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1989-1992 VEGETABLE CULTIVAR TRIALS ON GUAM

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INTRODUCTION

Vegetable cultivar trials were conducted in three locations – a farmer's field in Barrigada, at the Radio Barrigada Experimental Farm and at Yigo Agricultural Experimental Farm – between 1989-1992. Head cabbage, watermelon, lettuce, tomato and hot pepper were tested. Seeds of cabbage, lettuce, tomato and hot pepper were sown in a Todd planter flat with 72 of the 2 inch by 2 inch cells (Speedling Co.) filled by hand with commercial potting mix (Sunshine Mix.) Seedlings were fertilized with liquid fertilizers at least three times before being transplanted into the field. Watermelon was directly seeded in the field. The recommended rate of complete fertilizers was applied prior to transplanting seedlings in the field (pre-plant) and additional fertilizers were applied as side-dressing or through trickle irrigation system by a fertilizer injector. All fields were irrigated by trickle irrigation system. Recommended pesticides were applied to each type of vegetable, as needed.

Planting date, harvest date, location of the experiment, soil type, experimental design, rainfall during the experiment, and insect and disease occurrences are noted with the result of each cultivar evaluation when available. Sources or origin of seeds are also presented in the following tables.

WEATHER RECORD

Local climatological data reported by the National Oceanic and Atmospheric Administration, (NOAA.)

1989:

Month	Temperature (°F)			Precipitation
	Max	Min	Ave	(inches)
Jan	85.7	73.4	79.6	3.31
Feb	85.5	70.9	78.2	9.95
Mar	86.5	68.9	77.7	1.01
Apr	86.1	73.3	79.7	10.93
May	87.0	74.3	80.7	4.30
Jun	86.6	72.6	79.6	9.27
Jul	86.4	72.6	79.5	11.64
Aug	86.1	72.7	79.4	13.27
Sep	86.4	71.7	79.1	14.38
Oct	86.4	72.0	79.2	12.74
Nov	86.0	72.8	79.4	10.52
Dec	85.5	73.5	79.5	4.07
Mean	86.2	72.4	79.3	
Total				105.39

1990:

Month	Temperature (°F)			Precipitation
	Max	Min	Ave	(inches)
Jan	83.9	73.5	78.7	17.01
Feb	84.0	72.3	78.2	3.72
Mar	84.7	71.7	78.2	2.64
Apr	87.2	71.7	79.5	2.52
May	87.9	73.3	80.6	4.95
Jun	87.9	73.9	80.9	6.28
Jul	88.0	72.4	80.2	14.49
Aug	86.1	73.0	79.6	17.25
Sep	85.8	72.6	79.2	22.00
Oct	86.9	72.9	79.9	8.46
Nov	85.3	73.6	79.5	16.41
Dec	84.0	73.2	78.6	7.35
Mean	86.0	72.8	79.4	
Total				123.08

1991:

Month	Temperature (°F)			Precipitation
	Max	Min	Ave	(inches)
Jan	83.5	72.1	77.8	4.85
Feb	83.7	71.8	77.8	4.58
Mar	84.8	72.5	78.7	1.79
Apr	85.9	74.6	80.3	6.33
May	86.7	74.7	80.7	4.40
Jun	86.7	75.3	81.0	7.28
Jul	87.6	73.6	80.6	13.33
Aug	87.2	73.8	80.5	18.62
Sep	86.3	73.6	80.0	11.27
Oct	86.3	72.8	79.6	14.49
Nov	85.3	73.8	79.6	13.72
Dec	84.5	72.1	78.3	3.29
Mean	85.7	73.4	79.6	
Total				103.95

1992:

Month	Temperature (°F)			Precipitation
	Max	Min	Ave	(inches)
Jan	83.3	72.7	78.0	9.81
Feb	84.2	70.7	77.5	1.75
Mar	85.0	72.3	78.7	2.28
Apr	86.4	71.1	78.8	2.57
May	88.0	71.6	79.8	6.23
Jun	87.7	75.0	81.4	3.40
Jul	87.1	73.9	80.5	10.08
Aug	86.0	72.7	79.4	38.13
Sep	86.9	74.3	80.6	5.95
Oct	86.8	73.2	80.0	15.01
Nov	85.3	73.8	79.6	12.91
Dec	84.4	73.2	78.8	2.17
Mean	85.9	72.9	79.4	
Total				110.29

Typhoon:	Highest wind speed	Greatest precipitation in 24 hours
1989 4/21(Andy)	58 mph (25.9 m/sec)	4.93 in. (12.5 cm)
1990 12/21 (Russ)	89 mph (39.8 m/sec)	3.44 in. (8.7 cm)
1991 11/27 (Yuri)	79 mph (35.3 m/sec)	6.50 in. (16.5 cm)
1992 8/28 (Omar)	117 mph (52.3 m/sec)	15.36 in. (39.0 cm)
1992 10/21 (Brian)	61 mph (27.3 m/sec)	6.40 in. (16.3 cm)

Yield and plant characteristics of 19 ***head cabbage*** *cultivars, 1989*

Source of all cultivars: Takii

Cultivar	Average wt. of head in **lbs** (in grams)	Percetage of marketable harvest (%)	Plant height in **inches** (in cm) 3-1-89	Plant height in **inches** (in cm) 3-13-89	Canopy diameter in **inches** (in cm) 3-1-89	Canopy diameter in **inches** (in cm) 3-13-89	Head diameter in **inches** (in cm) 3-1-89	Head diameter in **inches** (in cm) 3-13-89
KK-Cross	**2.97** (1348.8)	75.0	**16.3** (41.5)	**9.8** (25.0)	**22.0** (55.8)	**23.9** (60.6)	**6.9** (17.5)	**8.6** (21.8)
KY-Cross	**2.81** (1280.0)	79.3	**15.8** (40.2)	**12.5** (31.7)	**21.3** (54.0)	**26.6** (67.6)	**8.0** (20.4)	**8.7** (22.1)
CO-Cross	**2.70** (1228.0)	81.5	**15.4** (39.1)	**13.4** (34.0)	**21.6** (54.8)	**26.7** (67.7)	**7.1** (18.1)	**8.0** (20.2)
Green Stone	**2.53** (1150.1)	79.0	**14.6** (37.2)	**8.6** (21.8)	**21.2** (53.9)	**19.2** (48.8)	**6.1** (15.5)	**7.1** (18.0)
Southern Treasure	**2.28** (1034.7)	85.5	**17.3** (43.9)	**13.3** (33.7)	**23.5** (59.6)	**27.6** (70.2)	**5.3** (13.5)	**6.9** (17.6)
YR Summer 50	**2.27** (1030.1)	94.0	**14.8** (37.7)	**9.7** (24.7)	**20.7** (52.6)	**24.6** (62.5)	**6.3** (16.0)	**7.8** (19.9)
Tight Globe	**2.08** (947.2)	50.0	**18.8** (47.8)	**18.0** (45.8)	**23.1** (58.7)	**28.7** (72.9)	**4.1** (10.3)	**6.7** (17.0)
Resist Crown	**2.02** (917.6)	83.3	**17.0** (43.1)	**13.1** (33.3)	**22.0** (55.8)	**25.2** (64.0)	**4.7** (11.9)	**7.2** (18.3)
Green Impulse	**1.94** (880.6)	77.0	**14.4** (36.5)	**15.1** (38.3)	**20.9** (53.2)	**26.9** (68.3)	**5.1** (13.0)	**7.1** (18.0)
Emerald Cross	**1.91** (866.0)	58.3	**11.5** (29.3)	**9.4** (24.0)	**17.0** (43.3)	**18.4** (46.8)	**4.4** (11.2)	**5.2** (13.2)
Globe Master	**1.69** (767.5)	85.5	**17.9** (45.5)	**15.3** (38.8)	**22.6** (57.5)	**26.5** (67.3)	**3.7** (9.3)	**5.6** (14.1)
NS-Cross	**1.61** (729.6)	81.3	**17.9** (45.5)	**15.5** (39.4)	**25.1** (63.8)	**30.7** (77.9)	**4.7** (11.9)	**5.7** (14.4)
Resist Ball	**1.38** (628.2)	67.0	**18.6** (47.3)	**15.3** (38.8)	**22.1** (56.1)	**26.4** (67.0)	**4.5** (11.4)	**11.4** (28.9)
CG-Cross	**1.16** (528.8)	48.0	**10.8** (27.4)	**9.1** (23.1)	**15.9** (40.4)	**19.1** (48.4)	**3.3** (8.5)	**4.7** (11.9)
Golden Cross	**0.96** (437.5)	31.3	**8.7** (22.1)	**8.6** (21.8)	**11.7** (29.7)	**14.4** (36.6)	**3.6** (9.1)	**4.5** (11.5)
Green Cross	**0.85** (388.4)	56.3	**18.0** (45.7)	**16.0** (40.7)	**25.1** (63.8)	**29.5** (75.0)	**4.1** (10.4)	**6.3** (16.0)
Ruby Ball	**0.80** (364.0)	75.0	**11.5** (29.2)	**9.1** (23.1)	**16.9** (42.8)	**20.2** (51.3)	**3.4** (8.7)	**4.0** (10.1)
RI-Cross	**0.52** (237.2)	49.8	**28.3** (42.6)	**12.5** (31.7)	**24.4** (61.9)	**29.4** (74.7)	**3.5** (8.8)	**5.0** (12.8)
Ruby Perfection	**0.18** (80.7)	33.5	**12.8** (32.5)	**12.9** (32.7)	**17.0** (43.3)	**20.9** (53.0)	**1.8** (4.5)	**2.4** (6.1)
Average	**1.72** (781.3)	67.9	**15.2** (38.6)	**12.5** (31.7)	**20.7** (52.7)	**24.4** (62.0)	**5.1** (13.0)	**6.5** (16.5)

Location:	Barrigada
Soil type	Saipan/Guam complex, clayey, montmorillonitic, isohyperthermic Udic Haplustalfs
Field layout:	12 plants/plot; 3.6 ft. x 18 ft. plot; 4 replications
Planting date:	Transplanted 1/4/89
Harvest date:	3/13/89
Insect:	Low population of cutworm (*Spodoptera litura*)

Survival rate and plant characteristics of 7 ***head cabbage*** *cultivars, 1991*

Cultivar	Source	Average wt. of head in **lbs** (in grams)	Plant survival (%)	Head diameter in **inches** (in cm)	Canopy diameter in **inches** (in cm)	Remark
KK-Cross	Takii	**0.90** (411.1)	72.7	**5.4** (13.7)	**10.1**(25.6)	Yield decline due to bacterial diseases
Resist Crown	Takii	**0.75** (340.2)	84.1	**3.3** (8.4)	**12.6**(32.1)	Slow growth; compact head; necrotic spots on outer leaves
YR Summer 50	Takii	**0.69** (312.4)	100	**5.9** (14.9)	**12.8**(32.5)	Bacterial disease; necrotic spots on outer leaves
YR Rampau	Norin	**0.39** (177.1)	86.4	**5.1** (12.9)	**13.7**(34.8)	Slow growth; angular shape of head
Southern Treasure	Takii	**0.30** (134.6)	95.5	**4.9** (12.5)	**11.1**(28.3)	Slow growth and head formation
KY-Cross	Takii	**0.25** (113.4)	40.9	**4.1** (10.4)	**5.9** (15.1)	Bacterial disease; interveinal chlorosis
Golden Cross	Takii	-	0	-	-	100% death due to bacterial diseases
Average		**0.55** (248.1)	72.4	**4.8** (12.1)	**11.0**(28.0)	

Location: Yigo
Soil type and pH: Guam Cobbly Clay: Clayey, gibbsitic, nonacid, isohyperthermic, Lithic Ustorthents, pH=7.5
Planting date: Seeded 6/12/91; transplanted 7/11/91
Field layout: 11 plants/plot; 3.6ft x 16.4ft plot; 4 replications
Data taken: 9/19/91
Rainfall: 125.8 cm (=41.3 inches) during 7/11/91- 9/19/91
Insect: High population; cluster caterpillar (*Crocidolomia pavonana*) and webworm (*Hellula undalis*)
Disease: Black rot (*Xanthomonas campestris*); Bacterial soft rot (*Erwinia carotovora*)
Remark: Severe outbreak of bacterial diseases during the experiment

Yield and fruit characteristics of 26 ***watermelon*** *cultivars, 1991*

Cultivar	Source	Yield (lb/A)	Fruit wt (lb)	Sugar content (%)	Belly rot[z]	Blotch[z]
Sky Luck	Known-You	21,806*	11.1	8.9	R	S
Carmen	Twilley	21,202*	13.9	9.0	R	I
Southern Light	Known-You	18,300*	7.2	10.3	R	-
Crimson Sweet	Petoseed	18,071*	10.5	11.7	I	S
Sweet Favorite	Twilley	17,058*	12.2	11.0	R	I
Top Yield	Sakata	15,935*	9.4	13.5	I	I
Empire #2	Known-You	14,200	12.8	9.3	I	I
Imperial(5005)	Petoseed	13,408	6.0	9.0	R	S
Big Top	Sakata	13,281	8.2	8.7	I	S
SweetmeatII	Petoseed	12,770	9.5	8.5	R	S
Regency	Petoseed	12,200	8.8	9.0	I	S
Sugarlee	Willhite	11,817	9.8	10.1	R	R
Royal Sweet	Petoseed	10,899	11.9	10.0	R	S
Crimsontide	Twilley	10,805	9.3	11.2	R	S
Paladin	Sakata	10,269	10.2	9.0	S	R
Summer Festival	Sakata	9,605	9.3	10.6	I	I
Early Jubilee	Petoseed	9,299	15.7	11.1	S	S
Glory	Takii	9,095	7.2	9.8	I	I
Super Top	Sakata	8,840	10.8	11.3	I	S
Klondike II	Known-You	8,584	6.9	11.2	R	S
Peace	Known-You	8,363	4.8	9.2	I	-
Calhoun Gray	Willhite	8,338	15.5	9.2	I	R
Farmer's Giant	Known-You	7,870	7.6	9.9	R	I
New Dragon	Known-You	7,223	6.1	10.5	I	S
Golden Crown	Known-You	4,169	3.5	10.5	I	-
Au Producer	Willhite	3,480	7.8	9.5	R	R
Average		11,803.4	9.47	10.08		

* Significantly higher yields than the rest.
[z] R=Resistant; I=Intermediate; S=Susceptible

Location: Radio Barrigada
Soil type: Clayey, montmorillonitic, isohyperthermic Udic Haplustalfs
Planting date: 2/89
Harvest date: 5/89

Lettuce Trial, 1991

A lettuce cultivar trial was conducted on a Guam Cobbly Clay soil using the following three cultivars:

Cultivar	Source
Anuenue	University of Hawaii
Green Mignonette	Takii
Okayama Salad	Takii

Yields per plant ranged from 2-4.5 oz. None of the plants were marketable due to bitterness, indicating the presence of intolerable stress on the plants. Unfavorable environmental conditions probably included inadequate water supply, high temperature and other environmental stresses.

Planting Condition

Location:	Dededo
Soil type:	Guam Cobbly Clay
Planting date:	Seeded 4/24/91; transplanted 3 weeks later
Field layout:	33 plants/plot; 0.82ft x 3.28ft plot; 3 replications
Data taken:	6/4/91
Insect:	No significant insect damage
Disease:	No significant disease

General remark: Irrigation was applied every other day under high solar intensity and dry weather conditions.

*Yield and fruit characteristics of 22 **tomato** cultivars and accessions, 1992a*

Accession no. or Cultivar	Total marketable yield per plant in **lbs** (in grams)	Average fruit wt. in **oz** (in grams)	Friut Soluble solids (%)	Fruit pH	Fruit Citric acid (%)	Fruit Dry wt (%)	Rating of Fruit crack (1-5)*
Chandelier	**5.74** (2610)	**4.34** (123)	3.48	3.79	0.33	4.3	2.8
FMTT 22	**4.66** (2118)	**4.66** (132)	4.41	3.81	0.35	7.0	1.2
Hope No.1	**4.52** (2053)	**5.93** (168)	3.57	3.83	0.28	4.3	3.8
FMTT 138	**4.16** (1889)	**2.68** (76)	4.21	3.78	0.31	8.3	1.4
FMTT 267	**4.08** (1855)	**4.24** (120)	4.51	3.76	0.31	6.4	2.2
FMTT 270	**3.40** (1545)	**3.99** (113)	3.96	3.85	0.33	4.8	1.4
FMTT 269	**3.32** (1508)	**3.88** (110)	4.03	3.84	0.31	4.5	2.0
Dynamo	**3.28** (1492)	**1.87** (53)	4.51	3.65	0.40	5.7	2.0
FMTT 301	**3.12** (1416)	**4.34** (123)	4.18	3.98	0.28	5.0	1.8
Solar Set	**3.09** (1403)	**7.31** (207)	4.41	3.84	0.31	4.7	2.3
FMTT 277	**2.97** (1350)	**4.84** (137)	4.64	3.82	0.32	5.2	2.6
Tropic Boy	**2.72** (1235)	**6.11** (173)	4.26	3.87	0.38	5.3	3.4
FMTT 32	**2.59** (1175)	**3.14** (89)	3.75	3.77	0.41	4.7	1.4
Master No. 2	**1.87** (850)	**4.87** (138)	4.56	3.94	0.32	5.3	4.2
N-65	**1.78** (811)	**6.00** (170)	4.36	3.85	0.31	5.5	4.8
Firebird	**1.63** (742)	**7.10** (201)	4.56	3.96	0.28	4.9	3.6
UH8637	**1.45** (659)	**6.50** (184)	4.23	3.88	0.37	5.0	5.0
Red Queen	**1.28** (584)	**5.08** (144)	4.11	3.89	0.27	4.1	4.6
Red King	**1.17** (533)	**4.73** (134)	4.04	3.96	0.28	4.2	4.8
Firedance	**0.95** (433)	**6.04** (171)	4.44	3.74	0.36	5.3	4.0
Fireball	**0.84** (382)	**7.06** (200)	4.86	3.83	0.34	5.5	4.0
Bestom	**0.62** (284)	**7.17** (203)	4.88	3.94	0.36	5.5	5.0
Average	**2.69** (1224)	**5.08** (144)	4.27	3.84	0.33	5.3	3.1

* Fruit crack rating ranged from 1=little to 5=severe

Location:	Yigo
Soil type and pH:	Guam Cobbly Clay; Clayey,gibbsitic, nonacid, isohyperthermic, Lithic Ustorthents, pH=7.5
Field layout:	18 plants in 2 rows/plot; 3.6 ft. x 16.4 ft plot; 4 replication
Planting date:	Seeded 1/14/92; transplanted 2/11/92
Harvested:	3/31; 4/1, 3, 6, 9, 13, 14, 15, 16, 17, 20, 22, 24, 27, 29; 5/1, 4, 7, 12, 14
Rainfall:	17.4 cm (= 6.85 inches) during 2/21/92-5/14/92
Insect:	Philippine lady beetle (*Epilachna vigintisexpunctata*); garden looper (*Chrysodeixis chalcites*)
Disease:	Root-knot nematode (*Meloidogyne* sp.); Tobacco mosaic virus
Physiological disorder:	Secondary vegetative growth at inflorescence; chlorosis; fruit cracking; blossom-end-rot

*Evaluation of 22 **tomato** cultivars and accessions, 1992b*

Accession no. or Cultivar	Growth habit	Source	Nematode:Rating*		Percentage of Plants Harvest (%)	Fruit quality (% by weight)		
			Ave	Range		*No damage*	*Insect damage*	*Cracked / deformed*
FMTT 32	Determinate	AVRDC	2.0	1—3	98.1	83.4	1.8	14.7
FMTT 138	Indeterminate	AVRDC	2.0	1—3	100.0	92.5	4.0	3.5
FMTT 22	Indeterminate	AVRDC	0.3	0—1	100.0	87.6	3.6	8.8
FMTT 267	Indeterminate	AVRDC	1.0	1	98.1	77.8	4.4	17.9
FMTT 269	Indeterminate	AVRDC	2.0	1—3	100.0	79.0	6.7	14.3
FMTT 270	Indeterminate	AVRDC	2.0	1—3	100.0	81.2	6.8	12.1
FMTT 277	Indeterminate	AVRDC	2.0	1—3	98.1	71.6	4.6	23.8
FMTT 301	Indeterminate	AVRDC	1.7	1—2	96.3	80.7	4.7	14.5
Solar Set	Determinate	Asgrow	1.7	1—3	92.6	70.1	8.0	21.9
Hope No.1	Determinate	Takii	1.0	1	100.0	59.6	6.2	34.2
Chandelier	Determinate	Takii	1.0	1	100.0	69.1	9.9	21.0
Bestom	Indeterminate	Takii	0	—	96.3	12.5	6.4	81.1
Tropic Boy	Indeterminate	Takii	1.3	0—3	100.0	60.2	9.5	30.3
Master No. 2	Indeterminate	Takii	0	—	98.1	45.0	3.0	52.0
Firedance	Indeterminate	Sakata	0.3	0—1	100.0	19.3	5.7	75.0
Fireball	Indeterminate	Sakata	0	—	100.0	15.9	9.3	74.8
Firebird	Indeterminate	Sakata	2.0	1—3	98.1	36.7	10.6	52.7
Red Queen	Determinate	Sakata	1.0	1	100.0	33.0	8.1	59.0
Red King	Determinate	Sakata	0	—	96.3	34.8	8.7	56.5
Dynamo	Indeterminate	Sakata	0.3	0—1	96.3	84.9	3.6	11.5
UH8637	Determinate	Univ. of Hawaii	1.7	1—3	100.0	37.6	7.4	55.0
N-65	Indeterminate	Univ. of Hawaii	0	—	98.1	33.3	7.8	58.9
Average			1.1		98.5	57.5	6.4	36.1

* Four plants/plot were examined for root-knot nematode infestation. Rating: 0=no infestation, 1=slight, 2=medium and 3=severe

*Evaluation of **hot pepper**, 1992*

Cultivar or accession no.	Origin/Source	Total marketable yield per10 plants in **lbs** (in grams)	Total no. of marketable fruits per 10 plants	Flowering date (days after transplanting)	Plant survival rate (%) on 10/15/92
Cheongryong	Korea/KBNU	**5.26** (2393)	156.0	20	71.4
Unknown X		**5.00** (2271)	714.0	20	82.1
Long Fruit	Thailand/AVRDC	**4.64** (2108)	215.5	20	17.9
Unknown Y		**4.57** (2079)	602.5	21	57.1
KA-11	Sri Lanka/RARC-KA	**4.57** (2077)	821.5	20	39.3
Hot Beauty (F1)	Taiwan/Known-You	**4.39** (1998)	309.0	21	75.0
Guam Local	Guam	**3.29** (1497)	297.5	34	41.2
KA-2	Sri Lanka/RARC-KA	**3.24** (1472)	433.5	20	60.7
Huaruar	Thailand/KKU	**3.14** (1429)	781.0	27	71.4
Huay Sithon	Thailand/KKU	**3.02** (1372)	767.0	25	25.0
Hot Long (F1)	Korea/Seoul Seed Co.	**2.90** (1319)	83.0	20	35.7
Twist Green (F1)	Korea/Seoul Seed Co.	**2.85** (1296)	164.0	20	14.3
Yangjiao	Taiwan/AVRDC	**2.81** (1275)	68.0	21	50.0
Szechwan 10	Taiwan/AVRDC	**2.71** (1231)	166.0	20	0
Var. PL-2289	Nigeria/IAR	**2.64** (1199)	1046.0	23	53.6
Punjab Lal	India/PAU	**2.57** (1170)	587.3	21	82.1
Long Chili (F1)	Taiwan/Known-You	**2.53** (1149)	87.0	20	7.1
Lv.1583	Indonesia/LEHRI	**2.43** (1106)	122.5	20	10.7
Extra Long Selection	India/PAU	**2.42** (1101)	308.0	20	17.9
KKU Cluster	Thailand/KKU	**2.13** (970)	351.0	25	32.1
Cipanas	Indonesia/LEHRI	**2.07** (939)	151.0	20	25.0
Keriting	Indonesia/LEHRI	**2.02** (918)	408.0	22	60.7
Ludhiana Long Selection	India/PAU	**1.90** (862)	113.5	20	60.7
Unknown Z		**1.84** (836)	69.0	26	53.6
Var. P. Sakaraho	Nigeria/IAR	**1.83** (832)	979.5	34	42.9
Chain Fair (F1)	Taiwan/Known-You	**1.68** (765)	58.5	20	46.4
Atarodo	Nigar/AVRDC	**1.64** (747)	172.0	21	84.9
Lv.2319	Indonesia/LEHRI	**1.58** (719)	74.0	20	10.7
Lv.1092	Indonesia/LEHRI	**1.52** (691)	110.0	20	53.6
IAC Ubatuba Cambuci	Brazil/IAC	**1.26** (573)	25.0	34	46.4
Lv.2323	Indonesia/LEHRI	**1.19** (543)	41.0	20	3.6
Average		**2.76** (1256)	332.0	22.4	43.0

Location:	Yigo
Soil type and pH:	Guam Cobbly Clay; Clayey, gibbsitic, nonacid, isohyperthermic, Lithic Ustorthents, pH=7.5
Field layout:	14 plants/plot; 2.95ft x 14.76ft plot; 1-3 replications
Planting date:	Transplanted 6/2/92
Harvested:	7/8,15,22,29; 8/5,12,19,26; 9/2,9,16,23,30; 10/7,14
Major problem:	Typhoon Omar (8/28) caused severe plant damages

SUMMARY

The following cultivars and accessions tested in the 1989-1992 vegetable variety trials show promise under Guam's conditions.

Head cabbage

Medium-large green:

KK-Cross, KY-Cross, CO-Cross, Resist Crown, YR Summer 50

Small purple:

Ruby Ball

Watermelon

Sky Luck, Crimson Sweet, Carmen, Sweet Favorite,

Southern Light, Top Yield

Tomato

Medium-large:

Determinate—Solar Set, Tropic Boy, Hope No.1

Indeterminate—FMTT 22, FMTT 301, FMTT 267, Chandelier

Small-medium:

Determinate—FMTT 32

Indeterminate—Dynamo

Hot Pepper

Data obtained from the 1992 trial will be used for further evaluation of hot pepper cultivars and accessions. Fruit characteristics and pungency should be evaluated before a final recommendation is made.

Appendix 1: Conversion Table

Temperature		Length		Weight		
°C	°F	cm	inch	g	oz	lb
20	68.0	5	2.0	10	0.35	0.02
21	69.8	10	3.9	50	1.76	0.11
22	71.6	15	5.9	100	3.53	0.22
23	73.4	20	7.9	150	5.29	0.33
24	75.2	25	9.8	200	7.05	0.44
25	77.0	30	11.8	250	8.82	0.55
26	78.8	35	13.8	300	10.58	0.66
27	80.6	40	15.7	350	12.34	0.77
28	82.4	45	17.7	400	14.11	0.88
29	84.2	50	19.7	450	15.87	0.99
30	86.0	55	21.7	500	17.64	1.10
31	87.8	60	23.6	550	19.40	1.21
32	89.6	65	25.6	600	21.16	1.32
33	91.4	70	27.6	650	22.93	1.43
34	93.2	75	29.5	700	24.69	1.54
35	95.0	80	31.5	750	26.45	1.65
		85	33.5	800	28.22	1.80
		90	35.4	850	29.98	1.87
		95	37.4	900	31.74	1.98
		100	39.4	1000	35.27	2.20
		110	43.3	1100	38.80	2.42
		120	47.2	1200	42.33	2.64
		130	51.2	1300	45.85	2.86
		140	55.1	1400	49.38	3.08
		150	59.1	1500	52.91	3.30
		160	63.0	1600	56.44	3.52
		170	66.9	1700	59.96	3.74
		180	70.9	1800	63.49	3.96
		190	74.8	1900	67.02	4.18
		200	78.7	2000	70.54	4.40

Appendix 2: Addresses of Commercial Seed Sources used in the 1989-1992 Trials

Seed Source	Address
Asgrow	Subsidiary of The Upjohn Company 7000 Portage Road Kalamazoo, MI 49001
Known-You Seed Company	26 Chung Cheng Second Road Kaohsiung, Taiwan, R.O.C Telephone: (07) 224-1106 Fax:(07) 222-2846
Nippon Norin Co.	6-6-5 Takinogawa Kita-ku, Tokyo Japan
Petoseed	P.O. Box 4206 Saticoy, CA 93007-4206 Telephone: (805) 647-1188 Fax: (805) 656-4818
Sakata Seed Company	1-7 Nagata Higashi 3-Chome P.O. Box Yokohama Minami No. 20 Yokohama, Japan 232 Telephone (045) 715-2111 Fax (045) 715-2112
Takii & Company Ltd.	180 Umekoji Inokuma, Shimokyo-Ku Kyoto Japan P.O. Box 7, Kyoto Central 600-91 Telephone: (075) 365-0123 Fax: (075) 365-0110
Twilley Seed Company	P.O. Box 65 Trevose, PA 19053-0065
Seed Program University of Hawaii	Department of Horticulture 3190 Maile Way, Room 112 Honolulu, Hawaii 96822 Telephone: (808) 956-7890
Willhite Seed Company	P.O. Box 23 Poolville Texas 76487

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