

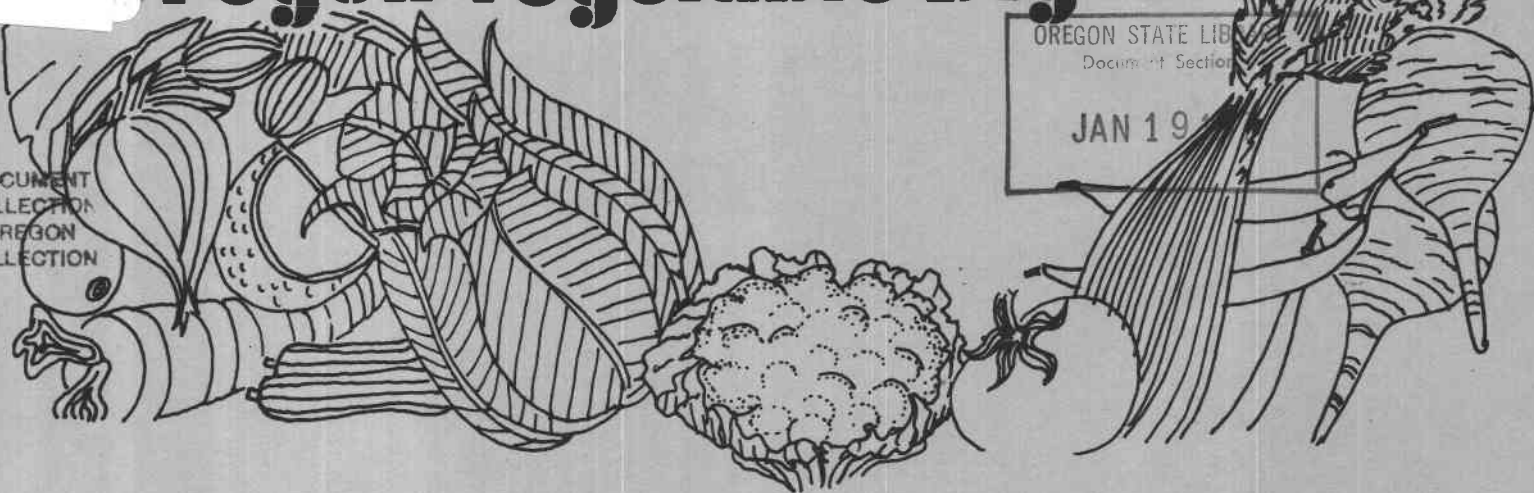
# Oregon Vegetable Digest

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## Sweet corn varieties tested in 1976

Commercial and experimental sweet corn hybrids were planted at the Oregon State University Research Farm on May 27, 1976. Each hybrid was grown in six 36 ft. plots, arranged in 4 randomized blocks with 15 ft. guard plots on the ends of the field. Seedlings were thinned to 38 plants per plot.

A band application of 600 lbs. of 8-24-8 fertilizer was made prior to planting and about 60 lbs. per acre additional N, as ammonium nitrate, was applied just prior to tasseling. Water was applied about every 10 days after the early growth stages. Vigor and uniformity of the planting were good.

Yields were obtained from 4 replications after making sample harvests, in some cases with moisture determination, from the 2 extra replications.

Processing tests were made on 15 of the most promising varieties. Results of panel evaluations of processed samples are shown in Table 4.

Some varieties included in this trial were also planted in a commercial field at Scio, Oregon and in an infected plot at Corvallis, for a test of head smut resistance. This test included 10 varieties not included in the yield test. No infection occurred at Scio so the plots were abandoned. At Corvallis, good infection occurred in the small

plots. However, because this area is just being established, there was only enough space available for a single small plot. The data obtained, though subject to variation error, are shown in Table 3.

Six varieties were included in a larger trial involving spacing and topping variables. Results are shown in Table 5 as mean of all treatments or for all varieties.

### Sources of varieties -

- (1) Rogers Bros., PO Box 2188, Idaho Falls, Idaho 83401
- (2) Charter Research, PO Box YY, Twin Falls, Idaho 83301
- (3) FMC Seeds, PO Box 2508, El Macero, California 95618
- (4) Ferry Morse Seed Company, Box 967, Mountain View, California 94040
- (5) Northrup King & Co., 1500 Jackson Street NE, Minneapolis, Minnesota 55413
- (6) Keystone Seeds, 101 Chateau Avenue, St. Louis, Missouri 63123
- (7) Asgrow Seed Company, Kalamazoo, Michigan 49001

The following varieties, excluding the standard 'Jubilee', appeared to deserve special discussion, based on yield, quality, or other considerations. These

comments were derived from the variety screening trial and smut resistance from the 1976 trial and previous years' trial where applicable.

Commander - good yield; very late maturity.

Rapidpak - early maturity, excellent quality scores - highest overall score for frozen; good smut resistance; yield low.

Fanfare - medium early; yield very good; smut resistance fairly good.

Reliance - several days earlier than Jubilee; yield good; smut resistance very good.

H74-203 - high yield; strong taper with tendency for tip blanking; very tall plant.

Tendertreat - good yield; large badly tapered ear; very tall plant.

Epic - good yield; smut resistance appears to be only fair, from the limited 1976 trial.

Hallmark - good yield; large ear; deep kernel; high row number; smut resistance may be good but it needs re-testing.

Buttersweet - good yield; large ear; neat looking; high row number; smut resistance may be poor, needs re-testing.

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--G. W. Varseveld  
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TABLE 1. Characteristics of sweet corn varieties observed at Corvallis, Oregon, 1976<sup>1</sup>

No.	Variety	Source	50% Silk	Days to Maturity	Avg. Ear Length (")	Avg. Ear Dia. (")	Kernel Depth (mm)	Row No.	Row Str.	Tip Fill	Taper	Uniformity			Avg. Tender.	Suckers	Plant Height	Notes
												Mat.	Ear	Kernel				
1	Fanfare	1	8/12	112	---	2.15	12	18-22	4.0	4.0	3.0	4.0	4.0	4.0	144.5	3.5	8.5	
2	Jubilee	1	8/14	116	7.5	2.05	12	16-18	4.0	4.0	3.0	4.0	4.0	4.0	127.5	2.8	9.0	
3	72-1651	1	8/09	106	7.6	1.95	10	14-16	3.0	2.0	3.0	4.0	4.0	3.0	163.0	3.0	8.8	Light color
4	74-1763	1	8/10	109	8.1	2.20	12	20	3.0	4.0	4.0	3.0	4.0	4.0	191.0	3.0	8.8	
5	72-2093	1	8/11	110	7.3	2.20	11	18-22	3.0	4.0	3.0	4.0	2.0	3.0	166.0	4.0	8.5	Much mat. variation
6	74-3045	1	8/22	114	7.8	2.20	11	18-20	2.5	3.0	3.0	2.5	3.0	2.0	104.0	4.0	9.0	Golden yellow; uniform, fat; round taper
7	Tendertreat	2	8/22	124	8.4	2.20	9	18	3.0	2.0	1.0	3.5	2.0	2.0	140.5	3.0	9.8	Some tips green; tip shriveled; many culls
8	H-74203	2	8/19	116	8.4	1.95	9	14-18	3.0	2.0	2.0	4.0	3.0	3.0	147.0	3.0	10.0	Light color; poor husk cover, short flags
9	Epic	3	8/14	116	8.0	2.05	11	16-20	4.0	3.0	2.0	4.0	3.0	4.0	165.5	3.0	9.0	
10	NCX-2012	3	8/08	103	7.5	1.90	10	12-14	2.0	2.0	3.0	3.0	2.0	2.0	167.0	3.0	8.4	Second ears all culls; kernels not refined
11	NCX-2016	3	8/09	106	7.1	1.85	10	16	3.0	2.0	3.0	4.0	2.0	3.0	159.0	3.5	8.5	
12	NCX-2017	3	8/10	110	7.8	2.10	11	16-18	3.0	4.0	3.0	4.0	4.0	3.0	151.5	3.0	8.0	
13	Rapidpak	4	8/12	111	7.0	2.00	8	16-18	2.0	2.5	3.0	3.0	2.0	2.0	124.5	3.5	8.8	
14	Reliance	5	8/10	109	7.5	2.10	11	16-22	3.0	2.0	3.0	3.0	2.0	4.0	167.0	2.0	8.0	Variable tip fill
15	Hallmark	5	8/19	120	7.8	2.20	12	18-22	3.0	2.5	4.0	2.5	3.0	3.5	114.0	2.0	9.3	
16	Exp 3272	5	8/23	124	7.8	2.05	12	16-20	2.5	2.0	3.0	3.0	2.0	3.0	129.0	2.0	9.0	
17	Sugar Loaf	5	8/15	116	7.5	2.00	11	16-18	2.0	2.0	2.0	3.0	2.0	2.0	165.5	3.0	9.8	Poor tip & husk cover
18	Buttersweet	6	8/19	118	7.9	2.05	11	20-22	4.0	3.0	3.0	4.0	4.0	4.0	132.0	3.0	10.0	Neat ear and kernel; long, uniform
19	Exp Hyb 7597	6	8/20	120	7.4	2.10	10	16-18	2.0	2.0	2.0	2.0	2.0	3.0	102.5	4.0	9.0	Many short tapered ears
20	Borealis	6	8/06	106	7.0	1.90	10	14-22	3.0	1.0	2.0	1.0	2.0	3.0	174.0	3.0	7.8	Generally very poor
21	Commander	7	8/22	120	8.0	2.20	10	18-24	2.0	2.0	2.5	3.0	3.0	4.0		3.0	9.3	

<sup>1</sup>Scores were based on a 1-5 scale, with 5 as the most desirable.

Table 2. Mean Sweet Corn Yield Data From Four Replications, Corvallis, Oregon, 1976.

No.	Variety	Source	Gross Weight T/A	C U L L S		G O O D E A R S			% Moisture <sup>3</sup>	Adjusted T/A <sup>4</sup>
				No. Ears/Acre	Wt. T/A	Ears/A <sup>1</sup>	Wt. T/A <sup>2</sup>	Lb/Ear		
1	Fanfare	1	9.4	5,339	.99	17,833	6.1	.68	73.7	6.4
2	Jubilee	1	9.8	4,231	.72	21,359	6.3	.59	70.5	6.1
3	72-1651	1	8.0	5,440	.51	17,329	4.4	.51	74.0	4.6
4	74-1763	1	8.5	3,324	.63	16,221	5.8	.72	73.9	6.1
5	72-2093	1	8.9	7,153	1.19	17,631	5.2	.59	75.3	5.6
6	74-3045	1	9.9	7,052	1.3	18,639	6.3	.68	75.2	6.8
7	Tendertreat	2	13.4	9,772	2.1	25,389	8.1	.64	73.2	8.3
8	H-74203	2	10.6	7,052	1.3	16,322	6.7	.82	72.1	6.7
9	Epic	3	10.4	4,433	.75	21,178	6.5	.61	72.5	6.6
10	NCX-2012	3	8.7	13,097	1.9	15,213	4.0	.53	72.7*	4.1
11	NCX-2016	3	6.5	5,239	.78	16,322	4.0	.49	71.6*	2.9
12	NCX-2017	3	8.2	4,936	.72	16,322	5.1	.62	73.7	5.3
13	Rapidpak	4	7.4	3,123	.45	17,833	4.6	.52	72.1	4.6
14	Reliance	5	8.3	5,742	.87	18,034	5.4	.60	74.0	5.7
15	Hallmark	5	9.8	2,115	.42	16,221	6.1	.75	74.2	6.4
16	Exp 3272	5	7.6	1,813	.31	16,612	4.8	.58	----	---
17	Sugar Loaf	5	8.9	8,160	1.5	19,143	5.3	.55	73.9*	5.5
18	Buttersweet	6	11.6	9,672	1.9	21,057	6.7	.64	73.3	6.9
19	Exp Hyb 7597	6	8.8	4,936	.9	17,934	5.1	.57	74.0*	5.3
20	Borealis	6	3.9	4,433	.46	9,269	2.3	.49	71.6*	1.7
21	Commander	7	10.8	4,231	.84	18,740	5.8	.62	74.7	6.2

<sup>1</sup>LSD for no. good ears/acre: @ 5% - 3178; @ 1% - 4163.

<sup>2</sup>LSD for wt. good ears/acre: @ 5% - 1.1 tons; @ 1% - 1.4 tons.

<sup>3</sup>Percent moisture of samples processed was determined by vacuum oven method; \*indicates moisture was determined by a microwave oven method and adjusted to a vacuum oven % based on the average difference between methods.

<sup>4</sup>Yields adjusted to 72% H<sub>2</sub>O when moisture % available: 1% difference in % H<sub>2</sub>O = 2.4% change in yield.



TABLE 3. Smut susceptibility test, Corvallis, 1976.<sup>1</sup>

No.	Variety & Source	No. of Plants	No. of Infected	Per Cent Infected	Per Cent Infected Adjacent Control <sup>2</sup>
1	Fanfare (1)	12	0	--	38
2	Jubilee (1)	13	3	23	75
3	72-1651 (1)	14	2	14	46
4	74-1763 (1)	14	3	21	17
5	72-2093 (1)	11	2	18	54
6	74-3045 (1)	14	4	26	46
7	73-2829 (1)	12	0	--	82
8	71-1913 (1)	15	0	--	29
9	73-1999 (1)	13	0	--	50
10	72-2885 (1)	13	0	--	50
11	74-3044 (1)	14	1	7	75
12	Golden Cross (1)	13	0	--	20
13	H75-201-21EH (2)	13	1	8	92
14	H75-201-38EH (2)	11	4	36	75
15	H75-201-54EH (2)	7	1	14	90
16	Epic (3)	11	2	18	67
17	NCX 2012 (3)	18	4	22	62
18	NCX 2016 (3)	10	1	10	50
19	NCX 2017 (3)	10	5	50	64
20	Sugar Daddy (4)	15	8	53	27
21	Rapidpak (4)	14	1	7	17
22	Reliance (5)	10	0	--	63
23	Hallmark (5)	14	0	--	9
24	Exp 3272 (5)	9	4	44	82
25	Sugar Loaf (5)	13	3	23	20
26	Buttersweet (6)	15	2	13	62
27	Exp Hyb 7597 (6)	15	0	--	62
28	Borealis (6)	10	2	20	64

<sup>1</sup>Small test in plot at Vegetable Research Farm. A commercial trial established at Scio, Oregon, failed to develop infection.

<sup>2</sup>'Sugar Daddy' plants growing in a length of row immediately adjacent to the respective variety plot.

Table 4. Sweet Corn Panel Quality Scores, Corvallis, Oregon, 1976.<sup>1</sup>

No.	Variety	% H <sub>2</sub> O	FROZEN SAMPLES										CANNED SAMPLES										Lab Data <sup>2</sup>		
			OSU Panel					Industry Panel					OSU Panel					Industry Panel					Percent cut-off	Percent pericarp	Shear press
			Over-all	color	app.	text.	flav.	Over-all	color	app.	text.	flav.	Over-all	color	app.	text.	flav.	Over-all	color	app.	text.	flav.			
1	Fanfare	73.7	6.2	6.3	5.9	6.4	6.3	5.5	5.7	5.2	5.5	5.2	5.2	5.0	5.5	5.9	4.5	4.2	4.9	4.6	4.6	4.1	58.8	0.65	337
2	Jubilee	70.5	6.4	6.6	6.8	6.5	6.0	5.0	5.7	5.5	5.5	4.7	6.5	6.7	6.7	6.6	6.4	4.5	4.5	4.7	5.0	3.6	55.7	0.79	290
3	72-1651	74.0	5.8	5.9	5.9	5.6	6.1	4.6	5.6	5.2	4.2	4.3	5.5	6.3	5.3	5.6	4.8	4.1	4.6	4.6	4.2	3.8	61.6	0.60	450
4	74-1763	73.9	6.0	6.8	6.2	5.3	5.9	4.2	5.5	4.8	3.7	3.7	5.3	5.4	5.6	5.2	5.6	3.5	3.1	4.1	3.3	3.1	63.7	1.01	512
5	72-2093	75.3	5.2	5.3	5.6	5.7	5.2	4.6	4.9	5.2	5.1	4.6	5.4	5.5	5.1	6.0	5.4	4.1	5.2	4.7	4.2	3.5	53.0	0.97	352
6	74-3045	75.2	5.8	6.1	5.8	5.7	6.1	4.5	5.3	6.1	4.5	4.2	6.0	6.4	5.8	5.9	5.7	4.7	4.7	4.6	4.8	4.6	55.1	0.71	375
7	Tendertreat	73.2	6.5	6.3	6.3	6.4	6.8	5.4	6.0	5.2	5.0	5.6	5.4	5.9	6.0	4.7	5.4	5.0	5.7	4.7	4.8	4.7	--	0.81	340
8	H-74203	72.1	6.8	6.3	6.9	7.3	6.8	5.7	6.3	5.8	6.0	5.7	6.7	6.5	6.5	6.9	6.2	5.0	5.6	5.5	5.8	4.6	50.5	0.26	255
9	Epic	72.5	6.0	6.7	6.3	5.4	5.5	5.4	5.6	5.1	4.2	4.1	6.1	7.1	7.0	5.6	5.8	4.9	5.5	5.1	4.6	4.0	53.3	1.03	370
12	NCX-2017	73.7	6.7	6.9	6.7	6.5	6.5	4.8	5.6	5.0	4.5	4.2	6.4	6.7	6.3	6.5	6.2	5.0	4.7	5.2	4.6	3.6	57.3	1.05	352
13	Rapidpak	72.1	7.6	7.3	7.6	7.2	7.4	6.0	6.2	6.2	6.2	6.2	7.2	7.3	7.3	7.1	6.4	5.1	5.2	5.5	5.7	5.2	57.7	0.54	285
14	Reliance	74.0	6.2	6.8	6.4	6.0	5.7	4.2	5.7	5.0	4.8	4.2	4.7	5.3	5.1	5.2	4.2	4.1	4.7	4.3	4.7	3.3	61.7	0.91	345
15	Hallmark	74.2	5.7	6.8	6.3	5.0	5.2	4.3	5.7	5.5	4.5	5.0	5.2	6.1	5.7	5.4	4.4	4.8	5.2	5.0	4.7	4.6	60.8	1.00	473
18	Buttersweet	73.3	5.8	6.7	6.5	5.1	5.6	5.3	6.8	5.5	4.7	4.8	5.6	6.3	5.7	6.3	5.7	5.3	6.0	5.8	4.8	4.6	54.2	1.08	400
21	Commander	74.7	6.7	6.8	6.8	6.3	6.5	5.5	6.0	5.6	5.3	5.0	6.7	6.7	6.4	6.7	6.7	5.3	5.5	5.8	5.5	4.6	57.5	0.76	350

<sup>1</sup>Mean scores for 10 OSU panelists, or 8 industry panelists; 1.0 = poor, 9.0 = outstanding. App. = appearance.

<sup>2</sup>Percent cut-off was on basis of graded, husked ears; pericarp data from canned whole kernels after 2 minute drain; shear press = lbs. max. force/100 gram sample of cut, drained, canned kernels. No correction factors available to adjust % cut-off and % pericarp for differences in maturity.

Table 5. Sweet Corn Topping, Variety, Spacing Test, Summary, 1976<sup>1</sup>

Variety	Husked Acceptable Ears				Harvest Date
	Yield T/A	Ear wt. Lbs/Ear	Percent Moisture	Percent Cut-off	
Fanfare	5.4	.62	74	50	Sept. 20
Jubilee	6.3	.58	72	56	Sept. 22
H-74203	6.1	.66	76	56	Sept. 27
Rapidpak	4.9	.49	76	51	Sept. 17
Reliance	4.9	.59	79	56	Sept. 15
Golden Cross Bantam	4.6	.48	72	55	Sept. 24
<u>Spacing (inches)</u>					
36x12 (14,500 p1/A)	4.5	.58	75	54	
36x9 (19,300 p1/A)	5.3	.58	75	54	
36x6 (29,000 p1/A)	6.4	.54	75	53	
<u>Topping</u>					
No Topping	5.8	.58			
Topping	5.0	.56			

<sup>1</sup>All varieties planted June 3rd; cut-off percent based on husked ears; two topping treatments (no topping and two leaves remaining above top ear), three spacings, six varieties, five replications; individual plot - one row, twenty-five feet long. For each variety, spacing and topping treatments were harvested on the same day.

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