

1981 MASSACHUSETTS HYBRID CORN EVALUATION

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Corn hybrids in 1981 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, 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 of the testing program in this environment. The Walpole test included a smaller selection of these hybrids at the Norfolk County Agricultural School in Walpole. 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 conditions during the 1981 growing season are summarized for the South Deerfield trials under the hybrid yield data. Rainfall was below normal for May, July, and August and 1 inch above normal for June. 1981 was slightly warmer than normal with above average heat units available in May and July.

The South Deerfield yield trials were planted May 8, 1981, using a cone type distributor mounted on a double disc opening corn planter in a conventionally prepared seed bed. Each plot was planted at the rate of 27,000 seeds per acre in 36 inch rows. Plots were 3 rows wide and 25 feet long. Each hybrid was replicated four times. Soil tests were used as a guide to fertilization. Plow down fertilizer was 170 lb N, 90 lb P₂O₅ and 140 lb K₂O per acre. Weeds were controlled with a pre-emergence application of 2 lb cyanazine (Bladex 80WP) plus 2 qts alachlor (Lasso) per acre. Weed growth was insignificant in all plots.

In the Walpole yield trial cultural practices were similar to those above and were the same as those used on the Norfolk County Agricultural School farm in the remaining portion of the field. This trial site suffered from severe moisture stress from mid-summer through to maturity. This would have contributed to the lower yields especially in the case of the later maturity hybrids.

Corn silage plots were harvested when most entries were at the full dent stage. Ten feet of the row from the center of 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 for corn harvested as silage. The number of standing and lodged plants were counted. Any plant broken below the ear or leaning across the neighboring row was considered lodged.

Average Corn Yield from Univ. of Mass. (Amherst) Trials

Hybrid	No. of Years	Silage ¹ t/ac	Earcorn ² t/ac
<u>Agway</u>			
425X	3	30.0	6.2
570X	3	28.2	5.8
724	8	26.6	5.8
615S	3	26.5	5.3
584S	3	25.9	5.5
590X	12	25.0	5.9
595S	11	24.1	5.8
393S	7	21.6	5.1
<u>Asgrow</u>			
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	3	25.4	5.6
XL367	4	24.1	5.7
XL12	10	21.5	5.5
XL15	3	20.0	5.0
<u>Funk</u>			
G-4604	5	26.8	6.1
G-4444	11	25.9	6.3
G-4195	8	25.9	5.8
G-4315	3	25.8	5.7
G-4343	6	24.5	6.1
G-4252	3	24.2	5.3
G-4224	3	24.1	5.4
G-4040	3	23.2	5.3
G-4065	3	22.2	5.2
G-4252	12	21.6	4.9
G-11A	4	19.3	4.3
G-5048	5	19.8	6.1
<u>Muncy Chief</u>			
SX777	6	28.0	6.2
SX662	7	27.3	6.4
SX220	3	15.1	3.7

Average Corn Yield from Univ. of Mass. (Amherst) Trials

Hybrid	No. of Years	Silage ¹ t/ac	Earcorn ² t/ac
<u>Northrup King</u>			
PX37	3	29.4	6.3
PX485	3	25.2	5.7
PX525	4	25.1	6.2
PX32	6	24.8	5.6
PX11	3	24.0	5.6
PX419	3	24.0	5.7
PX7	3	23.2	5.6
PX420	4	19.3	4.9
PX446	5	18.9	5.0
PX20	5	18.5	4.9
<u>Penn. State</u>			
Pa6203	4	24.6	6.0
<u>Pioneer</u>			
3901	3	26.8	6.4
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
155	4	18.0	4.5
140	3	21.1	4.9
<u>Stewart</u>			
325	3	26.6	5.4
244	3	22.7	5.2
2660	3	22.2	4.9
255	3	21.1	5.1
<u>Wisconsin</u>			
335A	7	18.4	4.3

¹ Silage - 70% moisture

² Earcorn - 25% moisture

Early Maturity Corn Hybrids 1981

Hybrid	Silage ¹ t/ac	Earcorn ² t/ac	Percent Ears ³	Non-lodged Plants %	Moisture Content %
Asgrow RX255	26.6	6.0	59	98	65
Stewart 38	26.3	5.9	56	100	71
Northrup King PX419	25.6	6.1	59	98	66
Cornell 281	25.4	5.8	57	99	70
Cornell 175	25.4	5.6	55	97	65
Seneca 149	25.3	5.7	57	98	61
Northrup King PX7	23.7	5.7	60	96	65
Funk G5048	23.6	5.5	60	100	67
Stewart 2660	23.6	5.0	53	100	66
Northrup King PX11	23.6	5.2	55	100	64
Funk G4040	23.5	5.0	51	100	68
Seneca S2153	23.4	5.5	59	98	66
Pioneer 3950	23.2	5.7	62	100	69
Funk G4065	22.7	5.2	57	100	65
Stewart 244	22.5	4.9	55	96	66
Stewart 255	22.5	5.5	59	98	63
Seneca 140	22.4	5.2	58	96	64
Dekalb XL13	22.0	4.7	53	100	63
Muncy Chief 460	19.9	4.3	53	99	69
MEAN	23.7	5.4	57	99	66
LSD 5%	3.80	1.16	6.7	4.7	4.2

¹ Silage - 70% moisture

² Earcorn - 25% moisture

³ Percent of total dry matter in ears

Planting Date

May 8, 1981

Harvest Date

September 1, 1981

	<u>Growing Degree Days</u>		<u>Rainfall (inches)</u>			
	1981	Norm	1981	Norm		
May	291*	(345)	257	2.81*	(2.84)	3.53
June	555		525	4.74		3.78
July	728		691	3.02		3.57
August	633		632	1.77		3.95
September	20	(326)	366	.22	(3.25)	3.57
	<u>2227</u>	<u>2587</u>	<u>2471</u>	<u>12.56</u>	<u>15.62</u>	<u>18.40</u>

* Planting to Harvest Date

Early Medium Maturity Corn Hybrids 1981

Hybrid	Silage ¹ t/ac	Earcorn ² t/ac	Percent Ears ³	Non-lodged Plants %	Moisture Content %
Agway 425X	31.8	6.5	51	100	68
Pioneer 3744	31.3	7.0	55	100	68
Muncy-Chief SX560	30.8	6.0	49	100	71
Pioneer 3747	30.4	6.7	56	100	69
Funk G-4195	30.3	6.4	54	100	64
Funk 29060	29.5	6.2	50	100	67
Dekalb XL25A	29.4	6.8	56	100	69
Agway 370X	28.7	5.7	50	100	66
Pride R319	28.5	6.3	55	100	65
Pioneer 3906	28.4	6.8	59	100	66
Seneca S4742	27.3	5.2	48	100	68
Stewart 290	27.1	6.0	55	98	63
Stewart 325	27.1	4.9	44	100	67
Pioneer 3901	26.6	6.1	59	100	64
Funk G4224	26.3	5.9	56	100	65
Funk G-4256	26.2	5.8	53	97	63
Northrup King PX21	26.1	5.8	55	100	64
Seneca 321	26.0	5.7	55	100	68
Northrup King PX32	26.0	5.2	51	100	70
Northrup King PX485	25.8	5.4	53	100	69
Funk G4252	25.4	5.5	54	99	65
Pioneer 3925	25.3	5.4	57	98	63
Northrup King PX449	24.9	5.2	51	100	60
Pride MF2264	22.8	5.1	59	98	62
Waltham 80 28X30	21.7	4.8	46	100	72
MEAN	27.4	5.9	53	100	66
LSD 5%	6.7	1.9	7.2	2.5	5.8

¹ Silage - 70% moisture

² Earcorn - 25% moisture

³ Percent of total dry matter in ears

Planting Date

May 8, 1981

Harvest Date

September 2, 1981

Growing Degree Days

	1981	Norm
May	291* (345)	257
June	555	525
July	728	691
August	633	632
September	39 (326)	366
	2246 2587	2471

Rainfall (inches)

	1981	Norm
May	2.81* (2.84)	3.53
June	4.74	3.78
July	3.02	3.57
August	1.77	3.95
September	.22 (3.25)	3.57
	12.56 15.62	18.40

* Planting to Harvest Date

Medium-Late Maturity Corn Hybrids 1981

Hybrid	Silage ¹ t/ac	Earcorn ² t/ac	Percent Ears ³	Non-lodged Plants %	Moisture Content %
Northrup King PX37	31.2	7.0	56	100	67
Asgrow RX511	31.0	6.7	54	100	61
Funk G4321A	30.9	6.9	56	100	66
Agway 650X	30.0	6.0	50	100	71
Dekalb XL56	29.8	6.3	53	100	72
Dekalb XL72AA	29.7	5.7	48	100	73
Pioneer 3572	29.3	6.2	53	100	66
Pride 4461	28.6	5.8	51	98	66
Agway 584S	28.0	5.8	51	100	71
Muncy Chief SX660	27.9	5.7	51	100	64
Funk G4444	27.8	6.4	58	100	62
Seneca PC40	26.7	6.1	57	100	65
Northrup King PX39	26.6	5.6	52	100	69
Funk G4315	26.5	6.0	56	100	64
Pride 4488	26.4	5.8	54	100	67
Agway 719S	25.8	5.1	50	100	70
Agway 600X	25.8	5.6	55	100	65
Muncy Chief SX777	25.8	4.8	47	100	73
Agway 615S	25.3	4.6	45	100	71
Northrup King PX603	25.1	5.5	53	100	70
Muncy Chief SX662	22.6	4.4	48	100	67
MEAN	27.7	5.8	52	100	68
LSD 5%	5.21	1.84	7.3	1.1	4.2

- ¹ Silage - 70% moisture
² Earcorn - 25% moisture
³ Percent of total dry matter in ears

Planting Date

May 8, 1981

Harvest Date

September 9, 1981

	<u>Growing Degree Days</u>			<u>Rainfall (inches)</u>		
	1981	Norm		1981	Norm	
May	291*	(345)	257	2.81*	(2.84)	3.53
June	555		525	4.74		3.78
July	728		691	3.02		3.57
August	633		632	1.77		3.95
September	145	(326)	366	1.07	(3.25)	3.57
	2352	2587	2471	13.41	15.62	18.40

* Planting to Harvest Date

Walpole Hybrid Corn Trial 1981

Variety	Silage ¹ t/ac	Non-lodged Plants %	Moisture Content %
Pioneer 3901	22.6	98	65
Asgrow RX511	21.3	100	67
Muncy Chief SX560	19.9	93	69
Muncy Chief SX777	19.4	97	69
Funk G4321A	19.2	100	67
Pride R319	18.6	98	61
Agway 425X	18.4	96	68
Seneca 321	17.5	97	63
Cornell 281	17.2	94	72
Dekalb XL13	16.9	95	65
Northrup King PX603	15.5	100	77
Northrup King PX449	14.9	95	65
Pride 4488	14.7	100	73
Pioneer 3572	14.7	94	70
Dekalb XL71AA	13.2	100	79
Stewart 325	12.8	96	69
Stewart 2660	11.0	88	71
MEAN	16.9	96	69
LSD	6.69	8.2	8.1

¹ Silage - 70% moisture

Planting Date

May 5, 1981

Harvest Date

August 28, 1981