

# Yuma Cauliflower Variety Trials 1987/1988

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## INTRODUCTION

The consumption of cauliflower and other crucifers has increased dramatically over the last several years due to consumers' heightened awareness of the vegetable's dietary importance. The cauliflower acreage in the Yuma area reflects this increased demand; acreage has risen from 3,800 acres five years ago to 6,600 acres during the 1987/1988 season. Cauliflower acreage in the Yuma area is second only to head lettuce. Cauliflower is planted from mid-August through November; approximately one-fourth of the acreage is transplanted, the remainder of the crop is direct-seeded. The crop is harvested from November through March.

Since diverse conditions exist throughout the long growing season, a large number of varieties are used in the desert southwest. Early varieties undergo 100-110°F temperatures at germination, while later varieties must perform properly both through the freezing temperatures of winter and warm spring days.

Desirable characteristics include a medium- to large-size plant; adequate wrapper leaves to prevent damage to the curd; a white, dome-shaped head without riciness or fuzziness; a heavy scaffold system to provide weight and support for the head; and uniform maturity.

## METHODS AND MATERIALS

The five cauliflower variety trials conducted during the 1987/1988 season included 59 varieties from 11 seed companies; the seeds were planted from August 30 to November 17. Planting dates and locations were: August 30 with Clint Curry in the Yuma Valley; September 14 at the Yuma Valley Ag Center; October 15 with Barkley Company in the Yuma Valley; October 15 and November 17 at the Yuma Valley Ag Center. Rather than including all varieties in each planting, varieties were placed in the plantings in which they were expected to do well.

The cauliflower was direct-seeded in a single row on the east shoulder of 40 inch beds using an Earthway push planter. The 20-foot, single-bed plots were thinned to 12-14 inches between plants; the plots were replicated when possible.

The varieties were evaluated as they matured, with both the evaluation date and head maturity when evaluated indicated on the performance reports. Varieties indicated as being undermature had a majority of slightly smaller heads than are usually harvested; over-maturity denotes larger than normal head size. Plant characteristics which were evaluated include: plant height, head cover provided by wrapper leaves, and uniformity of maturity. Head characteristics include head compactness, head shape, curd smoothness, color, color uniformity, riciness (separation of the florets) and fuzziness, which is usually an indication that the variety is not adapted to that particular planting date or weather conditions. Many of the quality characteristics were rated using a scale of 1 to 5, with 1 being most desirable and 5 unacceptable.

Three heads approximately 5-6 inches in diameter were harvested from each plot; head diameters and weights were recorded. Similar-sized heads were harvested from each plot to reduce the effect of head size when comparing head weights. The head weights were divided by the head diameter to provide a comparison of the relative head weight for each variety.

Each variety was then given an overall rating. Varieties with an overall rating of 1-2 should perform well for the given planting date and conditions under which they were grown. An overall rating of 3 may be acceptable, but the variety has some problem areas when grown under the conditions of these trials. Varieties rated 4-5 are considered unacceptable for commercial use.

## RESULTS AND DISCUSSION

A summary of the overall ratings for the variety trials is shown in Table 1. The two trials planted on October 14 have been combined into one column since only the earlier maturing varieties were evaluated at the Barkley trial because the field was harvested. Later varieties were evaluated from the trial at the Yuma Valley Ag Center. More complete evaluations for each trial are provided in Tables 2-5.

During the 1987/1988 season, temperatures averaged above normal through much of the fall. This was followed by temperatures well below normal for most of December, with nighttime temperatures dropping into the lower 20s late in the month. This slowed maturity, as can be seen most dramatically in the August 30 planting, where the evaluations extended from November 30 through January 21. Snowball-type varieties in the October 14 plantings tended to "blow up" in response to the sudden warm temperatures during January and February, as can be seen by their low ratings in Table 4. During these warm spells, the consistent quality of some of the hybrids can more than pay for the higher cost of seed.

New varieties which performed well in early season trials this year include: Serrano (Northrup King), Exp. #22 (Sakata), Exp. #84-8 (Sakata) and T-518 (Takii). New mid-season performers include: Sunre 5102 (Sunseed), Exp. PTOH-8 (Brinker Orsetti) and Ravella (Royal Sluis).

Snow Crown (Takii) continues to be a top early variety, while the season for Glacier (Sakata) is being expanded and Candid Charm (Sakata) is being used in late season as well as early plantings. Flanca (Royal Sluis) and Plana (Royal Sluis) both do well mid-season, while Bretanova (Royal Sluis) tends to be temperamental in its performance.

**Table 1. Summary of the Overall Evaluations for each of the Planting Dates.**

VARIETY	Planting Dates			
	8/28/87	9/11/87	10/14/87	11/17/87
Alpha Durato (Royal Sluis)	2	2	3	
Arbon (Royal Sluis)			3	
Baco (Royal Sluis)		3	3	
Bretanova (Royal Sluis)		1	1	3
Candid Charm (Sakata)	2	2		2
Corvilia (Ohlsens Enke)	4	2		
Danish Perfection (Ohlsens Enke)	2	3		
Dok Elgon (Royal Sluis)			4	
Dova (Royal Sluis)		4	3	
Early Glacier (Sakata)	2			
Early Snowball (Ferry-Morse)			4	
Flanca (Royal Sluis)	2	1	1	3
Glacier (Sakata)	2	2		
Kopod (Ohlsens Enke)	4			
Majestic (Sakata)	3			
Matra (Royal Sluis)		2		
Menovi (Ohlsens Enke)	2	3		
Plana (Royal Sluis)		2	1	4
Ravella (Royal Sluis)		2	1	2
Revito (Ohlsens Enke)		3		
Serrano (Northrup King)	1	2	2	3
Snowball E (Ferry-Morse)			4	
Snowball Z (Ferry-Morse)			4	
Snowball 42 (Ferry-Morse)			4	
Snowball 76 (Ferry-Morse)			4	
Snow Crown (Takii)	1			
Snow-Pak (Petoseed)			2	2
Snow Rock (Takii)		2	2	
Starla (Ohlsens Enke)	2	3		
Sunre 202 (Sunseed)	2	2	4	
Sunre 204 (Sunseed)		3	3	
Sunre 5101 (Sunseed)	2	2	3	4
Sunre 5102 (Sunseed)	2	1	2	5
Suprimax (Royal Sluis)			4	
Vernon (Royal Sluis)		2		
White Cloud (Asgrow)	3	2		
White Rock (Northrup King)			3	3
White Satin (Northrup King)			4	3
BOS #C8 (Brinker Orsetti)		2	2	
Exp. PTOH-8 (Brinker Orsetti)		1	2	
Exp. S-207 (Sakata)		2	4	4
Exp. S-208 (Sakata)		2		5
Exp. #20 (Sakata)	3	4	4	5
Exp. #22 (Sakata)	1	2	3	3
Exp. #84-8 (Sakata)	1	3		
FM 17 (Ferry-Morse)			3	4
FM 47 (Ferry-Morse)			4	4
PSX 100184 (Petoseed)			3	3
R-136 (Pybas)				3
R-137 (Pybas)				3
SG 122 (Northrup King)	3	2	3	4
SG 124 (Northrup King)	2	2	4	3
SG 741 (Northrup King)	2	2	3	
T-518 (Takii)	1	2	3	4
XP 5143 (Asgrow)		3	3	
XPH 5105 (Asgrow)	2	2		

Key: 1 = most desirable, 5 = undesirable

Table 2. Cauliflower Variety Evaluations for the August 28, 1987, Planting with Clint Curry Farms in the West Yuma County.

VARIETY	Overall Eval. (a)	Head Wt. (lbs.)	Head Dia. (in.)	Head Weight ÷ Head Diameter	Plant Ht. (b)	Head Cover (a)	Uniform Maturity (a)	Head Shape (c)	Curd (d)	Color (a)	Uniform Color (a)	Compact Head (a)	Riciness (a)	Fuzziness (a)	Harvest Date	Maturity at Harvest (e)
White Cloud (Asgrow)	3	1.1	5.0	0.22	S	1	4	D	M	1	1	2	1	1	1/15	M
XPH 5105 (Asgrow)	2	2.0	5.7	0.35	M	2	4	D	L	2	3	1	2	1	1/7	M
Serrano (Northrup King)	1	1.7	5.7	0.30	T	2	1	D	M	2	2	2	1	1	1/7	M
SG 122 (Northrup King)	3	1.6	5.7	0.28	S	4	3	D	L	4	3	2	1	1	1/7	M
SG 124 (Northrup King)	2	1.3	5.3	0.25	M	1	1	D	M	2	1	2	1	1	1/5	M
SG 741 (Northrup King)	2	1.0	5.0	0.20	M	1	2	F	M	1	1	2	1	1	1/21	UM
Corvilia (Ohlsens Enke)	4	1.2	5.7	0.21	M	3	3	F	M	3	4	2	2	1	12/12	UM
Danish Perfection (Ohlsens Enke)	2	1.6	5.3	0.30	M	1	3	D	L	1	2	2	1	1	1/21	UM
Kopod (Ohlsens Enke)	4	1.3	5.8	0.22	M	4	2	D	M	4	2	3	1	1	11/24	M
Menovi (Ohlsens Enke)	2	1.5	5.0	0.30	S	1	2	D	M	2	2	2	1	1	1/15	UM
Starla (Ohlsens Enke)	2	1.3	5.0	0.26	S	1	3	D	L	1	1	2	1	1	1/12	M
Alpha Durato (Royal Sluiss)	2	1.7	6.0	0.28	M	1	2	D	L	1	2	2	1	1	1/21	UM
Fianca (Royal Sluiss)	2	2.0	5.7	0.35	M	2	2	D	L	3	2	2	1	1	1/7	OM
Candid Charm (Sakata)	2	1.4	5.3	0.26	M	2	2	D	M	2	2	2	1	1	1/7	OM
Early Glacier (Sakata)	2	1.6	5.7	0.28	T	2	2	D	L	3	2	3	1	1	1/7	OM
Glacier (Sakata)	2	1.7	5.7	0.30	M	2	3	D	L	2	3	2	1	1	1/7	UM
Majestic (Sakata)	3	1.8	6.0	0.30	M	3	2	D	L	4	3	1	1	1	11/30	M
Exp. #20 (Sakata)	3	1.1	5.3	0.21	S	3	2	D	L	2	2	2	1	2	12/9	UM
Exp. #22 (Sakata)	1	1.5	5.3	0.28	M	2	1	D	M	2	2	1	1	1	1/7	M
Exp. #84-8 (Sakata)	1	2.1	5.7	0.37	T	1	2	D	M	1	1	1	1	1	12/28	M
Sunre 202 (Sunseed)	2	1.3	5.3	0.25	T	1	2	D	M	2	1	2	1	1	1/7	M
Sunre 5101 (Sunseed)	2	1.2	5.0	0.24	T	1	3	D	M	2	2	2	2	1	1/15	M
Sunre 5102 (Sunseed)	2	1.1	5.0	0.22	T	1	2	D	M	1	1	2	1	1	1/21	UM
Snow Crown (Takii)	1	1.3	5.0	0.26	M	3	3	D	L	1	2	2	1	1	12/12	UM
T-518 (Takii)	1	1.3	5.7	0.23	T	3	3	D	L	2	2	2	1	1	12/12	UM

KEY  
(a) 1 = most desirable, 5 = undesirable,  
(b) T = tall, M = medium, S = short  
(c) D = dome, F = flat dome, P = peak  
(d) L = lumpy, M = moderate, S = smooth  
(e) M = mature, U = under, O = over

Table 3. Cauliflower Variety Evaluations for the September 11, 1987, Planting at the Yuma Valley Ag Center.

VARIETY	Overall Eval. (a)	Head Wt. (lbs.)	Head Dia. (in.)	Head Weight ÷ Head Diameter	Plant Height (b)	Head Cover (a)	Uniform Maturity (a)	Head Shape (c)	Curd (d)	Color (a)	Uniform Color (a)	Compact Head (a)	Riciness (a)	Fuzziness (a)	Harvest Date	Maturity at Harvest (e)
White Cloud (Asgrow)	2	2.0	6.3	0.32	M	1	2	D	M	2	1	2	1	1	1/21	OM
XP 5143 (Asgrow)	3	1.3	5.3	0.25	M	1	2	D	L	1	1	2	1	3	1/21	M
XPH 5105 (Asgrow)	2	1.2	5.0	0.24	M	1	3	D	L	2	2	3	1	1	1/15	UM
BOS #C8 (Brinker Orsetti)	2	1.8	5.3	0.34	T	1	1	D	L	2	2	1	1	2	2/10	M
Exp. P10H-8 (Brinker Orsetti)	1	2.1	5.5	0.38	M	1	2	D	M	2	1	1	1	2	2/16	M
Serrano (Northrup King)	2	1.3	5.0	0.26	M	1	3	D	L	2	2	2	1	1	1/15	M
SG 122 (Northrup King)	2	1.6	5.7	0.28	M	1	2	D	M	2	2	2	1	1	1/15	M
SG 124 (Northrup King)	2	1.5	6.0	0.24	M	1	3	D	M	1	1	2	1	4	1/21	UM
SG 741 (Northrup King)	2	1.7	6.0	0.28	T	1	2	D	M	1	2	2	2	1	1/21	OM
Corvilia (Ohlsens Enke)	2	1.7	5.7	0.30	S	2	2	D	M	2	2	1	1	1	1/7	M
Danish Reflection (Ohlsens Enke)	3	1.6	5.5	0.29	M	3	3	D	L	2	3	2	2	1	1/29	M
Menovi (Ohlsens Enke)	3	1.6	5.7	0.28	S	2	1	D	M	2	3	2	1	1	1/29	OM
Revito (Ohlsens Enke)	3	1.8	6.0	0.30	S	2	2	F	M	2	1	3	3	1	2/5	M
Starla (Ohlsens Enke)	3	2.0	6.0	0.33	S	2	3	D	L	3	2	2	1	1	1/15	M
Alpha Durato (Royal Sluis)	2	1.4	5.5	0.25	S	1	2	D	L	1	1	2	1	1	1/29	OM
Baco (Royal Sluis)	3	1.8	5.5	0.33	T	1	1	D	L	2	1	2	2	3	2/16	OM
Bretanova (Royal Sluis)	1	1.6	5.7	0.28	T	1	3	D	L	1	1	1	1	2	2/21	UM
Dova (Royal Sluis)	4	1.4	6.0	0.23	M	2	1	D	L	3	3	3	2	3	2/16	OM
Flanca (Royal Sluis)	1	1.7	5.7	0.30	T	1	2	D	L	2	1	1	1	1	1/21	M
Matra (Royal Sluis)	2	1.5	6.0	0.25	T	1	3	F	L	1	1	2	1	1	1/29	M
Plana (Royal Sluis)	2	1.3	5.0	0.26	M	1	2	D	L	1	1	2	1	1	1/15	M
Ravelia (Royal Sluis)	2	1.6	5.3	0.30	S	1	2	D	L	2	2	2	1	1	1/15	M
Vernon (Royal Sluis)	2	2.1	6.0	0.35	S	1	3	D	L	1	1	1	1	2	2/5	M
Candid Charm (Sakata)	2	2.2	6.3	0.35	M	2	2	D	L	2	2	2	1	1	1/15	OM
Glacier (Sakata)	2	1.4	5.3	0.26	T	1	2	D	L	2	2	2	1	1	1/15	M
Exp. #20 (Sakata)	4	1.8	6.5	0.28	S	4	2	D	L	4	3	2	1	3	12/30	M
Exp. #22 (Sakata)	2	2.2	6.3	0.35	M	3	1	D	L	2	2	1	1	1	1/15	OM
Exp. #84-8 (Sakata)	3	1.8	5.7	0.32	S	1	2	D	M	2	2	2	1	1	1/15	OM
Exp. S-207 (Sakata)	2	1.4	5.5	0.25	M	1	3	D	L	2	2	2	1	1	1/21	UM
Exp. S-208 (Sakata)	2	2.3	6.0	0.38	T	1	3	D	L	1	1	1	1	4	1/21	UM
Sunre 202 (Sunseed)	2	1.4	5.7	0.25	T	2	2	F	M	2	2	3	1	1	1/15	M
Sunre 204 (Sunseed)	3	1.6	6.0	0.27	T	1	3	D	L	2	2	2	1	1	2/5	OM
Sunre 5101 (Sunseed)	2	1.4	5.3	0.26	M	1	2	D	M	2	1	3	2	1	1/21	M
Sunre 5102 (Sunseed)	1	1.7	5.0	0.34	T	1	2	D	L	1	1	1	1	1	1/29	OM
Snow Rock (Takii)	2	1.4	5.5	0.25	T	1	2	D	L	1	1	2	1	1	2/5	UM
T-518 (Takii)	2	1.4	5.3	0.26	T	2	2	D	L	3	2	2	1	1	1/7	M

KEY

- (a) 1 = most desirable, 5 = undesirable
- (b) T = tall, M = medium, S = short
- (c) D = dome, F = flat dome, P = peak
- (d) L = lumpy, M = moderate, S = smooth
- (e) M = mature, U = under, O = over

**Table 4. Combined Cauliflower Variety Evaluations for the October 14, 1987, Plantings with Barkley Company and at the Yuma Valley Ag Center.**

VARIETY	Overall Eval. (a)	Plant Height (b)	Head Cover (a)	Uniform Maturity (a)	Head Shape (c)	Curd (d)	Color (a)	Uniform Color (a)	Compact Head (a)	Riciness (a)	Fuzziness (a)	Harvest Date
XP 5143 (Asgrow)	3	S	2	3	F	L	2	3	3	1	1	2/8
* BOS #C8 (Brinker Orsetti)	2	M	1	2	D	M	1	2	1	1	2	2/23
* Exp. P10H-8 (Brinker Orsetti)	2	M	2	2	D	M	2	2	2	2	1	2/23
Early Snowball (Ferry-Morse)	4	S	3	2	F	M	2	2	3	3	1	2/8
Snowball E (Ferry-Morse)	4	S	2	2	F	L	2	2	4	4	1	2/10
Snowball Z (Ferry-Morse)	4	S	1	2	F	L	3	3	3	1	5	2/10
Snowball 42 (Ferry-Morse)	4	S	1	3	F	L	2	1	3	3	1	2/10
Snowball 76 (Ferry-Morse)	4	M	1	3	F	M	2	1	4	4	1	2/10
* FM 17 (Ferry-Morse)	3	M	2	3	F	L	2	3	2	2	3	2/23
FM 47 (Ferry-Morse)	4	M	1	2	D	L	3	3	2	2	5	2/10
Serrano (Northrup King)	2	M	2	3	F	M	2	2	2	1	1	2/10
* White Rock (Northrup King)	3	S	3	1	F	L	3	4	3	2	1	2/23
* White Satin (Northrup King)	4	M	3	2	F	L	2	4	3	2	3	2/23
SG 122 (Northrup King)	3	S	2	2	F	L	1	1	3	1	1	2/10
* SG 124 (Northrup King)	4	S	3	3	F	L	2	4	4	3	2	2/23
SG 741 (Northrup King)	3	M	1	2	F	M	1	2	2	3	1	2/10
* Snow-Pak (Petoseed)	2	M	3	2	F	L	2	4	3	1	2	2/23
PSX 100184 (Petoseed)	3	M	1	2	F	M	1	2	2	2	4	2/10
Alpha Durato (Royal Sluis)	3	M	2	1	F	L	2	2	4	2	1	2/10
* Arbon (Royal Sluis)	3	T	1	3	D	M	2	2	2	2	4	2/23
* Baco (Royal Sluis)	3	T	1	2	D	M	2	3	2	2	4	2/23
Bretanova (Royal Sluis)	1	T	1	3	D	M	2	1	1	1	1	2/10
* Dok Elgon (Royal Sluis)	4	S	3	1	F	M	2	5	3	3	3	2/23
* Dova (Royal Sluis)	3	M	2	3	D	L	2	3	2	2	3	2/23
Flanca (Royal Sluis)	1	T	1	3	D	L	1	1	2	1	1	2/10
Piana (Royal Sluis)	1	T	1	2	D	L	2	1	1	1	1	2/10
Ravella (Royal Sluis)	1	M	1	2	D	L	1	2	1	1	1	2/8
Suprimax (Royal Sluis)	4	M	2	2	F	M	1	1	3	3	1	2/10
Exp. #20 (Sakata)	4	S	3	2	D	L	3	3	3	1	4	2/8
Exp. #22 (Sakata)	3	M	2	3	F	L	2	2	2	1	2	2/8
Exp. S207 (Sakata)	4	M	2	2	F	L	2	2	4	1	1	2/8
Sunre 202 (Sunseed)	4	T	3	3	F	M	3	2	4	2	1	2/8
* Sunre 204 (Sunseed)	3	M	2	1	D	M	3	2	3	2	3	2/23
Sunre 5101 (Sunseed)	3	T	2	3	F	L	2	2	3	2	1	2/8
Sunre 5102 (Sunseed)	2	T	1	3	D	L	2	1	2	1	2	2/10
* Snow Rock (Takii)	2	T	2	2	F	M	2	3	2	2	2	2/23
T-518 (Takii)	3	M	3	2	F	L	2	2	3	2	1	2/8

**KEY**

(\*) Grown at Yuma Valley AG Center with same planting date.

- (a) 1 = most desirable, 5 = undesirable
- (b) T = tall, M = medium, S = short
- (c) D = dome, F = flat dome, P = peak
- (d) L = lumpy, M = moderate, S = smooth
- (e) M = mature, U = under, 0 = over

**Table 5. Cauliflower Variety Evaluations for the November 17, 1987, Planting at the Yuma Valley Ag Center.**

VARIETY	Overall Eval. (a)	Head Wt. (lbs.)	Head Dia. (in.)	Head Weight + Head Diameter	Plant Ht. (b)	Head Cover (a)	Uniform Maturity (a)	Head Shape (c)	Curd (d)	Color (a)	Uniform Color (a)	Compact Head (a)	Riciness (a)	Fuzziness (a)	Harvest Date	Maturity at Harvest (e)
FM 17 (Ferry Morse)	4	1.5	6.0	0.25	S	3	2	F	L	5	3	3	2	1	3/29	M
FM 47 (Ferry Morse)	4	1.2	5.3	0.23	S	3	2	F	S	4	3	3	2	1	3/23	UM
Serrano (Northrup King)	3	1.3	5.5	0.24	M	2	3	D	L	3	2	3	1	1	3/23	UM
White Rock (Northrup King)	3	1.6	6.0	0.27	S	3	3	D	L	3	3	2	3	1	4/5	M
White Satin (Northrup King)	3	1.4	6.0	0.23	M	2	3	D	L	2	2	3	2	1	4/5	M
SG 122 (Northrup King)	4	1.3	6.0	0.22	S	3	1	F	L	4	4	4	3	1	4/5	M
SG 124 (Northrup King)	3	1.2	5.5	0.22	S	1	3	F	L	2	2	3	2	1	4/5	M
Snow-Pak (Petoseed)	2	2.1	6.5	0.32	S	3	3	F	M	4	3	1	2	1	3/29	M
PSX 100184 (Petoseed)	3	1.6	5.8	0.28	S	3	3	F	L	4	3	1	1	1	3/23	UM
R-136 (Pybas)	3	1.7	6.0	0.28	S	3	1	D	L	3	2	3	1	1	3/29	M
R-137 (Pybas)	3	1.3	6.0	0.22	S	3	2	D	L	3	3	2	2	1	3/29	UM
Bretanova (Royal Sluis)	3	1.2	5.5	0.22	M	2	2	F	M	3	3	3	2	3	4/5	OM
Fianca (Royal Sluis)	3	1.3	6.0	0.22	M	2	3	D	L	3	2	3	2	1	3/29	OM
Candid Charm (Sakata)	2	2.2	6.3	0.35	M	3	1	D	L	3	3	2	1	1	3/29	M
Plana (Royal Sluis)	4	1.6	5.5	0.25	S	3	3	D	L	4	3	3	2	1	3/23	M
Ravella (Royal Sluis)	2	2.0	5.8	0.34	S	3	1	D	L	4	3	2	1	1	3/29	M
Exp. #20 (Sakata)	5	1.0	5.5	0.18	S	4	2	F	M	4	3	4	3	3	3/23	M
Exp. #22 (Sakata)	3	1.7	6.0	0.28	S	3	2	D	L	4	3	1	1	1	3/23	UM
Exp. S-207 (Sakata)	4	1.6	5.8	0.28	M	2	1	D	L	3	3	3	3	1	4/5	M
Exp. S-208 (Sakata)	5	1.1	5.5	0.20	M	1	3	D	L	2	2	5	4	3	4/5	M
Sunre 5101 (Sunseed)	4	1.5	6.0	0.25	M	3	2	D	L	5	4	3	2	1	3/23	M
Sunre 5102 (Sunseed)	5	0.9	5.8	0.16	M	2	3	F	S	3	2	5	4	1	3/23	UM
T-518 (Takii)	4	1.4	5.5	0.25	M	3	2	D	L	4	3	3	2	1	3/23	OM

**KEY**

- (a) 1 = most desirable, 5 = undesirable
- (b) T = tall, M = medium, S = short
- (c) D = dome, F = flat dome, P = peak
- (d) L = lumpy, M = moderate, S = smooth
- (e) M = mature, U = under, O = over