



PGRO Variety Trials Results 2016

Vining Peas

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WEATHER FOR THE 2014 / 2015 SEASON.

Comments below are a summary taken from the meteorology website for the UK <http://www.metoffice.gov.uk/climate/uk/summaries/2016>

Spring 2016

Following on from a wet and notably mild winter, this 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.

Summer 2016

Summer 2016 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, with the exception of southern England. June was exceptionally wet in East Anglia.

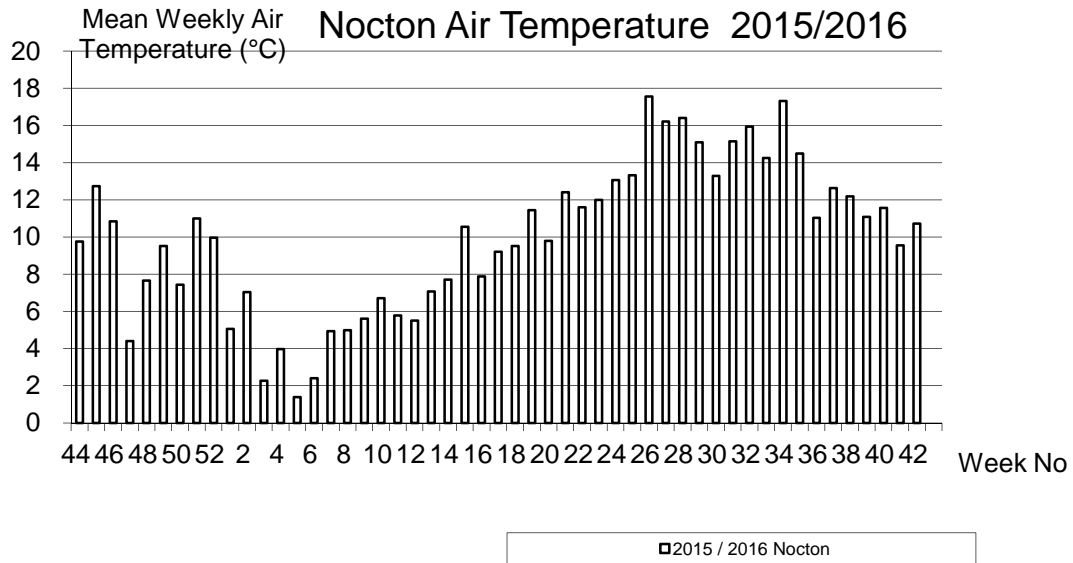
Summer sunshine totals were slightly below average except in parts of eastern England. June was an exceptionally dull month in the south.

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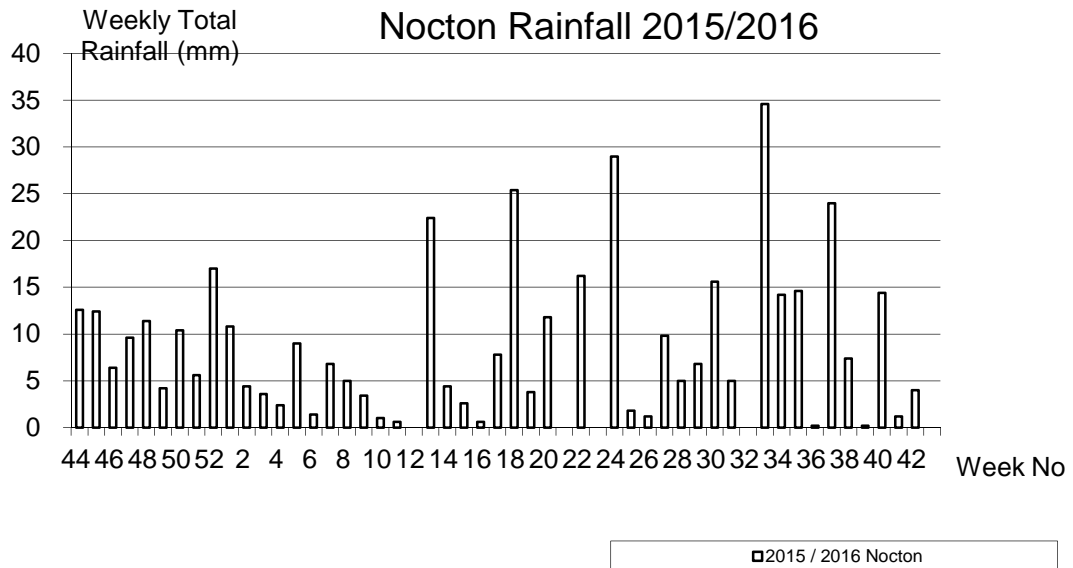
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METEROLOGICAL DATA - 2015 / 2016 season

Nocton mean weekly air temperatures (°C) 2015/2016



Nocton weekly rainfall totals (mm) 2015/2016



Nocton monthly rainfall totals (mm) 2015/2016

Month	2015/2016 Monthly Rainfall (mm) Nocton
November	-
December	-
January	49.0
February	27.6
March	56.0
April	50.8
May	31.2
June	72.4
July	38.6
August	32.4
September	29.2
October	-

VINING PEAS

SUMMARY – VARIETIES TESTED 2014 - 2016

2014 temperatures throughout much of the growing season were above average, apart from August, which was cooler than average. The 2nd week of May and the middle 2 weeks of June were particularly warm spells. March and April were drier than average months, but May was very wet receiving 312.6% of the long-term average rainfall. June was drier than average and rainfall totals for July and August were similar to average.

2015 was a cooler year with temperatures for the most part at or below average. The end of June / early July saw some very high temperatures. Rainfall was average and unlike recent years rainfall was frequent and at the right times.

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.

Standard Size Varieties, Thornhaugh / Nocton Tables 1 & 2

Varieties were evaluated in Standard Preliminary Trial 2014 and Standard Main Trials 2015 and 2016.

There have been some considerable changes during this 3 year period. Oasis replaced Bikini as the yield standard in 2014, with Bikini being dropped from trials in 2015. Standard vining pea trials moved away from its long time base at Thornhaugh to a new location in Lincolnshire near Nocton in 2015.

After the withdrawal of 05S52323A and 06S60830A, six varieties Beverly, Cargo, LG Element, CS-437F, LG Guardian, and LG Galileo completed three years of evaluation in 2016.

Oasis (the yield standard) gave the highest yields in 2015 and the lowest in 2016. Maturities for Oasis ranged from +10 (2015) to +13 (2014).

Sherwood, a replacement for Avola matured one day before Avola.

Beverly (van Waveren) matured one day before Avola. Yields were significantly lower than Oasis, but higher than Avola at TR100. Yields were similar to Avola at TR120. Produce was smaller than Avola, mostly medium size grade at TR100. Haulm was shorter than Avola and standing ability was similar.

Cargo (van Waveren) matured three days later than Avola. Yields were significantly lower than Oasis, but were significantly higher than Avola at TR100. Produce was smaller than Avola, mostly medium size grade at TR100. Standing ability was a little better than Avola.

LG Element (05S52738A) (Limagrain UK) was semi-leafless and matured 4 days later than Avola. Yields although significantly lower than Oasis were significantly higher than Avola. Produce was mostly medium size grade, smaller than Avola. Standing ability was very good.

CS-437F (Crites Seed) matured 7 days later than Avola. Yields were significantly lower than Oasis. Produce was medium size grade, smaller than Oasis. Haulm was longer than Oasis and standing ability was a little better than Oasis.

LG Guardian (06S57317A) (Limagrain UK) was semi-leafless and matured one day before Oasis. Yields were a little lower than Oasis and produce of a similar size, medium-large size grade. Standing ability was better than Oasis.

LG Galilaeo (04S51315A) (Limagrain UK) was semi-leafless and matured one day later than Oasis. Yields were variable over the 3 years, but were the highest in this trial series a little higher than Oasis.

Produce was larger than Oasis, large-medium size grade.

Standard Size Varieties, Holbeach (HDC funded) Tables 3 & 4

Varieties were evaluated in standard Vining Pea Main Trials in 2015 and 2016.

After the withdrawal of 05S52323A and 06S60830A, six varieties Beverly, Cargo, LG Element, CS-437F, LG Guardian, and LG Galileo completed two years of evaluation in 2016.

AT TR100 Oasis (the yield standard) gave very similar yields in both years of trials. AT TR120 yields were 1.0t/ha higher in 2015 than 2016. Maturities for Oasis at TR100 were 9 days later than Avola in both years.

Sherwood, an early maturing replacement for Avola matured at the same time as Avola.

Beverly (van Waveren) matured one day before Avola. Yields were higher than Avola, but not statistically significantly so. Produce was large-medium size grade, smaller than Avola. Halum was shorter than Avola and standing ability was poor, similar to Avola.

Cargo (van Waveren) matured three days later than Avola. Yields were lower than Oasis, but were significantly higher than Avola at TR100 and TR120. Produce had 65% of the peas in medium size grade at TR100. Standing ability was poor similar to Avola.

LG Element (05S52738A) (Limagrain UK) was semi-leafless and matured 4 days later than Avola. Yields were lower, but not significantly lower than Avola. Produce was mostly medium size grade, smaller than Avola. Standing ability was average-good.

CS-437F (Crites Seed) matured 5 days later than Avola. Yields were significantly lower than Oasis. Produce was medium-large size grade, similar to Oasis. Standing ability was only a little better than Oasis.

LG Guardian (06S57317A) (Limagrain UK) was semi-leafless and matured one day before Oasis. Yields were only a little lower than Oasis at TR100 and produce of a similar size, medium-large size grade. Standing ability was better than Oasis.

LG Galileo (04S51315A) (Limagrain UK) was semi-leafless and matured 3 days later than Oasis. Yields a little lower than Oasis. Produce was larger than Oasis, large-medium size grade.

Petits Pois Varieties, Holbeach Tables 5 & 6

Varieties were evaluated in Petits Pois Preliminary Trial 2014 and Petits pois Main Trials 2015 and 2016.

Two varieties Louise, Bartesa and Festivert completed three years of evaluation in 2016.

Waverex (the yield standard) gave the highest yields in 2014 and lowest were the lowest in 2016. Waverex overall gave produce with only 70% of the peas <8.75mm diameter. Produce was largest in 2016 (61%) and smallest in 2015 (88%).

Bartesa (Nunhems) matured four days earlier than Waverex. Yields were lower than Waverex, but not significantly lower. Produce was smaller than Waverex, with 83% of the peas <8.75mm diameter at TR100. Haulm was shorter than Waverex and standing ability was a little better.

Festivert (D175161) (Syngenta) was semi-leafless and matured one day later than Waverex. Yields were lower, but not significantly lower than Waverex. Yields were only a little lower than Waverex at TR120. Produce had 75% of the peas <8.75mm diameter. Haulm was longer than Waverex and the variety had good standing ability.

TRIALS IN 2016

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 funded by Agriculture and Horticulture Development Board (AHDB-Horticulture).

Promising varieties from 2014 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; Oasis was the yield standard (Bikini no longer trialled) and Ambassador was the late maturing standard. Waverex was the petits pois yield and maturity standard.

Nocton trials were drilled on 18 March and Holbeach trials on 5 May. The peas emerged well and evenly, with few field losses, but in the cool conditions emergence and early growth was slow. At Nocton, broad-leaved weeds were controlled pre-emergence with Nirvana (pendimethalin + imazamox). 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. Foliar disease levels were low this year. At Holbeach inputs were the same as the surrounding commercial crop.

Aphid, whilst low in number were present over a long period of time. Pea moth numbers were low.

The vining pea harvest started about 3 days later than 2015 on the 28 June and was completed on 3 August. Pea colour for most varieties was good and unless otherwise stated the uniformity of colour was also good.

Samples from all trials were frozen. Most varieties became darker in colour after freezing and defrosting than in the raw state.

Standard Pea Main Trial, Nocton - Tables 7 & 8

Avola gave significantly lower yields than Oasis. The highest yielding of the early varieties was 05S52738A

SV0957QF gave the highest yields (109% of Oasis), followed by PLS 196 which gave yields similar to Oasis.

Beverly was the first to mature 2 days before Avola and 06S60830A was the latest 3 days later than Oasis.

Several varieties had excellent / very good standing ability including, 05S52738A, D165621, D165618, D175161 and 04S51315A, all of these were semi-leafless.

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

Avola gave very low yields. The highest yielding of the early maturing varieties was Cargo (92% of Oasis at TR100). 05S52738A gave slightly higher yields than Oasis, but was later to mature than at the Nocton site.

05S52323A and 05S52738A gave the highest yields in the trial (106% of Oasis at TR100) and were closely followed by PLS 196, CS-445AF and 04S51315A.

04S51315A had very good standing ability.

Beverly was the earliest maturing variety, 2 days before Avola, whilst 06S60830A was the latest, 4 days later than Oasis.

Standard Pea Preliminary & Screening Trials, Nocton – Tables 11 & 12

Nineteen Preliminary and 6 Screening trial varieties were evaluated.

D85460 and CS-453F matured at a similar time to Sherwood and Avola. 08S04137A matured very late 7 days later than Oasis.

No variety gave significantly higher yields than Oasis. D165315, DGL0042, 04S51315N and 08S04137A gave the highest yields at TR100.

Varieties with good standing ability were SV8112QF, PFR15-PA42, D175580, 08S01030A and 08S04137A.

Petits Pois Main & Preliminary Trials, Holbeach – Tables 13 & 14

Main Trial Varieties

Bartesa matured 4 days earlier than Waverex. and gave lower yields. Judith matured one day earlier than Waverex and gave significantly higher yields than Waverex.

Judith gave produce smaller than Waverex, with 92% of the peas <8.75mm diameter.

Preliminary Trial Varieties

Dragon and Certis matured 4 and 2 days before Waverex respectively. Yields from Dargon were similar to Waverex at TR100. Certis was a little higher yielding than Waverex, but not statistically higher.

Produce from Dragon was larger than Waverex, medium-small size grade.

Produce from Certis was also larger, small-medium size grade.

Varietal Susceptibility of Vining Peas to Downy Mildew (*Peronospora viciae*) - 2016

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 33 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.

Downy mildew levels were very low at both sites in 2016

Susceptible	Moderately Susceptible	Slightly Susceptible	Moderate Field Resistance	Good Field Resistance
CS-437F		AVOLA	CS-453F	Aloha
		CS-426AF	Dragon	Beverly
		CS-445AF	PFR15-A10	Cargo
		D175161	PLS 196	CS-441AF
		PFR15-PA42	Tomahawk	D165315
			Valido	D165613
				D165618
				D165621
				D175580
				D85460
				D85607
				D95389
				DGL0042
				Judith
				Katie
				Kiss
				Louise
				Payton
				Rhianna
				Vidor
				Vivado

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 STUDIES. Summary of Standard Vining Peas - Thornhaugh / Nocton 2014 - 2016

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				
Beverly	vW	198	- 1	56 ⁻	26	51	20	3	- 1	58 ⁻	38	46	14	2	55	3	19	5.5	
<u>Sherwood</u>	<u>SVS</u>	<u>212</u>	- 1	<u>62⁻</u>	<u>27</u>	<u>45</u>	<u>23</u>	<u>5</u>	- 1	<u>67⁻</u>	<u>36</u>	<u>45</u>	<u>16</u>	<u>3</u>	<u>50</u>	<u>5</u>	<u>20</u>	<u>5.5</u>	
<u>Avola</u>	<u>SVS</u>	<u>222</u>	0	<u>42⁻</u>	<u>42</u>	<u>41</u>	<u>14</u>	<u>3</u>	0	<u>61⁻</u>	<u>60</u>	<u>32</u>	<u>7</u>	<u>1</u>	<u>61</u>	<u>3</u>	<u>18</u>	<u>5.6</u>	
Cargo	vW	199	+ 3	72 ⁻	23	54	20	3	+ 2	73 ⁻	28	56	14	2	54	5	22	5.6	
LG Element(05S52738A) (SL)	LUK	198	+ 4	74 ⁻	21	44	28	7	+ 3	77 ⁻	26	49	21	4	48	8	22	5.6	
CS-437F	CS	187	+ 7	72 ⁻	23	48	23	6	+ 7	81 ⁻	29	53	16	2	67	5	19	5.4	
LG Guardian(06S57317A) (SL)	LUK	188	+11	91	34	50	13	3	+10	89	46	47	6	1	70	6	22	5.8	
<u>Oasis</u>	<u>LUK</u>	<u>191</u>	<u>+12</u>	<u>100</u>	<u>33</u>	<u>52</u>	<u>13</u>	<u>2</u>	<u>+11</u>	<u>100</u>	<u>40</u>	<u>52</u>	<u>7</u>	<u>1</u>	<u>61</u>	<u>3</u>	<u>24</u>	<u>5.5</u>	
				(8.56t/ha)						(9.41t/ha)									
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+13</u>	<u>89</u>	<u>37</u>	<u>49</u>	<u>12</u>	<u>2</u>	<u>+12</u>	<u>84</u>	<u>45</u>	<u>47</u>	<u>7</u>	<u>1</u>	<u>76</u>	<u>4</u>	<u>20</u>	<u>5.5</u>	
LG Galileo(04S51315A) (SL)	LUK	192	+14	105	56	33	9	2	+13	111	69	25	5	1	68	7	22	5.4	
Significance @ P=0.05				SD						SD									
LSD @ P=0.05				19.9						18.2									
CV %				15.3						13.6									

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 STUDIES. Summary of quality data – Standard pea varieties – Thornhaugh / Nocton 2014 – 2016

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
LG Galileo	14	95.0	5.3	1.0	3.7	1.0	10.4
	15	113.0	6.5	1.0	4.3	1.0	12.3
	16	95.0	6.3	2.0	4.0	1.0	11.4
LG Element	14	103.0	5.7	1.0	4.7	1.0	10.0
	15	98.0	6.3	1.0	4.7	1.0	11.6
	16	101.0	5.5	1.0	4.3	1.0	13.7
LG Guardian	14	99.5	6.2	1.0	4.7	1.0	9.0
	15	96.5	6.5	1.0	4.5	1.0	12.5
	16	93.0	6.5	1.0	4.5	1.0	12.9
Ambassador	14	99.0	5.7	1.0	4.3	1.0	9.1
	15	99.5	6.5	1.5	4.5	1.0	11.7
	16	100.5	5.3	1.0	3.8	1.0	12.0
Avola	14	100.5	5.5	1.0	4.3	1.0	9.1
	15	101.5	6.3	1.0	4.3	1.0	9.8
	16	98.0	6.3	1.0	4.3	1.0	11.2
Beverly	14	101.0	5.2	1.0	3.7	1.0	7.8
	15	102.5	6.0	1.0	4.7	1.0	13.5
	16	100.0	5.8	2.0	4.5	1.0	12.4
Cargo	14	99.5	5.7	1.0	4.7	1.0	9.1
	15	97.5	6.2	1.0	4.7	1.0	12.4
	16	106.5	5.3	1.0	4.8	1.0	11.4
CS-437F	14	101.0	5.3	1.0	4.2	1.0	9.1
	15	99.5	5.7	1.0	4.7	1.0	13.2
	16	101.5	5.3	1.5	4.8	1.0	13.4
Oasis	14	97.0	5.3	1.0	3.7	1.0	8.5
	15	102.0	6.0	1.0	4.0	1.0	11.7
	16	106.0	5.8	1.0	4.5	1.0	10.8
Sherwood	15	101.5	6.2	1.0	4.7	1.0	12.2
	16	105.5	6.0	2.0	4.5	1.0	14.0

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 STUDIES. Summary of Standard Vining Peas - Holbeach 2015 - 2016

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				
Beverly	vW	194	- 1	55 ⁻	34	38	23	5	0	72 ⁻	42	46	10	2	49	2	24	5.3	
<u>Avola</u>	<u>SVS</u>	<u>218</u>	<u>0</u>	<u>36⁻</u>	<u>50</u>	<u>32</u>	<u>14</u>	<u>4</u>	<u>0</u>	<u>52⁻</u>	<u>42</u>	<u>47</u>	<u>8</u>	<u>3</u>	<u>64</u>	<u>2</u>	<u>18</u>	<u>5.3</u>	
<u>Sherwood</u>	<u>SVS</u>	<u>212</u>	<u>0</u>	<u>71⁻</u>	<u>33</u>	<u>37</u>	<u>25</u>	<u>5</u>	<u>+1</u>	<u>79</u>	<u>35</u>	<u>53</u>	<u>11</u>	<u>1</u>	<u>59</u>	<u>3</u>	<u>20</u>	<u>5.4</u>	
Cargo	vW	203	+ 3	92	30	65	4	1	+ 3	80	34	59	6	1	59	2	22	5.2	
LG Element(05S52738A) (SL)	LUK	197	+ 4	91	20	50	25	5	+ 4	73	23	55	19	3	56	6	19	5.3	
CS-437F	CS	188	+ 5	68 ⁻	32	46	19	3	+ 6	65 ⁻	40	49	9	2	65	3	15	5.1	
LG Guardian(06S57317A) (SL)	LUK	184	+ 8	95	36	50	12	2	+ 8	77	41	51	7	1	69	5	20	5.8	
<u>Oasis</u>	<u>LUK</u>	<u>189</u>	<u>+ 9</u>	<u>100</u>	<u>40</u>	<u>47</u>	<u>11</u>	<u>2</u>	<u>+10</u>	<u>100</u>	<u>49</u>	<u>44</u>	<u>6</u>	<u>1</u>	<u>65</u>	<u>2</u>	<u>19</u>	<u>5.1</u>	
				<u>(8.47t/ha)</u>						<u>(10.99t/ha)</u>									
<u>Ambassador</u>	<u>vW</u>	<u>184</u>	<u>+12</u>	<u>82</u>	<u>40</u>	<u>39</u>	<u>17</u>	<u>4</u>	<u>+13</u>	<u>65⁻</u>	<u>52</u>	<u>41</u>	<u>6</u>	<u>1</u>	<u>82</u>	<u>5</u>	<u>17</u>	<u>4.9</u>	
LG Galileo(04S51315A) (SL)	LUK	189	+12	92	53	33	11	3	+13	93	70	23	6	1	75	6	16	4.9	
Significance @ P=0.05				SD						SD									
LSD @ P=0.05				24.1						27.6									
CV %				13.4						16.7									

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 STUDIES. Summary of quality data – Standard pea varieties – Holbeach 2015 – 2016

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
LG Galileo	15	100.5	6.0	1.0	3.5	1.0	12.3
	16	101.0	5.3	2.0	3.5	1.0	11.7
LG Element	15	99.5	5.8	1.0	4.0	1.0	12.5
	16	106.0	6.0	1.0	4.5	1.0	11.2
LG Guardian	15	102.5	7.0	1.0	4.3	1.0	11.2
	16	99.5	6.5	1.0	3.8	1.0	11.0
AMBASSADOR	15	99.0	6.0	1.0	3.8	1.0	10.1
	16	103.0	5.8	1.5	3.0	2.0	11.1
AVOLA	15	136.0	5.8	1.0	4.3	1.0	10.0
	16	91.5	5.5	1.0	3.8	1.0	10.8
Beverly	15	114.0	5.5	1.0	3.8	1.0	10.7
	16	97.0	6.0	1.5	4.5	1.0	12.5
Cargo	15	108.0	5.3	1.0	3.3	1.5	10.5
	16	113.5	5.5	1.0	4.5	1.0	10.6
CS-437F	15	104.0	5.0	1.0	3.5	1.0	9.4
	16	98.0	5.5	1.5	3.3	1.5	10.3
OASIS	15	97.0	6.3	1.0	4.0	1.5	10.4
	16	99.5	5.5	1.0	2.5	2.0	10.3
Sherwood	15	117.0	5.3	1.0	3.3	1.0	11.4
	16	102.5	5.8	1.0	2.5	2.0	12.0

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 STUDIES. Summary of Petits Pois Vining Peas - Holbeach 2014 - 2016

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 L M S VS				Maturity (± days) Waverex	Yield % of Waverex	% in size grades L M S VS				Haulm length cm				
Bartesa	Nun	79	- 4	83	1	16	52	31	- 4	86	1	20	55	24	48	3	18	5.1	
<u>Waverex</u>	<u>vW</u>	<u>116</u>	<u>0</u>	<u>100</u> (8.52t/ha)	<u>4</u>	<u>26</u>	<u>44</u>	<u>26</u>	<u>0</u>	<u>100</u> (9.19t/ha)	<u>7</u>	<u>36</u>	<u>41</u>	<u>16</u>	<u>56</u>	<u>2</u>	<u>16</u>	<u>5.1</u>	
Festivert (D175161) (SL)	vW	89	+ 1	76	3	22	45	30	+ 2	93	5	30	50	15	69	7	14	5.0	
Significance @ P=0.05			NSD							NSD									
LSD @ P=0.05			25.2							19.5									
CV %			11.2							8.1									

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 6 - VINING PEA VARIETY STUDIES. Summary of quality data - Petits Pois Peas, Holbeach - 2014-2016

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Bartesa	14	98.5	5.7	1.0	5.0	1.0	9.3
	15	100.5	5.5	1.0	4.5	1.0	12.6
	16	110.5	5.3	1.5	4.3	1.0	11.1
Festivert	15	102.0	6.3	1.0	4.5	1.0	11.6
	16	100.5	5.8	1.0	4.3	1.0	12.6
Waverex	14	104.0	4.8	1.0	2.8	1.8	9.4
	15	103.0	5.8	1.0	3.5	1.5	11.8
	16	97.0	5.5	1.0	3.8	1.0	12.4

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 7 - VINING PEA VARIETY STUDIES. Summary of agronomic data Standard Vining Pea Main Variety Trial, Nocton - 2016

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 18 March.

Results are means of three replicates. Target population 90 plants per m² 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							
Beverly	vW	206	- 2	51 ⁻	20	45	31	4	- 3	55 ⁻	26	48	23	3	42	3	24	5.8
<u>Sherwood</u>	<u>SVS</u>	<u>209</u>	<u>- 1</u>	<u>68⁻</u>	<u>26</u>	<u>43</u>	<u>25</u>	<u>6</u>	<u>- 2</u>	<u>58⁻</u>	<u>30</u>	<u>46</u>	<u>20</u>	<u>4</u>	<u>44</u>	<u>4</u>	<u>20</u>	<u>5.6</u>
05S52738A	(SL) LUK	199	0	71 ⁻	15	41	33	11	- 1	68 ⁻	16	47	29	8	43	9	22	5.4
<u>Avola</u>	<u>SVS</u>	<u>218</u>	<u>0(1/7)</u>	<u>63⁻</u>	<u>44</u>	<u>36</u>	<u>17</u>	<u>3</u>	<u>0(4/7)</u>	<u>60⁻</u>	<u>51</u>	<u>36</u>	<u>10</u>	<u>3</u>	<u>57</u>	<u>3</u>	<u>22</u>	<u>5.5</u>
Cargo	vW	203	0	65 ⁻	15	48	33	4	0	63 ⁻	18	58	22	2	41	6	22	5.8
D165621	(SL) Syn	203	+ 2	65 ⁻	20	46	27	7	+ 2	59 ⁻	30	52	16	2	58	8	17	5.7
D165618	(SL) Syn	201	+ 3	68 ⁻	27	50	20	3	+ 3	68 ⁻	33	54	11	2	49	8	20	5.5
CS 437F	CS	201	+ 5	64 ⁻	14	43	35	8	+ 5	78	20	54	23	3	61	4	16	5.5
D165613	Syn	200	+ 6	81	19	48	28	5	+ 6	91	25	54	19	2	65	6	18	5.5
D85607	Syn	180	+ 7	84	15	44	31	10	+ 8	85	20	49	24	7	62	6	17	5.7
07S51368A	(SL) LUK	187	+ 8	63 ⁻	32	47	19	2	+ 7	66 ⁻	48	42	9	1	61	6	17	5.9
SV0957QF	(SL) SVS	196	+ 8	109	27	47	22	4	+ 8	105	36	50	12	2	53	7	22	5.8
D175161	(SL) Syn	89	+ 9	32 ⁻	1	7	32	60	+ 9	33 ⁻	1	13	54	32	51	8	12	5.3
D95389	Syn	106	+ 9	67 ⁻	2	16	45	37	+ 9	60 ⁻	3	19	52	26	51	6	18	5.3
05S52323A	(SL) LUK	191	+10	96	21	48	26	5	+ 8	91	28	53	17	2	55	6	22	5.7
06S55519A	(SL) LUK	200	+10	66 ⁻	33	49	16	2	+ 9	58 ⁻	42	46	10	2	59	6	22	5.8
CS-445AF	(SL) CS	198	+11	77	52	31	12	5	+12	78	63	25	8	4	52	7	20	5.8
Valido (Wav 4241)	vW	166	+12	74 ⁻	17	44	30	9	+10	73	23	53	20	4	59	4	18	5.5
06S57317A	(SL) LUK	167	+12	72 ⁻	25	43	24	8	+10	69 ⁻	39	48	12	1	63	7	18	5.8
PLS 196	(SL) PLS	217	+12	98	36	46	16	2	+11	97	44	35	18	3	55	6	23	5.7
<u>Oasis</u>	<u>LUK</u>	<u>172</u>	<u>+12</u>	<u>100</u>	<u>29</u>	<u>47</u>	<u>20</u>	<u>4</u>	<u>+11</u>	<u>100</u>	<u>33</u>	<u>49</u>	<u>15</u>	<u>3</u>	<u>55</u>	<u>4</u>	<u>23</u>	<u>5.6</u>
				(7.16t/ha)						(8.29t/ha)								
Vidor (Wav 4361)	vW	161	+12	83	35	39	22	4	+11	80	34	54	11	1	64	3	19	5.8
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+13</u>	<u>91</u>	<u>26</u>	<u>49</u>	<u>21</u>	<u>4</u>	<u>+12</u>	<u>87</u>	<u>29</u>	<u>53</u>	<u>16</u>	<u>2</u>	<u>73</u>	<u>5</u>	<u>18</u>	<u>5.6</u>
04S51315A	(SL) LUK	170	+14	81	46	33	16	5	+14	83	56	31	10	3	66	8	18	5.4
06S60830A	(SL) LUK	164	+15	79	19	46	28	7	+14	75	35	54	8	3	66	6	19	5.8
Significance @ P=0.05				SD						SD								
LSD @ P=0.05				25.0						28.3								
CV %				20.7						23.8								

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 STUDIES. Summary of quality data - Standard Vining Pea Main Variety Trial, Nocton - 2016

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Beverly	100.0	5.8	2.0	4.5	1.0	12.4
Sherwood	105.5	6.0	2.0	4.5	1.0	14.0
05S52738A	101.0	5.5	1.0	4.3	1.0	13.7
Avola	98.0	6.3	1.0	4.3	1.0	11.2
Cargo	106.5	5.3	1.0	4.8	1.0	11.4
D165621	101.5	5.8	1.0	4.3	1.0	12.0
D165618	98.5	5.5	1.5	4.3	1.0	12.2
CS 437F	101.5	5.3	1.5	4.8	1.0	13.4
D165613	104.0	5.5	1.0	4.8	1.0	11.0
D85607	99.0	6.0	1.0	4.5	1.0	13.1
07S51368A	99.0	5.5	1.5	3.8	1.0	13.0
SV0957QF	98.5	5.8	1.0	4.8	1.0	11.9
D175161	101.0	6.3	1.0	4.0	1.0	13.8
D95389	100.0	5.5	2.0	4.3	1.0	13.2
05S52323A	104.5	5.3	1.5	4.5	1.0	12.8
06S55519A	98.5	7.0	1.0	4.5	1.0	10.3
CS-445AF	102.5	5.3	1.0	3.8	1.0	9.8
06S57317A	93.0	6.5	1.0	4.5	1.0	12.9
Valido (Wav 4241)	101.5	6.0	1.0	4.0	1.0	11.2
Oasis	106.0	5.8	1.0	4.5	1.0	10.8
PLS 196	99.5	6.3	1.0	4.8	1.0	11.8
Vidor (Wav 4361)	103.0	5.8	1.0	4.5	1.0	11.3
Ambassador	100.5	5.3	1.0	3.8	1.0	12.0
04S51315A	95.0	6.3	4.0	2.0	1.0	11.4
06S60830A	93.0	6.3	1.5	3.8	1.0	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 9 - VINING PEA VARIETY STUDIES. Summary of agronomic data Standard Vining Pea Main Variety Trial, Holbeach St Marks - 2016

Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 5 May.

Results are means of two replicates. Target population 90 plants per m² 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				
Beverly	vW	206	- 2	55 ⁻	34	38	23	5	- 1	57 ⁻	46	39	13	2	36	2	26	5.1	
<u>Avola</u>	<u>SVS</u>	<u>218</u>	<u>0</u>	<u>36⁻</u>	<u>50</u>	<u>32</u>	<u>14</u>	<u>4</u>	<u>0</u>	<u>29⁻</u>	<u>54</u>	<u>35</u>	<u>9</u>	<u>2</u>	<u>62</u>	<u>2</u>	<u>14</u>	<u>5.0</u>	
<u>Sherwood</u>	<u>SVS</u>	<u>209</u>	<u>0</u>	<u>71⁻</u>	<u>33</u>	<u>37</u>	<u>25</u>	<u>5</u>	<u>+ 1</u>	<u>75⁻</u>	<u>42</u>	<u>47</u>	<u>10</u>	<u>1</u>	<u>58</u>	<u>2</u>	<u>21</u>	<u>5.5</u>	
Cargo	vW	203	+ 3	92	40	54	5	1	+ 3	77 ⁻	47	49	4	0	55	2	24	5.0	
05S52738A	(SL) LUK	199	+ 3	106	22	54	22	2	+ 3	88	25	57	16	2	49	6	23	5.1	
D165618	(SL) Syn	201	+ 4	93	40	49	10	1	+ 4	78 ⁻	46	48	6	0	60	6	20	5.6	
D165621	(SL) Syn	203	+ 4	68	38	48	13	1	+ 4	57 ⁻	43	47	9	1	59	5	18	5.4	
07S51368A	(SL) LUK	187	+ 4	82 ⁻	38	50	11	1	+ 4	69 ⁻	48	45	5	2	58	6	22	5.5	
CS 437F	CS	201	+ 5	66	31	49	18	2	+ 5	71 ⁻	38	54	7	1	63	4	17	5.0	
D165613	(SL) Syn	200	+ 5	80 ⁻	33	46	18	3	+ 5	70 ⁻	42	49	8	1	58	6	17	4.9	
D85607	Syn	180	+ 6	67	21	53	22	4	+ 6	85 ⁻	28	60	10	2	64	4	18	5.0	
SV0957QF	(SL) SVS	196	+ 6	91	33	55	11	1	+ 6	94	40	54	6	0	60	4	23	5.3	
05S52323A	(SL) LUK	191	+ 7	106	24	54	19	3	+ 7	90	35	54	10	1	61	4	22	5.1	
06S57317A	(SL) LUK	167	+ 7	82	24	56	18	2	+ 7	72 ⁻	35	58	7	0	61	4	22	5.6	
D95389	Syn	106	+ 8	85 ⁻	3	30	54	13	+ 8	82 ⁻	5	40	49	6	68	4	18	5.0	
06S55519A	(SL) LUK	200	+ 8	74 ⁻	33	56	10	1	+ 8	66 ⁻	45	50	5	0	65	6	22	5.6	
Valido(Wav4241)	vW	166	+ 8	66 ⁻	24	51	20	5	+ 9	67 ⁻	35	52	11	2	58	3	14	5.0	
D175161	(SL) Syn	89	+ 8	53 ⁻	2	24	48	26	+ 9	58 ⁻	5	32	45	18	66	7	16	4.9	
PLS 196	(SL) PLS	217	+ 9	98	42	44	11	3	+ 9	113	68	28	4	0	70	4	20	5.3	
<u>Oasis</u>	<u>LUK</u>	<u>172</u>	<u>+ 9</u>	<u>100</u>	<u>40</u>	<u>50</u>	<u>9</u>	<u>1</u>	<u>+ 9</u>	<u>100</u>	<u>50</u>	<u>44</u>	<u>5</u>	<u>1</u>	<u>62</u>	<u>2</u>	<u>18</u>	<u>5.0</u>	
				(8.46t/ha)						(10.49t/ha)									
Vidor(Wav4361)	vW	161	+ 9	94	37	48	13	2	+ 9	97	56	39	4	1	62	2	18	4.9	
CS-445AF	(SL) CS	198	+ 9	99	54	35	9	2	+ 9	84 ⁻	69	27	3	1	54	4	21	5.0	
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+11</u>	<u>84</u>	<u>43</u>	<u>40</u>	<u>14</u>	<u>3</u>	<u>+12</u>	<u>68⁻</u>	<u>54</u>	<u>37</u>	<u>8</u>	<u>1</u>	<u>82</u>	<u>6</u>	<u>16</u>	<u>5.0</u>	
04S51315A	(SL) LUK	170	+12	99	56	31	10	3	+13	94	73	20	6	1	78	8	15	5.0	
06S60830A	(SL) LUK	164	+13	86	30	46	20	4	+14	81 ⁻	42	48	9	1	74	6	20	5.4	
Significance @ P=0.05				SD						SD									
LSD @ P=0.05				17.1						14.2									
CV %				10.6						9.5									

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 STUDIES. Summary of quality data - Standard Vining Pea Main Variety Trial, Holbeach St Marks - 2016

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Beverly	97.0	6.0	1.5	4.5	1.0	12.5
Avola	91.5	5.5	1.0	3.8	1.0	10.8
Sherwood	102.5	5.8	1.0	2.5	2.0	12.0
05S52738A	106.0	6.0	1.0	4.5	1.0	11.2
Cargo	113.5	5.5	1.0	4.5	1.0	10.6
07S51368A	103.5	5.8	2.0	3.8	1.0	11.7
D165618	103.5	6.3	1.0	4.8	1.0	10.7
D165621	99.5	6.5	1.5	4.5	1.0	10.5
CS-437F	98.0	5.5	1.5	3.3	1.5	10.3
D165613	97.0	5.5	1.0	4.3	1.0	10.6
D85607	104.0	5.3	1.0	3.0	2.0	11.8
SV0957QF	106.0	5.8	1.0	4.5	1.0	11.1
05S52323A	97.5	5.3	1.0	4.5	1.0	11.2
06S57317A	99.5	6.5	1.0	3.8	1.0	11.0
06S55519A	101.5	6.3	2.0	4.5	1.0	11.5
D95389	97.0	5.3	2.0	3.8	1.0	10.9
D175161	100.5	5.8	1.0	4.3	1.0	12.6
Valido(Wav4241)	103.0	5.0	1.0	2.5	1.0	11.2
CS-445AF	99.0	5.3	1.0	4.5	1.0	9.9
Oasis	99.5	5.5	1.0	2.5	2.0	10.3
PLS 196	100.5	6.0	1.0	4.0	1.0	11.7
Vidor(Wav4361)	98.5	5.3	1.0	3.5	1.0	10.8
Ambassador	103.0	5.8	1.5	3.0	2.0	11.1
04S51315A	101.0	5.3	2.0	3.5	1.0	11.7
06S60830A	102.0	6.5	1.0	3.5	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 11 - VINING PEA VARIETY STUDIES. Summary of agronomic data Standard Vining Pea Preliminary & Screening Variety Trial, Nocton - 2016
 Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 18 March.
 Results are means of three replicates. Target population 90 plants per m² 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			
PRELIMINARY VARIETIES																		
<u>Sherwood</u>	<u>SVS</u>	<u>209</u>	<u>-1</u>	<u>68</u>	<u>26</u>	<u>43</u>	<u>25</u>	<u>6</u>	<u>-2</u>	<u>58</u>	<u>30</u>	<u>46</u>	<u>20</u>	<u>4</u>	<u>44</u>	<u>4</u>	<u>20</u>	<u>5.6</u>
D85460	Syn	221	-1	68	25	43	28	4	-1	61	33	45	19	3	49	5	22	5.9
CS-453F	CS	203	0	60	24	49	21	6	0	71	35	48	14	3	42	4	20	5.4
<u>Avola</u>	<u>SVS</u>	<u>218</u>	<u>0(1/7)</u>	<u>63</u>	<u>44</u>	<u>36</u>	<u>17</u>	<u>3</u>	<u>0(4/7)</u>	<u>60</u>	<u>51</u>	<u>36</u>	<u>10</u>	<u>3</u>	<u>57</u>	<u>3</u>	<u>22</u>	<u>5.5</u>
SV8112QF	(SL) SVS	137	+4	58	6	29	42	23	+3	58	10	41	38	11	44	8	15	5.6
Orient	ZKI	176	+4	27	36	37	21	6	+4	26	60	30	9	1	51	6	12	5.8
08S00662A	(SL) LUK	178	+6	60	8	41	40	11	+8	64	20	51	24	5	64	7	16	5.8
PFR15-PA42	(SL) PFR	209	+8	81	5	32	49	14	+9	88	14	55	28	3	51	8	19	5.3
PFR15-A10	PFR	206	+9	72	9	36	43	12	+9	73	19	53	25	3	60	6	19	5.6
Trend	ZKI	198	+9	63	31	53	14	2	+10	65	41	50	8	1	59	2	17	5.8
D165315	(SL) Syn	220	+9	107	30	41	23	6	+10	95	30	48	18	4	73	7	21	5.5
Medion	ZKI	157	+9	87	18	50	27	5	+10	84	21	53	23	3	71	5	25	5.7
DGL0042	Syn	215	+10	118	28	46	18	8	+9	82	30	50	17	3	69	3	26	5.2
D175580	(SL) Syn	86	+10	64	2	18	55	25	+9	65	1	13	52	34	59	8	19	5.3
Trinity	ZKI	194	+10	83	51	39	9	1	+10	76	51	41	7	1	56	3	22	5.9
08S01030A	(SL) LUK	220	+10	87	36	42	17	5	+11	86	41	43	13	3	63	8	18	5.8
CS-441AF	(SL) CS	187	+11	85	33	52	14	1	+10	73	41	48	10	1	59	4	26	5.7
04S51315N	LUK	196	+11	98	34	42	19	5	+11	96	43	44	11	2	58	4	22	5.5
<u>Oasis</u>	<u>LUK</u>	<u>172</u>	<u>+12</u>	<u>100</u>	<u>29</u>	<u>47</u>	<u>20</u>	<u>4</u>	<u>+11</u>	<u>100</u>	<u>33</u>	<u>49</u>	<u>15</u>	<u>3</u>	<u>55</u>	<u>4</u>	<u>23</u>	<u>5.6</u>
				<u>(7.16t/ha)</u>						<u>(8.29t/ha)</u>								
08S02155A	(SL) LUK	210	+13	68	32	49	14	5	+14	62	42	44	11	3	75	5	18	5.4
<u>Ambassador</u>	<u>vW</u>	<u>192</u>	<u>+13</u>	<u>91</u>	<u>26</u>	<u>49</u>	<u>21</u>	<u>4</u>	<u>+12</u>	<u>87</u>	<u>29</u>	<u>53</u>	<u>16</u>	<u>2</u>	<u>73</u>	<u>5</u>	<u>18</u>	<u>5.6</u>
08S05676A	(SL) LUK	253	+14	82	39	46	13	2	+11	80	37	49	12	2	73	7	20	5.9
08S04137A	(SL) LUK	176	+19	99	38	41	17	4	+18	89	36	46	16	2	67	8	19	5.0

.../continued

TABLE 11 continued - VINING PEA VARIETY STUDIES. Summary of agronomic data Standard Vining Pea Preliminary & Screening Variety Trial, Nocton - 2016
 Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 18 March.
 Results are means of two replicates. Target population 90 plants per m² 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				
SCREENING VARIETIES																			
CS-455AF	(SL) CS	201	- 1	77	30	50	17	3	0	85	43	47	9	1	45	7	22	5.5	
PLS 228	(SL) PLS	180	+ 1	47	16	44	30	10	0	48	23	50	22	5	53	7	17	5.8	
CS-456AF	(SL) CS	205	+ 2	62	31	48	17	4	+ 1	59	34	48	15	3	47	3	22	6.0	
PLS 16326-4	(SL) PLS	161	+ 7	77	13	42	35	10	+ 7	80	24	51	21	4	62	7	18	5.9	
PLS 251	(SL) PLS	172	+10	72	25	46	24	5	+ 9	64	33	51	14	2	45	5	21	5.4	
CS-457AF	(SL) CS	184	+12	76	44	45	10	1	+12	76	50	43	6	1	51	4	23	5.8	
Significance @ P=0.05				SD							SD								
LSD @ P=0.05				25.0							28.3								
CV %				20.7							23.8								

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 STUDIES. Summary of quality data - Standard Vining Pea Preliminary Variety Trial, Nocton - 2016

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Preliminary Trial						
D85460	96.0	6.0	1.0	4.8	1.0	14.1
CS-453F	99.5	6.0	1.0	4.8	1.0	12.7
SV8112QF	104.5	7.0	1.5	3.8	1.0	14.4
Orient	97.5	6.0	1.0	4.8	1.0	13.8
08S00662A	102.5	6.0	2.0	4.0	1.0	12.7
PFR15-PA42	99.0	5.0	1.5	3.8	1.0	14.4
PFR15-A10	99.5	6.3	1.0	4.8	1.0	14.5
D165315	108.5	6.3	1.0	3.5	1.0	12.8
Medion	104.0	5.3	1.0	4.8	1.0	11.9
DGL0042	-	-	-	-	-	-
Trend	99.5	5.8	1.0	3.8	1.0	11.8
D175580	112.0	6.0	1.0	4.5	1.0	11.5
CS-457AF	100.0	5.3	1.0	4.5	1.0	11.9
Trinity	105.5	6.0	1.0	4.5	1.0	11.5
08S01030A	102.0	7.0	1.0	4.0	1.0	13.4
CS-441AF	101.5	5.5	2.0	4.3	1.0	12.3
04S51315N	98.5	6.0	1.0	3.8	1.0	13.2
CS-457AF	100.0	5.3	1.0	4.5	1.0	11.9
08S02155A	100.0	6.3	2.0	3.8	1.0	13.0
08S05676A	106.0	5.3	1.5	4.5	1.0	12.6
08S04137A	98.5	6.3	1.0	3.3	1.0	13.5
Screening Trial						
CS-455AF	100.0	6.0	1.5	4.3	1.0	12.1
PLS 228	101.0	5.5	1.5	4.0	1.0	13.4
CS-456AF	100.0	6.3	1.0	4.8	1.0	12.7
PLS 16326-4	100.0	5.8	1.0	4.3	1.0	13.7
PLS 251	100.0	5.8	1.0	4.0	1.0	10.4
CS-457AF	100.0	5.3	1.0	4.5	1.0	11.9

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 13 - VINING PEA VARIETY STUDIES. Summary of agronomic data Petits Pois Vining Pea Main & Preliminary Variety Trials, Holbeach St Marks - 2016
 Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 5 May.
 Results are means of two replicates. Target population 90 plants per m² 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 L M S VS				Maturity (± days) Waverex	Yield % of Waverex	% in size grades L M S VS							Haulm length cm
MAIN TRIAL VARIETIES																		
Bartesa	Nun	79	- 4	94	3	27	53	17	- 4	87	2	27	56	15	30	2	22	5.0
Judith (Wav6199)	vW	97	- 1	154 ⁺	0	8	56	36	- 1	142 ⁺	1	16	57	26	50	3	21	5.0
<u>Waverex</u>	<u>vW</u>	<u>103</u>	<u>0(25/7)</u>	<u>100</u>	<u>5</u>	<u>34</u>	<u>40</u>	<u>21</u>	<u>0(27/7)</u>	<u>100</u>	<u>11</u>	<u>46</u>	<u>32</u>	<u>11</u>	<u>57</u>	<u>2</u>	<u>14</u>	<u>5.0</u>
				(5.14t/ha)						(5.57t/ha)								
PRELIMINARY TRIAL VARIETIES																		
Dragon	SEMO	130	- 4	96	20	48	27	5	- 4	89	22	54	21	3	51	4	16	5.3
Certis	SEMO	130	- 2	105	7	42	44	7	- 2	110	9	50	36	5	44	4	17	4.8
Significance @ P=0.05				SD						SD								
LSD @ P=0.05				28.2						26.8								
CV %				10.6						9.5								

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 14 - VINING PEA VARIETY STUDIES. Summary of quality data - Petits Pois Main & Preliminary Variety Trials, Holbeach - 2016

Variety	Tenderometer Reading	Appearance				Brix %
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Main Trial						
Bartesa	110.5	5.3	1.5	4.3	1.0	11.1
Judith (Wav6199)	114.0	5.3	1.0	4.5	1.0	11.4
Waverex	97.0	5.5	1.0	3.8	1.0	12.4
Preliminary Trial						
Dragon	110.0	5.3	3.8	3.8	1.0	11.9
Certis	111.5	5.0	2.0	3.3	1.0	11.2

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
SEMO	SEMO a.s, Czech Republic
SVS	Seminis Vegetable Seeds, UK
Syn	Syngenta Seeds, UK
vW	van Waveren, Germany
ZKI	Zöldségtermesztési Kutató Intézet Zrt, Hungary