

Tomato Variety Trials, 2007

UH Poamoho Experiment Station
Final Report

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Summary:

This report provides results of Roma and round-type tomato variety trials conducted during 2006 and 2007 at the UH Poamoho Experiment Station. This research is considered preliminary, to identify varieties that growers might be interested in evaluating in their own farms. Growers may choose to select varieties based on their quality/horticultural traits, yields and performance, or tolerance/resistance to pests and diseases.

As a background, also included are results from earlier variety trials conducted at the Poamoho and Waimanalo UH Stations.

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TOMATO VARIETY TRIALS

UH POAMOHO STATION 2007

GRAPE + Awt: _____ Ano: _____ Bwt: _____ Bno: _____	GRAPE + Awt: _____ Ano: _____ Bwt: _____ Bno: _____	ANAHU-UH+ Awt: _____ Ano: _____ Bwt: _____ Bno: _____
PX-0241-0739 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	EX-0140-8426 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	ANAHU-UH+ Awt: _____ Ano: _____ Bwt: _____ Bno: _____
VELOZ-P-50151-2626R Awt: _____ Ano: _____ Bwt: _____ Bno: _____	XP-0142-9864 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	GRAPE+ Awt: _____ Ano: _____ Bwt: _____ Bno: _____
CAPAYA-PS-151-476 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	EX-0142-9857 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	ANAHU+ Awt: _____ Ano: _____ Bwt: _____ Bno: _____
EX-0149-8426 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	PS-0151-2647 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	23-4-TAKEDA Awt: _____ Ano: _____ Bwt: _____ Bno: _____
XP-0142-9864 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	PS-0152-3137 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	23-1 Awt: _____ Ano: _____ Bwt: _____ Bno: _____
EX-0142-9857 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	PX-0153-3690 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	KEWALO Awt: _____ Ano: _____ Bwt: _____ Bno: _____
PS-0151-2642 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	23-4 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	PX-0241-0739 Awt: _____ Ano: _____ Bwt: _____ Bno: _____
PS-0152-3137 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	23-1 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	VELOZ-PS-0151-2626R Awt: _____ Ano: _____ Bwt: _____ Bno: _____
PX-0153-3690 Awt: _____ Ano: _____ Bwt: _____ Bno: _____	KEWALO Awt: _____ Ano: _____ Bwt: _____ Bno: _____	CAPAYA-PS-151-476 Awt: _____ Ano: _____ Bwt: _____ Bno: _____

xxxxxxxxxxxxx drip irrigation line xxxxxxxxxxxxxxxxx

(note + = second planting, 1 month later)

Row 1

Row 2

Row 3

Tomato Growth After 4 months of Harvest, Poamoho Experiment Station, October 7, 2007

CVR	No. Plants	Growth Index (1-10)	Plt Dis Pre Index (1-10)	Overall Index (1-10)	Height (inches)	Comment
PX-0153-3690	5	7.5	6	7	56	
PS-0152-3137	3.5	3	8.5	3	45	
PS-0151-2642	2	2	9	2	37	
EX-0142-9857	2	1.5	8.5	1.5	42.5	
XP-0142-9864	5	7	6	6.5	49	
EX-0140-8426	5	7	5	7	61.5	
CAPAYA-PS-151-476	5	6	7	6	59	
VELOZ-P-50151-2626R	2.5	2	9	2.5	39	
PX-0241-0739	5	4	7	4	40.5	
KEWALO	5	7	6.5	7	61.5	
23-1	2	1	8.5	1	18	
23-4	3.5	3.5	7.5	3.5	42.5	
GRAPE	5	7	3	8	49	
CAPAYA+	5	8	5	8	69	
ANUHU-UH+	5	7	5	6	47	

Notes:

1. Tomato plant standard: total possible = 5 plants /plot
2. Growth Index: 10 = Best overall growth
3. Plant disease pressure index: 10 = worst disease pressure
4. Overall index : 10 = Best

Roma Varieties from Seminis (Petoseed) Seed

Contact for Seed Source: Jeff Sais, tel. 805-934-8436,
jeff.sais@seminis.com

Early Yields

Yields of several Roma and round salad tomato varieties grown at the UH Poamoho Experiment Station, after one month of weekly harvests, 2007.

Cultivar	Grade A (lbs/plant)	N	No. Grade A Fruit (No/plant)	Grade A (%)	Total Grade A yield (lbs/Acre)
Roma					
VELOZ	3.4a	6	10.8a	62.3	28,210
PS-0151-2642	2.4a	6	7.6a	62.9	28,644
EX-0142-9857	2.4a	5	13.2a	78.6	18,228
PS-0152-3137	2.3a	6	7.2a	68.0	19,530
XP-0142-9864	2.2a	5	8.5a	77.8	16,492
PX-0153-3690	1.6a	5	5.3a	76.7	11,718
PX-0241-0739	2.4a	5	8.3a	70.9	17,902
CAPAYA	1.6a	5	4.7a	75.5	11,067
Round					
23-1	2.8a	5	9.1a	68.5	18,011
23-4	2.0a	5	4.1a	66.1	14,322
KEWALO	2.0a	4	6.1a	80.7	13,041
EX-0149-8426	1.6a	6	2.6a	67.8	13,671

Note: The data shown represents mean values (average weekly values on a per plant basis).

Note: Values followed by a similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test ($P < 0.05$).

Note: Per acre yields estimated based on a plant population of 2,170 plants/acre (4 x 5 ft spacing).

Roma and Round Varieties from Seminis (Petoseed) Seed

Contact for Seed Source: Jeff Sais, tel. 805-934-8436,
jeff.sais@seminis.com

Final Yields

Final yields of several Roma and round salad tomato varieties grown at the UH Poamoho Experiment Station, after four months of weekly harvests, 2007.

Cultivar	Grade A (lbs/plant)	No. of harvests	No. A Fruit (No/plant)	Grade A (%)	Total Grade A yield (lbs/Acre)
Roma					
PS-0151-2642	5.0a	17	16.4bc	74.0ab	137,632
EX-0142-9857	4.7ab	14	26.6a	81.6ab	103,617
XP-0142-9864	4.5ab	16	19.5b	86.6a	160,146
PS-0152-3137	3.5a-d	18	12.6b-e	81.2ab	110,778
VELOZ	3.4a-d	17	14.2bcd	62.3	83,653
PX-0153-3690	3.1a-d	17	12.2cde	76.5ab	113,165
CAPAYA	2.9b-d	17	11.0cde	79.7ab	103,617
PX-0241-0739	1.9d	17	7.1de	71.0bc	70,817
Grape	1.9d	11	--	--	46,329
Round					
Anahu UH	4.1abc	12	12.4cde	69.0bc	106,113
23-4	3.4a-d	17	9.1cde	67.3bc	106,113
23-1	3.2a-d	17	11.0cde	53.7d	66,477
EX-0149-8426	3.2a-d	18	6.5e	77.0ab	124,286
KEWALO	2.3cd	17	9.2cde	59.1cd	87,364

Note: The data shown on the first three columns represents mean values (average weekly values on a per plant basis).

Note: Values followed by a similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test ($P < 0.05$).

Note: Per acre yields estimated based on a plant population of 2,170 plants/acre (4 x 5 ft spacing). If plants were lost from disease or other causes, yields were adjusted accordingly, based on plant stands, at each sampling date.

Picus (XP 01429864) (Seminis) Picus (XP 01429864) is a main season, determinate Roma tomato that is widely adapted. Fruits are large, uniform and blocky, maturing to a deep-red color with great firmness at the red stage. Picus has a medium to large, vigorous plant that provides good fruit cover and sets well in hot temperatures. It is resistant to ASC, F-1, GLS, TSWV and V-1. (ASC= Alternaria Stem Canker; GLS= Gray Leaf Spot, Stemphylium; F, fusarium; V, Verticillium Wilt; TSWV, Tomato Spotted Wilt Virus.

Capaya: This saladette type has firm, red, semi-elongated fruit. Vigorous, determinate plants are resistant to Alternaria stem canker, root Knot Nematode, Fusarium wilt, gray leaf spot, Verticillium wilt, and tomato spotted wilt.

PX-0241-0739. Determinate, TSWV resistance, large and extra large, deep oblate fruit, jointed pedicels, late maturity.

Seminis Varieties 2007



XP-0142-9864



PS-0152-3137



EX-0142-9857



PS-0151-2642



EX-0149-8426

2006 Cultivar Trials (Round and Roma Varieties from Western Pacific Seed)

Contact to obtain seed: Jason Cooksey, tel. 951-735-7289,
jcooksey@westernpacificseed.com

Table 2. Final yields of several Roma and round salad tomato varieties grown at the UH Poamoho Experiment Station, after 15 weekly harvests, 2006.

Cultivar	Grade A (lbs/plant)	N	No. Fruit (No/plant)	Grade A (%)	Total yield (lbs/Acre)	CV (Grade A fruit)
Round Fruit						
WPX-152	4.9A	15	14.9AB	93.0ABC	160,377	46.9
WPX-138	4.0AB	7	12.0A-D	81.6DEF	61,303	79.8
WPX-11205	3.7AB	15	9.0B-F	83.0C-F	120,075	54.2
WPX-11305	3.5ABC	26	7.9C-F	79.5DEF	113,612	88.6
WPX-119	2.9BCD	11	6.5DEF	77.9EF	68,463	63.7
WPX-16705	2.8BCD	28	8.8B-F	86.3A-E	92,120	79.3
WPX-151	2.2BCD	27	6.4DEF	83.3B-F	71,905	92.3
WPX-139	2.2BCD	25	6.8C-F	87.9A-E	70,514	95.2
WPX-116	2.1BCD	13	5.5DEF	94.3A	60,110	57.2
WPX-118	1.7CD	12	5.0EF	82.7C-F	44,461	70.2
WPX-110	1.4D	14	1.6EF	81.8DEF	41,826	92.4
WPX-1126	1.2D	12	2.9F	74.7F	32,332	49.3
Roma Fruit						
HMX-5852	3.8AB	16	13.1ABC	93.7AB	130,793	87.1
HMX-5851	3.7ABC	26	16.1A	86.1A-E	119,060	106.7
HMX-4790	2.8BCD	27	11.2A-E	88.3A-E	90,181	84.4
HMX-4791	2.5BCD	38	10.0A-E	89.5A-D	83,133	78.6

Note: The data shown represents mean values (average weekly values on a per plant basis).

Note: Values followed by a similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test ($P < 0.05$).

CV= coefficient of variation, lower values are better, showing better yield uniformity over time.

Note: Per acre yields estimated based on a plant population of 2,170 plants/acre (4 x 5 ft spacing).



WPX-152



WPX-152



WPX-11205



HMX-5852



HMX-5851



HMX-5851

Variety Description for 2006 Trials Poamoho, Spring/Summer 2006

Round types (Western Pacific Seed)

Note: all of the WPX varieties are WESTERN PACIFIC SEED, INC. They are from their breeding program in Florida

WPX-110, V, F2, ST, TSWV

WPX-116- V, F2, ST, TSWV, second planting

WPX-118- V, F2, ST, N, TSWV, second planting

WPX-119- second planting, This is the check variety for the trial. This is a commercial variety that is used for comparison with the new varieties. Please refer to this as "Check" variety only

WPX-138-, V, F2, ST, N FCRR, one plant- second planting

WPX-139- V, F2, ST, FCRR, TSWV, 1st and second plantings

WPX-151- V, F2, ST, TSWV, 1st and second plantings

WPX-152, V, F2, ST, TSWV (LSL)

WPX-1126- second planting

WPX-11205, V, F2, St, N

WPX-11305- V, F2, ST, N, only one plant, - 1st and second plantings

WPX-16705- V, F2, TSWV, high disease/pest pressure, - 1st and second plantings

Roma types (Harris Moran Seed)

HMX-4790- (Pony Express) V, F3, N, Pst, ToMV, second plantings (two plots)

HMX-4791- V, F2, N, Pst, ToMV, 1st and second plantings (3 plots)

HMX-5851, V, F2, N, Pst, TSWV, 1st and second plantings

HMX- 5852, V, F2, N, Pst, ToMV

Code for disease resistance:

ST= Stemphyllium

V= Verticillium Wilt

F2, 3= Fusarium Wilt Races 2, 3

FCRR: fusarium crown and root rot.

TSWV= Tomato Spotted Wilt Virus

N= nematode

Pst= *Pseudomonas syringae* pv. Tomato, Bacterial speck.

ST= stemphyllium

TMV= tomato mosaic virus

Results from Tomato Variety Trials in Oahu from 2001 to 2004

Table 1. Marketable yield of several specialty tomato varieties grown at the UH Poamoho Experiment Station, 2004

Variety	Weight Grade A (lbs/plant)	No. Fruit Grade A (total/plant)	Weight Grade B (lbs/plant)	CV (Grade A wt)	Total Weight Grade A (lbs/plot)	Weight Grade A (lbs/Acre)
UNH1	103.6a	578.5b	80	70.5	517.9	224812a
Tirano	101.5a	865.5a	21.5	80.4	507	220255a
Atila	96.5a	557b	21	52	481.6	209405a
F1 No. 5	40.5b	152cd	16	69	201.7	87885b
F1-685	36.5bc	618b	9	101.3	182	79205bc
Toro	35.5bc	192c	6.5	68.6	176.5	77035bc
F1-345B	26.5bcd	100cd	10	73.2	132	57505bcd
HA-3816	25.5b-e	107cd	12	88.7	126.7	55335b-e
Mariana	22.5b-f	120cd	10	72.9	111.6	48825b-f
Amelia	22b-f	62.5cd	9.5	80.2	111.2	47740b-f
HA-3817	22b-f	100cd	7.5	66.6	110	47740b-f
Conquistador	16.5c-g	133cd	3.5	82.4	83.6	35805c-g
Monica	13.5d-g	72cd	7	83.2	67.2	29295d-g
HA-3821	10.5d-g	47cd	3.5	140	51.8	22785d-g
Mountain Fresh	7.5d-g	22d	5	85.5	37.6	16275d-g
BHN-577	5.5efg	21d	6	116.5	27.3	11935efg
BHN-444	4.2fg	14.5d	2.5	189	21	9114fg
BHN-555	3.35fg	10.5d	2	288.1	16.8	7269.5fg
Cortez	2.3fg	9d	2.5	395.1	11.1	4991g
Classic Lady	2.1fg	9.5d	1.5	182.8	10.6	4557g
UH-231	0.75g	3d	1.5	235	3.7	1627.5g

Note: Values followed by similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test ($P < 0.05$).

Note: Per acre yields estimated based on a plant population of 2,170 plants/acre (4 x 5 ft spacing).

Note: These plants were harvested for a little over 6 months with 25 weekly harvests.

Table 2. Marketable yield of several specialty tomato varieties grown at the UH Waimanalo Experiment Station, 2004

Variety	Weight Grade A (lbs/plant)	No. Fruit Grade A (total/plant)	Weight Grade B (lbs/plant)	CV (Grade A wt)	Total Weight Grade A (lbs/plot)	Weight Grade A (lbs/Acre)
Cortez	31.0a	97.1bc	1.92abc	162	155.5	67356.8a
UNH1	25.4ab	116.9bc	5.44a	79.1	127.5	55204.8ab
Toro	21.3abc	128.6b	3.68abc	82.7	107	46177.6abc
Atila	17.8abc	78.4bc	3.2abc	87.4	88.5	38539.2abc
F-1685	15.2abc	255.8a	1.2bc	74	76	32984abc
HA-3821	15.2abc	69.9bc	2.4abc	105.6	76	32984abc
Conquistador	13.8abc	90.6bc	2.29abc	82.6	69	29859.2abc
Tirano	13.4abc	105.1bc	4.32ab	106.6	67.5	29164.8abc
HA-3187	11.8bc	62.4bc	1.2bc	67.1	59	25692.8bc
F1 No. 5	10.1bc	41.3bc	1.92abc	90.1	50.5	21873.6bc
Mariana	9.44bc	68.5bc	2.08abc	80.1	47.5	20484.8bc
HA-3816	8.96bc	45.8bc	2.14abc	83.9	45	19443.2bc
Amelia	8.48bc	32.3bc	2.56abc	94.1	42.5	18401.6bc
BHN-555	7.84bc	49.6bc	2.72abc	65.3	39.5	17012.8bc
Monica	7.52bc	41.6bc	1.28bc	60.9	38	16318.4bc
Mountain Fresh	6.24bc	31.4bc	2.08abc	71.6	31.5	13540.8bc
F-1345	4.96c	16.9c	0.45c	81.6	24.5	10763.2c
Classic Lady	4.29c	16.2c	0.19c	84.4	21	9096.64c

Note: Values followed by similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test (P<0.05).

Note: Per acre yields estimated based on a plant population of 2,170 plants/acre (4 x 5 ft spacing).

Note: These plants were harvested for a little over 6 months with 25 weekly harvests.

Table 3. Marketable yields of specialty tomato varieties grown at the UH Poamoho Station, 2001

	Weight Grade A (lbs)	Total Weight Grade A (lbs)	Total Weight Grade A & B (lbs)	CV Grade A wt
8 months of Harvest				
Ovata	72.4a	82.6a	2318.3a	54.5
Veronica	12.3b	18.1b	407.7b	97.4
Tuscany	9.8b	13.5b	325b	91

5 months of Harvest

Supra	14.5b	17.9b	276.5b	104.8
Ensalada	9.7b	11.6b	184.2b	117.7
Vitta Gold	8.4b	9.7b	160.5b	114.6

Note: the data shown represent mean weights per harvest for a total of 33 harvests (first three varieties) and 19 harvests (last three varieties).

Note: Values followed by similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test ($P < 0.05$).

Table 4. Marketable yields of specialty tomato varieties grown at the UH Waimanalo Station, 2001

	Weight Grade A (lbs)	Total Weight Grade A (lbs)	Total Weight Grade A & B (lbs)	CV Grade A wt
Ovata	53.3a	58.9a	907	55.1
Veronica	20.7b	24.9b	351.5	92.4
Tuscany	20.4b	25.2b	346.5	88

Note: the data shown represent mean weights per harvest for a total of 17 harvests (about 4 months of weekly harvests)

Note: Values followed by similar letter within each column are considered to be statistically similar according to Duncan's new multiple range test ($P < 0.05$).



UNH1



Tirano



Atila



Toro



Variety Description from earlier Trials

Atila (Harris Moran). *Indeterminate Saladette Tomato. Fruit Type: Saladette Plant Type: Indeterminate Fruit Size: Large Fruit Color: Intense Red (120-140 gr).*
Verticillium: (races 1 & 2); Fusarium Oxysparum Lycopersici Radicii; Nematode; Stemphyllium; Tobacco Mosaic Virus.

Cortez ((SXT 6237) (**Sunseeds/Nunhems**) *Fruit: Hybrid Roma / Saladette, 4.23 oz. (120 gm). Mid season (80 days). Medium large size, large determinate, good for ground culture or short stakes, good cover, strong vine. CORTEZ has performed well in trials over several years in Mexico and South America. Fruit size has been consistently large with attractive shape. Resistance: Verticillium Wilt Race 1, Fusarium Wilt Race 1&2, Bacterial Speck.*

Ensalada (Burpee); Determinate; *Fruit: Roma, best tasting saladette tomato; fruit have firm, thick walls, easy to peel for processing; high yielding plants; growth: deep square; 3" x 2 1/2"; disease: resistant to VF(1&2)N*

F1 No. 5 (UH, John Cho). Round fruit. RIN(LONG SHELF LIFE). TSWV, NEMATODE

F1-685 (UH, John Cho). Round Fruit. TSWV, RR nematode.

HA-3821 (HAZERA SEEDS). ROMA, BIG FRUIT. V,F1,F2,SW, TMV, PTO.

Marina (Sakata). Medium to large vined determinate hybrid. Rectangular, blocky, fruit may be harvested mature green or red. Resistant: Verticillium wilt (race 1), Fusarium wilt (race 1 and 2), Alternaria stem canker, nematodes, gray leaf spot, and bacterial speck. Recommended in Florida.

Ovata RZ F1 (73-17). (Rijk Zwann). Roma 'plug and egg' type. Egg-shaped tomato. Non-greenback fruits. Fruits weigh approx. 80 gr. Normal vigor, For fresh and processing markets. High yields in Hawaii at low and high elevation sites. Resistant to TmC5VF2N.

Supra (Siegers Seed Company (Novartis/Rogers)) Roma type, Determinate hybrid rectangular, blocky, shaped fruit with uniform green

shoulder. Resistant: Verticillium wilt (race 1), Fusarium wilt (race 1 and 2), nematodes, and bacterial speck; resistant to F1,2, N, V. Recommended in Florida..

Toro F1 (Harris Moran) *Fruit:* Roma, mid season maturity saladette type; firm fruit with good quality; widely adapted; *Growth:* square; round; *Diseases:* R-VF1F2

Tirano F1 (Harris Moran) *Fruit:* Roma type. Early maturity. Medium, uniform shape fruit, with a square round shape. The plant is indeterminate with good cover. This is one of the earliest varieties in the indeterminate saladette type. Prolific yields of uniform shaped fruit. Normal shelf life. Disease rating: VF5C5.

Tuscany (FMX 116N) F1 (Harris Moran) *Fruit:* Roma type. Early yields in Hawaii trials. Large fruit size. High solids in Hawaii trials.

UNHI (Nirit Seed). Large Round, indeterminate.

- a) This type is sold and grow successfully in approx. 70 countries world wide
- b) This type is suitable for growing in a wide range of geographical territories and temperatures and altitudes.
- c) This type is known for it high yield and the long shelf life of its fruit.
- d) The plants are strong and resistance/tolerance to Nematode and other diseases such as V, F1, F2, TMV.

Veronica (Sakata). Tall determinate hybrid. Smooth plum type fruit are uniform ripening. Good performance in all production seasons. Resistant: Verticillium wilt (race 1), Fusarium wilt (race 1 and 2), Alternaria stem canker, nematodes, gray leaf spot, and bacterial speck. Recommended in Florida.

Vitta Gold (Petoseed/Seminis). Yellow round. High solids in Hawaii trials.

DISEASE CODES:

A,Al: alternaria stem canker

Bsp, P= bacterial speck resistance

C5- resistant to cladosporium races ABCD and E.

F1: fusarium wilt (race 1)

F2: fusarium wilt (race 2)

V,Vt: verticillium wilt
T, TMV: Tobacco mosaic virus
St: stemphylium (grey leaf spot)
N, RN: root knot nematode
Wi- tolerant to silvering (chimaere).

Seed Sources:

Burpee. Burpee Customer Service 1-800-333-5808,
<http://www.burpee.com/>.

Hazera Seeds.

Harris Moran. RE: Neil Poston. 1-928-783-0343,
nposton@harrismoran.com, www.harrismoran.com.

Nirit Seeds. RE: Yigal Lazarov, Marketing Manager, contact them and the seeds will be ready for shipment (Ex-Factory) within 2-3 days from date of order. Contact Nirit at: "hana@niritseeds.com" or yigal-lazarov@niritseeds.com. www.niritseeds.com.

PetoSeed (Seminis). RE: Jeff Sais. Tel. 805-934-8436.
jeff.sais@seminis.com. <http://www.seminis.com/>

Rijk Zwaan, Salinas, Calif. +1 831 484 1920.
www.rijkszwaanusa.com.

Sakata Seed. RE: John Nelson, Sales Director, (408) 921-0048. <http://www.sakata.com/>

Siegers Seed. (800) 962-4999. siegers@siegers.com,
<http://www.siegers.com/>.

Sunseeds (now Nunhems). RE: Jeff Boettge Americas
(520) 275-0375. <http://www.sunseeds.com/>.
customer.service@nunhemsusa.com, 1-800-733-9505.

UH Dr. John Cho (Maui Kula Ag Park). Tel. 1-808-878-1213,
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Western Pacific Seed. RE: Jason Cooksey. Tel. 951-735-7289
jcooksey@westernpacificseed.com