

# Grower Summary

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## **FV 154c**

Vining Peas: Evaluation of new varieties sown at appropriate commercial timings

Final 2014

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Before using all pesticides check the approval status and conditions of use.

Read the label before use: use pesticides safely.

## **Further information**

If you would like a copy of the full report, please email the HDC office ([hdc@hdc.ahdb.org.uk](mailto:hdc@hdc.ahdb.org.uk)), quoting your HDC number, alternatively contact the HDC at the address below.

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HDC is a division of the Agriculture and Horticulture Development Board.

**Project Number:** FV 154c

**Project Title:** Vining Peas: Evaluation of new varieties sown at appropriate commercial timings

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**Previous report/(s):** Annual Report 2013

**Start Date:** 01 March 2010

**End Date:** 31 December 2013

**Project Cost:** £50,304.00

## Headline

This work will enable growers to have further information on relative yields and maturities of vining pea varieties within a maturity group.

## Background

Varietal selection is an important and key element of vining pea crop production to ensure a programmed harvest period and to maintain high quality produce. Maturity data is particularly important for varieties that have to be included in a harvesting schedule that is based on the provision of crops that can be harvested over a six week period within defined limits of maturity.

PGRO evaluates around 15 varieties annually at National List stage funded by PGRO Levy and the most promising are evaluated in trials for a further two years. Trials are usually sown early and to improve and refine the evaluation process, additional information is needed to supplement data from established trials. Growers indicate that up to 35% of sowings occur in May, but PGRO trials are sown in March – April. Data are therefore required from varieties sown at a timing appropriate for their maturity.

## Results

Because of delayed sowing by wet weather and bird damage the mid-season and Late-season trials were not taken through to harvest in 2012. These trials were repeated in 2013. The early maturing trial series was completed in 2012. However data from the downy and powdery mildew disease trials was obtained in years 2012 and 2013.

For full and comprehensive results please refer to the full trials report

Variety Name	Leaf Type	Source	Maturity
Pizarro	Semi-leafless	Seminis Vegetable Seeds, France	-1
Avola	Conventional	Seminis Vegetable Seeds, France	0
Salinero	Conventional	Seminis Vegetable Seeds, France	0
Sherwood	Conventional	Seminis Vegetable Seeds, France	+1
Anubis	Conventional	Limagrain, UK	+1
Hesbana	Semi-leafless	Nunhems Seeds, Netherlands	+1
Cosima	Conventional	van Waveren, Germany	+3
Romance	Semi-leafless	Seminis Vegetable Seeds, France	+3
Superana	Conventional	Nunhems Seeds, Netherlands	+4
Premio	Semi-leafless	Maribo Seeds, Denmark	+5
Chinook	Semi-leafless	Limagrain UK	+6
Bingo	Semi-leafless	Syngenta Seeds, France	+7
Bikini	Semi-leafless / semi-fasciated	Syngenta Seeds, France	+8
Biktop	Semi-leafless /	Syngenta Seeds, France	+8

	semi-fasciated		
Ashton	Conventional	Seminis Vegetable Seeds, France	+9
Tommy	Semi-leafless	Limagrain UK	+9
Spandimo	Semi-leafless	Seminis Vegetable Seeds, France	+9
Boogie	Semi-leafless	Nunhems Seeds, Netherlands	+9
Zephyr	Semi-leafless	Limagrain UK	+11
Butana	Semi-leafless	Nunhems Seeds, Netherlands	+11
Ambassador	Conventional	van Waveren, Germany	+12
Hippee	Semi-leafless	Syngenta Seeds, France	+12
Naches	Semi-leafless	Crites Seeds, USA	+13
Kenobi	Semi-leafless	Syngenta Seeds, France	+13

### ***Trial site details***

Variety Trials and powdery mildew trial: PGRO, The Research Station, Great North Road, Thornhaugh, Peterborough PE8 6HJ. OS Grid Ref: TF070017.

Downy Mildew Trials: 2013 Silt loam soil. OS Grid Ref TF436310. Red House Farm, Holbeach St Matthew, Lincs & silt loam soil. OS Ref TL500927, Manea, Cambs.

Tables of % yield, % size grade, haulm length and standing ability – 2010, 2011 & 2013

### **Early Main Crop Trial**

Variety	@TR100				@TR120		Haulm length cm	Standing Ability 9=erect 1=lodged
	Yield % of Bikini	% in size grades				Yield % of Bikini		
		L	M	S	VS			
Chinook	93	18	58	23	1	100	42	8
Boogie	87	50	45	5	0	90	46	7
Biktop	96	26	58	15	1	95	40	9
Bingo	107	29	53	16	2	107	45	6
Bikini	100	33	55	11	1	100	44	8
Spandimo	93	30	55	13	2	93	44	8
Tommy	94	15	56	26	3	97	54	7
Ashton	96 (5.77t/ha)	26	58	14	2	104 (6.21t/ha)	48	3

### **Main Crop Trial**

Variety	@TR100				@TR120		Haulm length cm	Standing Ability 9=erect 1=lodged
	Yield % of Bikini	% in size grades				Yield % of Bikini		
		L	M	S	VS			
Bikini	100	28	53	9	1	100	39	6
Zephyr	94	25	55	18	2	102	41	5
Butana	105	19	62	18	1	104	58	8

Hippee	99	24	56	18	2	97	47	6
Kenobi	113	31	56	12	1	109	54	6
Naches	112	38	51	10	1	110	46	6
Ambassador	107	54	36	9	1	114	59	3
	(4.91t/ha)					(5.37t/ha)		

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Full information on all varieties can be found in the Full Trial Report.

***Standard Pea Early Main Crop Trial, Thornhaugh 2010, 2011 & 2013 – Tables 5 & 6***

Overall there were no significant yield differences between Bikini and other varieties.

**Chinook** (Limagrain UK) was semi-leafless and matured 2 days before Bikini. Yields of medium size grade peas were similar to Bikini. Standing ability was very good.

Boogie, Biktop and Bingo matured at the same time as Bikini.

**Boogie** (van Waveren) was semi-leafless and had good standing ability. Yields of large size grade peas were lower than Bikini.

**Biktop** (Syngenta) was semi-leafless and semi-fasciated, like Bikini and had excellent standing ability. Yields of medium-large size grade peas were a little lower than Bikini.

**Bingo** (Syngenta) was semi-leafless and had average standing ability. Yields of medium-large size grade peas were a little higher than Bikini.

Spandimo, Tommy and Ashton matured one day later than Bikini.

**Spandimo** (Seminis) was semi-leafless and had very good standing ability. Yields of medium size grade peas were a little lower than Bikini.

**Tommy** (Limagrain UK) was semi-leafless and stood well. Yields of medium-small size grade peas were a little lower than Bikini.

**Ashton** (Seminis) was lodged at harvest. Yields of medium-large size grade peas were a little higher than Bikini.

***Standard Pea Main Crop Trial, Thornhaugh 2010, 2011 & 2013 – Tables 7 & 8***

**Bikini** was the first variety to mature, 5 days before Ambassador. Overall there were no significant yield differences between Bikini and other varieties.

**Zephyr** (Limagrain UK) was semi-leafless and matured 3 days later than Bikini. Yields of medium-large size grade peas were similar to Bikini at TR120. Standing ability was average.

**Butana** (Nunhems) was semi-leafless and matured 4 days later than Bikini. Yields of medium size grade peas were a little higher than Bikini. Standing ability was very good.

**Hippee** (Syngenta) was semi-leafless and matured 4 days later than Bikini. Yields of medium-large size grade peas were similar to Bikini.

**Kenobi** (Syngenta) was semi-leafless and matured 4 days later than Bikini. Yields of medium-large size grade peas were higher than Bikini and the highest in this trial series at TR100.

**Naches** (Crites Seed) was semi-leafless and matured at the same time as Ambassador, 5 days later than Bikini. Yields of medium-large size grade peas were higher than Bikini.

**Ambassador** matured 5 days later than Bikini and was lodged at Harvest. Yields of large size grade peas were the highest in this trial series at TR120.

## Conclusions

The varieties have been trialed in three very contrasting years. Varietal differences in maturity is key in planning sowing and harvesting programmes and it is reassuring to find that there were no major variances from previous data.

In the early main crops Chinook consistently matured first, with other varieties maturing 1-2 days later than Bikini.

With the exception of Bingo all varieties gave lower yields than previously seen when compared to Bikini. This suggests that Bikini has performed well in these 3 years. Bingo gave the highest yields overall, but no data was available for 2011 as incorrect seed was supplied.

Most varieties gave produce of medium-large size grade, but Chinook and Tommy gave produce of medium size grade.

Ashton showed very good field resistance to Downy mildew and Spandimo and Bikini were slightly susceptible.

Ashton, Bingo and were resistant to powdery mildew.

In the Main crop group, all varieties matured later than Bikini. Maturities were similar to those previously seen to within a day earlier or later than Ambassador.

Yields varied considerably over the 3 years. Bikini performed well in 2010 and other varieties were lower yielding as a result. However, yields overall were similar to those previously seen when compared to Bikini. The exception was Zephyr, which was lower yielding, particularly at TR100.