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VEGETABLE CROPS REPORT VARIETY TRIALS AND CULTURAL RESEARCH TEST MUCK CROPS BRANCH, 1984

O. A. R. D. C.

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ON THE COVER: Pictures taken at the 1984 Muck Crops Field Day.
Photo provided by Keith H. Remy, Public Information,
OARDC.

This report was prepared for distribution at the Celeryville
Muck Crops School, January 31-February 1, 1985.

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RAINFALL RECORD

Recorder: O.A.R.D.C. MUCK CROPS BRANCH
 Location: Willard, Ohio

Date	April	May	June	July	Aug.	Sept.
1						
2						
3						
4	.25	.60			.20	.70
5	.20			1.70		
6	.17		.25			
7		.15		.75	.24	.45
8		.25				
9		.30			.21	
10		.10		.33	.10	.50
11						
12						
13	.15	.60		.10		
14		.40	1.10			.50
15						.22
16	.75					
17	.10					
18	.04	.08		.10		
19	.10	.65	.05			
20	.15				1.28	
21		1.30				
22		.03				
23	1.50	.37			.17	
24	.58					.05
25	.01			.03		
26						.30
27				1.20		
28	.75	.30				.25
29		.38			.20	
30	.02					
31					.95	
Month Total	4.77	5.51	1.40	4.21	3.35	2.52

WILLARD, OHIO WEATHER DATE - 1984

	Average Air Temp.		Average Humidity		Average 4 inches Bare Soil	
	High	Low	High	Low		
April	55	37	99	59	48	43
May	63	44	100	69	58	49
June	83	57	97	48	77	67
July	80	56	97	56	77	69
August	81	58	100	62	78	72
September	73	47	100	65	71	62

ONION VARIETY TRIALS - 1984

Richard L. Hassell
Muck Crops Branch, Celeryville, Ohio

Forty cultivars or promising breeding lines of onions were compared in replicated trial at the Muck Crops Branch in the 1984 growing season. Cultural information and tabular data summary are included in this report.

Cultural Information:

Eight hundred sixty pounds of a 6-24-24 fertilizer was broadcast and disced in prior to planting. Seed was premeasured at the rate of four pounds per acre and sown with a cone planter on May 2. Plot size consisted of three rows, eighteen feet long, spaced sixteen inches apart. The inside fifteen feet of the middle row was harvested for evaluation. Standard cultural practices were applied to this plot as needed. Onions were harvested October 8 and 9. They were allowed to dry, then graded and placed in bulk storage at the John F. Stambaugh Company in November.

Results

Plant stands were thin due to standing water within the plots in early May. The trial was also late getting in due to early spring rains, therefore, tops remained green longer in the fall delaying harvest. Varieties Sweet Sandwich and Sparta Banner 80 continue to rank consistently high in our trials.

The 1983 variety trial storage information is also included in this report. Sweet Sandwich and the Spartan Banner varieties also stored extremely well.

Recommendations (Based on the last four years)

Early (seeded) Non-storage

1. Pronto S
2. Progress

Main Season (seeded) Storage

1. Spartan Banner 80
2. Sweet Sandwich
3. Spartan Banner
4. Northern Oak
5. Super Sleeper

Main Season (seeded) Non-storage

1. Vega
2. Cima

ONION STORAGE RESULTS 1983 TRIAL

Variety	Source	Loss in Storage (%) (March 15)	Comments
ACX 7944R	Nickerson	41	poor
ACX 3316R	Nickerson	9	poor-no skins
ACX 5800R	Nickerson	17	good
ACX 5041R	Nickerson	7	excellent
ACX 3327R	Nickerson	7	excellent
ACX 8122R	Nickerson	21	poor-soft
AXC 5329R	Nickerson	18	poor-soft & no skins
DEXP 293-3	Dessert Seed	6	excellent
Golden Cascade	Dessert Seed	49	poor
Magnum	Dessert Seed	23	good
DEXP 1317-1	Dessert Seed	7	good
Cuprum	Dessert Seed	3	excellent
Brahma	Dessert Seed	21	poor-soft
DEXP 595-4	Dessert Seed	10	excellent
Simcoe	Dessert Seed	29	poor-no skins
Caparte	Dessert Seed	43	poor
EYG - 155	Dessert Seed	21	poor-no skins
DEXP 594-1	Dessert Seed	0	excellent
DEXP 479-4	Dessert Seed	28	good
F 24	U. of Wisconsin	0	excellent
W 426A	U. of Wisconsin		
XW 419B	U. of Wisconsin	1	excellent
XW 407B			
W 419A	U. of Wisconsin	12	fair-no skins
XW 52B			
XW 419B	U. of Wisconsin	6	excellent
XW 420B	U. of Wisconsin	13	fair-no skins
XW 407B			
135-81	U. of Wisconsin	2	excellent
W 427	U. of Wisconsin	1	excellent
AXW 407B	U. of Wisconsin	1	excellent
F24XW 419B	U. of Wisconsin	0	excellent
F24AXW 52B	U. of Wisconsin	24	fair-soft
W407AXW 52B	U. of Wisconsin	19	good
W427AXW 407B	U. of Wisconsin	10	excellent
Sweet Sandwich	USDA	0	excellent
Spartan Banner 80	USDA	4	excellent
Spartan Sleeper	USDA	4	excellent
D 5542	Harris Seeds	9	poor-soft
HXP2610	Harris Seeds	33	excellent
D 5537P	Harris Seeds	1	fair-no skins
D 275162	Harris Seeds	20	poor
Early Yellow	Harris Seeds	71	excellent
Super Sleeper	Harris Seeds	1	good
Spartan Banner	Harris Seeds	12	poor-soft-no skins
Harvest More	Harris Seeds	11	good
MOX 1012		19	good
Northern Oak	Stokes Seeds	19	poor-soft
Russett	Stokes Seeds	29	poor-soft

Techumseh	Stokes Seeds	34	excellent
Sentinel	Harris Seeds	2	fair-no skins
Progress	Harris Seeds	13	good
Spartan Banner 80	Harris Seeds	19	good
Autumn Pride	Crookham Co.	21	poor-soft
Brown Beauty 80-A	Crookham Co.	36	poor
Early Shipper	Crookham Co.	68	poor
Golden Treasure	Crookham Co.	45	good
XPH.CRK.N11	Crookham Co.	16	poor
XPH.CRK.N65	Crookham Co.	43	excellent
XPH.CRK.W943	Crookham Co.	6	excellent
Spartan Banner 80	Crookham Co.	12	fair-no skins-soft
XPH.CRK.N13	Crookham Co.	18	poor-soft-no skins
XPH.CRK.N14	Crookham Co.	6	fair
XPH 3220 (3207)	Asgrow	22	excellent
XPH 3230	Asgrow	10	excellent
Spartan Banner	Asgrow	10	poor-soft
Sweet Sandwich	Asgrow	17	excellent
XPH 3223	Asgrow	6	excellent
XPH 3240	Asgrow	1	good
Krummery	Krummery & Sons, Inc.	13	poor-soft
X220W4	Ferry Morse	35	poor
X218W4	Ferry Morse	50	good
X221W4	Ferry Morse	18	poor-soft-no skins
X220W1	Ferry Morse	21	poor-soft-no skins
X223W2	Ferry Morse	5	excellent
X226W1	Ferry Morse	9	poor-soft-no skins
X224W2	Ferry Morse	9	good
X225W1	Ferry Morse	15	good
X225W1	Ferry Morse	29	good
X228W2	Ferry Morse	22	poor-soft
X229W3	Ferry Morse	9	excellent
X153W2	Ferry Morse	5	poor-soft-no skins
X230W3	Ferry Morse	20	good
X231W3	Ferry Morse	42	good
X221W9	Ferry Morse	17	good
X232W3	Ferry Morse	0	excellent
X219W2	Ferry Morse	25	fair-light skins
X219W3	Ferry Morse	29	fair
X220W2	Ferry Morse	37	poor-soft-no skins
X220W3	Ferry Morse	23	poor-soft

ONION VARIETY TRIALS - 1984

Variety	Variety Source	Total No.	Marketable/acre		"B" (small)/acre		Culls %
			wt. lb. 50 lb/bag	No/ ft/row	Wt. lb. 50 lb/bag		
Sweet Sandwich	Asgrow	155,572	1281	4.7	15	0	
Superior	A & C	163,760	1227	5.0	36	1	
Spartan Banner 80	Asgrow	141,929	1175	4.3	26	2	
D5542	Harris	161,577	1159	4.9	59	3	
XPH3376	Asgrow	168,127	1157	5.1	72	4	
XPH3367	Asgrow	163,760	1163	5.0	20	3	
(W419xW420)x 202B	Wisconsin	160,485	1153	4.9	44	5	
(BR3MW404)MSK/AXW429B	Wisconsin	175,763	1133	5.4	33	4	
XPH3380	Asgrow	155,026	1105	4.7	35	0	
Super Sleeper	Harris	163,760	1100	5.0	23	0	
HXP2610	Harris	157,210	1098	4.8	52	1	
Tecumseh	Stokes	134,283	1096	4.1	17	10	
Kremmy Yellow Globe	Krumrey	163,760	1087	5.0	9	25	
Spartan Banner	Harris	139,742	1070	4.2	44	4	
(BPBMW404)MSK/AXW409B	Wisconsin	149,567	1057	4.6	17	1	
Valiant	ARCO	136,467	1052	4.2	11	2	
XPH3374	Asgrow	141,925	1037	4.3	3	15	
Gold Mine	Ferry Morse	158,301	1035	4.8	41	5	
D275162	Harris	161,577	1028	4.9	37	3	
DEXP1317-1	ARCO	127,733	1028	3.9	26	0	
XPHCRK113	Crookham	138,650	1020	4.2	39	12	
X231W3	Ferry Morse	141,925	1004	4.3	31	5	
Northern Oak	Stokes	144,108	1005	4.4	17	9	
ACX796NR	Nickersons	146,292	978	4.5	35	16	
ACX9836W	Nickersons	133,191	976	4.0	15	4	
XPHCRKW943	Crookham	111,351	969	3.4	0	15	
X231W2	Ferry Morse	126,641	954	3.9	46	9	
W429A x W407B	Wisconsin	136,467	939	4.2	0	31	
XPHCRKN11	Crookham	112,994	937	3.4	22	7	
Copper Mine	Ferry Morse	140,834	880	4.3	85	3	
Keepsweet II	A & C	109,173	867	3.0	28	16	
Autumn Pride	Crookham	86,247	793	2.6	11	22	
Caprum	ARCO	96,072	790	2.0	0	15	
(W202M76SYN) AXW407B	Wisconsin	114,632	753	3.4	11	4	
XPH3258	Asgrow	117,907	684	3.6	46	6	
Caprum	ARCO	70,054	657	2.1	6	3	
ACX8196W	Nickerson	75,330	573	2.3	23	17	
AXC5105R	Nickerson	87,339	568	2.7	24	28	
ACX9834W	Nickerson	64,412	454	2.0	24	42	
ACX5105R	Nickerson	45,852	288	1.4	81	31	

ONION VARIETY TRIALS - 1984

Variety	Variety Source	Percent single centers	Overall Appear. 1=poor 5=good	External Characteristics					
				Skin color 1=light 5=dark	Scale retention 1=poor 5=good	Bulb size 1=small 5=large	Uniformity		Firmness 1=soft 5=firm
							Shape 1=poor 5=good	Size	
Sweet Sandwich	Asgrow	10	4	4	4	4.5	3	4	3
Superior	A & C	50	4	3	3	4	4	3	4
Spartan Banner 80	Asgrow	50	4	3	4	4	4	4	4.5
D5542	Harris	0	3	3	2	3	4	4	4
XPH3376	Asgrow	20	4	3	4	4	4	4	4
XPH3367	Asgrow	40	3	3	4	3	3	3	4
(W419xW420)x 202B	Wisconsin	30	4	3	4	4	2	4	4
(BRBW404)MSK/AXW429B	Wisconsin	20	3	3	4	3	4	4	4
XPH3380	Asgrow	40	2	2	2	2	2	2	3
Super Sleeper	Harris	40	3	4	2	3	3	3	3.5
HXP2610	Harris	10	2	3	2	3	2	2	3
Tecumseh	Stokes	50	4	3	3	4	4	4	2.5
Kremy Yellow Globe	Krummey	100	3	5	4	3	2.75	4	4
Spartan Banner	Harris	90	3	3	3	3	3	4	4
(BPBW404)MSK/AXW409B	Wisconsin	20	3	4	4	3	4	4	4
Valiant	ARCO	80	3.5	3	3	3	4	4	2.5
XPH3374	Asgrow	70	4	3	3	3	3	3	4
Gold Mine	Ferry Morse	30	2	3	3	3	2	2	3
D275162	Harris	0	4	3	4	3	4	4	4
DEXP1317-1	ARCO	10	2.5	2.5	2	3	2	3	4
XPHCRKN13	Crookham	70	4	3	3	3	3	3	4
X231W3	Ferry Morse	20	3	4	3	3	3	3	1.5
Northern Oak	Stokes	20	3	3	3	3	4	3	3
ACX796NR	Nickersons	30	2	2	2	2	2	3	2.5
ACX9836W	Nickersons	50	3	3	2	3	3	3	4
XPHCRKW943	Crookham	50	4	3	3	4	4	4	2.5
X231W2	Ferry Morse	0	2	2	2	3	2	3	2.5
W429A x W407B	Wisconsin	40	3	3	2	3	3	3	3
XPHCRKN11	Crookham	60	3	3	2	4	2	4	3.5
Copper Mine	Ferry Morse	30	3	4	2.5	3	3	3	3
Keepsweet II	A & C	20	2	2	2	4	2	4	2
Autumn Pride	Crookham	30	1	3	4	4	1.5	4	3
Caprum	ARCO	0	2	3	2	2	2	2	2
(W202M76SYN) AXW407B	Wisconsin	40	3	3	4	3	3	4	4
XPH3258	Asgrow	20	4	3	3	3	4	3	3
Caprum	ARCO	0	2	3	2	2	2	2	2
ACX8196W	Nickerson	40	4	3	3	3	2	4	4
AXC5105R	Nickerson	10	2	1	1	2	3	3	2
ACX9834W	Nickerson	40	2	4	3	4	2	2	3

GREEN ONION VARIETY TRIAL - 1984

Richard L. Hassell¹
Muck Crops Branch, Celeryville, Ohio

Fourteen cultivars of green onions were compared in a replicated trial at the Muck Crops Branch in the 1984 growing season. Variety descriptions as well as harvest data is found in this report.

Cultural Information

Eight hundred sixty pounds of a 6-24-24 fertilizer was broadcast and disced in prior to planting. Seed was premeasured at the rate of ten pounds per acre and sown with a cone planter on June 1. Plot size consisted of three rows, eighteen feet long, spaced sixteen inches apart. Each cultivar was replicated at least four times. Standard cultural practices were applied to this plot as needed. The onions were pulled on August 1. Variety descriptions were taken the day before. Holthouse Farms helped in the evaluation.

GREEN ONION VARIETY RECOMMENDATIONS

Early (Bulb Type)

K-99
Southport White
White Valencia (trial)

Mid-season to Late Season (Non-bulbing)

Tokyo Long White
Ishikura
White Spear
Kencho (trial)

¹Assistant Professor of Horticulture, The Ohio State University, Muck Crops Branch, Willard, OH 44890.

TABLE 1. Green bunching onion yield and growth characteristics

Variety	Non-Bulbing Onions			Comments
	Source	Tons/Acre	Mkt/acre	
Tokyo Long White	Arco	17.09	956,358	Short tops, long shank, thin blade Skins easy, medium-hard pull, Straight tops, no trash, medium- heavy blade.
White Spear	Ferry- Morse	14.23	855,919	Medium-small blade, skins easy, Firm tops, long shank, medium pull Straight tops.
Tokyo Long White	Harris	14.58	823,167	Medium-heavy blade, no trash, long tops, long shank, skins easy, hard pull, straight tops.
Ishikora	Harris	14.57	818,800	Skins easy, long tops, no trash, straight tops, medium shank, medium- heavy blades, medium pull.
Japanese Bunching	Harris	10.62	652,857	Long shank, some trash, skins easy, medium-heavy blade, firm tops, medium tops, straight tops.
Kincho	Harris	13.19	646,306	Medium tops, medium blade, no trash, straight tops, skins easy, firm tops, long shank, pulls easy
Nebuka Evergreen Bunching	Arco	4.37	275,167	Short shank, no trash, hard pull, too short tops, skins easy, small blades.
<u>Bulbing Onions</u>				
White Valencia	Arco	11.03	545,867	Skins easy, medium shank, medium blade, firm tops, little trash, short top, pulls easy.
Southport White	Harris	8.52	340,621	Firm tops, skins easy, long shank medium blade, trash, pulls easy, some curling in tops.
Southport White Globe	Arco	5.49	314,419	Medium blade, skins easy, long shank, medium tops, lot of trash, curling tops, pulls easy.
PRR Ringmaster	Arco	13.37	465,078	Some trash, medium-small blade, curling tops, hard to skin, pulls easy, medium-long shank, firm tops.
White Portugal	Harris	8.77	307,869	Heavy blade, skins easy, lot of trash, medium pull, curled tops, short shank.
White Lisbon	Harris	6.97	270,750	Long tops, short shank, soft blade, lots of trash, medium pull curled tops.
Brock's PRR	Arco	7.68	670,324	Short shank, heavy blade, medium pull, curled tops, skins hard.

PARSLEY VARIETY TRIAL - 1984

Richard L. Hassell¹
Muck Crops Branch, Celeryville, Ohio

Twelve cultivars of parsley varieties were compared in a replicated trial at the Muck Crops Branch in the 1984 season. Cultural information and tabular data summary are included in this report.

Cultural Information

Eight hundred sixty pounds of a 6-24-24 fertilizer was applied and disced in prior to planting. Seed was premeasured at the rate of fourteen pounds per acre and sown with a cone planter on May 2. Plot size consisted of three rows, eighteen feet long, spaced fifteen inches apart. Each cultivar was replicated four times. Standard cultural practices were applied to this plot as needed. Plots were harvested (10 feet of middle row) July 30 and September 10.

Results

Moss Curled and Forestgreen were the two outstanding varieties. By taking two cuttings, it was interesting to note the decline in variety performance after the first cutting. White varieties such as Forestgreen, seemed to perform better after the first cutting.

The two-inch scattered shoe was used at planting to add in variety performance.

¹Assistant Professor of Horticulture, The Ohio State University, Muck Crops Branch, Willard, OH 44890.

TABLE 1. Main effects of variety types on the number of twenty pound crates per acre. Fresh weight is a mean of four replications.

Variety Name	Source	First Culling	Second Culling	First and Second Culling	Comments
Champion Moss Curls	Stokes	445	593	1037	Light Color
Moss Curled	NK	460	575	1035	Very Dark
Componed Market Gardener	A&C	505	512	1017	Very Light
Forest Green	Harris	405	576	981	Dark Green
Fonuert	Agr.Seed	532	409	941	Medium color
Uncurled	Stokes	422	470	892	Too short
Deep Green	Harris	318	548	866	Very Dark
Banquet	Harris	480	385	865	Very Dark
Ferro	Harris	378	405	783	Dark green
Decorator	A&C	336	424	760	Too much curl
Optima*	Arco	309	407	716	Dark green
Bravour	Stokes	343	202	546	Too short

Date Seeded: May 2

Seed Rate: 14 lb/acre

Shoe Type: 2" scattered shoe

Row Spacing: 16" between row

Plot Length: 18' long

No. of Replications: 4

Date Harvested: July 30; September 10

* Planted two weeks later than the main plot.

POTATO VARIETY TRIAL - 1984

Richard L. Hassell
Muck Crops Branch, Celeryville Ohio

Introduction

Twenty-four varieties were placed in a replicated trial, while fifty were planted in an observation trial.

Procedure

Plots were planted on May 16, the spacing in the plots consisted of two rows 32-inches apart, then followed by 40-inches to the next two rows. Seedpieces were spaced 12 inches apart in the row. Each plot consisted of two 25-foot rows followed with a four-foot alleyway. Fertilizer was broadcast prior to planting at a rate of 860 pounds of 6-24-24 combination. Temik was used as the systemic insecticide at planting. Lasso and Lorax combination was used as the herbicide at planting. Harvesting was done the week of October 2.

Results

Plant emergence was very uneven. Irrigation was applied twice during the season due to lack of rainfall. Yield was down compared to past years with less hollow heart. NY 59 continues to remain one of the highest yielders and excellent grade out. Kennebec continues to perform well with a numbered variety, BR5991-WV16 looking extremely well.

TABLE 1. Growth characteristics and yield data of potatoes, replicated plot.

Cultivar	Yield cwt/acre	U.S. #1	Culls %	B-Size %	H.H. &	Comments
Ontario	449	86	7	7	0	Internal discoloration, excellent shape and size.
La-01-38	396	91	6	3	10	Cracks, skins easy, growth splits.
Al29-69-1	369	85	10	5	0	Scab, skins easy, poor appearance
BR5991-WV16	345	74	20	6	37	Lots of splits, good chips.
Kennebec	337	68	25	7	7	Some misshapens, excellent appearance.
B6949-WV3	323	84	8	8	0	Excellent
CF74135-3	316	81	10	9	0	Excellent
Alasclear	316	63	30	7	15	Internal discoloration, greens & splits.
G620-11	311	88	8	4	37	Internal discoloration, excellent shape & size.
Belchip	309	87	10	3	47	Cracks, skins easy, poor appearance.
Acadia Russet	308	88	6	6	0	Russet, very large.
Katahdin	301	90	3	7	10	Excellent
Beige	297	87	3	10	13	Excellent.
Semcoe	282	86	6	8	13	A lot of internal discoloration
Atlantic	277	89	3	8	50	Excellent.
Denali	256	79	14	7	13	Misshapen & split.
WF564-3	234	67	21	12	25	Russet, lots of growth cracks.
WNC521-12	229	85	12	3	40	Skins easy.
Bake King	221	94	2	4	0	Excellent.
Jemseg	217	74	21	5	10	Large.
Conestoga	182	86	8	6	30	Some growth splits.
CF7688-9	175	80	14	6	23	Lots of rots, bad shape.
G654-2	136	72	11	17	7	Excellent
Norchip	0	0	0	0	0	----
NC388-1	0	0	0	0	0	----

TABLE 2. Growth characteristics and yield data of potatoes, observations plots.

Cultivar	Yield cwt/ acre	U.S.#1 %	Culls %	B-Size %	H.H. %	Comments
NY59	483	92	5	3	0	Excellent shape & size.
Chipbelle	339	87	5	8	40	Fair size, good shape.
BR7088-18	330	73	19	8	10	Fair size, good shape.
MS700-70	323	89	5	6	40	Good shape & size.
AF330-1	323	88	9	3	0	Round shape, good size.
Hampton	320	79	16	5	0	Round, large size.
B9596-2	313	82	8	10	0	Internal brown discoloration, oblong.
AF303-5	309	84	8	8	60	Very bad internal discoloration
Islander	296	79	13	8	5	Skins easy, oblong.
B9569-2	294	60	24	16	10	Few growth cracks, russet.
MS704-10	292	78	12	10	80	Very misshapen, yellow meat.
Wis. 779	290	58	34	8	20	Surface cracks, a lot of misshapen, russet.
ND860-2	284	83	5	12	0	Excellent.
B9540-62	277	70	24	6	50	Secondary growth, large tubers, growth cracks.
B9553-6	274	65	26	9	0	Light russet.
Yukon Gold	268	76	20	4	30	Green tubers, yellow flesh.
B9752-7	268	74	15	11	20	Misshapen, oblong.
CF77154-10	268	68	19	13	20	Skins easy.
Yankee Clipper	266	79	8	13	0	Growth cracks.
Yankee Supreme	264	74	17	9	0	Some scab, excellent.
B9720-3	262	81	7	12	30	Russet, excellent.
MS002-171	255	66	25	9	0	Yellow meat, fair.
BR7093-23	242	74	17	9	0	Round, fair shape.
ND6-78-8	239	84	9	7	0	Excellent, easy to cut.
MN9319	235	69	22	9	0	Russet, fair appearance
B6928-WV14	229	80	8	12	40	Skins easy, growth cracks.
Belrus	222	60	25	15	0	Some scab, russet.
AF236-1	221	64	26	10	10	Greens, skins easy.
Hgass 12	211	64	7	29	0	Small size, russet.
MS716-15	210	67	26	7	0	Excellent.
B9340-13	209	74	20	6	60	Misshapens & rots.
Gold Rus	204	46	31	23	20	Growth splits, russet.
F 73008	201	45	43	12	0	Cracks, bad shape.
WF564-3	104	59	23	18	30	Bad cracks, russet.
MS702-91	179	94	0	6	0	Excellent.
ND398-1	179	83	7	10	0	Growth splits, russet.
B9140-32	179	79	10	11	40	Skins easy.
G654-2	176	70	14	16	0	Small size.
G670-11	169	75	18	7	50	Very bad growth cracks.
CF76183-2	166	60	29	11	0	Excellent.
B9398-2	166	59	25	16	30	Good shaped russet.
Wis. 752	164	77	15	8	0	Skins easy, flat shape.
Wis. 903	163	70	22	8	20	Skins easy, round shape.

MS 700-83	136	76	10	14	10	Scab.
Allegash Russet	133	51	28	21	50	Misshapen, bad, russet.
9648	116	53	41	6	0	Russet, no yields.
Superior	101	57	29	15	0	-----
Tolaas	91	73	17	10	10	-----
B9740-4	0	0	0	0	0	-----
MS702-80	0	0	0	0	0	-----

TABLE 3. Specific gravity, chip color and percent bruises. Celeryville Muck Crops Trials, 1984 (replicated trial).

Cultivar	Specific gravity	Chip Color Agtron	Chip Color PC/SFA	% Clusters
Ontario	1.069	26.1	4	10
ol-38	1.077	44.1	3	20
Al29-69-1	1.063	30.9	4	40
BR5991-WV16	1.073	40.3	3	10
Kennebec	1.074	41.3	3	50
B6949-WV3	1.073	46.8	3	20
CF74135-3	1.068	42.2	1	10
Alasclear	1.076	40.0	3	30
G670-11	1.081	44.4	3	20
Belchip	1.076	50.3	3	20
Acadia Russet	1.072	18.1	5	60
Katahdin	1.069	45.9	3	0
Beige	1.077	37.3	3	10
Simcoe	1.077	42.2	3	20
Atlantic	1.088	55.2	2	20
Denali	1.085	49.8	2	10
WF564-3	1.061	20.8	5	20
WNC521-12	1.092	45.9	3	50
Bake King	1.086	27.0	4	40
Jemseg	1.073	48.8	3	50
Conestoga	1.068	52.6	3	20
CF7688-9	1.083	40.7	3	10
G654-2	1.062	40.6	3	10
N1388-1	1.074	44.0	3	30

Specific Gravity: A = 1.070 & Higher = baking potato
 B = 1.070 & Lower = boiling potato

Chip Color: 1 or 65 + higher = very light
 5 or 25 to 34 = very dark

TABLE 4. Specific gravity, chip color, and percent blisters. Celeryville Muck Trials, 1984 (Observation Trial).

Cultivar	Specific Gravity	Chip Color Agtron	Chip Color PC/SFA	% Blister
NY 59	1.081	34.8	5	40
Chipbelle	1.087	52.2	3	40
BR7088-18	1.030	52.7	3	10
MS 700-70	1.082	49.3	2	20
AF 330-1	1.080	52.6	3	10
Hampton	1.070	35.1	3	20
B9596-2	1.067	27.3	5	30
AF 303-5	1.081	48.8	3	10
Islander	1.077	46.3	3	20
B9569-2	1.073	45.6	2	10
MS 704-10	1.076	49.3	2	10
Wis. 779	1.060	50.3	3	40
ND 860-2	1.076	59.4	2	30
B9540-62	1.077	47.4	3	40
B9553-6	1.065	37.6	4	40
Yukon Gold	1.070	35.1	3	20
B9752-7	1.066	35.3	4	20
CF77154-10	1.077	55.5	2	10
Yankee Clipper	1.089	54.6	2	10
Yankee Supreme	1.079	63.9	2	30
B9720-3	1.078	37.6	4	40
MS 002-171Y	1.079	53.3	3	40
BR 7093-23	1.081	60.2	2	40
ND 6-78-8	1.064	52.9	3	30
MN 9319	1.070	43.5	4	40
B6928-WV14	1.073	33.8	5	20
Belrus	1.082	55.7	2	40
AF 236-1	1.075	45.5	3	20
Hgass 12	1.066	45.5	3	40
MS 716-15	1.074	47.5	3	20
B9340-13	1.078	49.4	3	10
Gold Rus	1.073	48.5	3	10
F 73008	1.067	50.8	3	20
WF 564-3	1.066	41.0	4	10
MS 702-91	1.070	47.8	3	10
ND 398-1	1.060	40.2	4	10
B9140-32	1.079	55.0	2	10
G654-2	1.060	40.2	4	10
G670-11	1.077	47.5	3	20
CF 7683-2	1.074	51.7	3	20
B9398-2	1.079	53.8	3	30
Wis 752	1.087	53.1	3	40
Wis 903	1.067	45.9	3	30
MS 700-83	1.071	54.1	3	20
Allegash Russet	1.065	59.6	2	0
9648	1.069	55.9	2	30
Superior	1.070	46.0	3	10

Tolaas	1.068	34.6	5	20
B9740-4	----	----	-	--
MS 702-80	----	----	-	--

BROCCOLI VARIETY TRIALS - 1984

Richard L. Hassell
Muck Crops Branch, Celeryville, OH

Twenty-seven cultivars or promising breeding lines were evaluated at the Muck Crops Branch in 1984. Cultural information and tabular data summaries are included in this report.

Cultural Information

Eight hundred sixty pounds of 6-24-24 fertilizer was applied and disced in prior to planting. Side-dressings of ammonium nitrate (100 pounds/acre) were made twice during the growing season. The second was made just prior to head formation.

Transplants were grown in Todd planter flat #125. Soiless media was Metro-mix 215 provided by W.R. Grace Company. Liquid fertilizer was applied weekly in the greenhouse (15-16-17). Greenhouse temperatures were maintained at 75^oF-65^oF. Transplanting was accomplished with a standard bare root planter. Plants were six weeks old. First transplanting was done on April 26 and the second on July 16. Plants were spaced six-inches apart within rows and thirty-two-inches between rows. Fall harvest was performed in early September.

Results

The spring planting was never harvested. The ground was infested with club root and all varieties were very uneven. In some areas, the plants were not able to remain alive, let alone produce a head. Therefore, the fall harvest provided the data in this report.

VARIETY RECOMMENDATION

1. Green Comet - Early
2. Green Hornet - Mid-season
3. Premium Crop - Late
4. Prominence - Mid to late
5. Bravo - Fall only
6. Packman - Early (trial)
7. Packer - Late (trial)
8. XPH 503 - Early (trial)

Fall Broccoli Trial - 1984

1. Okion (Asgrow) - Late variety, only 28 percent worth harvesting - small heads with green heads - average head wt. 266 g.
2. Futura (Asgrow) - Late variety, only 57 percent worth harvesting, small head, green head. Average head wt. 210 g.
3. XPH 502 (Asgrow) - Medium variety, 77 percent harvested, medium to large heads, with blue head, average head wt. 229 g.
4. XPH 503 (Asgrow) - Early variety, 72 percent harvested, large heads, blue head, average head wt 306 g.
5. Bravo (Stokes) - Early variety, 70 percent harvested, large heads, blue head, average heat wt. 227 g.
6. Green Hornet (Stokes) - Medium variety, 67 percent harvested, large heads, blue-green head, average head wt. 344 g.
7. Paragon (Stokes) - Medium variety, 61 percent harvested, small to large heads, blue head, average head wt 278 g.
8. Prominence (Harris) - Early variety, 45 percent harvested, large heads, green head, average wt. 369 g.
9. Premium Crop (Harris) - Late variety, 84 percent harvested, medium to large heads, blue head, average head wt. 250 g.
10. Excaliber (Harris) - Medium variety, 55 percent harvested, small to medium heads, blue head, average head wt. 280 g.
11. Green Comet (Harris) - Early variety, 73 percent harvested, medium heads, blue-green head, average head wt. 240 g.
12. Commander (N.K.) - Late variety, 43 percent harvested, small heads, green head, average heat wt. 300 g.
13. Emperor (N.K.) - Late variety, 63 percent harvested, small head, green head, average head wt. 345 g.
14. Green Knight (N.K.) - Late variety, 50 percent harvested, small to medium heads, green heads, average head wt. 353 g.
15. Bravo (N.K.) - Early variety, 54 percent harvested, small to large heads, blue head, average head wt. 238 g.
16. Southern Comet (Takii) - EARly medium variety, 69 percent harvested, small heads, green head, average head wt. 221 g.
17. Premium Crop (Takii) - Late variety, 71 percent harvested medium to large heads, blue-green head, average head wt. 262 g.

18. Green Comet (Takii) - Early variety, 61 percent harvested, large heads, blue head, average head wt. 285 g.
19. Prominence (Takii) - Medium variety, 57 percent harvested, large heads, blue-green head, average head wt. 305 g.
20. Green Valiant (Agri-Seed) - Late variety, 26 percent harvested, small heads, green head, average head wt. 222 g.
21. Dandy Early (Agri-Seed) - Early variety, 36 percent harvested, small head, green head, average head wt. 483 g.
22. Septal (Agri-Seed) - Late variety, 70 percent harvested, medium heads, blue head, average head wt. 272 g.
23. Green Duke (N.K.) - Early variety, 56 percent harvested, large heads, green head, average head wt. 274 g.
24. Dandy Early (Sakota) - Early variety, 59 percent harvested, small heads, green head, average head wt. 285 g.
25. Dandy (Sakota) - Early variety, 50 percent harvested, large heads, blue-green head, average head wt. 242 g.
26. Packman (Peto) - Early variety, 94 percent harvested, medium to large heads, blue head, average head wt. 240 g.
27. Packer (Goldsmith) - Late variety, 72 percent harvested, small head, green head, average head wt. 367 g.

CELERY BOLTING STUDY - 1984

Richard L. Hassell
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Cultural Information

Eight hundred sixty pounds of a 6-24-24 fertilizer was broadcast and disced in prior to planting. Transplants were grown in the todd-planter flat 080A and transplanted with a standard bare root planter.

Four weeks after transplant, the celery was side dressed with ammonium nitrate (100 lb/acre) and then again two weeks later with the same amount. Standard herbicides, insecticides, and fungicides were applied as needed. All counts and weights on each treatment were evaluated in the field as they were harvested.

Materials and Methods

Two varieties (Tall Greenlight and Utah 52-70R) were seeded February 13. Greenhouse temperature was set at 68°F. Heat pads were placed under the tray. Temperatures in the metro-mix 215 was kept at 70°F for four weeks and then transplanted into trays. These trays were placed on metal benches.

Plants were grown in todd-planter flats No. 080A for additional four weeks. They were fertilized weekly with liquid fertilizer (15-16-17). These plants were then transplanted into the field April 12 with a standard Holland bare-root celery planter. Sixteen rows, 350 feet long were transplanted in one day with each variety transplanted every other row.

Treatments receiving plastic were then applied the next day. Wire hoops (No. 9 wire), were first put into place. These hoops were seven inches wide and eight inches high. The plastic was then put on by hand. The plastic is a low density poly, 26-inches wide with a one-inch hole, five inches apart in the center of the plastic.

Treatments receiving spunbonded material was also applied the same day. This was an experimental material provided by Kimberly Clark Co. It is 30 inches wide and requires no hoops. This was also applied by hand.

Each plot was twenty feet long and thirty-two inches wide with a four foot alleyway between treatments.

Thermocouple wire was used to gather air temperature. Temperatures were recorded every hour, twenty-four hours a day for four weeks.

Light measurements were also taken by using Licor sensors. Counts were taken one a day for four weeks.

At the end of four weeks all row covers were removed, temperature and light measurements were discontinued at that time.

All treatments were replicated four times in a randomized complete block design. Harvesting was done by hand on August 2.

Discussion

It has been reported by H.C. Thompson in 1929 that bolting of celery can be prevented by a number of methods. These include freezing, crowding plants in flats or withholding water. However, if plants are subject to low temperatures (40-50°F) for two weeks or more, seed stalk formation is sure to occur. There also seems to be little difference with respect to age of the plant to its ability to bolt. If temperatures reach 80°F or above, bolting will be prevented if it has not already been triggered. It was also noted that varieties differed in their behavior to formation of seed stalks. However, the varieties tested are not longer used. An 1983 current varieties were screened for bolting susceptibility and found to show a wide range of susceptibility. Two varieties were selected from that data for this test. Variety Tall Greenlight because of its fast tendency to bolt; used as a check, and Variety Utah 52-70R, because of its intermediate range to bolting. The purpose of this test was two-fold. First, to examine the possibility of using the spunbonded material in replacing the current plastic row covers. Plastic has a tendency to come loose and blow away, while the spunbonded material, no hoops needed, allow air and moisture in and doesn't come loose in high winds. Second, to further study bolting by examining when bolting does occur. Treatments were set up on a weekly basis by putting on row covers and removing others during four-week period.

Results

Temperatures in April and early May were normal for this time of year. Figures 1-4 provide a weekly summary of these temperatures.

Temperature between 9:00 P.M. and 6:00 A.M. were not significantly different for either of the row covers used. However, during the daylight hours significant differences occurred. The spunbonded material clearly was much warmer than the currently used plastic.

Light measurements also showed the same type of results. Table 1 indicates the spunbonded material allowed more usable light than the plastic. However, in comparing the row covers to the open treatment causes concern. The spunbonded material had a tendency to act like a filter during spring muck storms, but the plants were a healthy dark green in appearance which indicates there was ample light. The plastic didn't allow enough light to enter and thus the plants were a much lighter green and spindley in nature.

At the time of final harvest (Table 2) percent seeder and weight per stalk of celery were significantly higher for the spunbonded row cover over the plastic row cover. Treatments without row covers had 100% seeders and thus, no stalks were harvested. Table 2 records only the information for variety Utah 52-70R due to over 90% seeders with either row cover and thus not of any value, on variety Tall Green Light.

The results of the length of row cover treatment (Table 3) indicate that the first two weeks of cold period has a lot to do with the percent of seed stalk formation. Further studies will help explain the results more clearly.

TABLE 1. Main effect of row cover upon the amount of usable light in the area of the plant canopy^z. Light measurement are a means of four observations.

Row cover	P.A.R.
No cover	1251a
Spunbonded	345b
Plastic	303c
LSD .05	38

^z Means of separation within a column by Duncan's New Multiple Range Test, α 5% level.

TABLE 2. Main effect of percent of nonseeders and wt. per stalk of celery for variety Utah 52-70R. Nonseeder is a means of 56 observations. Stalk weight is a means of 4 observations.

Row Covers	Percent non-seeder	Wt (lb)/stalk
Spunbonded	65.07a	3.66a
Plastic	58.87b	2.97b
LSD .05	5.33	.54

^z Means of separation within a column by Duncan's New Multiple Range Test, α 5% level.

TABLE 3. Main effect on length of row cover and the percent celery seed stalk formation on variety Utah 52-70R. Percent of seeders is a means of 8 observations.

Row Cover Treatments by weeks ^Z				% Seed Stalk formation ^Y
(1)	(2)	(3)	(4)	
+	+	+	+	10.0a
+	+	-	-	19.58ab
+	+	+	-	20.00ab
+	+	-	+	20.83ab
+	-	+	+	23.75abc
+	-	-	-	31.25bc
+	-	-	+	32.08bcd
-	-	+	+	33.33bcd
-	+	+	+	37.08cd
-	-	+	-	47.50d
-	+	+	-	47.50d
-	-	-	+	66.25e
-	-	-	-	70.00e
-	-	-	-	73.33e
LSD .05				14.05

^Z Rows covered with plastic or spunbonded material from 0 up to 4 weeks after transplanting with weekly variables. (+) indicates week of cover; (-) indicates non-cover.

^Y Means of separation within a column by Duncan's New Multiple Range Test, 5% level.

	S	P	A
Hours over 80	9.00	4.00	0
Hours over 70	26.75	18.25	2.00
Hours over 60	43.75	37.75	18.00
Hours over 50	67.50	62.75	50.25
Hours over 40	130.50	129.25	117.00
Hours over 30	168.00	168.00	168.00

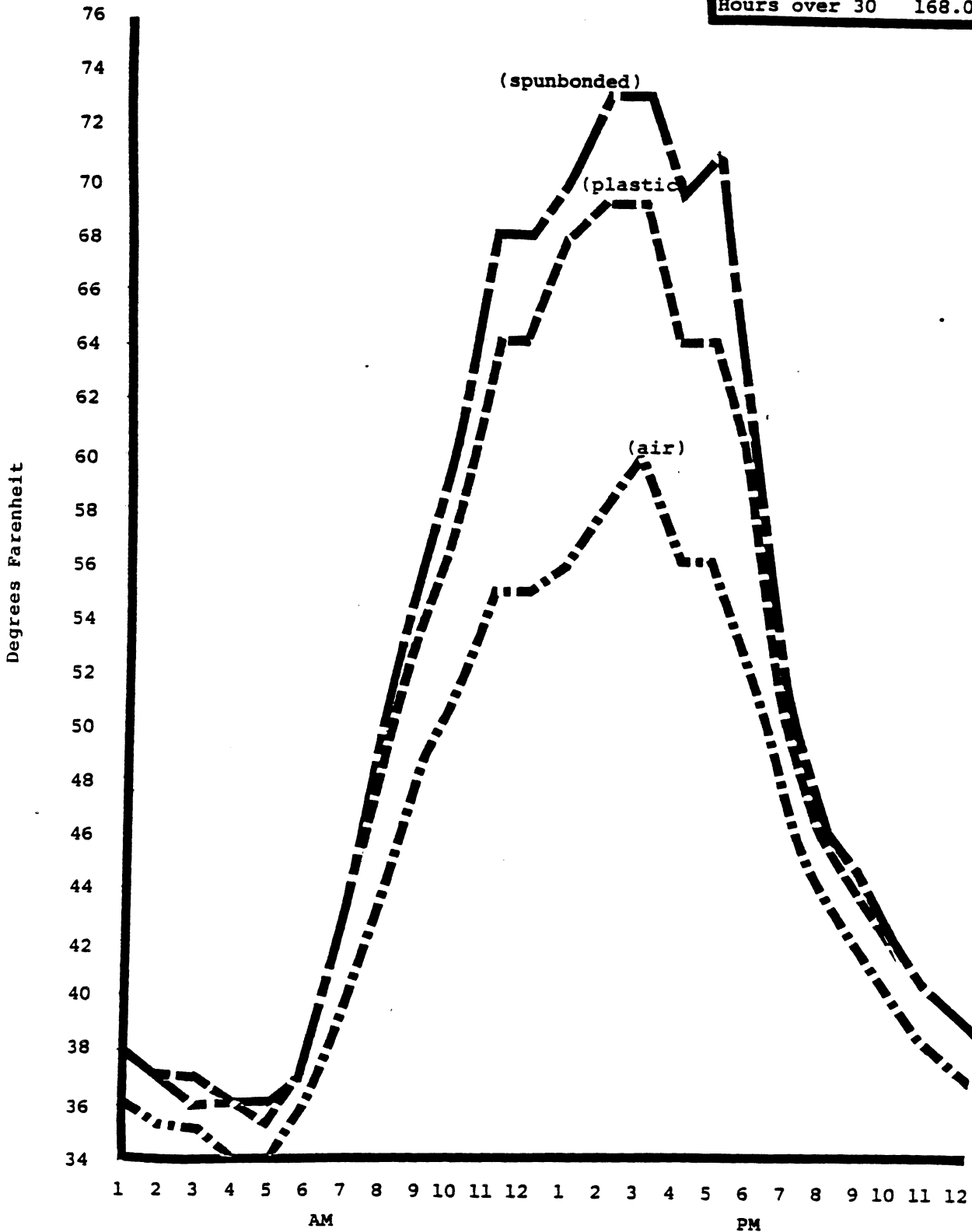


Fig. 1. Effect of row cover on air temperature (mean of 7 consecutive days). April 13 (beginning date) thru April 19 (ending date).

	S	P	A
Hours over 80	31.00	21.25	9.50
Hours over 70	36.50	32.00	27.00
Hours over 60	59.00	54.75	51.00
Hours over 50	88.00	85.50	76.50
Hours over 40	138.00	128.50	134.50
Hours over 30	168.00	168.00	168.00

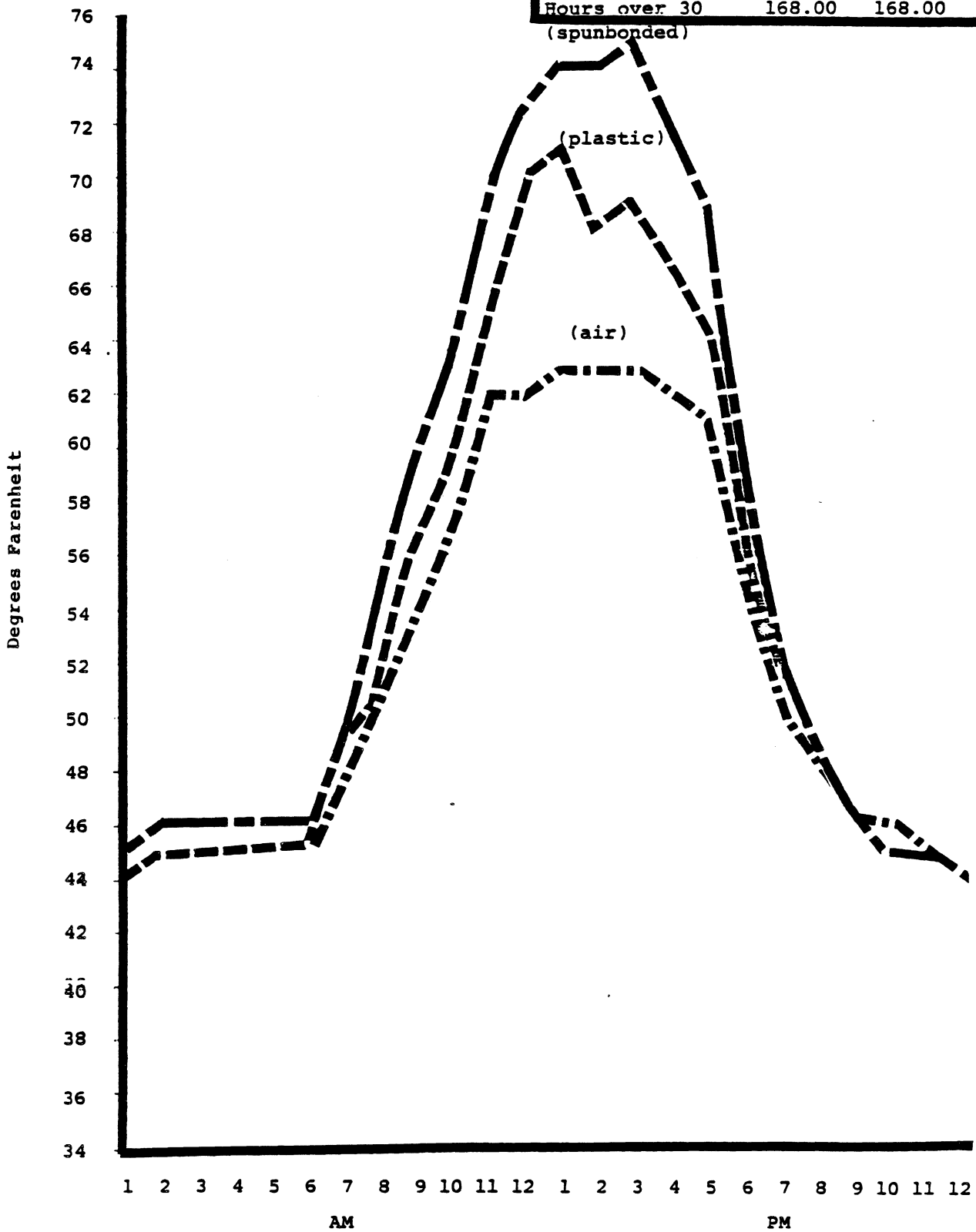


Fig. 2. Effect of row covers on air temperature (mean of 7 consecutive days). April 20 (beginning date) thru April 26 (ending date).

	S	P	A
Hours over 80	18.50	4.50	0
Hours over 70	34.50	28.75	12.25
Hours over 60	55.50	49.50	45.25
Hours over 50	125.00	113.25	109.00
Hours over 40	148.25	146.50	142.25
Hours over 30	168.00	168.00	168.00

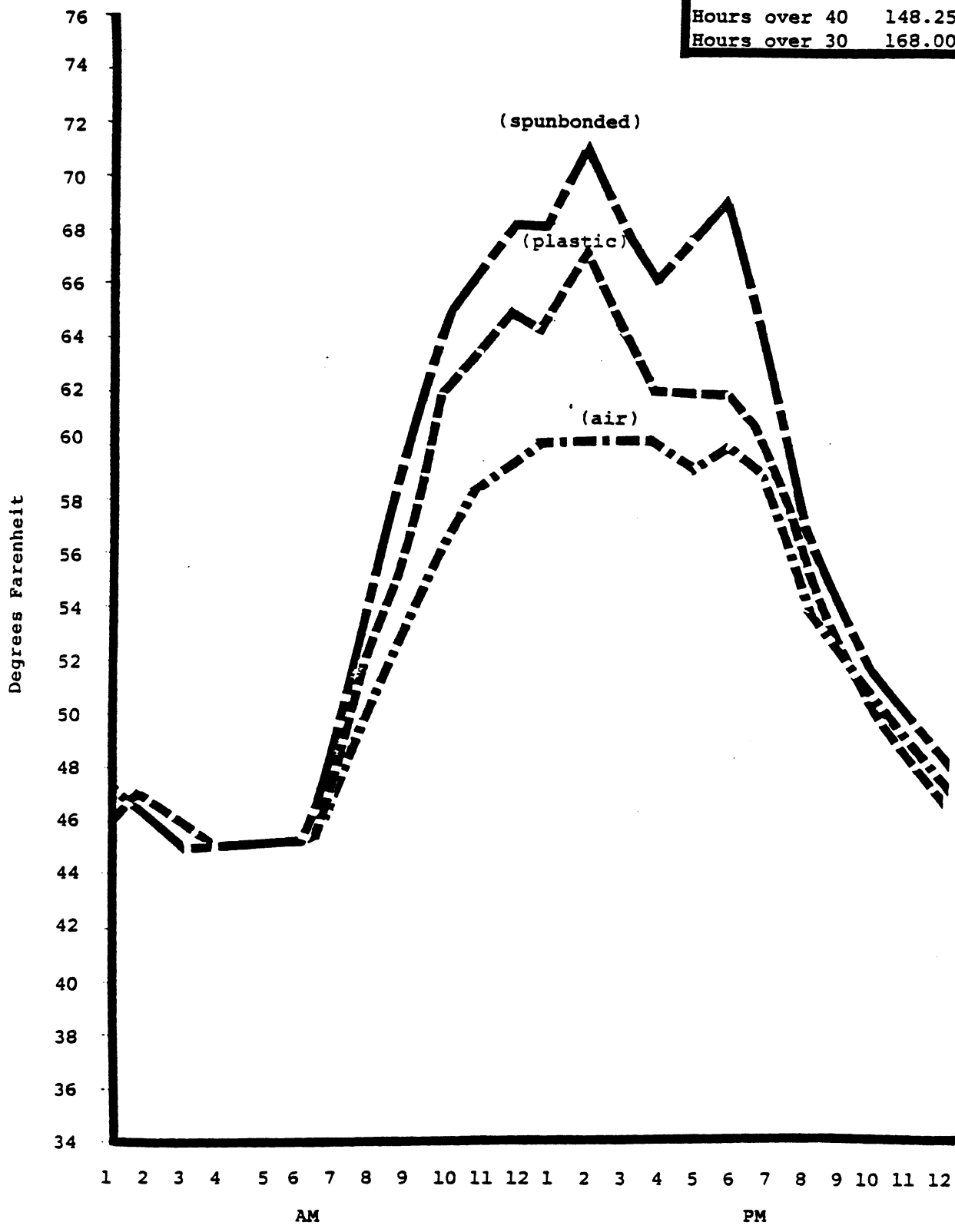


Fig. 3. Effect of row covers on air temperature (mean of 7 consecutive days May 4 (beginning date) thru May 10 (ending date)).

	S	P	A
Hours over 80	24.50	12.75	.5
Hours over 70	42.25	29.00	15.25
Hours over 60	70.25	62.00	46.00
Hours over 50	99.75	98.50	84.00
Hours over 40	155.50	152.50	142.00
Hours over 30	168.00	168.00	168.00

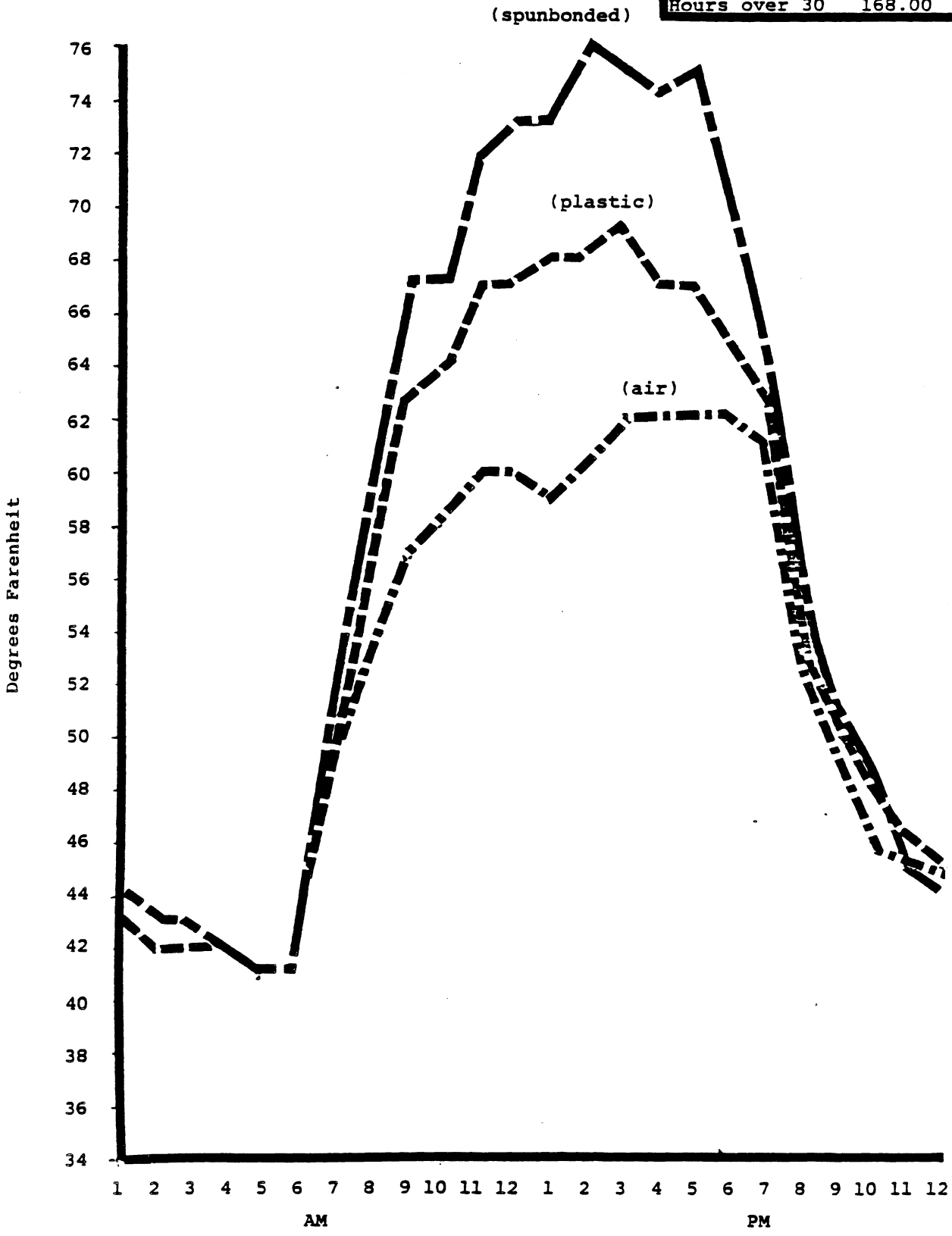


Fig. 4. Effect of row covers on air temperature (mean of 7 consecutive days April 27 (beginning date) thru May 3 (ending date)).

PARSLEY SEED RATE AND SPACING STUDY - 1984

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Five seed rates, three seed preparations, and two types of shoes were tested for increasing yields per acre. Two cuttings were taken and the fresh weights were recorded. Results are summarized in this report.

Cultural Information

Eight hundred sixty pounds of a 6-24-24 fertilizer was broadcast and disced in prior to planting. Seed was premeasured at the various rates and sown with a cone planter on May 25. Plot size consisted of three rows, eighteen feet long, spaced sixteen inches apart. Each treatment was replicated four times. Each plot cut was weighed immediately to eliminate weight loss. After the first cutting, the plot was cultivated and fertilized. No other time was the plot touched. Weed control was handled with standard herbicides. Insecticides were sprayed as needed. First cutting was made on Aug. 10 and the second on Sept. 19. The variety chosen was Forest Green with 70% germination.

Seed treatments were done prior to seeding in the field. Seed soaking was carried out in aerated water kept at 60°F (15.56°C) for 72 hours and then dried back down. Seed priming was accomplished by soaking the seed in PEG 6,000 (12 bar) for three weeks while aerating it then the seed was washed and dried back down.

Results

1) Shoe type: Tables 3 and 4 indicates again that by scattering the seed in a two inches band resulted in overall higher yields. This gives the parsley more area for growth and less chance of retarding growth by inhibitors. This practice was tested on Wier's Farms and found also to increase yields.

2) Seed rate: Tables 1 and 4 indicates that 24 lb and 28 lb of Forest Green 70% Ger. yields close to the same. However, in comparing to last year's test maximum rates are still in question.

3) Seed treatment: Tables 2 and 4 show confusion in which treatment adds in increasing yields. Priming seems to be a hindrance, while soaked seeds had no advantage. Last year's test indicated just the opposite. Further studies are needed.

4) This year's test was affected by heavy rain, early and high winds a week later. These winds caused blowing muck, which buried plants, as well as cut plants off at the surface.

TABLE 1. Main effect of seed rate on the number of twenty pound crates per acre². Fresh weight is a means of 24 observations.

Seed rate/acre	First & second cuttings
24	1033.71a
28	1006.17ab
16	979.04ab
10	967.92b
8	889.79c
LSD .05	52.01

²Mean separation within a column by Duncan's New Multiple Range Test, 5% level.

TABLE 2. Main effect of seed treatment on the number of twenty pound crates per acre². Fresh weight is a means of 40 observations.

Seed Treatment	First and Second cuttings
Raw seed	1000.02a
Soaked seed	986.80a
Primed seed	939.15b
LSD .05	40.29

²Mean separation within a column by Duncan's New Multiple Range Test, 5% level.

TABLE 3. Main effect of shoe type on the number of twenty pound crates per acre². Fresh weight is a means of 60 observations.

Shoe Type	First & Second cutting
2-inch scattered	1038.73
narrow	911.92
LSD .05	55.40

²Means separation within a column by Duncan's New Multiple Range Test, 5% level.

TABLE 4. Main effect of shoe type, seed rate and seed treatment on the number of twenty pound crates per acre². Fresh weight is the means of 4 observations.

Shoe Type	Seed Rate Rate (lb/acre)	Seed Treatment	First & Second cutting
2" scattered	20	raw	1266.26a
narrow	24	raw	1241.00ab
narrow	28	raw	1271.00abc
2" scattered	28	soaked	1199.25abc
2" scattered	24	raw	1168.25a-d
narrow	16	primed	1157.00a-e
2" scattered	28	raw	1119.75a-f
2" scattered	12	primed	1105.75b-g
2" scattered	16	primed	1075.75c-h
2" scattered	16	soaked	1072.25c-h
2" scattered	24	soaked	1044.00d-i
2" scattered	20	soaked	1040.50d-j
narrow	24	soaked	1013.75e-k
narrow	16	soaked	974.00f-k
2" scattered	20	primed	967.00g-k
narrow	12	primed	965.50g-k
2" scattered	24	primed	958.50g-l
narrow	20	soaked	936.00h-l
narrow	28	soaked	927.75h-m
2" scattered	16	raw	901.75i-n
2" scattered	28	primed	894.25i-n
2" scattered	12	raw	890.50j-n
2" scattered	12	soaked	877.28k-n
narrow	20	primed	812.00l-o
narrow	20	dry	785.75m-o
narrow	12	soaked	783.25m-o
narrow	24	primed	776.76no
narrow	12	raw	716.50o
narrow	16	raw	693.50o
narrow	28	primed	679.00o
LSD .05			127.39

²Means separation within columns by Duncan's New Multiple Range Test, 5% level.

COMMON MEASUREMENTS

Number of Feet of Row Per Acre at Various Row Spacings

Distance between Rows in inches	Feet of Row per acre
12	43,560
15	34,848
18	29,040
20	26,136
21	24,891
24	21,780
30	17,424
36	14,520
40	13,068
42	12,445
48	10,890
60	8,712
72	7,260
84	6,223
96	5,445

Length

1 centimeter = 10 millimeters
1 centimeter = 0.4 inch (0.394)
1 inch = 25.4 millimeters or 2.54 centimeters
1 foot = 30.48 centimeters
1 yard = 91.44 centimeters
1 yard = 0.914 meters
1 meter = 100 centimeters
1 kilometer = 1000 meters
1 kilometer = 0.621 mile

Area

1 square meter	= 10.8 square feet (10.76)
1 square meter	= 1.2 square yards (1.196)
1 square meter	= 0.0001 hectare
1 hectare	= 10000 square meters
1 hectare	= 2.47 acres
1 hectare	= 395 square rods (395.4)
1 acre	= 0.405 hectare (0.4047)
1 square mile	= 2.59 square kilometers
1 square kilometer	= 0.39 square mile (0.386)

Weight

1 gram	= 1000 milligrams
1 ounce	= 28 grams (28.35)
1 pound	= 454 grams (453.6)
1 kilogram	= 1000 grams
1 kilogram	= 2.2 pounds (2.205)
1 metric ton	= 2205 pounds (2204.6)
1 metric ton	= 1.1 short tons (1.102)
1 metric ton	= 0.98 long ton (0.9842)
1 short ton	= 2000 pounds
1 long ton	= 2240 pounds

Volume (liquid)

1 teaspoon	= 5 milliliters (approx.)
1 tablespoon	= 15 milliliters (approx.)
1 ounce	= 30 milliliters (approx.)
1 pint or 2 cups	= 473 milliliters (473.2)
1 quart	= 946 milliliters (946.3)
1 gallon	= 3785 milliliters (3785.3)
1 liter	= 1000 milliliters
1 pint	= 0.47 liter (0.473)
1 quart	= 0.95 liter (0.946)
1 gallon	= 3.8 liters (3.785)

FERTILIZER GUIDELINES FOR VEGETABLE CROPS GROWN ON MUCK SOILS IN OHIO

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Crop	Available Phosphorus**			Available Potassium**			Nitrogen* Amount to apply N lbs/A
	Below	Over		Below	Over		
	75	75-120	120	200	200-300	300	
	Amount to Apply						
P ₂ O ₅ lbs/A	P ₂ O ₅ lbs/A	P ₂ O ₅ lbs/A	K ₂ O lbs/A	K ₂ O lbs/A	K ₂ O lbs/A		
Beets, Red	150-200	100-150	50-100	175-225	125-175	75-125	25- 60
Carrots	150-175	125-150	75-125	250-300	200-250	150-200	75-100
Celery	250-300	200-250	150-200	375-425	350-375	300-350	50-125
Celery Cabbage	150-200	100-150	75-100	175-225	150-175	100-150	34- 45
Dill	175-200	150-175	125-150	175-200	150-175	125-150	40- 90
Endive	125-175	100-125	75-100	125-175	100-125	75-100	25- 90
Escarole	125-175	100-125	75-100	125-175	100-125	75-100	25- 90
Greens	125-150	100-125	75-100	150-175	125-150	100-125	40- 90
Lettuce	125-175	100-125	75-100	125-175	100-125	75-100	25- 90
Onions (Dry)	150-200	100-150	50-100	200-250	125-200	100-125	25- 90
Green Onions	100-150	75-100	50- 75	100-150	75-100	50- 75	25- 40
Parsley	125-175	100-125	75-100	125-175	100-125	75-100	25- 90
Potatoes	150-175	125-175	75-125	225-275	175-225	125-175	75-125
Radishes	125-150	100-125	75-100	100-150	75-100	50- 75	25- 75
Spinach	150-175	125-150	100-125	125-150	100-125	75-100	50-125
Sweet Corn	125-175	100-125	75-100	100-150	75-100	40- 75	50-140

*Amount of nitrogen to apply will vary with crop, time of year, soil temperature, water applied, type of muck, residue being incorporated into soil and related factors.

**REAL Lab Soil Test Values

December 1984

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