



# Grower Summary

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## **FV 340b**

Vining peas: Extension of  
variety evaluation trials

Final 2018

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The results and conclusions in this report may be based on an investigation conducted over one year. Therefore, care must be taken with the interpretation of the results.

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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 AHDB Horticulture office (hort.info.@ahdb.org.uk), quoting your AHDB Horticulture number, alternatively contact AHDB Horticulture at the address below.

AHDB Horticulture,  
AHDB  
Stoneleigh Park  
Kenilworth  
Warwickshire  
CV8 2TL

Tel – 0247 669 2051

AHDB Horticulture is a Division of the Agriculture and Horticulture Development Board.

**Project title:** Vining peas: Extension of variety evaluation trials

**Project number:** FV 340b

**Project leader:** Stephen Belcher, PGRO

**Report:** Final report , 2018

**Previous report:** FV 340a final report

**Key staff:** S. Belcher, S. Duffy, J.Nash, Dr L. Herold

**Location of project:** The Grove  
Holbeach Hurn  
Spalding. Lincs. PE12 8EX

**Industry Representative:** Mr. R. Fitzpatrick  
Holbeach Marsh Co-op,  
Manor Farm,  
Holbeach Hurn,  
Spalding, PE12 8LR.  
Tel: 01406421098  
Email:Richard.fitzpatrick@hmcpeas.co.uk

**Date project commenced:** 01/03/2015

**Date project completed** 28/02/2018  
**(or expected completion date):**

## GROWER SUMMARY

### Headline

This project will provide vining pea growers with independent, relevant and accurate trials evaluations on vining pea varieties, so that a considered and informed variety choice can be made.

### Background

Through funding from seed companies and PGRO vining pea levy, vining pea varieties are evaluated at one site. After year one (Preliminary Trial stage) varieties may progress to the Main Trial Stage, where after two further years of evaluation they may be added to the PGRO Descriptive List of Vining Pea Varieties. Currently these trials are located near Nocton, mid-Lincolnshire, but this soil type represents only a proportion of the vining pea production area. Funding by AHDB Horticulture allows a duplicate standard size Main Trial to be sown on a different soil type and location near Holbeach, S. Lincolnshire. After two years of evaluation varieties may be added to a Descriptive List of vining pea varieties for this area / soil type.

### Variety Trial Results

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

Table 1. Varieties, leaf type, source and approximate maturity – 2017

Variety Name	Leaf Type	Source	Maturity (± days Avola)
Avola	C	Seminis Vegetable Seeds, France	0
Sherwood	C	Seminis Vegetable Seeds, France	0
D85460	C	Syngenta Seeds, France	0
D165621(Saltingo)	SL	Syngenta Seeds, France	+ 6
D165618	SL	Syngenta Seeds, France	+ 6
SV8112QF	SL	Seminis Vegetable Seeds, France	+ 8
D165613(Fantastigo)	SL	Syngenta Seeds, France	+ 8
SV0957QF	SL	Seminis Vegetable Seeds, France	+10
D165315	C	Syngenta Seeds, France	+10
CS-441AF	SL	Crites Seed, USA	+11
PFR 15-A10	C	Plant & Food Research, New Zealand	+11
Oasis	C	Limagrain, UK	+12
PFR 15-PA42	SL	Plant & Food Research, New Zealand	+12
D85607	C	Syngenta Seeds, France	+12
04S51315N	C	Limagrain, UK	+12
DGL0042	C	Syngenta Seeds, France	+12
LG Midnight(06S55519A)	SL	Limagrain, UK	+13
08S05676A	SL	Limagrain, UK	+13
Vidor(Wav4361)	C	van Waveren, Germany	+13
08S01030A	SL	Limagrain, UK	+13
Ambassador	C	van Waveren, Germany	+14
Reflection (PLS 196)	SL	Pure Line Seeds, USA	+14
CS-445AF	SL	Crites Seed, USA	+15
08S04137A	SL	Limagrain, UK	+19

C=Conventional-leaved; SL=Semi-leafless

## Financial Benefits

New vining pea varieties in trial represent improvements in either yield, size-grade, colour, uniformity and disease vulnerability compared with varieties such as Avola, Bikini and Ambassador which have been grown for very many years. Improvements in colour avoid deductions in payment which can be up to 5%. Growers, processors, retailers and consumers are all likely to benefit from these improvements.

The trials provide additional data for the Descriptive List of Vining Peas – Holbeach, which is published annually in the PGRO publication 'The Vining Pea Variety Guide'. Data from the Nocton trials is published in separate table within the guide. The guide is available on the [AHDB Horticulture website](#). This work will benefit all vining pea growers interested in adopting new improved varieties.

## Trial site details

Variety Trial Site: Fertile light silt soil in a commercial crop of Vining Peas, near Holbeach Hurn, South Lincolnshire. OS Grid Ref: TF397278. The Grove, Holbeach Hurn, Spalding, PE12 8EX.

Downy Mildew Trials:

Grange Farm, near Nocton, Lincs, LN4 2AH, OS Grid Ref: TF025633

Lodge farm, near Stubton, Lincs, NG32 2AX, OS Grid Ref SK894476

## Standard Pea Main Trial, Holbeach 2017 – Table 2

Yields from the yield standard Oasis, were about 1 t/ha higher than in 2016 at TR100, but there was no yield increase from TR100 to TR120, yielding 9.49 t/ha. Consequently many varieties appear higher yielding at TR120 when compared to Oasis than at TR100.

Variety	@TR100				@TR120		Standing Ability 9=erect 1=lodged	
	Yield % of Oasis	% in size grades				Yield % of Oasis		Haulm length cm
		L	M	S	VS			
Avola		63	37	0	0	95	70	2
Sherwood	64-	21	58	20	1	98	66	2
D85460		39	53	8	0	87	89	2
D165621(Saltingo)	58-	39	45	14	2	66-	66	5
D165618	68-	41	45	12	2	75-	62	6
SV8112QF	70-	17	55	24	4	70-	66	8
D165613(Fantastigo)	87	21	52	23	4	110	74	6
SV0957QF	83	27	49	20	4	97	74	8
D165315	77-	15	50	27	8	81	84	3
CS-441AF	88	42	48	9	1	102	68	6
PFR 15-A10	76-	19	37	36	8	86	68	2
Oasis	100	36	49	13	2	100	65	2
	(9.49t/ha)					(9.49t/ha)		
PFR 15-PA42	78	12	47	36	5	98	72	8
D85607	89	23	45	25	7	100	72	6
04S51315N	86	37	47	14	2	95	70	2
DGL0042	60-	22	57	18	3	69-	79	2
LG Midnight(06S55519A)	93	30	60	9	1	102	82	7
08S05676A	101	42	47	10	1	112	74	7
Vidor(Wav4361)	103	47	44	8	1	103	72	2
08S01030A	92	24	50	21	5	134+	70	5
Ambassador	107	35	47	15	3	133+	83	2
Reflection (PLS 196)	105	51	41	7	1	123	66	6
CS-445AF	117	64	30	5	1	147+	58	7
08S04137A	109	32	51	15	2	109	66	8

KEY: Yield: +Significantly less than Oasis @ P = 0.05; -Significantly less than Oasis @ P = 0.05  
Size grades: L = large > 10.2mm; M = medium 8.75 - 10.2mm; S = small 7.5 - 8.75mm; VS = very small < 7.5mm

Early varieties Avola and Sherwood gave similar yields at TR120. D85460 was lower yielding, but not significantly so. 08S04137A had very late maturity, maturing 7 days later than Oasis.

The highest yielding variety was CS-445AF, which yielded 117 and 147% of Oasis at TR100 and TR120 respectively. Several other varieties out yielded Oasis at TR100 including 08S05676A, Vidor, Ambassador, Reflection (PLS 196) and 08S04137A.

Varieties with very good standing ability (8) were SV8112QF, SV0957QF, PFR 15-PA42 and 08S04137A.

Several varieties showed good field tolerance to downy mildew infection in 2017 including Cargo CS-455AF, D165618, D85460, D85607, Fantastigo, Saltingo.

Hot weather and a clash at harvest meant the early varieties Avola and D85460 were not harvested at the correct time for TR100 and no yield data was presented.

Full information on all varieties can be found in the Full Trial Report.  
None of the varieties were found to be unsuitable for UK production.

## Main Conclusions

Varieties were evaluated in standard Vining Pea Main Trials in 2016 and 2017.

After the withdrawal of 07S51368A and Valido and the placement of D95389 in the petits pois trials, nine varieties Saltingo, D165618, Fantastigo, SV0957QF, D85607, LG Midnight, Reflection (PLS 196), Vidor and CS-445AF completed three years of evaluation in 2017.

In 2016 Oasis gave a 2 t/ha yield increase from TR100 to TR120. In 2017 yields did not increase from TR100 to TR120. Oasis matured 9 and 12 days later than Avola in 2016 and 2017 respectively.

Sherwood, an early maturing replacement for Avola matured at the same time as Avola and gave a significant yield increase over Avola at TR100. Saltingo (D165621) (Syngenta) was semi-leafless and matured on average 5 days later than Avola. Yields were significantly lower than Oasis, but significantly higher than Avola at TR100. Produce was medium-large size grade, a little smaller than Avola at TR100. Haulm was similar in length to Avola and the variety had better standing ability (5).

D165618 (Syngenta) was semi-leafless and matured on average 5 days later than Avola. Yields were lower than Oasis, but significantly higher than Avola at TR100. Produce was medium-large size grade, a little smaller than Avola at TR100. Standing ability was a little above average (6).

Fantastigo (D165613) (Syngenta) was semi-leafless and matured 7 days later than Avola. Yields were significantly higher than Avola (84/89%). Yields were higher in 2017, than 2016. Produce was medium-large size grade, smaller than Avola. Standing was ability a little above average (6).

SV0957QF (Seminis Vegetable Seed) was semi-leafless and matured 3 days before Oasis. Yields were lower, but not significantly lower than Oasis (87/96). Produce was medium-large size grade. Standing ability was a little above average (6).

D85607 (Syngenta) matured 3 days before Oasis. Yields at TR100 were significantly lower than Oasis. Yields were better in 2017 than 2016. Produce was smaller than Oasis, medium-small size grade. Standing ability was average (5).

LG Midnight (06S55519A) (Limagrain UK) was semi-leafless and matured at the same time as Oasis. Overall yields were lower but not significantly lower than Oasis (84/83%). Yields were a little higher in 2017 than 2016. Produce was larger than Oasis, medium-large size grade. Haulm was longer than Oasis and the variety had the best standing ability (7).

Vidor (Wav 4361) (van Waveren) matured at the same time as Oasis. Overall, yields were similar to Oasis (98/100%). Produce was similar in size to Oasis, medium-large size grade. Standing ability was poor, similar to Oasis.

Reflection (PLS 196) (Pure Line Seeds) was semi-leafless and matured one day later than Oasis. Overall yields were higher than Oasis (102/118%) and were the highest in the trial at TR120. Produce was a little larger than Oasis, large-medium size grade. Standing ability was average (5).

CS-445AF (Crites Seed) was semi-leafless and matured one day later than Oasis. Yields were much higher in 2017 than 2016. Yields were the highest in trial at TR100 (109/114%). Produce was large size grade, larger than Oasis. Haulm was short and standing ability was a little above average (6).