

MASSACHUSETTS HYBRID CORN EVALUATION - 1983 RESULTS

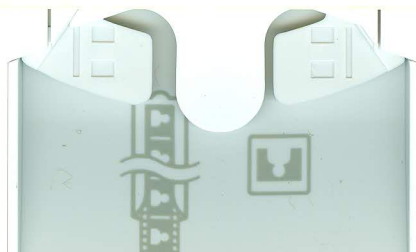
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Corn hybrids in 1983 were tested by the Department of Plant & Soil Sciences and Regional Cooperative Extension Services. Hybrids were evaluated for yield of silage and earcorn, percentage ears, standability, bird damage, and moisture content. All hybrids submitted by contributing companies were tested in the Connecticut River Valley at the Agricultural Experiment Station Farm in South Deerfield, Massachusetts, and at the Ken-Ric farm in Spencer, Massachusetts. These results are presented and the South Deerfield results have been incorporated into the long term results (3 or more years) of the testing program in this environment. Results of these trials are made available to farmers, extension agents, seed distributors, seed salesmen and others upon request. Tables should not be reproduced if any portion is omitted or if order of data is changed.

Weather during the 1983 growing season was cool and wet during May followed by hot and much drier conditions during June through September. Growing degree days in South Deerfield were more than 200 above normal for May 1 through September 30 and rainfall was about 3.4 inches below normal for the same period. However May had nearly 2 inches more rainfall than normal while most months of major corn growth had more than 1 inch less rainfall than normal. These weather conditions adversely affected 1983 corn grain yields compared to long term averages however silage yields were less affected.

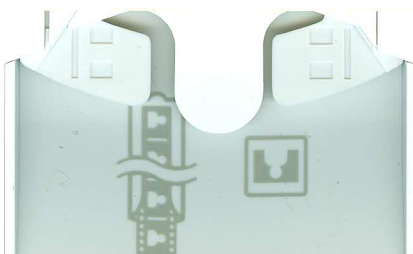
The trials were planted May 5, 1983 in South Deerfield in the Connecticut River Valley and May 26, 1983 in Spencer in the Worcester County hills. Seeds were planted using a cone type distributor mounted on a double disc opening corn planter in a conventionally prepared seedbed at each site. Each plot was planted at the rate of 27,000 seeds per acre in 30 inch rows. Plots were 25 feet long and 3 rows wide at South Deerfield and 2 rows wide at Spencer. Each hybrid was replicated three times at each site. Soil tests were used as guides to fertilization. Plow down fertilizer was 225 lb N, 120 lb P205 and 180 lb K20 per acre at South Deerfield while in Spencer only 120 lb per acre of nitrogen was applied in addition to previous manure applications. Weeds were controlled with a pre-emergence application of 2 lb cyanazine (Bladex 80 WP) plus 2 quarts alaclor (Lasso) per acre in South Deerfield and with 1½ qts alaclor (Lasso) and 1 qt atrazine 4L per acre in Spencer.

Corn silage plots were harvested when most entries were at the full dent stage. Harvested dates are shown on each table of results. All hybrids at Spencer were harvested the same day. Ten feet of row from each plot was taken for yield estimation. Silage yields were adjusted to 70% moisture and earcorn yields to 25% moisture. Moisture content is reported as a percentage of corn harvested as silage. Lodged plants were any plants broken below the ear or leaning across the neighboring row. Bird damage ratings were based on the top half of 10 randomly selected ears from each plot. A rating of 10 meaning all kernels were missing from the top half of all ten ears, 5 meaning 50% missing and 0 none missing. Bird damage at the Spencer site was minor (not shown), however the trends were similar.



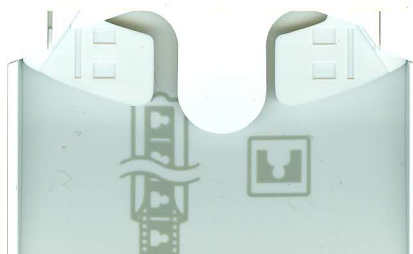
Average Corn Yield from Univ. of Mass. (South Deerfield) Trials

Hybrid	No. of Years	Silage ¹ t/ac	Earcorn ² t/ac
<u>Agway</u>			
425X	3	30.0	6.2
791S	3	28.3	5.4
370X	3	28.2	5.8
600X	3	26.8	5.8
724	8	26.6	5.8
615S	3	26.5	5.3
584S	4	26.4	5.6
590X	12	25.0	5.9
595S	11	24.1	5.8
393S	7	21.6	5.1
<u>Asgrow</u>			
RX511	4	30.4	6.8
RX255	3	23.4	5.2
RX58	4	22.4	5.4
<u>Cornell</u>			
281	3	25.8	5.7
<u>Dekalb</u>			
XL72aa	3	31.7	6.2
XL66	4	26.6	6.3
XL25A	4	25.2	5.5
XL367	4	24.1	5.7
XL12	10	21.5	5.5
XL15	3	20.0	5.0
<u>Funk</u>			
G-4321A	5	27.8	6.0
G-4604	5	26.8	6.1
G-4444	11	25.9	6.3
G-4315	4	26.5	6.0
G-4195	9	25.6	5.7
G-4224	5	25.5	5.4
G-4256	3	25.2	5.3
G-4343	6	24.5	6.1
G-4252	3	24.2	5.3
G-4040	3	23.2	5.3
G-4065	3	22.2	5.2
G-4252	12	21.6	4.9
G11A	4	19.3	4.3
G-5048	5	19.8	6.1
<u>Muncy Chief</u>			
SX660	3	28.0	5.9
SX777	8	28.0	5.9
SX560	4	27.6	5.6
SX662	9	27.2	6.1
SX220	4	15.1	3.7

¹ Silage - 70% moisture² Earcorn - 25% moisture

Average Corn Yield from Univ. of Mass. (South Deerfield) Trials

Hybrid	No. of Years	Silage ¹ t/ac	Earcorn ² t/ac
<u>Northrup King</u>			
PX37	3	29.4	6.3
PX39	4	26.0	5.2
PX525	4	25.1	6.2
PX485	4	24.8	5.6
PX32	8	26.6	5.3
PX11	5	24.6	5.5
PX419	3	24.0	5.7
PX7	3	23.2	5.6
PX420	4	19.3	4.9
PX466	5	18.9	5.0
PX20	5	18.5	4.9
<u>Pioneer</u>			
3572	3	27.6	5.6
3901	3	26.5	5.9
3906	3	25.0	5.7
3780	6	25.6	6.5
3373	4	25.0	5.8
3950	3	23.2	5.7
3663	5	23.1	5.8
3956A	4	20.0	5.1
<u>Pride</u>			
R319	3	28.3	6.3
4488	3	26.9	5.8
R290	5	24.6	6.0
R200A	4	18.9	5.2
<u>Seneca</u>			
321	3	24.9	5.3
149	5	23.5	5.2
285	5	22.9	5.4
140	3	21.1	4.9
155	4	18.0	4.5
<u>Stewart</u>			
325	4	26.3	5.5
290	4	24.0	5.0
2660	5	23.0	5.0
244	5	21.3	4.6
255	5	21.2	4.8

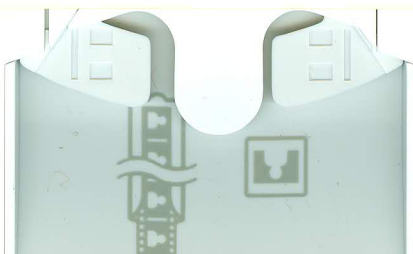
¹ Silage - 70% moisture² Earcorn - 25% moisture

EARLY MATURITY CORN HYBRIDS 1983 SOUTH DEERFIELD. HARVESTED 2 SEPT.

HYBRID	SILAGE T/AC	EARCORN T/AC	PERCENT EARS	NON-LODGED PLANTS %	MOISTURE CONTENT %	BIRD DAMAGE
HYTEST HT244	25.9	5.2	50.	100.	68.	1.0
FUNK 0002X	25.2	5.1	50.	98.	59.	0.0
PRIDE EXP295	25.2	4.5	45.	100.	61.	.9
NORTHROP-KING PX11	24.4	5.1	52.	98.	61.	.4
AGWAY 265X	24.2	4.5	46.	98.	66.	1.8
ASGROW RX255	23.7	5.1	56.	100.	63.	.9
STEWART 2660	23.6	4.4	47.	100.	65.	1.1
EASTLAND 210	23.3	4.9	52.	100.	60.	.2
AGWAY 283S	23.1	4.3	46.	100.	64.	.1
STEWART 38	23.0	4.1	45.	98.	65.	.4
ASGROW RX308	23.0	5.2	56.	100.	62.	1.0
PIONEER X7064	22.7	4.6	51.	100.	64.	2.3
KING GRAIN K2204	20.7	4.1	50.	100.	66.	1.2
STEWART 280	20.5	4.0	49.	100.	66.	1.3
STEWART 244	20.3	3.7	45.	98.	67.	2.1
STEWART 255	19.8	3.7	47.	98.	66.	.4
MEAN	23.0	4.5	49.	99.	64.	.9
LSD 5%	5.14	1.41	8.1	3.4	6.1	

EARLY-MEDIUM MATURITY CORN HYBRIDS 1983 SOUTH DEERFIELD. HARVESTED 6 SEPT.

HYBRID	SILAGE T/AC	EARCORN T/AC	PERCENT EARS	NON-LODGED PLANTS %	MOISTURE CONTENT %	BIRD DAMAGE
MUNCY CHIEF SX560	28.6	5.7	50.	100.	72.	.1
PIONEER 3901	26.9	5.6	53.	100.	64.	.5
AGWAY 380X	26.6	5.6	53.	100.	67.	1.6
FUNK G-4224	26.0	4.4	42.	100.	65.	.1
PRIDE R328	25.6	5.2	51.	100.	71.	1.1
AGWAY 310X	25.4	4.9	47.	100.	69.	.1
FUNK 29097	25.1	4.0	40.	100.	67.	.1
EASTLAND 240	24.5	4.6	47.	98.	72.	.5
HYTEST HT261	24.5	4.8	48.	100.	70.	.7
AGWAY 415X	24.3	5.2	55.	100.	66.	.3
STEWART 302	24.1	4.4	46.	100.	67.	.4
STEWART 290	23.9	4.1	43.	96.	65.	.7
AGWAY 473S	23.8	3.9	40.	100.	72.	.1
FUNK G-4256	23.8	4.3	45.	100.	70.	.4
KING GRAIN K4423	23.2	3.9	42.	100.	68.	.3
HYTEST HT466	22.8	4.3	46.	100.	73.	.3
EASTLAND 238	22.8	4.5	49.	97.	67.	.1
KING GRAIN R319	22.7	4.1	44.	100.	67.	0.0
PIONEER 3906	22.5	4.9	54.	100.	69.	.2
FUNK 29306	22.3	4.0	45.	100.	70.	.3
NORTHROP KING PX32	22.1	3.4	39.	95.	73.	1.2
PIONEER 3930	21.8	4.2	48.	100.	68.	.1
NORTHROP KING PX9288	21.7	4.3	49.	100.	69.	2.1
MEAN	24.1	4.5	47.	99.	69.	.5
LSD 5%	3.77	1.08	7.5	2.5	3.5	



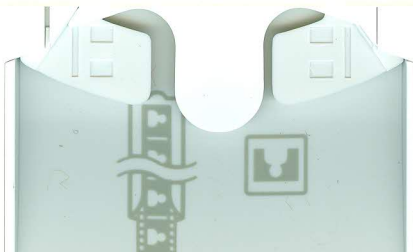
MEDIUM-LATE MATURITY CORN HYBRIDS 1983 SOUTH DEERFIELD. HARVESTED 14 SEPT.

HYBRID	SILAGE T/AC	EARCORN T/AC	PERCENT EARS	NON-LODGED PLANTS %	MOISTURE CONTENT %	BIRD DAMAGE
HYTEST HT650A	34.1	5.8	42.	100.	72.	.1
ASGROW RX777	33.1	6.7	50.	100.	67.	0.0
ASGROW RX511	32.3	7.0	54.	100.	65.	.3
AGWAY 650X	31.0	6.0	50.	100.	71.	.2
KING GRAIN K4464	30.8	6.5	53.	100.	65.	1.4
MUNCY CHIEF SX777	30.7	4.8	39.	100.	71.	.7
FUNK G-4342	30.5	6.2	50.	100.	64.	.1
NORTHROP KING PX74	29.9	5.6	47.	100.	72.	.4
HYTEST HT660	29.7	5.1	43.	100.	69.	.1
PIONEER 3747	28.7	6.1	54.	100.	66.	.9
FUNK G-4438	28.7	4.8	42.	100.	70.	0.0
HYTEST HT560	28.2	5.8	50.	100.	72.	.3
PIONEER 3593	28.0	5.4	48.	100.	66.	.5
AGWAY 600X	27.6	5.4	48.	100.	68.	.1
STEWART 338	27.4	5.3	48.	100.	66.	.2
AGWAY 719S	27.3	5.0	46.	100.	70.	.2
ASGROW RX717	27.3	4.8	43.	100.	71.	.2
MUNCY CHIEF SX662	27.0	4.1	38.	98.	71.	.1
PRIDE 4422	26.8	6.1	56.	100.	65.	1.1
FUNK G-4321A	26.1	4.9	47.	100.	68.	.2
NORTHROP KING PX39	26.1	4.4	42.	100.	69.	.3
MUNCY CHIEF SX660	25.8	5.4	52.	98.	66.	.2
AGWAY 575X	24.9	5.5	53.	100.	66.	.1
ASGROW RX420	24.6	5.2	52.	100.	62.	.9
MEAN	28.6	5.5	48.	100.	68.	.3
LSD 5%	4.90	1.24	6.3	0.9	4.2	

Climate Data for 1983 in South Deerfield, MA

	Growing Degree Days		Rainfall (inches)			
	1983	Norm	1983	Norm		
May	157*	(206)	257	4.68* (5.51)	3.57	
June	579		525	2.30	3.88	
July	738		691	2.50	3.55	
August	688		632	2.31	3.86	
September	312*	(483)	366	.03* (2.37)	3.52	
	2474	2694	2471	11.82	14.99	18.38

* Planting to harvest date for medium-late maturity hybrids.

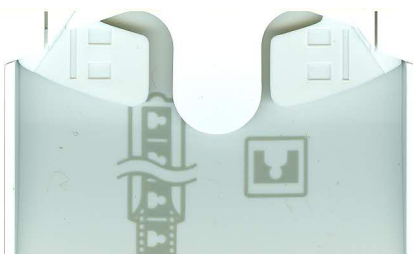


EARLY MATURITY CORN HYBRIDS 1983 SPENCER
HARVESTED 20 SEPT.

HYBRID	SILAGE NON-LODGED MOISTURE		
	T/AC	PLANTS %	CONTENT %
STEWART 255	22.7	100.	58.
HYTEST HT244	22.5	100.	63.
PIONEER X7064	21.8	100.	61.
EASTLAND 210	21.7	100.	60.
STEWART 2660	21.4	100.	61.
STEWART 38	21.3	100.	63.
NORTHRUP KING PX11	21.3	100.	61.
AGWAY 283S	21.1	100.	65.
STEWART 280	20.8	100.	61.
FUNK 0002X	20.7	98.	63.
ASGROW RX255	20.4	100.	63.
STEWART 244	19.7	100.	62.
PRIDE EXP295	19.6	100.	66.
ASGROW RX308	19.4	100.	67.
KING GRAIN K2204	18.9	100.	63.
AGWAY 265X	18.8	100.	67.
MEAN	20.8	100.	63.
LSD 5%	5.06	1.64	

EARLY-MEDIUM CORN HYBRIDS 1983 SPENCER
HARVESTED 20 SEPT.

HYBRID	SILAGE NON-LODGED MOISTURE		
	T/AC	PLANTS %	CONTENT %
KING GRAIN R319	26.8	100.	58.
AGWAY 310X	26.0	100.	64.
FUNK 29097	24.9	97.	66.
EASTLAND 240	24.6	100.	65.
AGWAY 415X	24.5	100.	66.
AGWAY 473S	23.8	100.	69.
AGWAY 380X	23.8	100.	65.
FUNK G-4224	23.7	100.	65.
PIONEER 3901	23.4	100.	63.
NORTHRUP KING PX32	22.4	100.	66.
NORTHRUP KING PX9288	22.2	100.	66.
PIONEER 3906	21.9	100.	64.
PRIDE R328	21.6	100.	68.
HYTEST HT261	21.2	100.	68.
EASTLAND 238	21.2	100.	68.
MUNCY CHIEF SX560	21.0	100.	71.
FUNK G-4256	20.9	100.	66.
PIONEER 3930	20.9	100.	64.
FUNK 29306	20.6	100.	64.
STEWART 302	20.4	100.	67.
STEWART 290	20.1	100.	65.
HYTEST HT466	19.5	100.	69.
KING GRAIN K4423	19.3	100.	65.
MEAN	22.4	100.	66.
LSD 5%	4.67	5.30	



MEDIUM-LATE MATURITY CORN HYBRIDS
HARVESTED 20 SEPT.

HYBRID	SILAGE		NON-LODGED MOISTURE	
	T/AC	PLANTS %	%	CONTENT %
NORTHRUP KING PX74	28.2	100.		69.
STEWART 338	25.0	100.		66.
MUNCY CHIEF SX777	24.9	100.		71.
HYTEST HT650A	24.7	100.		71.
NORTHRUP KING PX39	24.5	100.		68.
AGWAY 719S	24.3	100.		68.
MUNCY CHIEF SX660	24.3	100.		68.
FUNK G-4342	24.3	100.		66.
AGWAY 650X	24.2	100.		70.
HYTEST HT560	24.1	100.		68.
ASGROW RX511	24.1	100.		71.
ASGROW RX717	24.0	100.		69.
AGWAY 600X	23.2	100.		68.
FUNK G-4438	22.9	100.		70.
HYTEST HT660	22.8	100.		70.
PRIDE 4422	22.8	100.		67.
ASGROW RX777	22.6	100.		69.
KING GRAIN K4464	22.3	100.		68.
MUNCY CHIEF SX662	22.3	100.		71.
PIONEER 3593	21.4	100.		69.
FUNK G-4321A	21.1	100.		68.
PIONEER 3747	20.9	100.		70.
AGWAY 575X	20.5	100.		67.
ASGROW RX420	19.9	100.		68.
MEAN	23.3	100.		69.
LSD 5%	5.69			

