PGRO Variety Trials Results 2022

Vining Peas

CONTENTS

WEATHER FOR THE 2022 SEASON.

Comments below are a summary taken from the meteorology website for the UK https://www.metoffice.gov.uk/research/climate/maps-and-data/summaries/index.

Winter

The winter was milder than average throughout the Winter. December had mild weather in the middle of the month with more unsettled weather on either side. January was particularly dry month with 50% of average UK rainfall, whereas February was much wetter than average in most areas, with storms towards the end of the month.

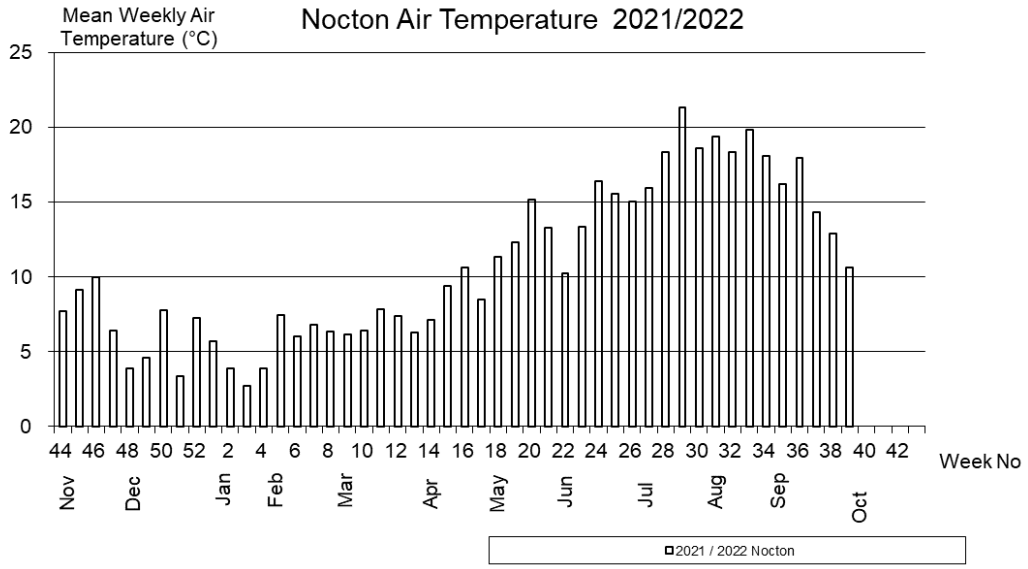
Spring 2022

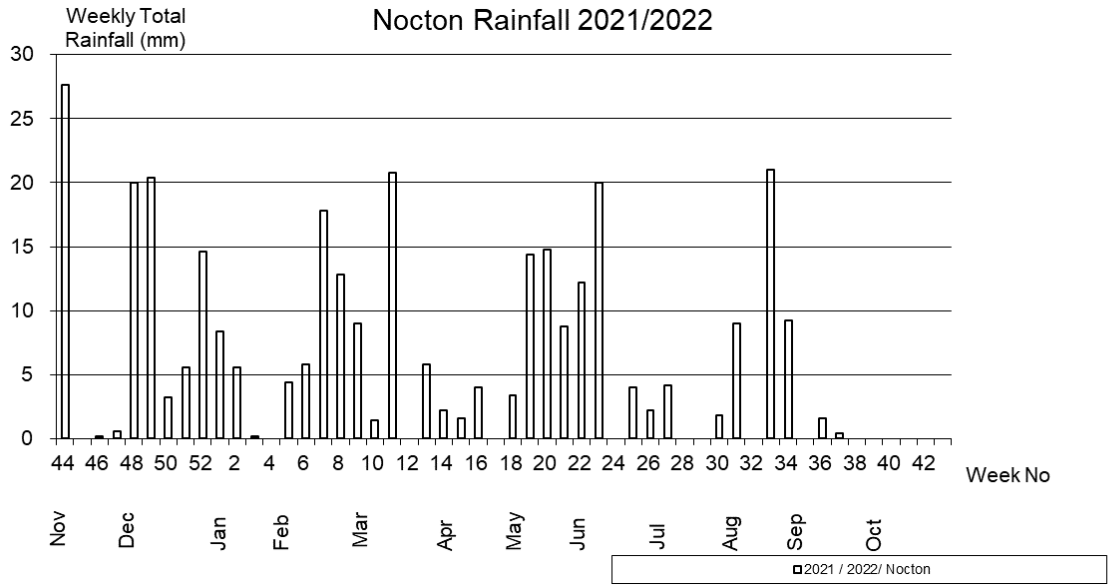
This spring was warmer than average, particularly in March which had clear and sunny skies. Rainfall was low for March and April, though not as dry as 2021. May was very wet in parts of the country and had less sunshine compared to average for the month.

Summer 2022

The summer was warmer than average, with several heatwaves including one that reached 40.3°C on the 19th of July. June, July and August all had increased average temperatures, especially in the east of the country. Rainfall was lower than average throughout the summer with July being especially dry with 56% of typical July rainfall. Sunshine percentages of average were 114% in June, 103% in July and 128% in August.

METEROLOGICAL DATA - 2021 / 2022 season





Nocton monthly rainfall totals (mm) 2021/2022

Month	2021/2022 Monthly Rainfall (mm) Nocton
November	52.4
December	25.0
January	14.2
February	45.8
March	29.8
April	10.0
May	53.6
June	25.8
July	14.6
August	31.0
September	2.0
October	-

VINING PEAS

SUMMARY

In **2020**, the spring was generally warmer than average. Following a very wet February, March, April and May were very dry months receiving only around 20% average rainfall for the area.

Most of June was wetter and cooler than average. The last week of June saw some high maximum temperatures peaking on 26 June at 29.9°. The end of July was even hotter with temperatures peaking at 33.4 °C on 31 July. Rainfall in August was well above average due to heavy thunderstorms and down pours.

In **2021,** the spring was colder than average, with regular frosts in many areas, however there were warm spells at the end of March and the end of May. March rainfall totals were rather below average in most areas, this was followed by the driest April since 1980, with 28% of average rainfall for the UK. By contrast, May was very wet, characterized by bands of rain and heavy showers, with 171% of average overall.

June was generally settled and warm, with temperatures reaching 29.7 °C on the 14th. June was also drier than average with 59% of normal rainfall. Thunderstorms and showers meant that July had a more typical summer rainfall with 93% of average. The end of July was even hotter with 32.2 °C recorded on the 20th of July.

In **2022** the spring was warmer than average, particularly in March. Rainfall was low for March and April, though not as dry as the previous two seasons. May had a typical amount of rain. June, July and August were all warmer than average temperatures. There were also heatwaves where the temperature reached around 40 C. June and July also had low rainfall alongside typical sunshine.

Standard Size Varieties, Varieties completing 3 years of trials, Nocton 2022. Tables 01 & 02

These varieties were evaluated in the Standard Main Trial 2022 and had previously been evaluated in a Main and Preliminary Trial. For most varieties this was 2021 and 2020 respectively. But some varieties have been submitted for non-consecutive trialling.

Three varieties, Agilar, Contigo and SV5795QE completed 3 years of evaluation in 2022.

Yields from the yield standard Oasis were lowest in 2022 (6.18 t/ha) and highest in 2021 (11.02 t/ha) at TR100. Maturity of Oasis when compared to Avola was +11 days in all three years.

Sherwood, a possible replacement for Avola, gave higher yields than Avola in both years it was trialed. Maturity of Sherwood relative to Avola was -2 in 2021 and 0 in 2022.

Agilar (ZKI) matured 3 days earlier than Oasis. Yields were lower than Oasis (67% for both TR 100 and TR 120). Yields were highest in 2021. Produce was larger in size than Oasis, large size grade. Agilar and Oasis both had the same score for standing ability (3).

Contigo (Syn) was semi-leafless and matured 2 days earlier than Oasis. Yields were lower than Oasis (55% for both TR 100 and TR 120). Yields were highest in 2022. Produce was similar size to Oasis, medium-large size grade. Standing ability was better than Oasis (5).

SV5795QE (SVS) matured 3 days later than Avola. Yields were lower than Oasis (58% at TR100 and 55% at TR120). It produced its highest yield compared to Oasis in 2022, but its overall highest yield in 2021. Produce was smaller than Oasis, medium-small size grade. SV5796QE had the same standing ability as Oasis (3). SV5795QE has a short haulm length (45 cm).

Petits Pois Varieties, Varieties completing 3 years of trials, Holbeach 2022. Tables 03 & 04

This data set comprises data from the past three years of trialling at the Holbeach site.
Three varieties, Eloise, Noelle and Wav 7300 completed 3 years of evaluation in 2022.
Yields from the yield standard Waverex were lowest in 2020 (3.66 t/ha) and highest in 2022 (6.74 t/ha).

Eloise (vW) was a semi-leafless variety that matured two days before Waverex. Its yield was 75% of Waverex at TR100 and 88% at TR120. Its highest yield relative to Waverex was 98% at TR120 in 2020. Its standing ability was good, scoring a 6 on the 1-9 scale.

Noelle (vW) matured one day after Waverex. It had the same yield as Waverex at TR100 and outperformed it by seven percent at TR120. Yields were highest in 2021. Noelle also had the same haulm length as Waverex (55cm). Produce was similar to Waverex with 81% of produce <8.75mm diameter at TR100.

Wav7300 (vW) matured three days after Waverex. Its yield was close to that of Waverex at TR 120 (98%) but lower at TR100 (84%). It had its best yields in 2021, when it also matured one day earlier. It had slightly longer haulm than Waverex (59cm).

TRIALS IN 2022

Standard size varieties were evaluated in Main, Preliminary and Screening Trials at Nocton, Lincs. Trials of petits pois varieties were evaluated at Holbeach, South Lincolnshire.

Promising varieties from 2019 and 2020 Preliminary Trials were assessed in the Main Trial. Preliminary Trial varieties were at National List stage of testing in an EU member country.

Due to the loss of seed treatment options, the 2022 trials used only untreated seed. This was also how the trials were run in 2021. This means there was less protection than in previous seasons for 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 24 March and Holbeach trials on 19 April. At Nocton, the peas emerged with few losses, barring one variety that had seed quality issues. At Holbeach drilling conditions were good with the peas being drilled at a depth where there was still a layer of retained moisture. The peas at Holbeach emerged well and had no notable establishment issues. At Nocton, broad-leaved weeds were controlled with pre and post-emergence herbicides. Insecticides were applied to control pea aphid (*Acyrthosiphon pisum*) and pea moth (C*ydia nigricana)*. At Holbeach inputs were the same the as the surrounding commercial crop.

The vining pea harvest started early about 7 days later than 2021 on the 18th of June and was completed on the 16th of July. Pea colour for most varieties was very good, though Oasis had a high proportion of blonds compared to other varieties.

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

Standard Pea Main Trial, Nocton - Tables 05 & 06

Growth at this site was generally good though there was some pythium losses. Some of the early varieties struggled to grow quickly in the drier weather in April. The weather was dry and hot during harvest leading to some varieties maturing sooner than predicted. The relatively consistent weather did aid harvesting otherwise.

Yields from the standard Oasis (6.18 t/ha) was lower than in 2021 at TR100. However, 2021 was a particularly high yielding year for Oasis.

Early variety SV5795QE matured four days later than Avola. Agilar and Contigo were mature two and one days before Oasis respectively. Oasis received a maturity score of +11 relative to Avola as did CS-494DAF. Darlin, Invictus and Larango all had a TR100 maturity of +13, two days after Oasis. Ambassador matured four days later than Oasis and was the last main trial variety to reach maturity.

Oasis was the highest yielding variety, SV5795QE had the second highest yield at TR100 (80%) and was among the highest at TR120 (76%). Larango (78 & 77%) and Contigo (76 & 72%) gave the next

highest yields.

SV5795QE produced smaller peas than most varieties, with a greater amount of small size grade at both TR100 and TR120. Standing abilities in 2022 were low for all varieties with Sherwood having the best at 3.3 on a scale of 1-9.

Standard Pea Preliminary Trial, Nocton – Tables 07 & 08

Nine varieties were entered into the Preliminary Trial.

BSC304 was an early variety maturing four days later than Avola. Bering and 1909 matured one day before Oasis. Oasis matured eleven days after Avola as did two preliminary candidates Logic and CS-498AF. Two Brotherton varieties Kotzebue and Lakeshore both matured one day after Oasis. The last varieties to mature were 1705, Namrata and the control variety Ambassador at +13, +14, +15 maturity respectively.

None of the varieties had yields higher than Oasis. The best performing preliminary varieties were Kotzebue (84% & 79%) and Lakeshore (80% & 76%). Though 1909, CS-498AF and 1705 also did well with yields of around 70-80 percent of Oasis.

CS-498AF had a smaller size grade than anything else of a similar yield, with a small size grade at TR100 and a medium-small at TR120. 1909 was short in stature and had the joint best standing ability with Sherwood, although standing was poor relative to other seasons.

Standard Pea Screening Trial, Nocton – Tables 09 & 10

Nine Screening trial varieties were evaluated.

Avola was the first variety to mature, 11 days before Oasis. 11P42 and CS-504AF were early varieties that matured three days after Avola. The other early variety CS-503AF matured the one day later, four days after Avola. CS-517AF was the latest to mature 16 days later than Avola.

The only variety that yielded higher than Oasis was CS-508AF, its yield was seven percent higher than Oasis at TR100 and six percent higher at TR120. It matured three days earlier than Oasis at both tenderometer readings. 11P42 had the highest yield out of the early maturing varieties.

The varieties CS-504AF, CS-503AF and CS-508AF stand out as having particularly good standing abilities. CS-504AF and PLS 595 had a high percentage of peas in large size grade at both TR 100 and TR 120.

Petits Pois Main and Preliminary Trials, Holbeach – Tables 11 & 12

Waverex, the yield standard, produced higher yields at TR 100 (6.74 t/ha) than in 2021(5.18 t/ha) or 2020 (3.66 t/ha).

Three varieties matured earlier than Waverex, Atasiska, Digit and Eloise at three, two and one days earlier respectively. Panama and BSC494 had the same maturity as Waverex. Nagoya and Noelle matured one day later. Wav 7300 and Colivert both had a maturity of plus three. The latest variety to mature was RF5424, five days after the maturity control.

Nagoya and BSC494 had notably higher yields than Waverex. Colivert had a higher yield than Waverex at TR120 but was lower yielding at TR 100. RF5424 had a yield that was only just under Waverex at TR100.

Waverex gave produce with 79% of the peas <8.75mm diameter at TR100. RF5434 gave the produce with the greatest number of peas <8.75mm diameter (85%).

Atasiska and Digit had the best standing abilities achieving a perfect rating of nine, though the site had relatively good standing across all the varieties.

Varietal Susceptibility of Vining Peas to Downy Mildew (Peronospora viciae) - 2022

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 43 varieties of vining peas were sown in disease observation trials at two locations in Nocton and Fosdyke. Both trials were situated in a field with a history of pea growing. Plants were scored for infection on three occasions during the season, to include both primary systemically infected seedlings and secondary infection on the foliage. The data were combined to give an indication of the relative susceptibility to downy mildew.

There was not a high amount of pod infection at either site. Some symptoms were seen on the following varieties, 11P42, CS-498AF, Digit and SV5795QE. This occasional infected pod isn't factored into the overall ratings and is included as an extra observation.

Susceptible	Moderately Susceptible	Slightly Susceptible	Moderate Field Resistance	Good Field Resistance
	3/4	5/6	7/8	9
	92013	11P42	1705	Atasiska
	Agilar	Ambassador	1816	CS 504AF
	Avola	Bering	1909	CS 508AF
	BSC494	BSC304	Contigo	CS 517AF
	Larango	Colivert	Darlin	CS-494DAF
	Logic	CS-498AF	Eloise	CS-503AF
	Oasis	Digit	Nagoya	Noelle
	RF5424	Invictus	Romago	Panama
	Trinity	Kotzebue		Sherwood
		Lakeshore		SV5795QE
		Namrata		Wav 7300
		Orient		
		PLS 251		
		PLS 595		
		Waverex		

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

TABLE 1 -VINING PEA VARIETY EVALUATIONS. Summary of Standard Vining Peas. Varieties completing 3 years of trials, Nocton 2022.
Varieties placed in order of maturity. Standard varieties underlined.

Variety		Source	1000 Seed Weight g	@ TR 100 Maturity (± days) Avola	@ TR 100 Yield % of Oasis	@ TR 100 % in size grades L	M	S	VS	@ TR 120 Maturity (± days) Avola	@ TR 120 Yield % of Oasis	@ TR 120 % in size grades L	M	S	VS	Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
Avola		SVS	192	0	51	42	37	17	4	0	50	62	32	5	1	55	4.0	19	4.6
Sherwood		SVS	213	0	61	32	43	20	5	1	57	41	42	14	3	57	4.0	19	4.9
SV5795QE		SVS	136	3	58	14	44	36	6	3	55	20	53	24	3	45	3.0	22	4.7
Agilar		ZKI	159	8	67	51	42	5	2	7	67	63	32	4	1	55	3.0	23	4.8
Contigo	(SL)	Syn	200	9	55	29	53	16	2	8	55	40	50	9	1	50	5.0	14	5.0
Oasis		LUK	189	11	100 (7.67t/ha)	36	53	9	2	11	100 (8.41t/ha)	45	50	5	0	54	3.0	26	4.7
Ambassador		vW	198	14	83	37	44	16	3	13	81	51	42	6	1	65	5.0	20	4.6

KEY: 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
Source of varieties see Appendix.

TABLE 02 - VINING PEA VARIETY EVALUATIONS. Summary of quality data for standard pea varieties. Varieties completing 3 years of trials, Nocton 2022.

Variety	Year	Tenderometer Reading	Appearance				Brix
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	%
Agilar	20	100.5	7.0	2.0	5.0	1.0	12.30
	21	101.5	6.5	1.0	5.0	1.0	12.50
	22	120.0	5.7	1.0	3.8	1.0	13.20
Ambassador	20	96.0	6.2	2.0	5.0	1.0	12.60
	21	94.5	6.5	1.0	3.8	1.0	13.10
	22	97.5	6.2	1.0	4.8	1.0	12.50
Avola	20	100.5	5.8	2.0	5.0	1.0	11.80
	21	92.5	6.3	1.0	4.0	1.0	12.60
	22	102.0	5.8	1.7	4.5	1.0	12.00
Contigo	18	101.5	5.9	2.0	4.5	2.0	13.50
	20	100.5	6.2	2.0	4.5	1.0	11.80
	22	101.5	5.8	1.0	4.8	1.0	11.80
Oasis	20	97.0	6.7	2.0	4.2	1.0	11.90
	21	101.5	5.8	1.0	4.0	2.0	11.30
	22	100.0	5.0	1.0	2.0	4.0	11.05
Sherwood	21	100.0	6.3	1.0	4.5	1.0	12.90
	22	100.0	6.2	1.0	4.5	1.0	12.80
SV5795QE	20	97.0	6.2	2.0	4.8	1.0	11.80
	21	102.0	5.3	1.0	3.8	1.0	13.10
	22	100.5	5.8	1.0	4.8	1.0	14.40

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 Petits Pois Vining Peas- Varieties completing 3 years of trials, Holbeach 2022.
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) Waverex	Yield % of Waverex	% in size grades L	M	S	VS	Maturity (± days) Waverex	Yield % of Waverex	% in size grades L	M	S	VS				
Wav 287 (Eloise)	(SL)	vW	100	- 2	75	1	18	51	30	- 2	88	3	31	58	8	58	6.0	14	4.0
Waverex		vW	122	0	100 (5.19 t/ha)	2	21	43	34	0	100 (5.55 t/ha)	4	34	46	16	55	2.0	17	4.5
Wav 7297 (Noelle)		vW	115	+ 1	100	1	18	58	23	+ 1	107	2	29	57	12	55	5.0	19	4.0
Wav 7300		vW	103	+ 3	84	2	16	53	29	+ 3	98	1	19	62	18	59	4.0	16	4.6

KEY: 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.
Source of varieties see Appendix.

TABLE 04 - VINING PEA VARIETY EVALUATIONS. Summary of quality data – Petits pois pea varieties – Varieties completing three years at Holbeach in 2022.

Variety	Year	Tenderometer Reading	Appearance				Brix %
			Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	
Wav 287 (Eloise)	20	100.0	4.5	2.0	5.0	1.0	12.5
	21	104.5	5.3	2.0	3.5	1.0	11.0
	22	95.0	5.5	1.0	5.0	1.0	12.8
Wav 7297 (Noelle)	20	103.5	5.0	2.0	4.3	1.5	13.2
	21	97.5	6.0	1.0	4.0	1.0	11.8
	22	103.5	5.7	1.0	4.5	1.0	14.0
Wav 7300	20	102.0	7.0	2.0	4.5	1.0	13.6
	21	99.0	6.5	1.0	4.3	1.0	11.5
	22	102.5	6.0	1.0	4.0	1.3	14.1
Waverex	20	106.0	5.0	2.0	5.0	1.0	13.6
	21	102.5	6.0	1.0	4.0	1.0	12.4
	22	102.5	5.5	1.0	3.5	2.2	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 05 - VINING PEA VARIETY EVALUATIONS. Summary of agronomic data. Standard Vining Pea Main Variety Trial, Nocton - 2022
Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 24 March.
Results are means of three replicates. Target population 100 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				Maturity (± days) Avola	Yield % of Oasis	% in size grades							
						L	M	S	VS			L	M	S	VS				
Avola		SVS	213	0(18/6)	65	40	41	16	3	0(20/6)	67	47	40	11	2	57	2.7	20	4.6
Sherwood		SVS	236	+ 2	70	23	42	28	7	+ 2	67	27	49	20	4	56	3.3	20	4.8
SV5795QE		SVS	138	+ 4	80	5	32	54	9	+ 4	76	8	42	46	4	45	2.3	23	5.0
Agilar		ZKI	158	+ 9	69	33	61	4	2	+ 8	65	33	62	4	1	60	2.0	22	5.0
Contigo (DGL0046)	(SL)	Syn	192	+10	76	27	59	12	2	+ 9	72	34	57	8	1	58	2.0	16	4.8
CS-494DAF	(SL)	CS	118	+11	59	11	56	29	4	+10	56	17	59	21	3	54	3.0	15	4.7
Oasis		LUK	176	+11	100 (6.18 t/ha)	33	60	6	1	+11	100 (6.51t/ha)	37	59	4	0	62	2.0	25	4.7
Darlin	(SL)	vW	144	+13	61	5	42	45	8	+13	64	6	52	38	4	62	3.0	13	4.8
Invictus (PFR 1601)		PFR	228	+13	70	25	58	15	2	+13	70	32	57	10	1	54	3.0	19	5.0
Larango (DGL0052)		Syn	193	+13	78	33	51	14	2	+14	77	40	52	7	1	64	2.7	17	4.6
Ambassador		vW	216	+15	65	47	44	7	2	+14	62	61	35	3	1	74	3.0	16	4.6

KEY: 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
Source of varieties see Appendix.

TABLE 06 - VINING PEA VARIETY EVALUATIONS. Summary of quality data - Standard Vining Pea Main Variety Trial, Nocton - 2022

Variety	Tenderometer Reading	Appearance				Brix
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	%
Avola	102.0	5.83	1.67	4.50	1.00	12.00
Sherwood	100.0	6.17	1.00	4.50	1.00	12.75
SV5795QE	100.5	5.83	1.00	4.83	1.00	14.35
Agilar	120.0	5.67	1.00	3.83	1.00	13.15
Contigo (DGL0046)	101.5	5.83	1.00	4.83	1.00	11.75
CS-494DAF	101.5	6.17	1.00	5.00	1.00	14.80
Oasis	100.0	5.00	1.00	2.00	4.00	11.05
Darlin	99.0	6.00	1.00	4.67	1.33	15.70
Invictus (PFR 1601)	101.0	5.83	1.00	4.50	1.00	13.80
Larango (DGL0052)	100.5	6.17	1.00	4.67	1.00	15.25
Ambassador	97.5	6.17	1.00	4.83	1.00	12.45

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 07 - VINING PEA VARIETY EVALUATIONS. Summary of agronomic data. Standard Vining Pea Preliminary Variety Trial, Nocton - 2022
Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 24 March.
Results are means of three replicates. Target population 100 plants per m² sown in ten 15 cm rows.

Variety		Source	1000 Seed Weight g	@ TR 100 Maturity (± days) Avola	@ TR 100 Yield % of Oasis	@ TR 100 % in size grades L	M	S	VS	@ TR 120 Maturity (± days) Avola	@ TR 120 Yield % of Oasis	@ TR 120 % in size grades L	M	S	VS	Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
Avola		SVS	213	0(18/0)	65	40	41	16	3	0(20/6)	67	47	40	11	2	57	2.7	20	4.6
Sherwood		SVS	236	+ 2	70	23	42	28	7	+ 2	67	27	49	20	4	56	3.3	20	4.8
BSC304	(SL)	Bro	183	+ 4	65	12	50	33	5	+ 4	61	16	60	22	2	58	2.7	16	4.9
Bering	(SL)	Bro	189	+10	57	14	51	31	4	+10	58	20	58	20	2	51	3.0	18	5.2
1909		PFR	207	+10	73	38	56	5	1	+10	70	46	50	4	0	44	3.3	21	4.9
Logic	(SL)	Bro	143	+11	59	10	50	34	6	+10	56	13	62	23	2	50	2.3	17	4.7
CS-498AF	(SL)	CS	170	+11	78	4	33	48	15	+11	74	6	42	45	7	54	2.3	18	4.7
Oasis		LUK	176	+11	100 (6.18 t/ha)	33	60	6	1	+11	100 (6.51t/ha)	37	59	4	0	62	2.0	25	4.7
Kotzebue	(SL)	Bro	169	+12	84	30	55	13	2	+11	79	41	52	6	1	64	3.0	20	4.9
Lakeshore		Bro	265	+12	80	57	37	5	1	+13	76	71	25	3	1	66	2.0	20	4.7
1705		PFR	196	+13	75	38	52	9	1	+12	72	50	45	4	1	71	2.7	20	4.7
Namrata	(SL)	Bro	169	+14	34	39	42	15	4	+14	33	45	38	12	5	56	2.0	12	4.7
Ambassador		vW	216	+15	65	47	44	7	2	+14	62	61	35	3	1	74	3.0	16	4.6

KEY: 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
Source of varieties see Appendix.

TABLE 08 - VINING PEA VARIETY EVALUATIONS. Summary of quality data - Standard Vining Pea Preliminary Variety Trial, Nocton - 2022

Variety	Tenderometer Reading	Appearance				Brix
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	%
Avola	102.0	5.83	1.67	4.50	1.00	12.00
Sherwood	100.0	6.17	1.00	4.50	1.00	12.75
BSC304	99.5	5.83	1.00	4.83	1.00	12.35
1909	107.0	6.33	1.33	4.67	1.00	11.30
Bering	103.0	6.50	1.00	4.83	1.00	14.00
Logic	97.0	5.67	1.00	4.50	1.00	14.00
CS-498AF	100.0	6.67	1.00	5.00	1.00	13.40
Oasis	100.0	5.00	1.00	2.00	4.00	11.05
Kotzebue	103.0	5.83	1.00	4.67	1.00	12.35
Lakeshore	102.0	5.67	1.00	4.00	1.50	13.30
1705	99.5	5.67	1.00	4.83	1.00	14.85
Namrata	99.0	6.00	1.00	4.33	1.33	13.70
Ambassador	97.5	6.17	1.00	4.83	1.00	12.45

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 09 - VINING PEA VARIETY EVALUATIONS. Summary of agronomic data Standard Vining Pea Screening Variety Trial, Nocton - 2022
Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 24 March.
Results are means of two replicates. Target population 100 plants per m² sown in ten 15 cm rows.

				@ TR 100						@ TR 120									
Variety		Source	1000 Seed Weight g	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	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
Avola		SVS	213	0 (18/6)	52	28	56	14	2	0 (20/6)	77	37	53	9	1	56	2.5	20	4.6
Sherwood		SVS	236	+ 2	64	15	44	34	7	+ 2	72	20	57	21	2	58	3.0	20	4.8
11P42	(SL)	PLS	178	+ 3	77	42	39	16	3	+ 2	82	45	42	11	2	49	2.5	23	4.8
CS-504AF	(SL)	CS	218	+ 3	67	47	44	7	2	+ 4	66	62	35	2	1	67	4.5	16	4.8
CS-503AF	(SL)	CS	164	+ 4	69	12	49	33	6	+ 4	71	23	67	10	0	56	5.0	18	4.5
CS-508AF	(SL)	CS	204	+ 8	107	27	57	15	1	+ 8	106	43	51	5	1	49	4.5	22	4.9
PLS 251	(SL)	PLS	182	+11	70	21	61	16	2	+10	68	25	62	11	2	48	2.5	22	4.5
Oasis		LUK	176	+11	100 (6.33 t/ha)	17	58	24	1	+11 (6.44 t/ha)	100	22	63	14	1	61	2.0	25	4.7
PLS 595	(SL)	PLS	151	+12	64	48	48	4	0	+12	63	55	40	4	1	52	2.5	16	5.0
92013	(SL)	PLS	203	+13	65	34	59	6	1	+13	64	38	58	4	0	49	2.0	20	5.0
Ambassador		vW	216	+15	70	27	54	17	2	+14	68	36	51	12	1	75	3.0	16	4.6
CS-517AF	(SL)	CS	198	+16	50	23	42	29	6	+15	49	26	51	20	3	58	3.0	15	4.8

KEY: 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
Source of varieties see Appendix.

TABLE 10 - VINING PEA VARIETY EVALUATIONS. Summary of quality data - Standard Vining Pea Screening Variety Trial, Nocton - 2022

Variety	Tenderometer Reading	Appearance				Brix
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	%
Avola	102.0	5.83	1.67	4.50	1.00	12.00
Sherwood	100.0	6.17	1.00	4.50	1.00	12.75
11P42	102.0	5.67	1.00	5.00	1.00	11.90
CS-504AF	99.5	5.83	1.00	4.67	1.00	12.90
CS-503AF	100.5	6.17	1.00	5.00	1.00	13.40
CS-508AF	105.5	5.67	1.00	5.00	1.00	14.10
PLS 251	102.5	5.83	1.00	4.83	1.00	13.55
Oasis	100.0	5.00	1.00	2.00	4.00	11.05
PLS 595	102.5	6.17	1.00	4.67	1.00	13.00
92013	97.5	5.83	1.00	4.50	1.00	14.45
Ambassador	97.5	6.17	1.00	4.83	1.00	12.45
CS-517AF	97.5	6.00	1.00	4.00	1.67	14.05

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 Vining Pea Petits Pois Main & Preliminary Variety Trial, Holbeach - 2022
Varieties placed in order of maturity. Standard varieties underlined. All varieties sown on 19 April.
Results are means of two replicates. Target population 100 plants per m² sown in ten 15 cm rows.

Variety		Source	1000 Seed Weight g	@ TR 100 Maturity (± days) Waverex	@ TR 100 Yield % of Waverex	@ TR 100 % in size grades L	M	S	VS	@ TR 120 Maturity (± days) Waverex	@ TR 120 Yield % of Waverex	@ TR 120 % in size grades L	M	S	VS	Haulm length cm	Standing Ability 9=erect 1=lodged	Pea wt. as % of total weight	Raw pea colour 1=pale 6=dark
PP Main Trial																			
Wav 287 (Eloise)	(SL)	vW	93	- 1	79	2	26	53	19	- 1	87	3	37	52	8	62	6.5	16	4.3
Waverex		vW	134	0 (9/7)	100 (6.74 t/ha)	2	19	48	31	0 (11/7)	100 (7.23 t/ha)	3	29	51	17	55	3.0	21	4.6
Wav 7297 (Noelle)		vW	100	+ 1	77	2	25	52	21	+ 1	93	3	31	55	11	57	3.5	20	4.3
Wav 7300		vW	108	+ 3	76	2	19	57	22	+ 3	98	2	20	68	10	58	4.5	16	4.6
PP Preliminary Trial																			
Atasiska	(SL)	Bro	124	- 3	77	3	26	52	19	- 2	81	4	39	50	7	62	9.0	14	4.7
Digit	(SL)	Bro	137	- 2	91	3	27	44	26	- 2	100	4	34	44	18	54	9.0	22	4.8
Panama		LUK	133	0	64	5	34	33	28	0	60	5	37	35	23	58	8.0	16	5.0
BSC494	(SL)	Bro	100	0	112	4	30	47	19	0	118	6	42	42	10	59	8.5	23	4.7
Nagoya	(SL)	LUK	140	+ 1	116	10	48	34	8	+ 1	126	13	60	24	3	58	8.5	27	4.9
Colivert		Syn	80	+ 3	87	3	25	53	19	+ 3	113	3	29	60	8	62	6.5	21	4.6
RF5424	(SL)	LUK	98	+ 5	97	2	13	52	33	+ 5	93	3	20	58	19	68	5.0	19	4.6

KEY: 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.
Source of varieties see Appendix.

TABLE 12 - VINING PEA VARIETY EVALUATIONS. Summary of quality data - Standard Vining Pea Petis Pois Variety Trials, Holbeach - 2022

Variety	Tenderometer Reading	Appearance				Brix
		Colour (3-8)	Brightness (1-2)	Uniformity (1-5)	No. of blonds (1-5)	%
Wav 287 (Eloise)	95.0	5.50	1.00	5.00	1.00	12.80
Waverex	102.5	5.50	1.00	3.50	2.17	13.55
Wav 7297 (Noelle)	103.5	5.67	1.00	4.50	1.00	14.00
Wav 7300	102.5	6.00	1.00	4.00	1.33	14.05
Atasiska	99.5	6.00	1.00	4.50	1.00	13.15
Digit	112.5	6.00	1.00	4.50	1.00	12.85
BSC494	97.5	5.67	1.00	4.67	1.00	13.45
Panama	97.0	6.17	1.00	4.50	1.00	12.95
Nagoya	105.5	5.67	1.00	4.00	1.00	13.30
Colivert	99.5	5.83	1.00	4.50	1.33	13.75
RF5424	96.0	5.83	1.00	5.00	1.00	14.20

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

Bro	Brotherton Seed Company, USA
CS	Crites Seed Inc., USA
El	Elsoms Seeds Ltd, UK
GA	General Availability
LUK	Limagrain UK Ltd, UK
PFR	The New Zealand Institute for Plant and Food Research Ltd
PLS	Pure Line Seeds Inc., USA
SVS	Seminis Vegetable Seeds, UK
Syn	Syngenta Seeds, UK
vW	van Waveren, Germany
ZKI	ZKI, Hungary