

Bush Bean Cultivar Trial

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Thirty-one cultivars of bush beans were evaluated at the Muscatine Island Research Farm at Fruitland, Iowa during 2000. There were twenty-one green snap, five flat-podded and five yellow wax bean cultivars in the trial. There were two planting dates for all cultivars - May 15 and July 7. Cultivar performance didn't differ between planting dates so harvest data were combined and presented in Table 1. Each plot was harvested three times - pods were handpicked when they were fully elongated but still tender and crisp with undeveloped seeds. The first harvest occurred 53 days after the May 15 planting and 48 days after the July 7 planting. Good yields of high quality beans were achieved from both plantings. It has been a few years since we have conducted a bean trial at the Research Farm and this group of cultivars was impressive. Yield potential and quality, particularly in the area of pod straightness and color, has really improved. It is difficult to pick out a few as 'Best in Trial' since most cultivars showed merit but based on yield and pod characteristics here are my picks: *SB 4188* (really straight light green pods), *Benchmark*, *Mercury*, *Hialeah* (concentrated early pod set), *Capricorn*, *EX 8104027*, *Bronco*, *Eureka* (yellow wax), *EX 8104639* (yellow wax), *Bush Kentucky Wonder 125* (flat podded) and *Roma II* (flat podded).

Materials and Methods

Planting: First planting - May 15, second planting - July 7, 2000.

Plot Design: Randomized Complete Block, two replications each planting date. 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 insecticide, Bravo fungicide.

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

Cultivar	Seed Source	Total Yield CWT/A	% Early	Pod Length inches	Pod Weight grams	Pod Shape	Pod Color
<i>Green Snap Beans</i>							
SB 4188	NV	135.3	22	5.6	5.8	4.5	LG
Benchmark	NV	131.1	44	5.4	6.9	4.0	MG-DG
Mercury	NV	122.8	48	5.5	6.7	3.3	LG-MG
Hialeah	HM	117.0	68	5.6	6.8	4.0	LG
Capricorn	NV	117.0	27	5.4	7.0	4.0	LG-MG
EX 8104027	AS	113.7	16	5.2	6.3	3.5	DG
Festina	AS	112.9	43	5.4	6.0	3.0	DG
Strike	AS	112.1	16	5.3	5.6	3.3	LG
Bronco	AS	111.2	21	5.0	6.0	4.3	MG-DG
BBL 274*	SW	107.9	4	5.7	7.3	3.0	LG-MG
Carlo	AS	107.1	39	5.3	5.5	4.5	MG
Tema	AS	105.4	31	5.3	5.5	3.8	MG
EX 8104389	AS	102.1	45	5.1	5.0	4.0	DG
Shade	HM	101.3	9	5.3	6.1	4.0	DG
Probe	HM	99.6	17	5.7	5.9	4.0	LG-MG
Jade	NV	99.6	37	5.9	6.9	3.5	DG
EX 8104379	AS	98.8	51	5.0	5.0	3.8	DG
SB 4222	NV	97.9	31	5.4	6.1	3.3	DG
Prosperity	HM	95.5	22	6.0	6.8	3.5	LG
Matador	SW	86.3	18	5.3	6.0	4.3	DG
Savannah	HM	84.7	3	4.8	5.5	3.8	VDG
<i>Flat Pod</i>							
Primo	HM	122.8	39	5.1	9.7	3.0	LG
Magnum	AS	120.4	56	7.3	11.8	3.5	LG-MG
Bush KW 125**	RU	118.7	65	5.7	7.0	4.0	MG
Roma II	RU	90.5	46	5.2	9.4	4.0	LG
<i>Yellow Wax</i>							
Eureka	AS	126.2	15	5.3	4.9	3.5	Y
EX 8104639	AS	122.0	30	5.5	6.1	3.8	Y
Goldmine	AS	112.9	35	5.2	5.5	3.5	Y
Indy Gold	RU	103.8	36	5.0	5.6	3.8	Y
Gold Kist	RU	91.3	0	5.5	6.8	3.8	Y
<i>Trial Average</i>		<i>112.9</i>	<i>31</i>	<i>5.6</i>	<i>6.7</i>		
<i>LSD 5%</i>		<i>34.8</i>	<i>20</i>	<i>.4</i>	<i>.6</i>		

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

% Early: percent of total yield picked at first harvest (7/7 first planting, 8/24 second planting).

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

Pod Shape: 5 = excellent all straight, 1 = poor over 50% crooked.