

**Summary of Vegetable Variety
Observations
Palmer, Alaska
1988**

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Introduction

Since 1986, observations of vegetable varieties have been conducted by the Plant Materials Center (PMC) to record performance of the varieties under local growing conditions. The primary goal of the observations is to select varieties for the commercial and market garden vegetable producers, and secondarily, for home garden use.

In 1988, they were conducted in two commercial grower's fields. Cabbage, storage cabbage and broccoli varieties were grown at the Gold Nugget Farm. Transplants of the fresh cabbage and broccoli were grown in the Gold Nugget greenhouses. The storage cabbage was direct seeded in their field. The minor crops were direct seeded in a field at the Pioneer Peak Farm. Both farms are located in the Butte area of Palmer.

Observations on all of the crops were made on single row plots. Data on the average weight per head was recorded, and cabbage core length was measured. Degree of stem cracking was recorded for the broccoli.

The broccoli did not hold well in the field this summer. Warm temperatures and 0.13 inches of rain two days before harvest caused the plants to deteriorate.

This year, for the first time, average circumference of the cabbage heads was measured. This measurement could be used to determine if a variety would pack a 24-head carton. A 24-head carton weighing 48-50 pounds is preferred by commercial buyers.

A 24-head carton weighing 48-50 pounds is preferred by commercial buyers. Observations made by Dr. Allan Mitchell, University of Alaska Fairbanks Agriculture and Forestry Experiment Station, indicated that lettuce heads with a circumference of 19" packed a 24-head carton. Heads with a circumference greater than 19" and less than 21" packed cartons of 22-23 heads. Since local growers use the same size carton to pack lettuce and cabbage, Dr. Mitchell's observations provide a guideline. Similar measurements will be made with cabbage next season

Acknowledgements

I would like to thank Jerry and Paula Giauque, and Ted and Katie Pyrah for allowing the PMC to plant trials on their farms. The farmers and their crews also provided valuable assistance planting and maintaining the trials. The vegetable variety trials could not have been conducted without their assistance.

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Thanks also go to Dr. Allan Mitchell for his data on the Relationship of Head Circumference to Number of Heads/Cartron - Lettuce, and to the seed companies for their contributions of seeds and information.

Table 1. Weather Data for the Palmer Growing Season* 1988, and Long-Term Average.

	AVERAGE TEMPERATURES			Total Precip. Inches
	Daily Max. F	Daily Min. F	Daily Mean F	
APRIL				
1988	48	30	39	3.31
Long-Term Average	46.36	26.50	36.43	.87
MAY				
	60	39	49	.40
Long-Term Average	58.79	36.57	47.79	.51
JUNE				
	66	45	56	3.95
Long-Term Average	65.29	44	54.93	1.54
JULY				
1988	68	48	58	3.77
Long-Term Average	68.21	47.71	58	2.52
AUGUST				
1988	66	45	56	1.53
Long-Term Average	66.36	44.36	55.36	1.77
SEPTEMBER				
	55	34	44	1.59
Long-Term Average	57.29	36.86	46.93	2.33

* Weather data recorded at the Alaska Plant Materials Center farm.

1988 SEED SOURCE LIST

SYMBOL	NAME AND ADDRESS
BJ	Bejo, Holland (seeds were obtained from Seedway)
JS	Johnny's Selected Seeds, 305 Foss Hill Road, Albion, ME 04910
MO	Harris Moran, 1155 Harkins Rd., Salinas, CA 93901
OS	Osborne Intl. Seed Co., 2080 Little Mountain Rd., Mt. Vernon, WA 98273
RS	Royal Sluis, Inc., 1293 Harkins Rd., Salinas, CA 93901
SW	Seedway, Hall, NY 14463

Crop: Broccoli

Date Seeded: April 30, 1988

Date Transplanted: May 31, 1988

Harvested August 3, 1988

Fertilizer Rate: 900 lb./ac. 10-20-20 Broadcast

Spacing: Rows - 18" Within Rows - 12"

Variety	Source	Average Head Wt.(lbs)	Days To First Harvest	Stem Cracking	Comments
HMX 6140	MO	0.87	64	3	Flat heads
EMPEROR	GP	0.83	64	3	>50% split stem, irregular heads, some soft rot
SKIFF	RS	0.79	64	1	Dome-shaped, uniform heads, little soft rot, held in the field
HMX 4137	MO	0.78	64	2	Few plants reached marketable size before soft rot, flat heads
SPRINTER	OS	0.70	64	2	>25% split stem, uneven heads, high % of soft rot, many laterals produced
CRUISER	RS	0.70	64	1	Flat, dome-shaped heads, few did not reach marketable size before soft rot, held in the field
EXP 45B	MO	0.60	64	3	Irregular loose heads
MINARET	JS	0.39	64	1	Very short stalks for specialty market
SAGA	JS				Not harvested, flowers opened up before harvest

1 - None, desirable; to 5 - Severe, undesirable

Crop: Cabbage

Date Seeded: April 30, 1988

Date Transplanted: June 1, 1988

Harvested August 4 to September 14, 1988

Fertilizer Rate: 1,200 lb./ac. 10-20-20 Broadcast

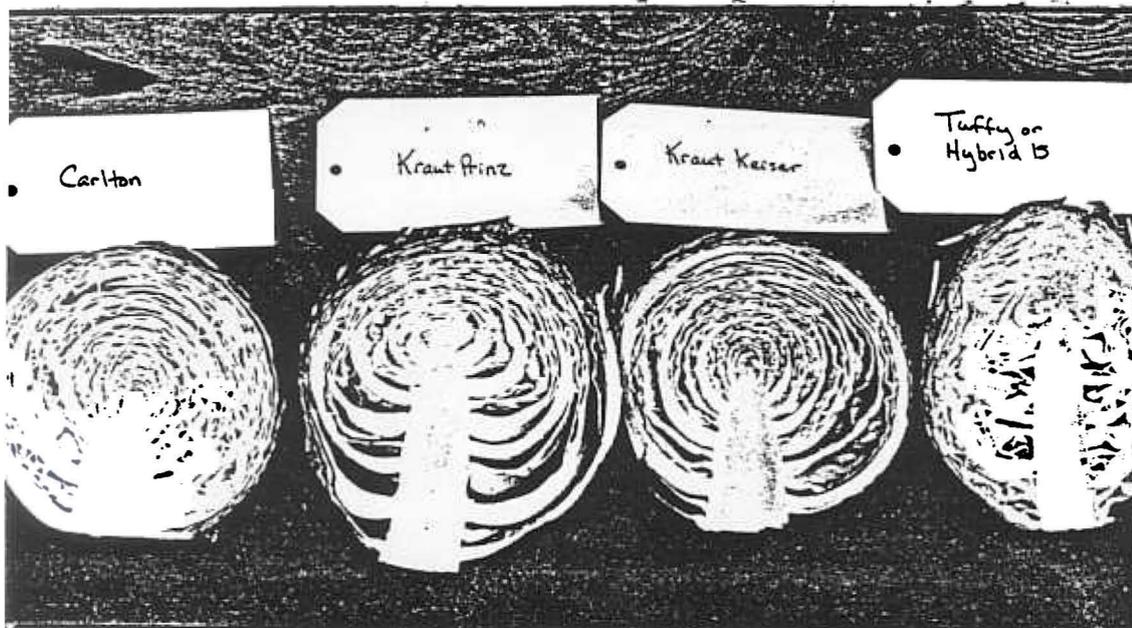
Spacing: Rows - 18" Within Rows - 12"

Variety	Source	Average Head Lbs.	Average Core Length Inches	Average Circumference Inches	Days To First Harvest	Comments
PERFECT BALL	JS	2.94	2.96	20.08	90	Very firm heads
CARLTON	SW/BJ	2.86	2.99	21.54	84	Dense head, light green
HYBRID 15	MO	2.81	4.66	19.92	84	Very firm heads, round - oval
FIELDKING	SW	2.67	2.66	21.16	79	Very firm, round heads, held well in the field, moose browsed
FIELDROCKET	SW	2.41	2.39	21.5	71	Not marketable, browning on leaf edge, head rot
KRAUTKAISER	SW/BJ	2.39	2.96	21.83	84	Not very dense
SLAWDNA	SW	2.36	3.52	17.42	90	Small, firm heads
KRAUTPRINZ	SW/BJ	2.17	4.08	21.42	83	Not uniform firmness, light to medium green, moose browsed
BINGO	SW/BJ	2.11	3.86	18.03	90	Very firm heads, dark green, oval
BENSON	SW/BJ	2.11	3.76	19.91	64	Small frame, round heads, little tip burn
FIELDLION	SW	2.11	3.08	21.57	90	Very firm, round, dark green outer, light inner leaves

Crop: Cabbage (Continued)

Variety	Source	Average Head Lbs.	Average Core Length Inches	Average Circumference Inches	Days To First Harvest	Comments
FIELDSPORT	SW/BJ	2.11	2.90	19.16	64	Dark green, oval very firm heads, small frame
PAREL	SW/BJ	2.08	3.57	18.91	64	Firm, round heads, bottom rot, very small frame. Heads in shade are oval; in sun, round
FIELDGOAL	SW	1.92	2.61	21.08	64	Light green, very round, firm heads
FIELDFORCE	SW	1.65	2.11	19.66	64	Not uniform, some tip burn
BARET	SW/BJ					Not harvested, head rot before they were mature
PERFECT ACTION	JS					Not harvested, heads rotted before they were mature

The core length for each variety was measured and an observation was made on the head density of each variety. Average core lengths for these varieties are: 'Carlton' - 2.99", 'Kraut Prinz' - 4.08", 'Kraut Kaiser' - 2.96", and 'Hybrid 15' 4.66".



Crop: Storage Cabbage

Date Seeded: May 2, 1988 Direct seeded to field

Harvested September 14, 1988

Fertilizer Rate: 900 lb./ac. 10-20-20 Broadcast

Spacing: Rows - 18" Within Rows - 12"

Variety	Source	Average Head Wt.(lbs)	Average Core Length Inches	Average Circumference Inches	Days To First Harvest	Comments
BRUTUS	SW	2.2	4.50	18.50	135	Oval-round heads, not firm
MANRICO	SW	2.3	4.00	18.83	135	Oval-round heads
BARTOLO	SW	2.1	3.86	18.33	135	Round, very firm
HINOVA	SW	2.6	3.36	18.83	135	Round-oval
BINGO	SW	1.8	3.54	16.00	135	Only one head harvested

MINOR CROPS

Crop: Kohlrabi

Date Seeded: June 22, 1988 Direct seeded to field
 Harvested September 7, 1988
 Fertilizer Rate: 800 lb./ac. 10-20-20 Banded at planting
 Spacing: Rows - 26" Within Rows - 14" - 16"

Variety	Source	Average Wt.(lbs)	Days To First Harvest	Comments
KOLPAK			77	Plants continued to grow after first frost

Crop: Chinese Cabbage

Date Seeded: June 22, 1988 Direct seeded to field
 Harvested September 7, 1988
 Fertilizer Rate: 800 lb./ac. 10-20-20 Banded at planting
 Spacing: Rows - 26" Within Rows - 14" - 16"

Variety	Source	Average Wt.(lbs)	Days To First Harvest	Comments
NERVA	JS	2.11	77	Held in the field
LETTUCY TYPE	JS	1.03	77	Bolted, infested with root maggots, poor color

Crop: Kale

Date Seeded: June 22, 1988 Direct seeded to field
 Harvested September 7, 1988
 Fertilizer Rate: 800 lb./ac. 10-20-20 Banded at planting
 Spacing: Rows - 26" Within Rows - 12"

Variety	Source	Average Wt.(lbs)	Days To First Harvest	Comments
WINTERBOR			77	Looked good

Crop: Radicho

Date Seeded: June 22, 1988 Direct seeded to field
 Fertilizer Rate: 800 lb./ac. 10-20-20 Banded at planting

Variety	Source	Total Harvested
'ALTO'		

Crops not harvested because they did not mature include:
 Squash 'COCAZELLE' JS Would mature if planted earlier
 'SUNBURST' JS Could be used for "baby vegetables"