



# **PGRO Variety Trials Results 2018**

Vining Peas

## CONTENTS

	<u>PAGE</u>
<b>WEATHER FOR THE 2018 SEASON</b>	1
<b>METEOROLOGICAL DATA</b>	2
<b>VINING PEAS</b>	
<i>SUMMARY - VARIETIES TESTED 2016 - 2018 &amp; 2017 - 2018</i>	3
<i>Standard Size Varieties, Nocton</i>	3
<i>Standard Size Varieties, Holbeach (AHDB-Horticulture funded)</i>	4
<i>Petits Pois Varieties, Holbeach</i>	5
<i>TRIALS IN 2018</i>	5
<i>Standard Pea Main Trial, Nocton</i>	5
<i>Standard Pea, Main Trial, Holbeach (AHDB-Horticulture funded)</i>	6
<i>Standard Pea Preliminary Trial, Nocton</i>	6
<i>Standard Screening Trial, Nocton</i>	6
<i>Petits Pois Main &amp; Preliminary Trials, Holbeach</i>	6
<i>Varietal Susceptibility of Vining Peas to Downy Mildew (Peronospora viciae)</i>	7
<b>TABLES</b>	8 - 25
<b>APPENDIX 1 - KEY TO SOURCE OF VARIETIES</b>	26

## WEATHER FOR THE 2018 SEASON.

Comments below are a summary taken from the meteorology website for the UK <http://www.metoffice.gov.uk/climate/uk/summaries/2018>

### Spring 2017

The early part of spring was rather unsettled, with some short spells of cold wintry weather, but also some drier spells. A particularly warm spell in the third week of April was followed by a May which, despite a brief cold spell to start, was one of the warmest on record. Weather systems approached the UK from the west for most of March and April, with only brief settled spells, but easterly winds were common during May. Below average temperatures for much of March and the first half of April meant a delayed start to the growing season, though the warmth of April 18th-21st was a sharp contrast. Although most areas had a drier May, spring rainfall totals were above average for eastern, central and southern areas. Sunshine was above average in most areas, especially further north.

### Summer 2017

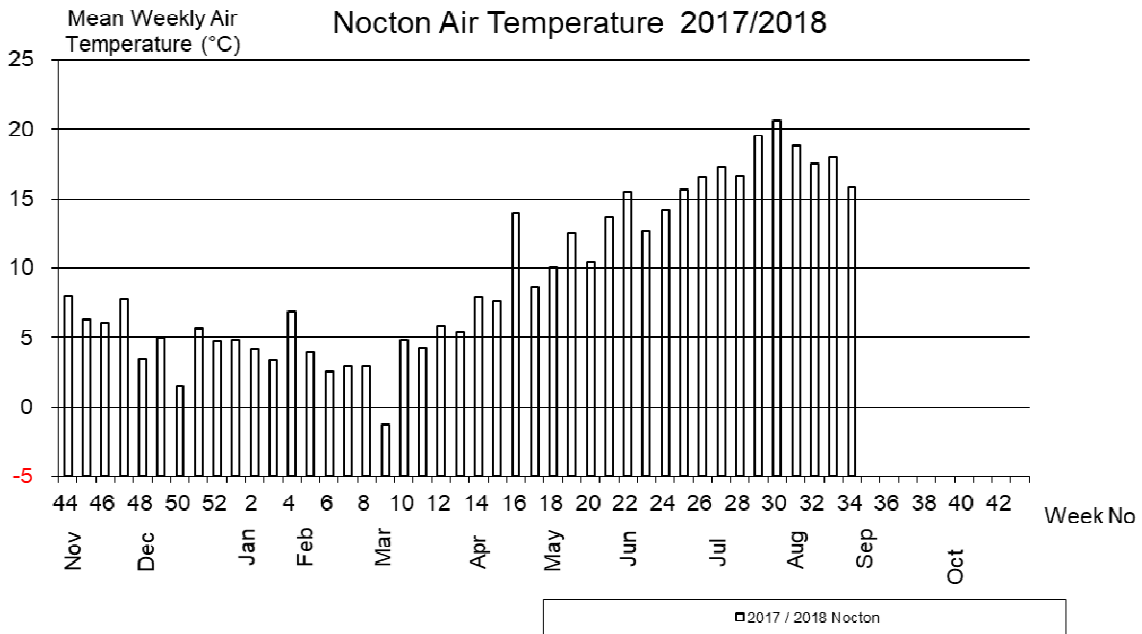
This summer was dominated by warm and largely sunny weather, with only short unsettled spells bringing rainfall mostly of a showery and sometimes thundery nature. Following a May in which the weather tended to become increasingly settled and warm, high pressure has been a regular influence of the UK weather, though Scotland saw regular bands of rain during 13th-20th June and on a few days around mid-July. More general showery rain across the UK in the last few days of July ended sequences of over 50 dry days at a few south-eastern stations. Temperatures have been well above average for much of the time, with numerous days bringing readings above 30 °C somewhere in the UK, and only brief cooler spells in mid-June and late July. Sunshine overall has been above average.

The content (text, pictures or graphics) and information contained in this publication must not be reproduced without the express written permission from PGRO, except for printing or saving for personal use. The data and observations reported herein do not constitute recommendations.

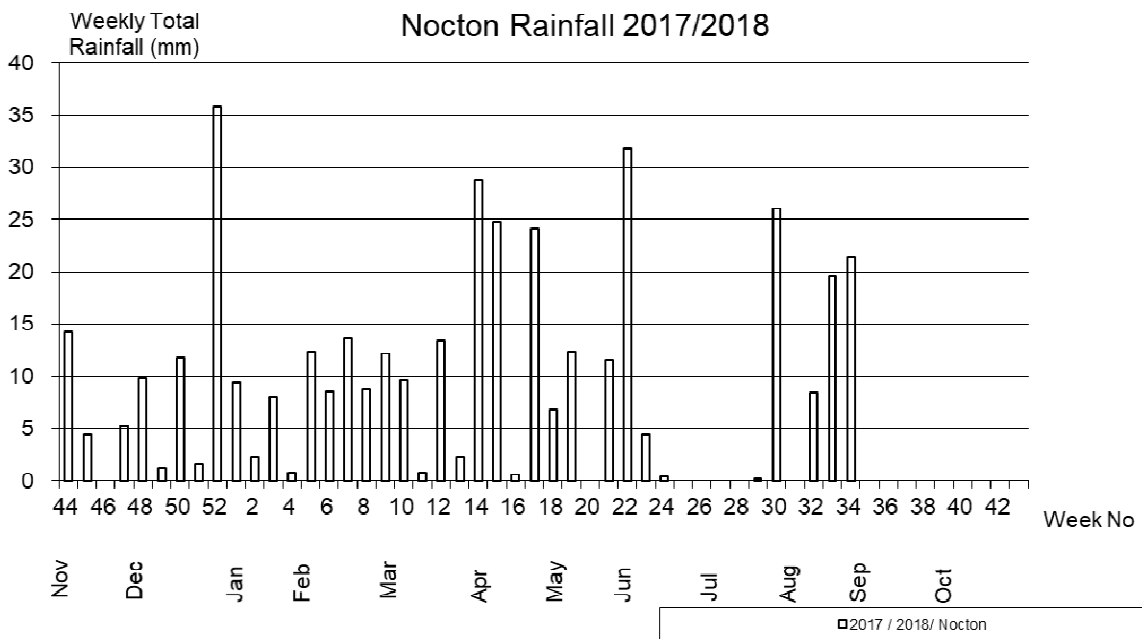
Information disseminated by the Processors & Growers Research Organisation is given after the exercise of all possible care in compilation, preparation and issue, but is provided without liability in its application or use.

**METEROLOGICAL DATA - 2017 / 2018 season**

Nocton mean weekly air temperatures (°C) 2017/2018



Nocton weekly rainfall totals (mm) 2016/2017



Nocton monthly rainfall totals (mm) 2017/2018

Month	2016/2017 Monthly Rainfall (mm) Nocton
November	30.4
December	53.8
January	30.8
February	34.8
March	36.4
April	78.4
May	40.2
June	27.2
July	26.2
August	51.2
September	-
October	-

## VINING PEAS

### SUMMARY

2016 followed on from a wet and notably mild winter. The spring was overall mostly unremarkable, with temperature and rainfall overall very close to the seasonal average. All three spring months had above-average sunshine totals.

The summer months began with a very cloudy and wet June over most of England and Wales, but under cloudy skies the night-time minima were often high. The mean temperature for the summer was 14.9 °C, which is 0.6 °C above the long-term average. Summer rainfall totals were above average for most areas. June was exceptionally wet in East Anglia. Summer sunshine totals were slightly below average except in parts of eastern England. June was an exceptionally dull month in the south.

2017 was a warm and rather dry spring. It was generally warmer than average during March and early April, but the second half of April was cooler, with some cold nights and numerous late frosts. May was predominantly warm, especially early and late in the month. April was much drier than average for most areas. Sunshine has been above average for spring in most areas.

The summer months were rather warm and wet. It was generally warmer than average during June and early July, especially in southern and eastern areas, but the second half of July was cooler, with an unsettled westerly regime. Both of these months were rather wet generally, and only a few areas were drier than average in each of them. Sunshine amounts have been slightly below average for summer so far in the majority of places.

2018 had an unsettled spring with frequent periods of rainfall. Temperatures were below average for much of March and the first half of April. May was one of the warmest on record. The summer months were warm and sunny with short periods of unsettled weather. Temperatures were well above average with long periods with no recorded rainfall. No rainfall was recorded between 17 June and 18 July (harvest period).

### Standard Size Varieties, Nocton 2016 – 2018 Tables 1 & 2

Varieties were evaluated in Standard Preliminary Trial 2016 and Standard Main Trials 2017 and 2018.

This 3 year data set comprises data from only the Nocton site.

Ten varieties Eldorado, SV8112QH, Kengo (D165315), PFR15-A10, PFR 15-PA42, CS-441AF, LG Stingray (04S51315N), LG Compass (08S05676A), LG Dolphin (08S01030A) and LG Infinity (08S04137A) completed 3 years of evaluation in 2018.

Yields from the yield standard Oasis were lowest in 2018 (5.86 t/ha) and highest in 2017 (9.97 t/ha) at TR100. Maturity of Oasis when compared to Avola ranged from +12 days in 2016 to +9 in 2017 and 2018.

Sherwood, a possible replacement for Avola matured at the same time as Avola and gave similar yields.

Eldorado (D85460) (Syngenta) matured one day before Avola. Yields were significantly lower than Oasis, but only 5-8% lower than Avola. Produce was medium-large size grade, but smaller than Avola.

**SV8112QH** (Seminis Vegetable Seeds) was semi-leafless and matured 5 days later than Avola. Yields(74%) were significantly lower than Oasis. Yields were low in 2016. Produce was much smaller than either Avola or Oasis, medium-small size grade. Standing ability was good (8).

**Kengo** (D165315) (Syngenta) was semi-leafless and overall matured one day before Oasis. Yields were variable over the 3 years. Overall yields (82 & 79%) were lower than Oasis, significantly so at TR120. Produce was similar in size to Oasis. Standing ability was good (8).

**PFR 15-A10** (Plant & Food Research) matured one day before Oasis. Yields (79 & 84%) were lower than Oasis, significantly so at TR100. Produce was smaller than Oasis, medium-small size grade. Standing ability was average (6).

**PFR 15-PA42** (Plant & Food Research) was semi-leafless and matured one day before Oasis. Yields (73 & 79%) were significantly lower than Oasis. Produce was smaller than Oasis, small-medium size grade at TR100. Standing ability was excellent (9).

**CS-441AF** (Crites Seed) was semi-leafless and matured at the same time as Oasis. Yields (88 & 86%) of medium- large size grade peas were lower, but not significantly lower than Oasis. Standing ability was average (5).

**LG Stingray** (04S51315N) (Limagrain UK) matured at the same time as Oasis. Yields (92 & 92%) were lower, but not significantly lower than Oasis. Produce was similar in size to Oasis. Standing ability was similar to Oasis (3).

**LG Compass** (08S05676A) (Limagrain UK) was semi-leafless and matured one day later than Oasis. Overall yields (96 & 93%) were a little lower than Oasis. Yields were better in 2017. Produce was medium-large size grade, a little larger than Oasis. Standing ability was average (6).

**LG Dolphin** (08S01030A) (Limagrain UK) was semi-leafless and overall matured 2 days later than Oasis. Maturity however was quite variable over the years. Yields (95 & 97%) were only a little below Oasis. Produce was similar in size to Oasis, medium- large size grade. Standing ability was better than average (7).

**LG Infinity** (08S04137A) (Limagrain UK) was semi-leafless and had late maturity, maturing 7 days later than Oasis. Yields (102 & 96%) were similar to Oasis. Yield were high in 2018. Produce was a little larger than Oasis. Standing ability was good (8).

*Standard Size Varieties, Holbeach 2017 - 2018 (AHDB Horticulture funded) Tables 3 & 4*

Varieties were evaluated in standard Vining Pea Main Trials in 2017 and 2018.

This 2 year data set comprises data from only the Hlobeach site.

Ten varieties Eldorado, SV8112QH, Kengo(D165315), PFR15-A10, PFR 15-PA42, CS-441AF, LG Stingray (04S51315N), LG Compass (08S05676A), LG Dolphin (08S01030A) and LG Infinity (08S04137A) completed 2 years of evaluation in 2018.

Yields from the standard Oasis were the highest in 2018 (11.32 t/ha) and lowest in 2017 (9.49 t/ha). Maturity of Oasis when compared to Avola ranged from +8 in 2018 to +12 in 2017.

Sherwood a possible replacement for Avola, matured at a similar time to Avola and gave similar yields.

**Eldorado** (D85460) (Syngenta) matured one day before Avola. Yields were significantly lower than Oasis and 12-14% lower than Avola. Produce was medium-large size grade, but smaller than Avola. Standing ability (2) was relatively poor.

**SV8112QH** (Seminis Vegetable Seeds) was semi-leafless and matured 6 days later than Avola. Yields (56%) were significantly lower than Oasis. Yields were low in 2018. Produce was much smaller than either Avola or Oasis, medium size grade. Standing ability was good (8).

**PFR 15-A10** (Plant & Food Research) matured one day before Oasis. Yields (78 & 83%) were lower significantly lower than Oasis. Produce was smaller than Oasis, medium-small size grade. Standing ability was below average (4).

**CS-441AF** (Crites Seed) was semi-leafless and matured at the same time as Oasis. Yields (93 & 107%) were a little lower than Oasis at TR100 and a little higher than Oasis at TR120. Produce was similar size grade to Oasis. Standing ability was average (6).

**PFR 15-PA42** (Plant & Food Research) was semi-leafless and matured at the same time as Oasis. Yields (86 & 104%) were lower than Oasis at TR100 and a little higher at TR120. Produce was smaller than Oasis, medium-small size grade at TR100. Standing ability was good (8).

**LG Compass** (08S05676A) (Limagrain UK) was semi-leafless and matured one day later than Oasis. Yields (99 & 110%) good, similar to Oasis at TR100 and the highest in the trials at TR120. Yields were better in 2017. Produce was similar in size to Oasis. Standing ability was average (5).

**LG Stingray** (04S51315N) (Limagrain UK) matured one day later than Oasis. Yields (81 & 93%) were lower, but not significantly lower than Oasis. Produce was similar in size to Oasis. Standing ability was similar to Oasis (2).

**Kengo** (D165315) (Syngenta) was semi-leafless and matured one day later than Oasis. Yields (89 & 100%) lower than Oasis at TR100, but similar at TR120. Produce was a little smaller than Oasis,

medium size grade. Standing ability was average (5).

**LG Dolphin** (08S01030A) (Limagrain UK) was semi-leafless and overall matured 4 days later than Oasis. Maturity however was quite variable over the 2 years. Yields (87 & 105%) were lower than Oasis at TR100, but a little higher at TR120. Produce was a little smaller than Oasis. Standing ability was average (6).

**LG Infinity** (08S04137A) (Limagrain UK) was semi-leafless and had late maturity, maturing 7 days later than Oasis. Yields (97 & 93%) were similar to Oasis at TR100 and a little lower at TR120. Yield were high in 2017. Produce was similar in size to Oasis. Standing ability was average (6).

#### *Petits Pois Varieties, Holbeach 2015 - 2017 Tables 5 & 6*

One petits pois variety, Afivert (D175580) completed trials in 2018.

Waverex the yield standard gave the highest yields in 2017 (5.21 t/ha) and the lowest in 2018 (4.12 t/ha) at TR100. Produce gave peas with 73% <8.75mm in diameter. Standing ability was poor (2).

**Afivert** (D175580) (Syngenta) was semi-leafless and matured 2/3 days later than Waverex. Yields (75/67%) were lower, but not significantly higher than Waverex. Yields were similar to Waverex in 2018. Produce was smaller than Waverex with 91% of the peas <8.75mm diameter at TR100. Haulm was longer than Waverex and standing ability (6) was better than Waverex.

#### *TRIALS IN 2018*

Standard size varieties were evaluated in Main, Preliminary and Screening Trials at Nocton, Lincs. Trials of standard and petits pois varieties were evaluated at Holbeach, South Lincolnshire. The standard pea Main Trial at Holbeach was a duplicate of the Main Trial at Nocton and was funded by Agriculture and Horticulture Development Board (AHDB-Horticulture).

Promising varieties from 2016 Preliminary Trials were assessed in the Main Trial. Preliminary Trial varieties were at National List stage of testing in an EU member country, while breeders' material at an early stage of development were evaluated in the Screening Trial.

Seed of all varieties was treated to control damping off, downy mildew and *Ascochyta* diseases. Avola was the standard variety for maturity (Sherwood was also included as a potential replacement for Avola); Oasis was the yield standard and Ambassador was the late maturing standard. Waverex was the petits pois yield and maturity standard.

Nocton trials were drilled on 12 March and Holbeach trials on 3 May. The peas emerged well and evenly, with few losses. At Nocton, broad-leaved weeds were controlled pre- and post-emergence with Nirvana and Bentazone plus MPCA respectively. Weevil (*Sitona lineatus*) and field thrips (*Thrips angusticeps*) were controlled with an application of Hallmark (lambda-cyhalothrin). Aphid (*Acyrtosiphon pisum*) and pea moth (*Cydia nigricana*) were controlled with insecticide. A fungicide was applied to control foliar diseases. At Holbeach inputs were the same as the surrounding commercial crop.

The vining pea harvest started early about 8 days later than 2017 on the 21 June and was completed on 21 July. Pea colour for most varieties was good and unless otherwise stated the uniformity of colour was also good.

A sample from all trials were frozen for later colour and Brix assessments. Most varieties became darker in colour after freezing and defrosting than in the raw state.

#### *Standard Pea Main Trial, Nocton - Tables 7 & 8*

This site received no rainfall between 17 June – 18 July

Yields from the yield standard Oasis (5.86 t/ha), were 4.11 t/ha lower than in 2017 at TR100.

Eldorado was the first to mature one day before Avola while LG Infinity and LG Dolphin matured very late, 16 days later than Avola.

Eldorado, Avola, DGL0027, Kengo and PFR 15-PA42 gave significantly lower yields than Oasis.

No variety gave significantly higher yields than Oasis. LG Infinity was the highest yielding at both TR100 and TR120, yielding 120 and 114% of Oasis. LG Valiant (112%) and LG Dolphin (101%) were also

higher yielding than Oasis at TR120.

Several varieties had excellent (9) / very good standing (8) ability including, LG Valiant, PFR 15-PA42, LG Infinity and LD Dolphin, all of these were semi-leafless.

#### Standard Pea Main Trial, Holbeach (AHDB-Horticulture funded) - Tables 9 & 10

In Contrast to the Nocton site, yields from the yield standard Oasis (11.32 t/ha), were 1.83 t/ha higher than in 2018 at TR100. Oasis did not give a yield increase from TR100 to TR120.

Eldorado was the first to mature one day before Avola while LG Infinity and LG Dolphin matured late, 14 days later than Avola.

Early varieties Avola, Sherwood and CS-455AF gave similar yields at TR120. D85460 was lower yielding, but not significantly so.

Oasis was the highest yielding variety at TR100 and several varieties gave significantly lower yields, including D85460 (56%), Sherwood (69%), Avola (71%), CS-455AF(72%), DGL0027(54%), SV8112QH(43%), LG Valiant(77%), D165641(59%), PFR 15-A10(79%), LG Stingray(77%), Ambassador(78%) and LG Dolphin(83%).

The following varieties gave higher, but not significantly higher yields than Oasis at TR120 including, Kengo(100%), PFR-15-PA42(108%), LG Compass(108%) and CS-441AF(108%).

Varieties with very good standing ability (8) were DGL0027, PFR 15-PA42 and SV0823QG.

#### Standard Pea Preliminary Trial, Nocton – Tables 11 & 12

Ten Preliminary trial varieties were evaluated.

Avola was the first variety to mature, 9 days before Oasis.

Oasis gave the highest yields at TR100. The following varieties gave significantly lower yields than Oasis at TR100 including, Avola(69%), Bonfire(64%), Lyric(59%), DGL046(45%), Querida(56%), Dancer(65%) and CS-463AF(64%).

CS-471AF(103%) was a little higher yielding than Oasis at TR120. Belvedere (95%/96%) was a little lower yielding than Oasis at both TR100 and TR120.

Varieties with the higher scores for standing ability were Dancer(8) and CS-463AF(7). All of these were semi-leafless.

#### Standard Pea Screening Trial, Nocton – Tables 13 & 14

Seven Screening trial varieties were evaluated.

Avola was the first variety to mature, 9 days before Oasis. PLS 602, PLS 595-1, CS-451AF and Ambassador matured one day later than Oasis.

Avola(69%), CS-462F(47%), PLS 613-1(45%), PLS 602(68%) and CS-451AF(70%) gave significantly lower yields than Oasis.

CS-464AF yielded 102% and 99% of Oasis at TR100 and TR120 respectively.

Varieties with the higher scores for standing ability were, Wav 763 (8) and CS-451AF (7), both were semi-leafless.

#### Petits Pois Main & Preliminary Trials, Holbeach – Tables 15 & 16

Some varieties (GV 490, GV 522, FP 2278 and BSC 7120) were entered into the petits pois trials, but were clearly not petits pois or small in size grade specification. Data for Avola and Oasis (from the adjacent standard pea trial) have also been presented for comparison.

#### **Main Trial Varieties**

Norvert had early maturity, maturing 3 days earlier than Waverex. SV3946QB and Afivert matured 1 and 2 days later than Waverex and SV6064QC matured 5 days later than Waverex.



Norvert(108%), SV3946QB(105%) and Afivert(104%) gave higher, but not significantly higher yields than waverex.

Afivert and SV064QC gave produce with 93% of the peas <8.75mm diameter, smaller than Waverex. Produce from SV3946QB was larger, medium-small size grade.

None of these varieties had good standing ability.

### **Preliminary Trial Varieties**

Wav 1107 had early maturity, maturing 6 days earlier than Waverex while GV 390 had late maturity maturing 5 days later than Waverex.

Wav 1107 gave produce with 90% of the peas <8.75mm diameter. Yields(75%) were lower than Waverex, significantly so at TR120. GV 389(74%) gave significantly lower yields than Waverex and small-medium size grade peas. GV 390 gave produce with 75% of the peas <8.75mm diameter. Yields very high(133%), significantly higher than Waverex.

All the standard size varieties all gave significantly higher yields than Waverex, but none gave yields that matched those of Oasis. BSC 7120 was the highest yielding of these (188% of Waverex).

### Varietal Susceptibility of Vining Peas to Downy Mildew (*Peronospora viciae*) - 2018

It is important that untreated seed is entered for trials so that downy mildew susceptibility can be evaluated.

As part of the variety evaluation work 54 varieties of vining peas were sown in disease observation trials at two locations in Lincolnshire. Both trials were situated in a field with a history of pea growing.

Plants were scored for infection on two occasions during the season, to include both primary systemically infected seedlings and secondary infection on the foliage and pods. The data were combined to give an indication of the relative susceptibility to downy mildew.

Susceptible	Moderately Susceptible	Slightly Susceptible	Moderate Field Resistance	Good Field Resistance
GV 390	Avola	BSC 7120	LG Dolphin	LG Stingray
GV 490	CS451AF	CS-445AF	LG Infinity	Afivert
	LG Midnight	CS-455AF	LG Compass	Belvedere
	Oasis	CS-462F	CS-441AF	Bonfire
		CS-463AF	D85481	D165641
		CS-464AF	Judith	Eldordao
		CS-471AF	Lunanvert	D85607
		FP 2278	Lyric	Dancer
		GV 389	PFR 1601	DGL 046
		GV 522	Wav 1107	Fantastigo
		LG Valiant	LG Dolphin	Kengo
		PFR 15-A10		Marimba
		PFR 15-PA42		Norvet
		Reflection		Querida
		PLS 595-1		Saltingo
		PLS 602		SV0823QG
		PLS 613-1		SV3946QB
		SV6064QC		SV8112QH
		Vidor		Wav 763

The results of these tests and those of previous years were incorporated in the PGRO Advisory Leaflet of Vining Pea Varieties.

**TABLE 1 - VINING PEA VARIETY EVALUATIONS.** Summary of Standard Vining Peas - Nocton 2016 - 2018

Varieties placed in order of maturity. Standard varieties underlined

Variety	Source	1000 Seed Weight g	@ TR 100						@ TR 120						Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark	
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS							Haulm length cm
Eldorado (D85460)	Syn	230	- 1	57-	25	45	25	5	- 1	54-	38	48	12	2	58	3	18	6.0
<u>Avola</u>	<u>SVS</u>	<u>215</u>	<u>0</u>	<u>62-</u>	<u>45</u>	<u>41</u>	<u>12</u>	<u>2</u>	<u>0</u>	<u>62-</u>	<u>62</u>	<u>32</u>	<u>5</u>	<u>1</u>	60	<u>3</u>	<u>20</u>	<u>5.5</u>
Sherwood	SVS	189	0	69-	23	49	24	4	0	64-	30	53	15	2	48	4	20	5.7
SV8112QH	(SL) SVS	157	+ 5	74-	11	42	37	10	+ 4	74-	16	51	28	5	47	8	20	5.6
Kengo(D165315)	(SL) Syn	198	+ 9	82	27	48	22	3	+ 9	79-	35	50	13	2	61	8	18	5.6
PFR 15-A10	PFR	199	+ 9	79-	10	40	44	6	+ 8	84	15	53	30	2	57	6	22	5.3
PFR 15-PA42	(SL) PFR	190	+ 9	73-	7	39	48	6	+ 9	79-	14	56	28	2	54	9	18	5.2
<u>Oasis</u>	<u>LUK</u>	<u>187</u>	<u>+10</u>	<u>100</u>	<u>26</u>	<u>54</u>	<u>18</u>	<u>2</u>	<u>+ 9</u>	<u>100</u>	<u>32</u>	<u>55</u>	<u>12</u>	<u>1</u>	57	<u>2</u>	<u>25</u>	<u>5.4</u>
				(7.66t/ha)						(8.43t/ha)								
CS-441AF	(SL) CS	202	+10	88	36	55	9	0	+ 9	86	40	53	7	0	58	5	25	5.4
LG Stingray	LUK	203	+10	92	30	51	17	2	+10	91	40	52	7	1	57	3	21	5.4
LG Compass	(SL) LUK	232	+11	96	42	50	7	1	+ 9	93	43	50	6	1	66	6	25	5.6
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+11</u>	<u>82</u>	<u>30</u>	<u>57</u>	<u>11</u>	<u>2</u>	<u>+11</u>	<u>79-</u>	<u>37</u>	<u>55</u>	<u>7</u>	<u>1</u>	70	<u>4</u>	<u>19</u>	<u>5.5</u>
LG Dolphin	(SL) LUK	183	+12	95	32	53	13	2	+12	97	39	52	8	1	57	7	22	5.6
LG Infinity	(SL) LUK	168	+17	102	42	46	10	2	+15	96	43	47	9	1	59	8	23	5.2
Significance @ P=0.05				SD						SD								
LSD @ P=0.05				21.1						17.9								
CV %				15.3						13.1								

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 2 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data – Standard pea varieties – Nocton 2016 – 2018

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Eldorado	16	96.0	6.0	1.0	4.8	1.0	14.1
	17	99.0	6.0	2.0	4.5	1.0	14.0
	18	107.0	5.5	2.0	3.8	2.0	14.2
Avola	16	98.0	6.3	1.0	4.3	1.0	11.2
	17	101.0	5.5	2.0	4.5	1.0	13.3
	18	99.0	5.0	2.0	4.3	2.0	12.5
Sherwood	16	105.5	6.0	2.0	4.5	1.0	14.0
	17	103.0	5.0	2.0	4.5	1.0	13.0
	18	97.0	5.3	2.0	4.3	2.0	13.8
SV8112QH	16	104.5	7.0	1.5	3.8	1.0	14.4
	17	97.0	6.5	2.0	5.0	1.0	14.3
	18	98.5	7.5	1.5	3.8	2.0	14.0
Kengo	16	108.5	6.3	1.0	3.5	1.0	12.8
	17	98.0	6.0	2.0	5.0	1.0	12.2
	18	98.5	6.3	2.0	4.8	2.0	14.4
PFR 15-A10	16	99.5	6.3	1.0	4.8	1.0	14.5
	17	99.0	5.5	2.0	4.5	1.0	13.6
	18	99.0	5.8	2.0	4.3	2.0	13.5
PFR 15-PA42	16	99.0	5.0	1.5	3.8	1.0	14.4
	17	101.0	4.5	2.0	4.5	1.0	11.1
	18	100.5	5.3	2.0	4.8	2.0	12.6
Oasis	16	106.0	5.8	1.0	4.5	1.0	10.8
	17	98.5	5.5	2.0	4.5	1.0	12.6
	18	99.0	5.8	2.0	3.8	1.5	15.0
CS-441AF	16	101.5	5.5	2.0	4.3	1.0	12.3
	17	99.5	5.0	2.0	4.5	1.0	11.1
	18	103.5	5.3	1.5	4.3	2.0	12.6
LG Stingray	16	98.5	6.0	1.0	3.8	1.0	13.2
	17	99.5	-	-	-	-	-
	18	101.0	5.3	2.0	3.3	2.0	13.8
LG Compass	16	106.0	5.3	1.0	4.5	1.0	12.6
	17	99.0	5.5	2.0	4.5	1.0	11.9
	18	115.5	5.0	1.5	4.3	2.0	14.3
Ambassador	16	100.5	5.3	1.0	3.8	1.0	12.0
	17	107.5	5.0	2.0	4.0	1.0	12.2
	18	97.0	5.5	1.5	3.8	2.0	13.6
LG Dolphin	16	102.0	7.0	1.0	4.0	1.0	13.4
	17	109.5	5.0	2.0	4.0	1.0	13.3
	18	101.0	5.8	1.5	4.0	2.0	15.8
LG Infinity	16	98.5	6.3	1.0	3.3	1.0	13.5
	17	119.0	4.5	1.0	5.0	1.0	9.8
	18	101.0	5.8	1.5	3.8	2.0	15.4

KEY: Uniformity; Uniformity; No. of blonds: (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 1 - VINING PEA VARIETY EVALUATIONS.** Summary of Standard Vining Peas - Nocton 2016 - 2018

Varieties placed in order of maturity. Standard varieties underlined

Variety	Source	1000 Seed Weight g	@ TR 100				@ TR 120				Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark				
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis					% in size grades L M S VS			
Eldorado(D85460)	Syn	230	- 1	57-	25	45	25	5	- 1	54-	38	48	12	2	58	3	18	6.0
<u>Avola</u>	<u>SVS</u>	<u>215</u>	<u>0</u>	<u>62-</u>	<u>45</u>	<u>41</u>	<u>12</u>	<u>2</u>	<u>0</u>	<u>62-</u>	<u>62</u>	<u>32</u>	<u>5</u>	<u>1</u>	60	<u>3</u>	<u>20</u>	<u>5.5</u>
Sherwood	SVS	189	0	69-	23	49	24	4	0	64-	30	53	15	2	48	4	20	5.7
SV8112QH	(SL) SVS	157	+ 5	74-	11	42	37	10	+ 4	74-	16	51	28	5	47	8	20	5.6
Kengo(D165315)	(SL) Syn	198	+ 9	82	27	48	22	3	+ 9	79-	35	50	13	2	61	8	18	5.6
PFR 15-A10	PFR	199	+ 9	79-	10	40	44	6	+ 8	84	15	53	30	2	57	6	22	5.3
PFR 15-PA42	(SL) PFR	190	+ 9	73-	7	39	48	6	+ 9	79-	14	56	28	2	54	9	18	5.2
<u>Oasis</u>	<u>LUK</u>	<u>187</u>	<u>+10</u>	<u>100</u>	<u>26</u>	<u>54</u>	<u>18</u>	<u>2</u>	<u>+ 9</u>	<u>100</u>	<u>32</u>	<u>55</u>	<u>12</u>	<u>1</u>	57	<u>2</u>	<u>25</u>	<u>5.4</u>
				(7.66t/ha)						(8.43t/ha)								
CS-441AF	(SL) CS	202	+10	88	36	55	9	0	+ 9	86	40	53	7	0	58	5	25	5.4
LG Stingray	LUK	203	+10	92	30	51	17	2	+10	91	40	52	7	1	57	3	21	5.4
LG Compass	(SL) LUK	232	+11	96	42	50	7	1	+ 9	93	43	50	6	1	66	6	25	5.6
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+11</u>	<u>82</u>	<u>30</u>	<u>57</u>	<u>11</u>	<u>2</u>	<u>+11</u>	<u>79-</u>	<u>37</u>	<u>55</u>	<u>7</u>	<u>1</u>	70	<u>4</u>	<u>19</u>	<u>5.5</u>
LG Dolphin	(SL) LUK	183	+12	95	32	53	13	2	+12	97	39	52	8	1	57	7	22	5.6
LG Infinity	(SL) LUK	168	+17	102	42	46	10	2	+15	96	43	47	9	1	59	8	23	5.2
Significance @ P=0.05				SD						SD								
LSD @ P=0.05				21.1						17.9								
CV %				15.3						13.1								

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 2 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data – Standard pea varieties – Nocton 2016 – 2018

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Eldorado	16	96.0	6.0	1.0	4.8	1.0	14.1
	17	99.0	6.0	2.0	4.5	1.0	14.0
	18	107.0	5.5	2.0	3.8	2.0	14.2
Avola	16	98.0	6.3	1.0	4.3	1.0	11.2
	17	101.0	5.5	2.0	4.5	1.0	13.3
	18	99.0	5.0	2.0	4.3	2.0	12.5
Sherwood	16	105.5	6.0	2.0	4.5	1.0	14.0
	17	103.0	5.0	2.0	4.5	1.0	13.0
	18	97.0	5.3	2.0	4.3	2.0	13.8
SV8112QH	16	104.5	7.0	1.5	3.8	1.0	14.4
	17	97.0	6.5	2.0	5.0	1.0	14.3
	18	98.5	7.5	1.5	3.8	2.0	14.0
Kengo	16	108.5	6.3	1.0	3.5	1.0	12.8
	17	98.0	6.0	2.0	5.0	1.0	12.2
	18	98.5	6.3	2.0	4.8	2.0	14.4
PFR 15-A10	16	99.5	6.3	1.0	4.8	1.0	14.5
	17	99.0	5.5	2.0	4.5	1.0	13.6
	18	99.0	5.8	2.0	4.3	2.0	13.5
PFR 15-PA42	16	99.0	5.0	1.5	3.8	1.0	14.4
	17	101.0	4.5	2.0	4.5	1.0	11.1
	18	100.5	5.3	2.0	4.8	2.0	12.6
Oasis	16	106.0	5.8	1.0	4.5	1.0	10.8
	17	98.5	5.5	2.0	4.5	1.0	12.6
	18	99.0	5.8	2.0	3.8	1.5	15.0
CS-441AF	16	101.5	5.5	2.0	4.3	1.0	12.3
	17	99.5	5.0	2.0	4.5	1.0	11.1
	18	103.5	5.3	1.5	4.3	2.0	12.6
LG Stingray	16	98.5	6.0	1.0	3.8	1.0	13.2
	17	99.5	-	-	-	-	-
	18	101.0	5.3	2.0	3.3	2.0	13.8
LG Compass	16	106.0	5.3	1.0	4.5	1.0	12.6
	17	99.0	5.5	2.0	4.5	1.0	11.9
	18	115.5	5.0	1.5	4.3	2.0	14.3
Ambassador	16	100.5	5.3	1.0	3.8	1.0	12.0
	17	107.5	5.0	2.0	4.0	1.0	12.2
	18	97.0	5.5	1.5	3.8	2.0	13.6
LG Dolphin	16	102.0	7.0	1.0	4.0	1.0	13.4
	17	109.5	5.0	2.0	4.0	1.0	13.3
	18	101.0	5.8	1.5	4.0	2.0	15.8
LG Infinity	16	98.5	6.3	1.0	3.3	1.0	13.5
	17	119.0	4.5	1.0	5.0	1.0	9.8
	18	101.0	5.8	1.5	3.8	2.0	15.4

KEY: Uniformity; Uniformity; No. of blonds: (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 3 - VINING PEA VARIETY EVALUATIONS.** Summary of Standard Vining Peas - Holbeach 2017 - 2018

Varieties placed in order of maturity. Standard varieties underlined

Variety	Source	1000 Seed Weight g	@ TR 100				@ TR 120				Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark				
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis					% in size grades L M S VS			
Eldorado (D85460)	Syn	235	- 1	57-	40	50	9	1	- 1	70-	48	47	4	1	87	2	17	5.6
<u>Avola</u>	<u>SVS</u>	<u>213</u>	<u>0</u>	<u>74-</u>	<u>57</u>	<u>40</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>82-</u>	<u>67</u>	<u>32</u>	<u>1</u>	<u>0</u>	<u>74</u>	<u>3</u>	<u>20</u>	<u>5.3</u>
Sherwood	SVS	179	0	67-	26	53	19	2	- 1	83-	32	56	11	1	64	3	21	5.5
SV8112QH	(SL) SVS	167	+ 6	56-	21	53	22	4	+ 6	56-	31	52	14	3	65	8	13	5.4
PFR 15-A10	(SL) PFR	195	+ 9	78-	20	41	33	6	+10	83-	23	53	21	3	71	4	20	5.0
CS-441AF	(SL) CS	210	+10	93	45	47	7	1	+ 9	107	49	45	5	1	73	6	22	4.9
PFR 15-PA42	(SL) PFR	181	+10	86	12	45	38	5	+10	104	21	69	9	1	73	8	20	5.0
<u>Oasis</u>	<u>LUK</u>	<u>194</u>	<u>+10</u>	<u>100</u>	<u>48</u>	<u>43</u>	<u>8</u>	<u>1</u>	<u>+10</u>	<u>100</u>	<u>52</u>	<u>41</u>	<u>6</u>	<u>1</u>	<u>66</u>	<u>2</u>	<u>24</u>	<u>5.3</u>
				(10.41t/ha)						(10.41t/ha)								
LG Compass	(SL) LUK	222	+11	99	44	46	9	1	+10	110	56	38	5	1	78	5	23	5.3
LG Stingray	LUK	207	+11	81	41	46	11	2	+11	93	56	40	4	0	68	2	19	5.1
Kengo(D165315)	(SL) Syn	187	+11	89	29	45	21	5	+11	100	38	49	11	2	71	5	19	5.4
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+13</u>	<u>91</u>	<u>48</u>	<u>41</u>	<u>9</u>	<u>2</u>	<u>+12</u>	<u>103</u>	<u>57</u>	<u>38</u>	<u>4</u>	<u>1</u>	<u>90</u>	<u>3</u>	<u>20</u>	<u>5.0</u>
LG Dolphin	(SL) LUK	165	+14	87	28	51	18	3	+14	105	42	49	8	1	62	6	21	5.0
LG Infinity	(SL) LUK	165	+17	97	34	50	14	2	+17	93	47	50	3	0	61	6	20	5.0
Significance @ P=0.05				SD						SD								
LSD @ P=0.05				21.7						29.4								
CV %				12.4						16.3								

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 4 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data – Standard pea varieties – Holbeach 2017 – 2018

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Eldorado	17	121.0	5.0	2.0	4.5	1.0	12.1
	18	100.0	6.0	2.0	4.3	2.0	13.4
Avola	17	122.0	5.0	2.0	4.5	1.0	9.0
	18	95.0	5.5	2.0	4.3	2.0	13.8
Sherwood	17	116.0	5.0	2.0	4.5	1.0	11.2
	18	98.5	6.0	2.0	3.8	2.0	13.1
SV8112QH	17	101.5	6.0	2.0	5.0	1.0	13.0
	18	101.0	6.8	2.0	4.8	2.0	14.5
PFR 15-A10	17	98.5	5.0	2.0	4.0	1.0	12.7
	18	109.0	5.5	1.5	3.3	1.0	13.2
CS-441AF	17	103.0	4.5	1.0	3.5	2.0	10.5
	18	99.5	5.0	1.5	3.8	2.0	11.7
PFR 15-PA42	17	95.5	5.0	2.0	5.0	1.0	11.6
	18	100.0	5.0	2.0	4.5	2.0	12.8
Oasis	17	99.0	5.0	1.0	4.0	2.0	10.4
	18	100.0	5.3	2.0	4.0	2.0	13.2
LG Compass	17	99.5	5.0	1.0	4.5	1.0	12.2
	18	101.0	5.8	2.0	4.0	2.0	12.9
LG Stingray	17	95.0	4.5	2.0	3.5	2.0	12.5
	18	99.0	5.3	2.0	3.8	1.0	13.8
Kengo	17	101.0	4.5	2.0	4.5	1.0	11.0
	18	100.0	5.8	1.0	3.8	1.0	13.6
Ambassador	17	94.5	5.0	1.0	4.0	2.0	11.8
	18	103.0	5.8	2.0	4.3	2.0	12.8
LG Dolphin	17	97.0	6.0	2.0	4.5	2.0	11.9
	18	101.5	5.8	1.0	3.5	2.0	14.1
LG Infinity	17	101.0	5.5	2.0	4.0	2.0	11.6
	18	95.0	5.0	1.5	2.5	1.0	12.7

KEY: Uniformity; Uniformity; No. of blonds: (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 5 - VINING PEA VARIETY EVALUATIONS.** Summary of Petits Pois Vining Peas - Holbeach 2017 - 2018

Varieties placed in order of maturity. Standard varieties underlined

Variety	Source	1000 Seed Weight g	@ TR 100							@ TR 120							Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
			Maturity (± days) Waverex	Yield % of Waverex	% in size grades				Maturity (± days) Waverex	Yield % of Waverex	% in size grades				Haulm length cm				
<u>Waverex</u>	<u>vW</u>	<u>98</u>	<u>0</u>	<u>100</u> (4.67t/ha)	<u>2</u>	<u>19</u>	<u>45</u>	<u>34</u>	<u>0</u>	<u>100</u> (5.25t/ha)	<u>3</u>	<u>29</u>	<u>49</u>	<u>19</u>	<u>56</u>	<u>2</u>	<u>14</u>	<u>4.9</u>	
Afivert (D175580)	(SL) Syn	93	+ 3	75	0	9	51	40	+ 2	67	0	8	57	35	66	6	11	5.2	
Significance @ P=0.05			NSD							NSD									
LSD @ P=0.05			51.06							39.6									
CV %			31.3							23.1									

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix



**TABLE 6 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data - Petits Pois Peas, Holbeach - 2017 - 2018

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Waverex	17	103.5	5.0	2.0	5.0	1.0	12.5
	18	101.5	5.3	2.0	3.3	1.0	13.4
Afivert	17	115.5	5.5	2.0	4.5	1.0	11.6
	18	101.5	6.0	1.5	4.8	2.0	12.9

KEY: Uniformity; Uniformity; No. of blonds: (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 7 - VINING PEA VARIETY EVALUATIONS.** Summary of agronomic data Standard Vining Pea Main Variety Trial, Nocton - 2018

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 22 March.

Results are means of three replicates. Target population 90 plants per m<sup>2</sup> sown in ten 15 cm rows.

Variety	Source	1000 Seed Weight g	@ TR 100				@ TR 120				Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark				
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis					% in size grades L M S VS			
Eldorado (D85460)	Syn	249	- 1	61-	27	49	19	5	- 2	55-	41	48	9	2	57	3	13	6.0
<u>Avola</u>	<u>SVS</u>	<u>220</u>	<u>0(20/6)</u>	<u>69-</u>	<u>44</u>	<u>46</u>	<u>9</u>	<u>1</u>	<u>0(23/6)</u>	<u>61-</u>	<u>62</u>	<u>34</u>	<u>4</u>	<u>0</u>	<u>64</u>	<u>2</u>	<u>16</u>	<u>5.6</u>
Sherwood	SVS	174	0	83	25	55	18	2	0	75	36	53	10	1	48	3	18	5.8
CS-455AF	(SL) CS	215	+ 3	80	40	52	8	0	+ 2	79	62	36	2	0	47	4	18	5.8
DGL0027	(SL) Syn	176	+ 4	42-	47	47	6	0	+ 4	41-	55	40	4	1	46	7	10	5.8
SV8112QH	(SL) SVS	164	+ 5	81	18	47	30	5	+ 4	72-	25	55	17	3	40	7	19	5.7
D165641	(SL) Syn	208	+ 8	75	55	42	3	0	+ 6	82	66	32	2	0	44	6	18	6.0
LG Valiant	(SL) LUK	195	+ 8	103	33	59	8	0	+ 6	112	40	55	5	0	58	8	27	6.0
Kengo(D165315)	(SL) Syn	176	+ 9	62-	34	53	12	1	+ 8	68-	51	45	4	0	51	7	13	5.8
PFR 15-A10	PFR	214	+ 9	87	14	45	38	3	+ 8	84	17	55	26	2	50	5	19	5.1
PFR 15-PA42	(SL) PFR	172	+ 9	53-	11	51	36	2	+ 8	71-	20	63	16	1	49	9	14	5.2
<u>Oasis</u>	<u>LUK</u>	<u>182</u>	<u>+ 9</u>	<u>100</u>	<u>33</u>	<u>59</u>	<u>8</u>	<u>0</u>	<u>+ 8</u>	<u>100</u>	<u>41</u>	<u>54</u>	<u>5</u>	<u>0</u>	<u>53</u>	<u>2</u>	<u>24</u>	<u>5.4</u>
				(5.86t/ha)						(6.58t/ha)								
LG Stingray	LUK	185	+10	87	38	55	7	0	+ 8	82	48	48	4	0	46	3	18	5.4
LG Compass	(SL) LUK	203	+10	92	55	43	2	0	+ 8	91	57	41	2	0	56	5	26	5.5
CS-441AF	(SL) CS	206	+10	92	50	47	3	0	+ 8	91	51	46	3	0	54	5	22	5.3
SV0823QG	(SL) SVS	202	+10	98	21	57	20	2	+ 9	92	29	65	6	0	57	7	21	5.7
<u>Ambassador</u>	<u>vW</u>	<u>199</u>	<u>+10</u>	<u>77</u>	<u>35</u>	<u>56</u>	<u>8</u>	<u>1</u>	<u>+ 9</u>	<u>71-</u>	<u>49</u>	<u>48</u>	<u>3</u>	<u>0</u>	<u>66</u>	<u>3</u>	<u>16</u>	<u>5.4</u>
PFR 1601	PFR	212	+10	98	22	66	11	1	+ 9	97	28	68	4	0	51	4	22	5.6
LG Infinity	(SL) LUK	151	+16	120	30	59	10	1	+14	114	32	61	7	0	47	8	28	5.5
LG Dolphin	(SL) LUK	150	+16	95	36	55	9	0	+15	101	37	57	5	1	45	8	22	5.5
Significance @ P=0.05				SD						SD								
LSD @ P=0.05				28.1						25.5								
CV %				22.3						20.8								

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 8 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data - Standard Vining Pea Main Variety Trial, Nocton - 2018

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Eldorado	107.0	5.5	2.0	3.8	2.0	14.2
Avola	99.0	5.0	2.0	4.3	2.0	12.5
Sherwood	97.0	5.3	2.0	4.3	2.0	13.8
CS-455AF	96.5	5.8	2.0	4.0	2.0	14.5
DGL0027	102.0	6.3	1.5	4.0	2.0	14.0
SV8112QH	98.5	7.5	1.5	3.8	2.0	14.0
D165641	102.0	5.8	2.0	4.5	2.0	14.4
LG Valiant	100.5	5.8	2.0	4.5	2.0	14.2
Kengo(D165315)	98.5	6.3	2.0	4.8	2.0	14.4
PFR 15-A10	99.0	5.8	2.0	4.3	2.0	13.5
PFR 15-PA42	100.5	5.3	2.0	4.8	2.0	12.6
Oasis	99.0	5.8	2.0	3.8	1.5	15.0
LG Stingray	101.0	5.3	2.0	3.3	2.0	13.8
LG Compass	115.5	5.0	1.5	4.3	2.0	14.3
CS-441AF	103.5	5.3	1.5	4.3	2.0	12.6
SV0823QG	98.5	6.0	2.0	4.3	2.0	13.3
Ambassador	97.0	5.5	1.5	3.8	2.0	13.6
PFR 1601	99.0	5.3	2.0	3.3	1.0	13.2
LG Infinity	101.0	5.8	1.5	3.8	2.0	15.4
LG Dolphin	101.0	5.8	1.5	4.0	2.0	15.8

KEY: Uniformity; Uniformity; No. of blonds; (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 9 - VINING PEA VARIETY EVALUATIONS.** Summary of agronomic data Standard Vining Pea Main Variety Trial, Holbeach (Moulton Seas End) - 2018

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 3 May.

Results are means of three replicates. Target population 90 plants per m<sup>2</sup> sown in ten 15 cm rows.

Variety	Source	1000 Seed Weight g	@ TR 100				@ TR 120				Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark					
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis					% in size grades L M S VS				
Eldorado (D85460)	Syn	249	- 1	56-	40	49	10	1	- 1	56-	59	38	2	1	84	3	14	5.6	
Sherwood	SVS	174	0	69-	30	51	17	2	- 1	71-	38	54	7	1	61	3	20	5.6	
<u>Avola</u>	<u>SVS</u>	<u>220</u>	<u>0(08/7)</u>	<u>71-</u>	<u>52</u>	<u>42</u>	<u>6</u>	<u>0</u>	<u>0(10/7)</u>	<u>71-</u>	<u>73</u>	<u>27</u>	<u>0</u>	<u>0</u>	<u>78</u>	<u>3</u>	<u>19</u>	<u>5.4</u>	
CS-455AF	(SL) CS	215	+ 1	72-	43	50	6	1	+ 1	72-	63	36	1	0	60	6	19	5.4	
DGL0027	(SL) Syn	176	+ 1	54-	33	57	9	1	+ 1	54-	43	51	5	1	70	8	14	5.8	
SV8112QH	(SL) SVS	164	+ 4	43-	24	53	20	3	+ 3	43-	30	54	14	2	64	7	12	5.6	
LG Valiant	(SL) LUK	195	+ 5	77-	24	56	19	1	+ 5	80-	31	65	4	0	74	5	20	5.8	
D165641	(SL) Syn	208	+ 6	59-	42	47	10	1	+ 6	84	52	44	4	0	58	4	19	5.8	
PFR 15-A10	PFR	214	+ 7	79-	21	47	29	3	+ 7	80-	23	57	18	2	73	6	23	5.0	
<u>Oasis</u>	<u>LUK</u>	<u>182</u>	<u>+ 8</u>		<u>100</u>	<u>60</u>	<u>37</u>	<u>3</u>	<u>+ 8</u>	<u>100</u>	<u>65</u>	<u>33</u>	<u>2</u>	<u>0</u>	<u>66</u>	<u>2</u>	<u>28</u>	<u>5.3</u>	
					<u>(11.32t/ha)</u>						<u>(11.32t/ha)</u>								
LG Compass	(SL) LUK	203	+ 8	98	45	46	8	1	+ 8	108	57	39	4	0	82	3	25	5.3	
CS-441AF	(SL) CS	206	+ 8	98	47	48	5	0	+ 8	111	58	39	3	0	78	5	25	5.1	
PFR 15-PA42	(SL) PFR	172	+ 8	94	11	45	40	4	+ 8	108	20	77	3	0	73	8	23	5.0	
SV0823QG	(SL) SVS	202	+ 9	88	23	63	13	1	+ 8	92	31	62	7	0	81	8	24	5.6	
Kengo(D165315)	(SL) Syn	176	+ 9	90	34	46	17	3	+ 9	100	44	47	8	1	70	7	22	5.6	
PFR 1601	PFR	212	+ 9	93	27	56	15	2	+ 9	96	33	61	5	1	74	6	24	5.1	
LG Stingray	LUK	185	+ 9	77-	44	48	7	1	+ 9	92	53	43	4	0	65	2	22	5.3	
<u>Ambassador</u>	<u>vW</u>	<u>199</u>	<u>+11</u>	<u>78-</u>	<u>63</u>	<u>35</u>	<u>2</u>	<u>0</u>	<u>+10</u>	<u>78-</u>	<u>68</u>	<u>31</u>	<u>1</u>	<u>0</u>	<u>96</u>	<u>4</u>	<u>20</u>	<u>5.0</u>	
LG Dolphin	(SL) LUK	150	+14	83-	31	53	15	1	+14	80-	37	57	6	0	54	6	21	5.0	
LG Infinity	(SL) LUK	151	+14	87	36	50	12	2	+14	81-	46	49	5	0	56	4	22	5.0	
Significance @ P=0.05				SD					SD										
LSD @ P=0.05				16.1					17.4										
CV %				12.0					12.4										

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 10 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data - Standard Vining Pea Main Variety Trial, Holbeach (Moulton Seas End) - 2018

Variety	Tenderometer Reading	Appearance			No. of blonds (1-5)	Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)		
Eldorado	100.0	6.0	2.0	4.3	2.0	13.4
Sherwood	98.5	6.0	2.0	3.8	2.0	13.1
Avola	95.0	5.5	2.0	4.3	2.0	13.8
CS-455AF	98.5	5.8	2.0	4.3	2.0	13.0
DGL0027	99.0	6.5	1.0	4.5	2.0	13.3
SV8112QH	101.0	6.8	2.0	4.8	2.0	14.5
LG Valiant	102.5	6.0	1.5	4.5	2.0	14.2
D165641	97.5	5.3	2.0	4.5	2.0	12.2
PFR 15-A10	109.0	5.5	1.5	3.3	1.0	13.2
Oasis	100.0	5.3	2.0	4.0	2.0	13.2
LG Compass	101.0	5.8	2.0	4.0	2.0	12.9
CS-441AF	99.5	5.0	1.5	3.8	2.0	11.7
PFR 15-PA42	100.0	5.0	2.0	4.5	2.0	12.8
SV0823QG	100.0	5.8	2.0	4.5	2.0	12.5
Kengo(D165315)	100.0	5.8	1.0	3.8	1.0	13.6
PFR 1601	98.0	4.8	2.0	2.3	1.0	12.3
LG Stingray	99.0	5.3	2.0	3.8	1.0	13.8
Ambassador	103.0	5.8	2.0	4.3	2.0	12.8
LG Dolphin	101.5	5.8	1.0	3.5	2.0	14.1
LG Infinity	95.0	5.0	1.5	2.5	1.0	12.7

KEY: Uniformity; Uniformity; No. of blonds; (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 11 - VINING PEA VARIETY EVALUATIONS.** Summary of agronomic data Standard Vining Pea Preliminary Trial, Nocton - 2018

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 22 March.

Results are means of three replicates. Target population 90 plants per m<sup>2</sup> sown in ten 15 cm rows.

Variety	Source	1000 Seed Weight g	@ TR 100							@ TR 120							Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Haulm length cm				
<u>Avola</u>	<u>SVS</u>	<u>220</u>	<u>0(20/6)</u>	<u>69-</u>	<u>44</u>	<u>46</u>	<u>9</u>	<u>1</u>	<u>0(23/6)</u>	<u>61-</u>	<u>62</u>	<u>34</u>	<u>4</u>	<u>0</u>	<u>64</u>	<u>2</u>	<u>16</u>	<u>5.6</u>	
Sherwood	SVS	174	0	83	25	55	18	2	0	75	36	53	10	1	48	3	18	5.8	
Bonfire	(SL) vW	182	0	64-	14	57	27	2	0	58-	26	66	8	0	45	6	15	5.6	
Belvedere	vW	203	+3	95	19	53	26	2	+2	96	26	63	10	1	46	3	23	5.8	
Marimba	vW	185	+5	94	20	66	13	1	+5	87	32	61	7	0	46	2	19	5.7	
Lyric	vW	189	+7	59-	31	61	7	1	+6	70-	38	56	5	1	39	2	17	5.8	
DGL 046	(SL) Syn	229	+7	45-	42	49	8	1	+6	44-	56	41	3	0	55	6	9	5.8	
Querida	vW	194	+8	56-	30	58	10	2	+8	61-	42	53	5	0	45	3	16	5.5	
CS-471AF	(SL) CS	197	+9	89	23	61	15	1	+8	103	34	58	8	0	45	4	22	5.5	
<u>Oasis</u>	<u>LUK</u>	<u>182</u>	<u>+9</u>	<u>100</u>	<u>33</u>	<u>59</u>	<u>8</u>	<u>0</u>	<u>+8</u>	<u>100</u>	<u>41</u>	<u>54</u>	<u>5</u>	<u>0</u>	<u>53</u>	<u>2</u>	<u>24</u>	<u>5.4</u>	
				(5.86t/ha)						(6.58t/ha)									
D85481	Syn	190	+10	77	51	44	3	2	+8	43-	49	47	3	1	51	2	12	5.0	
Dancer	(SL) vW	175	+10	65-	18	60	21	1	+9	56-	23	62	14	1	50	8	14	5.5	
CS-463AF	(SL) CS	174	+10	64-	14	57	27	2	+10	57-	31	68	1	0	49	7	13	5.6	
<u>Ambassador</u>	<u>vW</u>	<u>199</u>	<u>+10</u>	<u>77</u>	<u>35</u>	<u>56</u>	<u>8</u>	<u>1</u>	<u>+9</u>	<u>71-</u>	<u>49</u>	<u>48</u>	<u>3</u>	<u>0</u>	<u>66</u>	<u>3</u>	<u>16</u>	<u>5.4</u>	
Significance @ P=0.05				SD						SD									
LSD @ P=0.05				28.1						25.5									
CV %				22.3						20.8									

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 12 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data - Standard Vining Pea Preliminary Variety Trial, Nocton - 2018

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Avola	99.0	5.0	2.0	4.3	2.0	12.5
Sherwood	97.0	5.3	2.0	4.3	2.0	13.8
Bonfire	98.0	5.8	1.5	4.5	2.0	13.6
Belvedere	100.5	6.0	2.0	4.3	2.0	14.7
Marimba	98.0	5.8	2.0	3.5	1.0	13.9
Lyric	106.5	5.0	2.0	3.8	2.0	14.0
DGL 046	101.5	5.8	2.0	4.5	2.0	13.5
Querida	104.0	4.8	1.0	2.8	1.0	15.0
CS-471AF	95.5	5.0	2.0	4.5	2.0	13.6
Oasis	99.0	5.8	2.0	3.8	1.5	15.0
D85481	134.0	4.8	1.0	3.0	2.0	12.9
Dancer	117.0	5.3	2.0	4.3	2.0	14.1
CS-463AF	98.0	5.8	2.0	4.8	2.0	13.8
Ambassador	97.0	5.5	1.5	3.8	2.0	13.6

KEY: Uniformity; Uniformity; No. of blonds; (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 13 - VINING PEA VARIETY EVALUATIONS.** Summary of agronomic data Standard Vining Pea Screening Variety Trial, Nocton - 2018

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 22 March.

Results are means of three replicates. Target population 90 plants per m<sup>2</sup> sown in ten 15 cm rows.

Variety	Source	1000 Seed Weight g	@ TR 100							@ TR 120							Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
			Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Maturity (± days) Avola	Yield % of Oasis	% in size grades L M S VS				Haulm length cm				
<u>Avola</u>	<u>SVS</u>	<u>220</u>	<u>0(20/6)</u>	<u>69-</u>	<u>44</u>	<u>46</u>	<u>9</u>	<u>1</u>	<u>0(23/6)</u>	<u>61-</u>	<u>62</u>	<u>34</u>	<u>4</u>	<u>0</u>	<u>64</u>	<u>2</u>	<u>16</u>	<u>5.6</u>	
Sherwood	SVS	174	0	83	25	55	18	2	0	75	36	53	10	1	48	3	18	5.8	
CS-462F	CS	223	+7	47-	29	62	8	1	+5	45-	34	60	6	0	43	2	12	5.6	
Wav 763(Marquis)	(SL) vW	175	+8	85	10	54	34	2	+6	84	14	64	21	1	49	8	20	5.8	
PLS 613-1	(SL) PLS	178	+9	45-	15	57	26	2	+8	43-	16	62	21	1	47	4	12	5.7	
<u>Oasis</u>	<u>LUK</u>	<u>182</u>	<u>+9</u>	<u>100</u>	<u>33</u>	<u>59</u>	<u>8</u>	<u>0</u>	<u>+8</u>	<u>100</u>	<u>41</u>	<u>54</u>	<u>5</u>	<u>0</u>	<u>53</u>	<u>2</u>	<u>24</u>	<u>5.4</u>	
				(5.86t/ha)						(6.58t/ha)									
CS-464AF	(SL) CS	211	+9	102	33	60	7	0	+8	99	37	58	5	0	61	3	24	5.5	
PLS 602	(SL) PLS	151	+10	68-	15	64	20	1	+8	68-	17	69	14	0	53	4	16	5.6	
PLS 595-1	(SL) PLS	169	+10	86	42	51	6	1	+9	77	58	40	2	0	54	6	20	5.8	
CS-451AF	(SL) CS	152	+10	70-	6	51	41	2	+9	62-	7	55	37	1	48	7	18	5.3	
Ambassador	vW	199	+10	77	35	56	8	1	+9	71-	49	48	3	0	66	3	16	5.4	
Significance @ P=0.05				SD					SD										
LSD @ P=0.05				28.1					25.5										
CV %				22.3					20.8										

KEY: Yield: + Significantly greater 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix



**TABLE 14 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data - Standard Vining Pea Screening Variety Trial, Nocton - 2018

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Avola	99.0	5.0	2.0	4.3	2.0	12.5
Sherwood	97.0	5.3	2.0	4.3	2.0	13.8
CS-462F	101.5	5.3	2.0	4.5	2.0	13.3
Wav 763(Marquis)	95.5	6.3	2.0	4.5	2.0	15.3
PLS 613-1	104.0	6.0	1.0	4.3	2.0	14.6
Oasis	99.0	5.8	2.0	3.8	1.5	15.0
CS-464AF	99.5	5.5	1.5	3.8	1.0	14.9
PLS 602	102.5	5.5	1.5	4.0	2.0	12.2
CS-451AF	118.0	5.3	1.5	4.0	2.0	12.8
Ambassador	97.0	5.5	1.5	3.8	2.0	13.6

KEY: Uniformity; Uniformity; No. of blonds; (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content

**TABLE 15 - VINING PEA VARIETY EVALUATIONS.** Summary of agronomic data Vining Pea Petits Pois Main & Preliminary Variety Trials, Holbeach (Moulton Seas End) - 2018

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 3 May.

Results are means of two replicates. Target population 90 plants per m<sup>2</sup> sown in ten 15 cm rows.

Variety	Source	1000 Seed Weight g	@ TR 100							@ TR 120							Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
			Maturity (± days) Waverex	Yield % of Waverex	% in size grades				Maturity (± days) Waverex	Yield % of Waverex	% in size grades				Haulm length cm				
<b>Standard Peas</b>																			
<u>Avola</u>	<u>SVS</u>	<u>220</u>	<u>-5</u>	196+	<u>52</u>	<u>42</u>	<u>6</u>	<u>0</u>	<u>-5</u>	196+	<u>73</u>	<u>27</u>	<u>0</u>	<u>0</u>	<u>78</u>	<u>3</u>	<u>19</u>	<u>5.4</u>	
<u>Oasis</u>	<u>LUK</u>	<u>182</u>	<u>+3</u>	275+	<u>60</u>	<u>37</u>	<u>3</u>	<u>0</u>	<u>+3</u>	275+	<u>65</u>	<u>33</u>	<u>2</u>	<u>0</u>	<u>66</u>	<u>2</u>	<u>28</u>	<u>5.3</u>	
<b>PP Main Trial</b>																			
Norvert(D95387)	Syn	95	-3	108	1	10	52	37	-3	122	1	15	62	22	66	4	15	4.9	
<u>Waverex</u>	<u>vW</u>	<u>104</u>	<u>0(13/7)</u>	<u>100</u>	<u>3</u>	<u>23</u>	<u>47</u>	<u>27</u>	<u>0(15/7)</u>	<u>100</u>	<u>3</u>	<u>31</u>	<u>49</u>	<u>17</u>	<u>60</u>	<u>2</u>	<u>13</u>	<u>5.1</u>	
				(4.12t/ha)						(4.12t/ha)									
SV3946QB	SVS	114	+1	105	9	47	41	3	+1	87	10	51	36	3	57	3	13	5.4	
Afivert (D175580)	(SL) Syn	93	+2	104	0	7	55	38	+1	104	0	5	65	30	63	4	14	5.4	
SV6064QC	(SL) SVS	90	+5	93	1	6	43	50	+5	93	1	7	49	43	72	4	12	4.9	
<b>PP Preliminary Trial</b>																			
Wav 1107	vW	106	-6	75	2	8	50	40	-5	75-	0	11	63	26	54	6	11	5.1	
GV 490	SF	184	-3	139+	48	46	6	0	-3	162+	65	33	2	0	70	2	15	5.5	
GV 389	(SL) SF	130	-1	74-	7	40	42	11	-1	74-	11	54	32	3	72	4	9	5.4	
GV 522	(SL) SF	220	+1	135+	23	61	15	1	0	176+	31	60	9	0	79	3	18	5.4	
FP 2278	(SL) SF	176	+1	142+	36	52	11	1	+1	142+	45	50	5	0	63	3	16	5.5	
BSC 7120	(SL) SF	180	+2	188+	34	55	10	1	+2	221+	45	52	3	0	79	3	23	5.4	
GV 390	(SL) SF	120	+5	133+	2	17	56	25	+5	133+	2	24	58	16	74	4	16	5.0	
Significance @ P=0.05				SD							SD								
LSD @ P=0.05				44.3							47.9								
CV %				12.2							12.4								

KEY: Yield: + Significantly greater than Waverex @ P = 0.05; - Significantly less than Waverex @ 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

SL = Semi-leafless; SF = Semi-fasciated

Source of varieties see Appendix

**TABLE 16 - VINING PEA VARIETY EVALUATIONS.** Summary of quality data - Petits Pois Main & Preliminary Variety Trials Holbeach (Moulton Seas End) - 2018

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
<b>Main Trial</b>						
Norvert(D95387)	95.0	5.0	2.0	4.0	2.0	12.6
Waverex	101.5	5.3	2.0	3.3	1.0	13.4
SV3946QB	134.0	5.3	1.5	2.5	1.0	12.2
Afivert (D175580)	101.5	6.0	1.5	4.8	2.0	12.9
SV6064QC	99.0	6.0	1.5	4.8	2.0	13.8
<b>Preliminary Trial</b>						
Wav 1107	110.5	5.0	2.0	4.5	2.0	13.6
GV 490	100.0	5.8	2.0	3.0	1.0	13.6
GV 389	92.0	5.0	2.0	4.3	2.0	13.6
GV 522	98.0	5.5	2.0	4.3	2.0	13.8
FP 2278	98.5	5.5	2.0	4.0	2.0	14.0
BSC 7120	105.0	3.0	1.0	2.3	1.0	13.6
GV 390	99.0	5.3	2.0	3.0	1.0	13.3

KEY: Uniformity; Uniformity; No. of blonds: (1-5) - a high figure indicates that the variety shows the character to a high degree

Colour: a high figure indicates a darker green; Brightness: 1 = bright, 2 = dull; Brix - measured using Atago pocket refractometer PAL-1 and gives an indication of sugar content.

## APPENDIX 1

### KEY TO SOURCE OF VARIETIES

CS	Crites Seed Inc., USA
EI	Elsoms Seeds Ltd, UK
GA	General Availability
LUK	Limagrain UK Ltd, UK
Nun	Nunhems Zaden BV., Holland
PFR	The New Zealand Institute for Plant and Food Research Ltd
PLS	Pure Line Seeds Inc., USA
SF	Suba Seeds, France
SVS	Seminis Vegetable Seeds, UK
Syn	Syngenta Seeds, UK
vW	van Waveren, Germany