

Whole pods, beans per pod, snag attachment and raw bean colour - 2011.



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BROAD BEAN VARIETIES – 2010-11

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INTRODUCTION

There has been no independent evaluation of broad bean varieties for more than 10 years. During that time there have been a small number of new varieties made available by breeders but they have not been evaluated and compared with existing standard varieties. The freezing market requires a white flowered bean with even seed size and colour. The fresh market requires a pod width and length of defined ranges of dimensions, a minimum number of beans per pod and a seed pod ratio of around 35%. The availability of information on new varieties couple all these criteria with improved yield or quality. A list of agronomic and quality characteristics of varieties is given table.

With funding from the Horticultural Development Company (HDC), PGRO undertook a 2 year evaluation of 12 commercially available broad bean varieties under the project code FV 369.

SUMMARY OF RESULTS

For full and comprehensive results please refer to the HDC full trials report FV 369.

Conclusions are drawn from a 2 year summary of varieties evaluated in 2010 - 2011.

Monica and Witkiem Manita were the earliest varieties to mature, 4 to 5 days earlier than Listra. Late maturing (Listra +7) varieties were Greeny and Scorpio and could offer advantages in extending the maturity range.

Suprifin (coloured flowered) was a large seeded bean and was the highest yielding variety. Yields were significantly higher than all other varieties in the trial series.

Sirene gave significantly lower yields of vined beans than Listra.

The % of beans to whole pods was generally high. The varieties giving the highest percentage were Suprifin, Scorpio and Finale (H2 only) with values over 40%.

While plant growth was generally short, Finale and Greeny were the tallest varieties. Gold, Monica and Scorpio were the shortest varieties.

Pod length was generally short. Varieties producing the longest pods were Suprifin, Monica, Witkiem, Manita and Turbo (Vendor). All gave pods longer than Listra and greater than 12cm length.

The number of beans per pod did not vary greatly, but Suprifin gave slightly the highest number 4.5 and 5.2 beans per pod at H1 and H2 respectively.

The number of pods per plant was more varied and ranged at H1 from 3.7 (Monica) to 9.1 (Greeny and Scorpio) and 8.8 (Statissa).

There were some differences between the length of the snag attachment between varieties. This is an important attribute for the fresh industry as it has to be snipped off prior to being sold. Varieties showing a shorter snag attachment were Monica, Witkiem Manita, Statissa, Gold, Suprifin, Finale and Greeny.

A Descriptive List of Broad Bean Varieties - Summary of Field Data

Data are derived from at least 2 years trials, over the period 2010-2011. Yields are expressed as a percentage of the yield standard Listra and are only indications of comparative yield. Small yield differences should be treated with caution

Variety	Source	TSW g	Harvest stage 1			Harvest stage 2			Harvest stage 1					snag pod attachment	
			Maturity to Listra ± days	Yield % of Listra	TR	Maturity to Listra ± days	Yield % of Listra	TR	% beans to whole pods	Plant Height cm	No. Pods /plant	Pod Length cm	No. Beans /pod		
															No.
Monica	EL	1407	-5	124	151	-4	99	173	28	47	3.7	12.7	3.8	1-2	3.8
Witkiem Manita (C)	EL	1436	-4	106	139	-4	104	180	35	52	5.6	12.4	3.8	1-2	3.8
Turbo (Vendor)	HS	977	-3	98	131	-3	98	174	39	49	6.9	12.9	2.5	>2	2.5
Statissa	PVS	1272	-2	83	139	-2	106	144	41	52	8.8	10.0	3.0	1-2	3.0
Gold	NiZw	710	-2	80	143	-2	83	144	34	45	6.3	9.8	2.8	1-2	2.8
Stereo	HS	686	-2	92	156	-2	76	167	29	49	8.9	10.0	2.3	>2	2.3
Sirene	BB	811	-1	68-	146	0	66-	154	34	49	8.0	9.6	1.8	>2	1.8
Suprifin (C)	HS	1287	-1	170+	143	-1	139+	167	48	50	6.8	12.6	4.3	1-2	4.3
Listra	Nun	822	0	100 (3.97t/ha)	135	0	100 (4.52t/ha)	144	38	51	8.4	11.2	4.1	>2	1.8
Finale	Nun	655	+4	91	129	+4	104	139	43	59	7.8	10.8	4.2	1-2	1.8
Scorpio	HS	893	+7	75	116	+8	88	147	43	47	9.1	9.9	4.0	>2	2.8
Greeny	Nun	662	+7	90	125	+8	75	154	35	58	9.1	9.5	3.6	1-2	2.0

Significance @

LSD @ P=0.05

CV %

SD

28.4

12.1

KEY: Pod angle (orientation): 1 = vertical, 3 = horizontal, 5 = hanging down. Snag attachment: <1cm, >1 & <2cm, >2cm long.
(C): = Coloured flowered.

Yield: ~ significantly lower than Listra @ P = 0.05, + significantly greater than Listra @ P = 0.05.

Harvest 1: TR 110 -140 for a 140g sample; Harvest 2: TR 130 -150 for a 140g sample

For full and comprehensive results please refer to the HDC full trials report FV 369.

KEY TO SOURCE OF VARIETIES

BB = Bakker Brothers, PO Box 7, 1723 ZG Noord-Schaarwoude, Holland.

EL = Elsoms Seeds Ltd., Pinchbeck Road, Spalding, Lincs., PE11 1QG, UK.

HS = Holland-Select BV., P.O. Box 27, 1619 ZG Andijk, Holland.

Nun = Nunhems Netherlands BV, PO Box 4005, 6080 AA Haelen, Holland

PVS = Pro-Veg Seeds Ltd, Shinghay Lane, Sawston, Cambridge CB22 3SS, UK.

NiZw = J.N.R.C. Rothwell, Market Rasen, Lincs, LN7 6DT, UK

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