Dekalb DK493	177	5.9	8.6	9.9	44.9
36,000	Dekalb DK493	187	9.1	11.8	13.9	88.9
36,000	Dekalb DK493	196	11.7	14.7	16.2	148.2
36,000	Dekalb DK493	218	19.0	19.0	19.0	272.6
36,000	NK PX9060	154	2.0	3.3	4.2	7.2
36,000	NK PX9060	162	3.0	4.3	6.0	14.4
36,000	NK PX9060	170	5.0	7.2	8.2	27.1
36,000	NK PX9060	177	5.9	8.6	9.9	44.9
36,000	NK PX9060	187	8.8	12.0	14.0	90.6
36,000	NK PX9060	196	11.2	13.6	15.7	154.9
36,000	NK PX9060	218	15.9	15.9	15.9	236.2
36,000	Pioneer 3394	154	2.0	2.8	4.0	8.0
36,000	Pioneer 3394	162	3.0	4.4	6.0	15.2
36,000	Pioneer 3394	170	5.0	7.2	8.2	28.8
36,000	Pioneer 3394	177	5.8	8.1	9.4	48.3
36,000	Pioneer 3394	187	8.8	11.0	12.9	93.1
36,000	Pioneer 3394	196	11.2	14.1	15.6	154.1
36,000	Pioneer 3394	218	18.7	18.7	18.7	264.2
36,000	Pioneer 3845	154	2.0	3.7	4.9	8.5
36,000	Pioneer 3845	162	3.2	4.3	6.3	19.9
36,000	Pioneer 3845	170	5.0	7.7	8.7	30.1
36,000	Pioneer 3845	177	5.7	8.3	9.8	50.0
36,000	Pioneer 3845	187	9.1	11.9	13.9	95.3
36,000	Pioneer 3845	196	12.0	14.4	16.4	161.7
36,000	Pioneer 3845	218	18.4	18.4	18.4	294.6

**Table E-18. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Hancock, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
42,000	Dekalb DK493	154	2.0	2.4	4.0	7.2
42,000	Dekalb DK493	162	3.0	4.2	6.0	14.0
42,000	Dekalb DK493	170	4.9	7.1	8.3	21.6
42,000	Dekalb DK493	177	5.9	8.4	9.8	39.8
42,000	Dekalb DK493	187	8.9	11.6	13.4	82.1
42,000	Dekalb DK493	196	11.4	14.3	16.6	155.8
42,000	Dekalb DK493	218	18.9	18.9	18.9	268.4
42,000	NK PX9060	154	2.0	3.0	4.4	6.8
42,000	NK PX9060	162	3.3	4.3	6.1	15.2
42,000	NK PX9060	170	5.0	7.8	8.8	26.3
42,000	NK PX9060	177	5.9	8.9	10.1	43.2
42,000	NK PX9060	187	9.2	12.4	14.2	92.3
42,000	NK PX9060	196	11.9	14.2	15.9	159.2
42,000	NK PX9060	218	15.8	15.8	15.8	259.1
42,000	Pioneer 3394	154	2.0	3.7	4.6	8.0
42,000	Pioneer 3394	162	3.2	4.1	6.1	17.4
42,000	Pioneer 3394	170	4.8	7.0	8.0	30.9
42,000	Pioneer 3394	177	6.0	8.3	9.7	50.8
42,000	Pioneer 3394	187	8.6	10.6	12.3	94.0
42,000	Pioneer 3394	196	10.1	13.1	14.4	163.4
42,000	Pioneer 3394	218	18.2	18.2	18.2	259.1
42,000	Pioneer 3845	154	2.0	3.0	4.8	9.3
42,000	Pioneer 3845	162	3.3	4.7	6.7	19.1
42,000	Pioneer 3845	170	5.0	7.9	8.9	31.3
42,000	Pioneer 3845	177	6.0	8.7	9.7	49.1
42,000	Pioneer 3845	187	9.0	11.8	13.7	99.9
42,000	Pioneer 3845	196	12.0	14.4	15.9	166.0
42,000	Pioneer 3845	218	18.4	18.4	18.4	296.3
Mean		.	7.9	9.8	11.1	87.0
<b>Probability %</b>						
Plant Density (PD)			2.1	5.1	0.8	3.4
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
PD x H			32.2	> 50	29.9	> 50
Days (T)			< 0.1	< 0.1	< 0.1	< 0.1
PD x T			< 0.1	0.1	< 0.1	9.7
H x T			< 0.1	< 0.1	< 0.1	< 0.1
PD x H x T			> 50	> 50	39.4	> 50
<b>LSD (0.10)</b>						
Plant Density (PD)			0.2	0.3	0.2	1.9
Hybrid (H)			0.1	0.1	0.1	2.2
Days (T)			0.1	0.1	0.1	2.1
<b>CV %</b>						
			7.1	6.7	6.0	8.8

**Table E-19. Determining Corn Hybrid Maturity.  
Plant Density by Hybrid - Harvest Data.  
Hancock, WI - 1996.**

Plant Density	Hybrid	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
12,000		13661	14.0	26.8	126.0
18,000		17357	3.9	27.5	137.4
24,000		21812	3.8	26.5	162.6
30,000		26860	3.5	26.5	167.3
36,000		30688	3.9	27.3	164.5
42,000		36067	4.7	27.6	167.0
	Dekalb DK493	24793	10.2	26.9	184.4
	NK PX9060	22461	5.5	21.7	108.0
	Pioneer 3394	24924	2.6	36.4	161.3
	Pioneer 3845	25452	4.3	23.2	162.7
12,000	Dekalb DK493	14519	38.1	26.7	148.5
12,000	NK PX9060	12539	10.6	21.2	84.5
12,000	Pioneer 3394	13067	2.0	35.5	133.1
12,000	Pioneer 3845	14519	5.3	23.7	137.7
18,000	Dekalb DK493	17687	6.0	25.4	168.1
18,000	NK PX9060	16631	6.1	22.9	100.3
18,000	Pioneer 3394	16367	0.8	39.6	132.9
18,000	Pioneer 3845	18743	2.8	22.0	148.3
24,000	Dekalb DK493	22439	5.4	25.7	197.4
24,000	NK PX9060	19667	2.7	21.7	116.3
24,000	Pioneer 3394	22571	3.0	36.5	168.5
24,000	Pioneer 3845	22571	4.2	22.1	168.0
30,000	Dekalb DK493	28378	2.9	26.4	202.0
30,000	NK PX9060	23627	3.6	21.4	116.6
30,000	Pioneer 3394	28642	1.6	34.7	174.2
30,000	Pioneer 3845	26794	5.7	23.6	176.2
36,000	Dekalb DK493	29302	3.1	27.4	191.8
36,000	NK PX9060	30094	4.4	20.5	127.9
36,000	Pioneer 3394	33526	4.0	37.8	168.3
36,000	Pioneer 3845	29830	4.2	23.7	169.9
42,000	Dekalb DK493	36430	5.5	29.8	198.6
42,000	NK PX9060	32206	5.8	22.3	102.4
42,000	Pioneer 3394	35374	4.1	34.3	190.8
42,000	Pioneer 3845	40258	3.5	24.2	176.2
Mean		24408	5.6	27.0	154.1
<b>Probability %</b>					
Plant Density (PD)		< 0.1	40.8	14.4	< 0.1
Hybrid (H)		15.0	18.5	< 0.1	< 0.1
PD x H		> 50	33.4	0.4	> 50
<b>LSD (0.10)</b>					
Plant Density (PD)		2938	NS	NS	13.4
Hybrid (H)		NS	NS	0.9	9.6
<b>CV %</b>		16.8	187.9	5.7	11.1

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		.	7.6	9.3	10.6	83.8
18,000		.	7.4	9.0	10.4	87.3
24,000		.	7.5	9.2	10.4	87.6
30,000		.	7.4	9.0	10.3	91.0
36,000		.	7.7	9.3	10.7	92.8
42,000		.	7.7	9.4	10.7	92.0
	Dekalb DK493	.	7.4	8.8	10.2	84.3
	NK PX9060	.	7.4	9.2	10.4	83.2
	Pioneer 3394	.	7.7	9.2	10.6	92.9
	Pioneer 3845	.	7.8	9.5	10.9	95.7
12,000	Dekalb DK493	.	7.4	8.8	10.3	79.8
12,000	NK PX9060	.	7.5	9.3	10.5	79.3
12,000	Pioneer 3394	.	7.8	9.4	10.8	87.9
12,000	Pioneer 3845	.	7.8	9.6	10.9	88.0
18,000	Dekalb DK493	.	6.8	8.3	9.6	82.6
18,000	NK PX9060	.	7.3	9.1	10.2	80.8
18,000	Pioneer 3394	.	7.5	8.9	10.3	88.3
18,000	Pioneer 3845	.	8.1	9.8	11.2	97.3
24,000	Dekalb DK493	.	7.4	8.9	10.3	83.2
24,000	NK PX9060	.	7.3	9.2	10.2	82.3
24,000	Pioneer 3394	.	7.7	9.2	10.6	92.2
24,000	Pioneer 3845	.	7.7	9.4	10.7	92.7
30,000	Dekalb DK493	.	7.3	8.7	10.0	84.9
30,000	NK PX9060	.	7.3	9.2	10.3	84.9
30,000	Pioneer 3394	.	7.3	8.7	10.0	96.3
30,000	Pioneer 3845	.	7.7	9.5	10.8	98.0
36,000	Dekalb DK493	.	7.7	9.1	10.6	86.4
36,000	NK PX9060	.	7.5	9.4	10.5	86.5
36,000	Pioneer 3394	.	7.7	9.2	10.7	97.1
36,000	Pioneer 3845	.	7.8	9.6	10.8	101.0
42,000	Dekalb DK493	.	7.7	9.1	10.5	89.2
42,000	NK PX9060	.	7.5	9.3	10.4	85.5
42,000	Pioneer 3394	.	7.9	9.6	11.0	95.9
42,000	Pioneer 3845	.	7.7	9.5	10.8	97.6
		157	1.8	3.3	4.0	7.0
		165	3.0	4.7	5.6	14.0
		173	4.3	6.1	7.3	24.5
		178	6.0	8.6	9.8	55.1
		190	9.2	11.8	14.1	121.1
		197	11.6	12.8	15.5	143.8
		220	17.6	17.6	17.6	258.1



**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000		157	1.8	3.1	4.0	6.8
12,000		165	3.0	4.8	5.8	13.8
12,000		173	4.3	6.1	7.3	22.9
12,000		178	5.9	8.4	9.8	49.7
12,000		190	9.1	11.9	14.2	109.2
12,000		197	11.8	13.0	15.7	132.9
12,000		220	17.6	17.6	17.6	251.0
18,000		157	1.7	3.1	3.9	6.4
18,000		165	2.9	4.6	5.6	13.0
18,000		173	4.1	5.9	7.1	23.7
18,000		178	6.0	8.4	9.6	53.1
18,000		190	9.3	11.8	14.0	114.1
18,000		197	11.7	12.9	15.8	138.6
18,000		220	17.4	17.4	17.4	261.8
24,000		157	1.8	3.3	4.1	6.8
24,000		165	2.9	4.6	5.6	13.8
24,000		173	4.3	6.3	7.5	23.6
24,000		178	6.0	8.6	9.8	54.4
24,000		190	9.1	11.7	14.0	115.4
24,000		197	11.5	12.6	15.3	139.3
24,000		220	17.4	17.4	17.4	259.7
30,000		157	1.8	3.1	3.9	7.2
30,000		165	2.9	4.5	5.4	14.6
30,000		173	4.3	6.1	7.3	24.8
30,000		178	5.9	8.4	9.6	55.1
30,000		190	8.9	11.6	13.9	125.5
30,000		197	11.6	12.8	15.2	147.1
30,000		220	17.5	17.5	17.5	262.7
36,000		157	1.7	3.3	4.0	7.5
36,000		165	3.0	4.7	5.7	14.7
36,000		173	4.3	6.3	7.5	25.6
36,000		178	6.1	8.7	10.0	59.2
36,000		190	9.3	11.9	14.3	132.5
36,000		197	11.7	12.8	15.6	152.2
36,000		220	17.8	17.8	17.8	257.6
42,000		157	2.0	3.5	4.1	7.1
42,000		165	3.0	4.8	5.8	14.1
42,000		173	4.3	6.2	7.4	26.1
42,000		178	6.1	8.8	10.0	58.7
42,000		190	9.2	11.9	14.3	130.0
42,000		197	11.6	12.6	15.3	152.4
42,000		220	17.8	17.8	17.8	255.9

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
	Dekalb DK493	157	1.7	2.9	3.7	6.3
	Dekalb DK493	165	2.9	4.2	5.2	12.4
	Dekalb DK493	173	3.9	5.5	6.7	22.6
	Dekalb DK493	178	5.9	8.1	9.5	48.7
	Dekalb DK493	190	9.1	11.4	13.9	108.7
	Dekalb DK493	197	11.5	12.7	15.6	131.0
	Dekalb DK493	220	18.2	18.2	18.2	260.9
	NK PX9060	157	1.7	3.2	4.0	5.5
	NK PX9060	165	2.9	4.8	5.7	12.1
	NK PX9060	173	4.4	6.5	7.6	22.1
	NK PX9060	178	5.9	8.9	10.0	49.4
	NK PX9060	190	9.1	12.5	14.2	115.2
	NK PX9060	197	11.8	12.9	15.1	140.6
	NK PX9060	220	15.8	15.8	15.8	237.8
	Pioneer 3394	157	1.9	3.4	4.0	7.9
	Pioneer 3394	165	3.0	4.8	5.8	14.6
	Pioneer 3394	173	4.2	5.8	7.1	25.2
	Pioneer 3394	178	6.0	8.3	9.5	60.3
	Pioneer 3394	190	8.9	11.1	13.8	128.3
	Pioneer 3394	197	11.1	12.3	15.4	148.5
	Pioneer 3394	220	18.8	18.8	18.8	265.9
	Pioneer 3845	157	1.9	3.6	4.3	8.1
	Pioneer 3845	165	3.0	4.9	5.9	16.9
	Pioneer 3845	173	4.6	6.7	8.0	27.9
	Pioneer 3845	178	6.1	8.9	10.2	61.8
	Pioneer 3845	190	9.5	12.2	14.6	132.4
	Pioneer 3845	197	12.1	13.2	15.8	155.1
	Pioneer 3845	220	17.6	17.6	17.6	268.0
12,000	Dekalb DK493	157	1.2	2.2	3.6	5.9
12,000	Dekalb DK493	165	2.9	4.1	5.0	12.3
12,000	Dekalb DK493	173	3.3	4.7	6.2	21.6
12,000	Dekalb DK493	178	5.8	7.9	9.3	43.2
12,000	Dekalb DK493	190	8.8	11.8	13.9	95.7
12,000	Dekalb DK493	197	11.4	12.8	15.8	120.2
12,000	Dekalb DK493	220	18.3	18.3	18.3	259.9
12,000	NK PX9060	157	1.9	3.2	4.1	6.4
12,000	NK PX9060	165	3.0	5.0	6.1	12.3
12,000	NK PX9060	173	4.8	6.9	8.0	23.3
12,000	NK PX9060	178	5.9	8.6	10.0	45.7
12,000	NK PX9060	190	9.3	12.4	14.2	105.8
12,000	NK PX9060	197	12.0	13.2	15.2	132.9
12,000	NK PX9060	220	15.6	15.6	15.6	228.6

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
12,000	Pioneer 3394	157	2.0	3.7	4.2	7.6
12,000	Pioneer 3394	165	3.0	4.9	5.9	14.8
12,000	Pioneer 3394	173	4.2	5.9	6.9	23.3
12,000	Pioneer 3394	178	6.0	8.4	9.7	58.4
12,000	Pioneer 3394	190	8.9	11.3	14.2	116.0
12,000	Pioneer 3394	197	11.7	13.0	15.8	138.9
12,000	Pioneer 3394	220	18.8	18.8	18.8	256.5
12,000	Pioneer 3845	157	1.9	3.4	4.0	7.2
12,000	Pioneer 3845	165	3.0	5.0	6.0	15.7
12,000	Pioneer 3845	173	4.7	6.9	8.1	23.3
12,000	Pioneer 3845	178	5.9	8.8	10.0	51.7
12,000	Pioneer 3845	190	9.2	12.2	14.6	119.4
12,000	Pioneer 3845	197	11.9	13.1	15.9	139.7
12,000	Pioneer 3845	220	17.7	17.7	17.7	259.1
18,000	Dekalb DK493	157	1.4	2.9	3.8	5.9
18,000	Dekalb DK493	165	2.9	4.1	5.1	12.3
18,000	Dekalb DK493	173	3.8	5.9	6.9	23.3
18,000	Dekalb DK493	178	5.9	8.1	9.4	49.1
18,000	Dekalb DK493	190	9.2	11.0	13.0	98.2
18,000	Dekalb DK493	197	11.8	13.2	16.4	126.2
18,000	Dekalb DK493	220	17.1	17.1	17.1	263.3
18,000	NK PX9060	157	1.4	2.9	3.8	5.1
18,000	NK PX9060	165	2.9	4.7	5.6	11.4
18,000	NK PX9060	173	4.1	5.8	7.1	19.9
18,000	NK PX9060	178	6.0	8.7	9.7	47.4
18,000	NK PX9060	190	9.1	12.8	14.4	110.9
18,000	NK PX9060	197	11.6	12.9	15.2	132.1
18,000	NK PX9060	220	15.7	15.7	15.7	238.8
18,000	Pioneer 3394	157	1.9	3.2	3.8	6.4
18,000	Pioneer 3394	165	3.0	4.6	5.6	12.3
18,000	Pioneer 3394	173	4.0	5.6	6.8	22.0
18,000	Pioneer 3394	178	5.8	7.8	9.0	54.2
18,000	Pioneer 3394	190	8.7	10.7	13.2	118.5
18,000	Pioneer 3394	197	10.6	11.8	15.2	136.3
18,000	Pioneer 3394	220	18.8	18.8	18.8	268.4
18,000	Pioneer 3845	157	1.9	3.4	4.3	8.0
18,000	Pioneer 3845	165	3.0	5.0	6.1	16.1
18,000	Pioneer 3845	173	4.4	6.4	7.8	29.6
18,000	Pioneer 3845	178	6.4	9.0	10.4	61.8
18,000	Pioneer 3845	190	10.3	12.7	15.3	128.7
18,000	Pioneer 3845	197	12.8	13.8	16.4	160.0
18,000	Pioneer 3845	220	18.0	18.0	18.0	276.9

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
24,000	Dekalb DK493	157	1.9	3.4	4.0	5.9
24,000	Dekalb DK493	165	3.0	4.3	5.3	11.9
24,000	Dekalb DK493	173	4.1	5.9	7.0	21.6
24,000	Dekalb DK493	178	6.0	8.4	9.7	48.3
24,000	Dekalb DK493	190	9.0	11.4	13.8	106.7
24,000	Dekalb DK493	197	11.3	12.4	15.5	130.4
24,000	Dekalb DK493	220	17.9	17.9	17.9	257.4
24,000	NK PX9060	157	1.4	3.0	3.9	5.5
24,000	NK PX9060	165	2.8	4.8	5.6	11.9
24,000	NK PX9060	173	4.4	6.6	7.6	22.4
24,000	NK PX9060	178	5.9	9.0	10.0	50.8
24,000	NK PX9060	190	8.8	12.3	13.9	108.4
24,000	NK PX9060	197	11.6	12.6	14.7	134.6
24,000	NK PX9060	220	15.7	15.7	15.7	242.2
24,000	Pioneer 3394	157	1.8	3.3	4.0	7.6
24,000	Pioneer 3394	165	3.0	4.9	5.9	14.4
24,000	Pioneer 3394	173	4.1	5.7	7.1	23.7
24,000	Pioneer 3394	178	6.0	8.2	9.7	59.3
24,000	Pioneer 3394	190	9.1	11.0	14.0	121.9
24,000	Pioneer 3394	197	11.1	12.5	15.4	148.2
24,000	Pioneer 3394	220	18.9	18.9	18.9	270.1
24,000	Pioneer 3845	157	2.0	3.6	4.3	8.0
24,000	Pioneer 3845	165	3.0	4.4	5.6	16.9
24,000	Pioneer 3845	173	4.8	6.9	8.1	26.7
24,000	Pioneer 3845	178	6.0	8.9	9.9	59.3
24,000	Pioneer 3845	190	9.3	12.1	14.4	124.5
24,000	Pioneer 3845	197	12.0	13.0	15.6	143.9
24,000	Pioneer 3845	220	17.1	17.1	17.1	269.2
30,000	Dekalb DK493	157	1.8	2.7	3.3	6.4
30,000	Dekalb DK493	165	2.9	4.1	5.0	12.3
30,000	Dekalb DK493	173	3.8	5.3	6.6	21.6
30,000	Dekalb DK493	178	5.9	7.9	9.2	45.7
30,000	Dekalb DK493	190	8.9	11.2	13.8	111.8
30,000	Dekalb DK493	197	11.5	12.8	15.4	133.8
30,000	Dekalb DK493	220	18.4	18.4	18.4	262.5
30,000	NK PX9060	157	1.8	3.3	4.0	5.5
30,000	NK PX9060	165	2.9	4.7	5.6	12.7
30,000	NK PX9060	173	4.3	6.6	7.6	20.7
30,000	NK PX9060	178	5.9	8.8	9.9	47.4
30,000	NK PX9060	190	8.9	12.4	14.4	121.9
30,000	NK PX9060	197	11.6	12.9	15.0	140.6
30,000	NK PX9060	220	15.9	15.9	15.9	245.5

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
						cm
30,000	Pioneer 3394	157	1.7	2.8	4.0	7.6
30,000	Pioneer 3394	165	3.0	4.3	5.3	14.8
30,000	Pioneer 3394	173	4.2	5.8	6.9	27.1
30,000	Pioneer 3394	178	5.9	8.1	9.1	61.4
30,000	Pioneer 3394	190	8.6	10.7	12.9	132.1
30,000	Pioneer 3394	197	11.0	12.1	14.5	154.1
30,000	Pioneer 3394	220	18.5	18.5	18.5	276.9
30,000	Pioneer 3845	157	2.0	3.7	4.3	9.3
30,000	Pioneer 3845	165	3.0	4.9	5.9	18.6
30,000	Pioneer 3845	173	4.8	6.9	8.1	29.6
30,000	Pioneer 3845	178	6.1	9.0	10.3	66.0
30,000	Pioneer 3845	190	9.4	11.9	14.6	136.3
30,000	Pioneer 3845	197	12.2	13.4	15.8	160.0
30,000	Pioneer 3845	220	17.5	17.5	17.5	265.9
36,000	Dekalb DK493	157	1.7	2.7	3.6	7.2
36,000	Dekalb DK493	165	2.9	4.4	5.3	13.1
36,000	Dekalb DK493	173	4.1	5.7	6.9	23.3
36,000	Dekalb DK493	178	6.1	8.2	9.7	53.3
36,000	Dekalb DK493	190	9.3	11.8	14.7	119.4
36,000	Dekalb DK493	197	11.4	12.6	15.8	133.8
36,000	Dekalb DK493	220	18.6	18.6	18.6	254.9
36,000	NK PX9060	157	1.7	3.4	4.1	5.5
36,000	NK PX9060	165	3.0	4.8	5.8	12.7
36,000	NK PX9060	173	4.4	6.9	7.8	22.4
36,000	NK PX9060	178	6.0	9.3	10.4	52.1
36,000	NK PX9060	190	9.4	12.4	14.3	125.3
36,000	NK PX9060	197	12.0	13.0	15.3	151.6
36,000	NK PX9060	220	16.0	16.0	16.0	236.2
36,000	Pioneer 3394	157	1.8	3.2	4.1	9.3
36,000	Pioneer 3394	165	3.0	4.9	5.9	16.1
36,000	Pioneer 3394	173	4.1	5.6	7.1	27.5
36,000	Pioneer 3394	178	6.1	8.4	9.7	64.4
36,000	Pioneer 3394	190	9.0	11.3	14.0	141.4
36,000	Pioneer 3394	197	11.0	12.2	15.4	154.9
36,000	Pioneer 3394	220	18.9	18.9	18.9	265.9
36,000	Pioneer 3845	157	1.8	3.8	4.3	8.0
36,000	Pioneer 3845	165	3.0	4.8	5.8	16.9
36,000	Pioneer 3845	173	4.6	6.9	8.1	29.2
36,000	Pioneer 3845	178	6.2	8.9	10.3	66.9
36,000	Pioneer 3845	190	9.6	11.9	14.2	143.9
36,000	Pioneer 3845	197	12.3	13.4	15.9	168.5
36,000	Pioneer 3845	220	17.7	17.7	17.7	273.5

**Table E-20. Determining Corn Hybrid Maturity - Plant Density by Hybrid.  
Growth and Development  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Day of Year	Leaf Development			Plant Height cm
			Leaf Collars	Hail Adjuster's Method	Total Leaves	
42,000	Dekalb DK493	157	2.0	3.2	3.9	6.4
42,000	Dekalb DK493	165	3.0	4.1	5.1	12.3
42,000	Dekalb DK493	173	4.0	5.6	6.9	24.1
42,000	Dekalb DK493	178	5.9	8.2	9.6	52.5
42,000	Dekalb DK493	190	9.1	11.4	14.3	120.2
42,000	Dekalb DK493	197	11.4	12.7	15.2	141.4
42,000	Dekalb DK493	220	18.6	18.6	18.6	267.6
42,000	NK PX9060	157	1.9	3.3	4.2	5.1
42,000	NK PX9060	165	3.0	4.9	5.9	11.4
42,000	NK PX9060	173	4.2	6.4	7.6	23.7
42,000	NK PX9060	178	6.0	8.9	9.9	52.9
42,000	NK PX9060	190	9.1	12.3	14.1	118.5
42,000	NK PX9060	197	11.9	12.9	15.1	151.6
42,000	NK PX9060	220	16.1	16.1	16.1	235.4
42,000	Pioneer 3394	157	2.0	3.9	4.1	8.9
42,000	Pioneer 3394	165	3.0	5.0	6.0	15.2
42,000	Pioneer 3394	173	4.7	6.6	7.6	27.5
42,000	Pioneer 3394	178	6.2	8.9	10.0	64.4
42,000	Pioneer 3394	190	9.2	11.8	14.4	139.7
42,000	Pioneer 3394	197	11.2	12.2	15.7	158.3
42,000	Pioneer 3394	220	19.0	19.0	19.0	257.4
42,000	Pioneer 3845	157	2.0	3.6	4.3	8.0
42,000	Pioneer 3845	165	3.0	5.1	6.1	17.4
42,000	Pioneer 3845	173	4.3	6.3	7.6	29.2
42,000	Pioneer 3845	178	6.1	9.0	10.4	65.2
42,000	Pioneer 3845	190	9.3	12.2	14.3	141.4
42,000	Pioneer 3845	197	11.7	12.6	15.2	158.3
42,000	Pioneer 3845	220	17.4	17.4	17.4	263.3
Mean	.		7.6	9.2	10.5	89.1
<b>Probability %</b>						
Plant Density (PD)			41.7	27.5	3.7	2.1
Hybrid (H)			< 0.1	< 0.1	< 0.1	< 0.1
PD x H			22.4	48.7	> 50	> 50
Days (T)			< 0.1	< 0.1	< 0.1	< 0.1
PD x T			> 50	> 50	46.7	< 0.1
H x T			< 0.1	< 0.1	< 0.1	< 0.1
PD x H x T			> 50	> 50	> 50	> 50
<b>LSD (0.10)</b>						
Plant Density (PD)			NS	NS	0.1	4.2
Hybrid (H)			0.1	0.2	0.2	2.1
Days (T)			0.1	0.1	0.1	2.0
<b>CV %</b>						
			7.9	8.3	7.5	8.2

**Table E-21. Determining Corn Hybrid Maturity.  
Plant Density by Hybrid - Harvest Data.  
Lancaster, WI - 1996.**

Plant Density	Hybrid	Final Population plants/a	Broken Stalks %	Moisture %	Yield bu/a
12,000		15575	3.2	24.4	96.7
18,000		19370	7.1	25.9	114.0
24,000		22043	3.6	25.6	130.7
30,000		28147	8.6	24.8	135.4
36,000		32569	7.2	24.6	141.1
42,000		36991	11.8	24.6	133.4
	Dekalb DK493	26706	3.0	24.1	145.1
	NK PX9060	24661	12.6	20.6	81.6
	Pioneer 3394	25518	7.3	32.0	149.9
	Pioneer 3845	26244	4.7	23.1	124.4
12,000	Dekalb DK493	18743	1.5	26.7	121.8
12,000	NK PX9060	14123	9.6	16.2	50.8
12,000	Pioneer 3394	13727	0.0	30.4	124.5
12,000	Pioneer 3845	15707	1.6	24.2	89.9
18,000	Dekalb DK493	20459	1.9	23.3	142.4
18,000	NK PX9060	19139	12.0	22.3	69.2
18,000	Pioneer 3394	19139	10.4	33.4	145.9
18,000	Pioneer 3845	18743	4.2	24.6	98.6
24,000	Dekalb DK493	21911	1.3	24.8	148.1
24,000	NK PX9060	20723	6.2	21.0	89.6
24,000	Pioneer 3394	22307	5.7	33.1	153.4
24,000	Pioneer 3845	23231	1.2	23.5	131.8
30,000	Dekalb DK493	27982	5.7	23.4	147.2
30,000	NK PX9060	27586	18.0	21.6	81.9
30,000	Pioneer 3394	28378	6.4	31.8	158.8
30,000	Pioneer 3845	28642	4.2	22.3	153.7
36,000	Dekalb DK493	32338	3.1	23.1	166.5
36,000	NK PX9060	31018	17.2	21.8	87.6
36,000	Pioneer 3394	34582	1.2	31.5	178.3
36,000	Pioneer 3845	32338	7.4	21.9	132.1
42,000	Dekalb DK493	38806	4.4	23.4	144.6
42,000	NK PX9060	35374	12.8	20.4	110.4
42,000	Pioneer 3394	34978	20.2	32.0	138.3
42,000	Pioneer 3845	38806	9.8	22.4	140.2
Mean		25782	6.9	25.0	125.2
<b>Probability %</b>					
Plant Density (PD)		< 0.1	13.7	44.1	0.7
Hybrid (H)		2.8	< 0.1	< 0.1	< 0.1
PD x H		27.5	24.5	21.3	4.0
<b>LSD (0.10)</b>					
Plant Density (PD)		1580	NS	NS	17.2
Hybrid (H)		1155	3.4	1.3	8.4
<b>CV %</b>					
		8.0	86.6	9.5	11.9