

Bush Bean Cultivar Trial

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Thirty-two cultivars of bush beans were evaluated at the Muscatine Island Research Farm at Fruitland, Iowa during 2001. There were twenty-three green snap, four flat-podded and five yellow wax bean cultivars in the trial. Growing conditions for the trial were fair with unusually cloudy and wet weather during May and cool temperatures that averaged just 70.6 F during June. However, sunshine during pod set and filling prevented any serious disease problems from occurring and brought about the first harvest on July 6, 58 days after planting. Each plot was harvested four times - pods were handpicked when they were fully elongated but still tender and crisp with undeveloped seeds. Yields were slightly lower this year than in 2000 but quality was good.

Yield potential and quality, particularly in the area of pod straightness and color, was impressive in this group of cultivars. Picking out a few for "Best in Trial" is difficult, but here are my choices:

Green snap: *Leon* and *Mercury* - high yield of light green pods.

Benchmark, *SB 4223*, *Capricorn* and *Bronco* - high yield of medium green pods.

Festina - notable for its straight, very dark green pods.

Flat Pod: *Magnum* - large light green pods up to 7" long.

Bush Kentucky Wonder 125 - attractive pods 5" to 6" long, medium green color.

Yellow Wax: *Eureka*, *EX 8104639* and *Goldmine* produced best yields.

All yellow cultivars had good quality and were nice looking.

Materials and Methods

Planting: May 9, 2001.

Plot Design: Randomized Complete Block, three replications. Plot = one row 22' long, rows 42" apart. Plots planted with a tractor-mounted cone-seeder, 90 seed per plot.

Soil Type: Alluvial coarse sand, O.M. content 1.5% or less, CEC of 2.5-5 meq/100g.

Irrigation: Overhead sprinklers, water applied according to tensiometer readings.

Fertility: 50 lbs P₂O₅ and 200 lbs K₂O applied preplant incorporated. Nitrogen applied by split application - 50 lbs preplant and 80 lbs sidedressed when plants 6" tall.

Pesticides: Dual II Magnum herbicide, Capture & Sevin XLR insecticide, Bravo fungicide.

Table 1. Yield and pod characteristics of bush bean cultivars.

Cultivar	Seed Source	Total Yield CWT/A	% Early	Pod Length inch	Pod Weight grams	Pod Color
<i>Green Snap Beans</i>						
Leon (SB4188)	RG	132.7	41	5.4	6.2	LG
Mercury	RG	129.0	50	5.3	6.6	LG
Benchmark	RG	128.0	55	5.5	7.1	MG
SB 4223	RG	123.9	61	5.1	6.4	MG
Capricorn	RG	118.0	53	5.3	6.9	MG
Bronco	AS	113.5	44	5.0	5.9	MG
Strike	AS	113.0	15	5.1	5.6	L-MG
Festina	AS	112.3	46	5.2	6.1	DG
EX 8104027	AS	110.6	36	5.1	6.3	M-DG
Carlo	AS	110.1	28	5.2	5.6	L-MG
Hialeah	HM	109.2	47	5.3	6.1	LG
Tema	AS	108.8	47	5.2	5.8	L-MG

EX 8104389	AS	104.6	41	4.9	5.0	MG
Grenoble	ST	104.0	21	5.3	6.2	L-MG
Jade	RG	103.6	51	5.8	6.7	M-DG
EX 8104379	AS	101.1	51	4.9	5.3	MG
Shade	HM	98.0	12	5.1	5.7	DG
Probe	HM	97.1	35	5.4	6.1	LG
Prosperity	HM	95.1	33	5.8	6.6	LG
Charon	RG	89.6	28	5.3	6.3	DG
(SB4222)						
Savannah	HM	83.9	41	4.7	5.4	VDG
BBL 274*	SW	83.7	7	5.6	6.9	L-MG
Matador	SW	83.2	21	5.1	5.9	M-DG
<i>Flat Pod</i>						
Magnum	AS	124.5	46	7.1	11.8	LG
Primo	HM	119.5	21	4.9	9.4	LG
Bush KW	RP	111.6	37	5.6	6.3	MG
125**						
Roma II	RP	72.2	1	4.9	8.4	LG
<i>Yellow Wax</i>						
Eureka	AS	133.7	42	5.2	5.4	Y
EX 8104639	AS	130.2	42	5.3	6.5	Y
Goldmine	AS	115.5	30	5.1	5.9	Y
Indy Gold	RP	102.3	46	5.0	6.1	Y
Gold Kist	RP	88.2	4	5.3	6.3	Y
<i>Trial</i>		107.8		5.3	6.5	
<i>Average</i>						
<i>LSD 5%</i>		27.5		.3	1.3	

* Bush Blue Lake 274, **Bush Kentucky Wonder 125

% Early: percent of total yield picked at first harvest (5/9 planting, 7/6 first harvest).

Pod Color: LG = light green, MG = medium grn, DG = dark grn, VDG = very dark grn, Y = yellow.