

1985 Massachusetts Hybrid Corn Evaluation

Stephen J. Herbert & Gerald V. Litchfield
Department of Plant and Soil Sciences

Corn hybrids in 1985 were tested by the Department of Plant & Soil Sciences, University of Massachusetts. Hybrids were evaluated for yield of silage and earcorn, percentage ears, standability, 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. These results are presented and have been incorporated into the long term results (3 or more years including one of the previous 3 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. Temperatures during the 1985 growing season were warmer than normal during May, much cooler for June and near normal for the rest of the growing season. Total growing degree days for May 1 to September 30 were average. Rainfall for the year was higher than normal for each month except September.

The trials were planted May 8, 1985 in South Deerfield in the Connecticut River Valley. 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. Each hybrid was replicated four times. Soil tests were used as guides to fertilization. Plow down fertilizer was 225 lb N, 120 lb P205 and 180 lb K20 per acre. Weeds were controlled with a preemergence application of 2 lb cyanazine (Bladex 80 WP) plus 2 quarts alachlor (Lasso) per acre.

Corn silage plots were harvested when most entries were at the full dent stage. Harvested dates are shown on each table of results. 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.

Climate Data for 1985 in South Deerfield, MA

	<u>Growing Degree Days</u>			<u>Rainfall (inches)</u>		
	<u>1985</u>		<u>Norm</u>	<u>1985</u>		<u>Norm</u>
May	306*	(343)	257	3.30*	(4.12)	3.81
June	399		522	4.59		3.84
July	691		694	4.76		3.63
Aug.	620		636	4.28		3.80
Sept.	354*	(426)	372	1.86*	(2.78)	3.43
	<u>2370</u>	<u>2479</u>	<u>2481</u>	<u>18.79</u>	<u>20.53</u>	<u>18.51</u>

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

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>			
650X	5	31.9	6.9
719S	4	29.9	5.9
473S	3	28.8	5.9
600X	4	28.4	6.2
310X	4	28.3	5.9
380X	4	27.9	6.3
415X	4	27.0	6.3
615S	4	26.8	5.7
584S	5	26.7	5.8
283S	4	25.3	5.5
265S	4	25.0	5.3
<u>Asgrow</u>			
RX777	3	34.1	7.4
RX511	5	30.6	7.2
RX255	3	23.4	5.2
RX58	4	22.4	5.4
<u>Dekalb-Pfizer</u>			
XL25A	4	25.2	5.5
<u>Eastland</u>			
238	3	25.0	5.1
210	4	24.7	5.4
<u>Funk</u>			
G-4342	4	30.1	7.1
G-4321A	5	27.8	6.0
G-4315	4	26.5	6.0
G-4195	9	25.6	5.7
G-4224	6	26.6	5.7
G-4256	5	25.7	5.5
G-5048	6	19.9	6.0
<u>Hyttest</u>			
650A	3	33.8	6.6
261	3	27.7	5.9
<u>Muncy Chief</u>			
SX777	10	28.8	6.0
SX660	5	28.2	6.1
SX662	11	28.4	6.2
SX560	6	28.0	5.8

¹Silage - 70% moisture

²Earcorn - 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>			
PX74	3	32.8	7.0
PX37	4	29.8	6.3
PX39	6	26.7	5.6
PX485	4	24.8	5.6
PX32	8	26.6	5.3
PX11	6	25.1	5.7
<u>Pioneer</u>			
3747	5	29.0	6.6
3744	4	28.4	6.9
3593	3	29.0	6.2
3572	3	27.6	5.6
3901	7	27.4	6.4
3930	3	25.8	5.7
3906	5	25.3	5.8
<u>Pride</u>			
R319	3	28.3	6.3
4488	3	26.9	5.8
<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

¹Silage - 70% moisture

²Earcorn - 25% moisture

EARLY HYBRIDS HARVESTED SEPT. 12, 1985

BRAND	HYBRID	SILAGE		EARCORN		PERCENT	NON-LODGED	MOISTURE
		T/AC	T/AC	EARS	PLANTS	CONTENT %		
AGWAY	310X	28.5	6.1	53.	97.	65.		
NORTHROP-KING	PX9151	27.5	6.7	61.	100.	66.		
EASTLAND	325	26.1	5.8	56.	97.	65.		
PIONEER	3779	26.1	6.2	59.	98.	69.		
HYTEST	X7001	25.7	5.9	57.	96.	61.		
AGWAY	265X	25.0	5.8	58.	100.	69.		
EASTLAND	3000	25.0	6.1	61.	97.	66.		
HYTEST	X7205	24.7	5.5	56.	98.	67.		
FUNK	1011X	24.3	6.0	61.	99.	62.		
TODD	M2500	24.0	5.4	57.	98.	67.		
O'S GOLD	2310	23.8	5.7	60.	100.	67.		
AGWAY	283S	23.5	5.6	60.	96.	66.		
FUNK	G-4081	23.1	5.6	61.	95.	66.		
FUNK	G-5048	20.4	5.3	65.	86.	62.		
EASTLAND	210	20.0	4.9	62.	92.	62.		
MEAN		24.5	5.8	59.	97.	65.		
LSD 5%		3.5	0.9	3.9	11.1	3.2		

EARLY-MEDIUM HYBRIDS HARVESTED SEPT. 21, 1985

BRAND	HYBRID	SILAGE		EARCORN		PERCENT	NON-LODGED	MOISTURE
		T/AC	T/AC	EARS	PLANTS	CONTENT %		
PIONEER	3540	34.2	7.2	53.	100.	69.		
FUNK	G-4046	33.9	7.7	57.	100.	67.		
PIONEER	3539	31.5	6.4	51.	100.	71.		
TODD	M5400	30.5	6.5	53.	100.	67.		
PIONEER	3901	28.4	6.7	59.	100.	61.		
FUNK	G-3047	28.4	6.4	56.	100.	66.		
FUNK	G-4211	28.2	6.6	59.	98.	64.		
AGWAY	473S	28.1	6.2	56.	100.	68.		
AGWAY	380X	28.0	6.6	60.	97.	65.		
TODD	M49	28.0	5.3	48.	99.	61.		
HYTEST	261	27.9	6.0	54.	99.	61.		
MUNCY-CHIEF	SX560	27.7	5.5	49.	99.	66.		
AGWAY	415X	27.4	6.5	60.	94.	64.		
HYTEST	252	26.9	6.0	55.	97.	55.		
O'S GOLD	1107	26.7	5.8	54.	100.	68.		
EASTLAND	EXP56A	26.5	6.2	58.	98.	61.		
PIONEER	3925	26.3	6.3	60.	99.	59.		
FUNK	G4256	25.6	5.9	58.	97.	63.		
AGWAY	381S	24.8	5.6	57.	97.	64.		
TODD	M4500	24.3	5.8	59.	97.	56.		
MEAN		28.2	6.3	56.	99.	64.		
LSD 5%		4.7	1.1	5.6	4.6	3.7		

MEDIUM-LATE HYBRIDS HARVESTED SEPT. 25, 1985

BRAND	HYBRID	SILAGE EARCORN PERCENT			NON-LODGED MOISTURE	
		T/AC	T/AC	EARS	PLANTS	CONTENT %
TODD	M7300	33.9	7.3	52.	100.	68.
ASGRO	RX777	32.1	7.3	57.	100.	67.
MUNCY-CHIEF	SX662	31.6	6.7	52.	100.	66.
HYTEST	650A	31.5	7.0	55.	100.	70.
TODD	736	31.0	6.6	53.	100.	63.
O'S GOLD	2545	30.7	6.8	55.	100.	70.
EASTLAND	625X	30.5	7.0	57.	100.	69.
MUNCY-CHIEF	SX777	30.1	6.3	53.	100.	68.
HYTEST	492	29.8	6.8	58.	100.	63.
MUNCY-CHIEF	SX788	29.5	6.4	55.	100.	59.
FUNK	G-4307	29.1	6.8	58.	100.	60.
PIONEER	3475	28.7	7.0	61.	100.	63.
EASTLAND	500X	28.5	6.7	58.	100.	60.
MUNCY-CHIEF	SX660	28.2	6.3	56.	100.	61.
AGWAY	650X	28.0	6.6	59.	100.	61.
AGWAY	584S	27.8	6.6	59.	100.	60.
FUNK	G-4342	27.7	6.9	62.	98.	58.
AGWAY	615S	27.6	6.0	55.	100.	65.
AGWAY	588X	27.5	6.1	56.	100.	65.
NORTHRUP-KING	PX39	26.3	6.0	57.	100.	60.
PIONEER	3747	25.9	6.4	62.	100.	59.
PIONEER	3744	25.7	6.1	60.	100.	60.
PIONEER	3737	25.3	6.1	61.	100.	60.
MEAN		29.0	6.6	57.	100.	63.
LSD 5%		3.9	0.5	5.6	0.9	3.8