

EVALUATION OF CORN HYBRIDS IN MASSACHUSETTS

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Corn hybrids submitted by contributing companies in 1993 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. The trials were planted in the Connecticut River Valley at the Massachusetts Agricultural Experiment Station Farm in South Deerfield, Massachusetts. The 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. 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.

The trials were planted May 11, 1993. A cone type distributor mounted on a double disc opening corn planter was used in a conventionally prepared seedbed at each site. Each plot was planted at the rate of 29,000 seeds per acre in 30 inch rows. Plots were 25 feet long and 3 rows wide. Each hybrid was replicated four times. Weeds were controlled with a pre-emergence application of 1 quart atrazine (AAtrex 4L) plus 1 quart metolachlor (Dual 8E) per acre. Preplant fertilization was at the rate of 500 lbs 15-8-12 per acre. In addition, the corn was side-dressed on June 19 with 250 lbs per acre of ammonium nitrate.

The 1993 growing season was warmer than normal for the months of June, July and August. Degree days for September were nearly normal, but May was cooler than normal. The growing season was very dry from May through the end of August. September received above normal levels of precipitation. Corn yield was markedly reduced this year due to inadequate precipitation coupled with above normal temperatures. The summer of 1993 precipitation shortfall from the norm was almost five inches. Heavy rains in September were followed by dry weather which provided good corn drying conditions.

Corn 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.

Climate Data for 1993 in South Deerfield, MA

	<u>Growing Degree Days</u>		<u>Rainfall (inches)</u>	
	<u>1993</u>	<u>Norm</u>	<u>1993</u>	<u>Norm</u>
May	231	265	1.82	3.90
June	544	523	1.66	3.69
July	727	695	2.98	3.67
Aug.	692	638	2.18	4.19
Sept.	<u>363</u> *	<u>369</u>	<u>5.46</u>	<u>3.57</u>
Totals	2703 *	2490	14.10	19.02

* To harvest date for medium-late maturity hybrids.

AVERAGE CORN YIELD FROM UNIV. OF MASS. DEERFIELD TRIALS

<u>Brand</u>	<u>Hybrid</u>	<u>No. of Years</u>	<u>Silage¹ T/ac</u>	<u>Earcorn² T/ac</u>
<u>AGWAY</u>	AG777	7	32.2	7.0
	AG673	5	31.6	7.0
	AG596	6	29.7	6.4
	AG473	10	28.4	6.0
	AG824	3	28.4	6.0
	AG427	3	27.9	6.3
	AG797	3	27.5	5.4
	AG658	5	26.6	6.4
	AG310	11	24.4	5.7
<u>CARGILL</u>	7877	5	28.1	6.6
	4327	4	25.9	6.0
<u>EASTLAND/TODD</u>	E565	3	31.1	7.2
	E599	3	29.3	6.4
	E340	3	27.4	6.0
<u>FUNK</u>	G-4446	6	28.2	6.4
	G-4309	5	28.2	6.7
	G-4027	4	27.1	6.6
	G-4260	3	26.6	5.9
	G-4106	6	26.4	6.2
<u>HALSEY</u>	H1107	3	27.7	6.3
	H3593	3	27.5	6.1
	H1105A	5	25.0	6.2
<u>HYTEST</u>	HT474	6	31.7	7.1
	HT512	4	31.1	6.7
	HT650A	10	30.5	6.3
	HT190	6	29.4	6.5
<u>MUNCY CHIEF</u>	XA777	4	29.4	6.6
	XA804	4	28.4	5.9
	SX662	16	28.3	6.1
	SX560	12	27.3	5.8
	XA560	6	23.2	5.4
<u>NORTHROP KING</u>	N7705	4	30.5	6.8
	N4545	5	29.9	6.9
	N3624	6	26.6	6.5

¹Silage - 70% moisture

²Earcorn - 25% moisture

EARLY HYBRIDS - HARVESTED SEPT. 20, 1993

BRAND	HYBRID	SILAGE ¹ T/A	SILAGE % MOISTURE	EARCORN ² T/A	EARCORN % MOISTURE	PERCENT EARS
NORTHRUP-KING	N3624	22.7	58	6.0	42	66
AGWAY	EXP322	22.6	57	5.7	43	63
CARGILL	4327	22.5	63	5.6	47	63
AGWAY	AG394	22.5	56	5.6	43	63
NORTHRUP-KING	N3808	22.1	59	5.8	41	66
EASTLAND	E340	21.9	62	5.4	44	62
HALSEY	H296	21.9	61	5.5	45	62
FUNK	G4260	21.7	54	5.4	42	63
FUNK	G2093X	21.6	60	5.4	45	62
AGWAY	AG310	21.1	51	5.1	43	60
FUNK	G4172	20.0	55	5.4	41	67
HALSEY	H188A	19.8	55	5.3	42	66
CARGILL	4277	19.7	65	4.9	49	62
FUNK	G4070	18.1	56	4.6	41	62
FUNK	G4106	18.0	60	4.5	45	62
MUNCY-CHIEF	SX390	17.6	63	4.2	47	59
MUNCY-CHIEF	SX2220	13.8	58	3.3	43	58
MEAN		20.5	58.4	5.2	43.7	62.6
LSD 5%		4.2	3.3	1.1	3.6	5.1

¹ Silage @ 70% moisture

² Earcorn @ 25% moisture

EARLY-MEDIUM HYBRIDS - HARVESTED SEPT. 28, 1993

BRAND	HYBRID	SILAGE ¹ T/A	SILAGE % MOISTURE	EARCORN ² T/A	EARCORN % MOISTURE	PERCENT EARS
AGWAY	AG626	27.1	64	6.8	47	63
EASTLAND	E495	26.6	62	6.5	43	62
CARGILL	X5307	25.2	61	6.0	46	60
AGWAY	AG578	25.0	59	6.2	43	62
AGWAY	AG622	24.5	64	6.2	48	63
AGWAY	AG631	24.3	65	6.1	47	63
FUNK	G4446A	24.3	63	6.1	44	62
AGWAY	AG427	24.1	58	6.1	40	64
CARGILL	X6207	24.0	62	6.2	46	64
MUNCY-CHIEF	XA5560	23.5	65	5.7	48	61
EASTLAND	E599	23.4	65	5.7	49	61
NORTHRUP-KING	N5220	23.2	54	5.8	42	62
FUNK	G4385	22.6	61	5.7	43	64
AGWAY	AG658	21.7	65	5.5	47	63
MUNCY-CHIEF	ESX560	21.4	53	5.5	40	64
HALSEY	H1105A	21.1	57	5.5	45	65
NORTHRUP-KING	N4242	21.0	54	5.7	39	68
MUNCY-CHIEF	XA4550	20.4	52	5.2	39	64
MUNCY-CHIEF	XA560	18.6	61	4.9	46	66
MUNCY-CHIEF	XA4492	17.1	58	4.4	42	64
MEAN		23.0	60.3	5.8	44.3	63.2
LSD 5%		3.0	4.0	0.8	2.0	3.3

¹ Silage @ 70% moisture

² Earcorn @ 25% moisture

MEDIUM-LATE HYBRIDS - HARVESTED SEPTEMBER 28, 1993

BRAND	HYBRID	SILAGE ¹ T/A	SILAGE % MOISTURE	EARCORN ² T/A	EARCORN % MOISTURE	PERCENT EARS
MUNCY-CHIEF	XA7580	24.5	68	5.5	49	56
AGWAY	AG824	24.3	69	5.5	50	57
FUNK	G4394	24.1	58	6.3	43	65
AGWAY	AG828	24.0	67	5.3	49	55
EASTLAND	E799	23.3	68	5.1	49	54
CARGILL	7897	23.3	68	5.2	49	56
NORTHRUP-KING	N5901	23.1	59	5.7	45	62
MUNCY-CHIEF	XA7790	23.1	65	5.2	51	56
CARGILL	7877	22.8	61	5.8	45	64
AGWAY	AG723	22.7	63	5.8	46	64
NORTHRUP-KING	N7989	22.0	70	5.0	51	57
HALSEY	H2118	21.6	60	5.4	48	62
AGWAY	AG797	21.6	69	4.7	50	54
HALSEY	H1115A	21.6	61	5.5	45	64
FUNK	G4584	21.2	67	5.0	48	59
HALSEY	H2110	20.3	57	5.1	45	63
MUNCY-CHIEF	XA788	17.9	63	4.3	46	60
MEAN		22.5	64.4	5.3	47.5	59.3
LSD 5%		3.6	2.4	0.81	2.2	2.8

¹ Silage @ 70% moisture

² Earcorn @ 25% moisture