

Revival of the Carlin Pea

Summary

Increasing our consumption of pulses is a simple way to eat more healthily while reducing our climate impact.

This trial explored whether Carlin and Latvian peas could offer a viable UK homegrown alternative to chickpeas. They were grown by participants in 142 home gardens in diverse locations around the UK.

In summary, people found the crop easy to grow and a majority agreed that their flavour and texture made them a credible alternative to chickpeas.

The exceptionally hot and dry conditions in the 2025 growing season presented a major challenge and in many cases the plants struggled. Average yields were therefore modest at 105 g/m², well below typical commercial yields that are typically 300 g/m². However, a sizeable minority of participants achieved yields around 400 – 600 g/m² which shows that highly productive harvests of dried peas can be obtained from small scale garden plots under the right conditions. Good yields were obtained in a range of locations ranging from Kent and Devon in the south to Perthshire and Orkney in the north. Drought tolerance was a concern frequently mentioned and is a topic that should be explored in future evaluations.



Rationale

Although consumption of pulses in the UK has declined over the last few hundred years, there are many good reasons why we should be giving them a more prominent role in our diets¹. A diet rich in pulses is good for our health, providing a rich source of plant protein, fibre, B vitamins, folic acid and other minerals². It is also good for the environment: there is a wealth of evidence that increasing the proportion of plant protein in the diet reduces greenhouse gas emissions, land use and water^{3 4}. Such changes in our diet are one of the key recommendations made by the UK Climate Change Committee in order to reduce our greenhouse gas emissions.⁵

Chickpeas are a popular component of a legume rich diet but nearly all are imported from countries including Australia, India, Turkey and Canada.⁶ It would be preferable to not rely on imports and grow them in the UK.

Although there has been work through crop trials to evaluate varieties of chickpea suitable for growing in the UK, this work is still at a relatively early stage⁷. An alternative is to grow a drying pea suited to the UK, that has similar culinary properties to chickpea. One suitable example is the Carlin Pea which has a long tradition of being grown in more northerly regions of the UK.

Carlin Peas - sometimes also known as brown, maple or pigeon peas are a possible substitute for chickpea. They have a similar nutty taste and are much easier to grow in our climate. In most areas

of the UK, they are a forgotten food, but you will still find them in specific regions such as Lancashire or Newcastle where they are eaten out of a cup, sprinkled with salt and vinegar. In these regions, they are commonly eaten on bonfire night or Carlin Sunday, around March.

The tradition of Carlin Sunday dates back to a medieval feast day in the 12th century when a dole was given to the poor in the form of dried peas. Carlin Peas also feature in a tale from the civil war in 1644, when Newcastle was under siege from the Scots, and a stranded shipload of peas saved many people from starvation.

It's only more recently they've had a revival, promoted by the company Hodmedods who have marketed Carlin Peas grown in Gloucestershire and Shropshire. As a taller pea, they are a challenge to grow on a large scale as they require support. To avoid having to put up large numbers of cane wigwams, they can be grown together with a thicker stemmed cereal such as triticale offering physical support⁸.

Garden Organic's Heritage Seed Library has several varieties of pea that are good for garden scale growing and drying: the Latvian Pea is similar to a Carlin Pea with a distinct nutty taste and is traditionally eaten at Christmas. Minerva is a standard Carlin Pea that has been traditionally grown in the UK.

Aim

The aim of this trial was to compare the performance and culinary acceptability of two varieties of drying pea in locations around the UK.

Methodology

Participants sowed the two varieties of peas into small pots mid-March. These were hardened off then the 15 best plants were transplanted late April / early May into 1 x 1 m² plots each with a wigwam of canes to climb.

Key dates such as emergence, first flowering, pod set and harvesting period were recorded. The yields were measured and culinary properties such as flavour quality and texture noted using a Likert scale.

Results were compiled and a Wilcoxon, non-parametric paired t-test was used to compare varieties growing at each site.

Season

Spring and summer 2025 presented challenging growing conditions. It was the sunniest and driest spring on record with April to June only receiving 56% of the average rainfall. Many growers were simply unable to keep up with providing adequate water for the peas to grow optimally. Temperatures were also warm, being 1.4°C above average.

Summer was also warm with temperatures continuing 1.5°C above average. Although in August, most areas continued to receive below average rainfall (62% of average) other areas in the west of the UK received above average rainfall. For many crops this rainfall came too late.

Participation

A total of 202 signed up for the experiment and 142 returned results giving a response rate of 70%. Locations were spread widely around the UK, ranging from Devon to Orkney, north-south and Pembrokeshire to Suffolk east-west.

Emergence

Carlin and Latvian peas both have a hard seed coat so can be slow to germinate. Carlin took an average of 7 days to germinate, and Latvian slightly longer taking 8 days. For the middle 50% of participants, germination occurred within a range of 5 to 11 days.

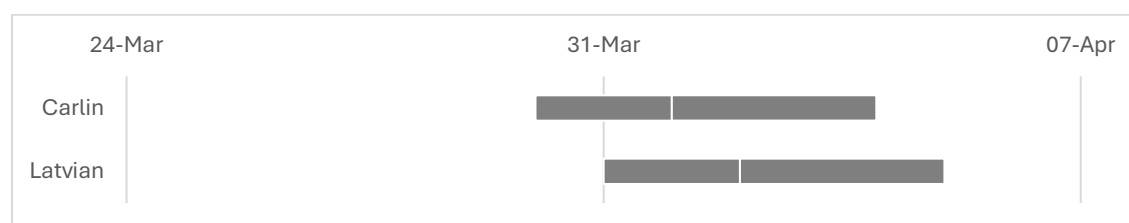


Figure 1 Emergence of pea varieties. Boxes represent interquartile range (middle 50% of participants) and white lines represent median values

Flowering

Carlin and Latvian peas flowered at 66 – 82 days and set pods 75 – 95 days after sowing. There was typically a range of 10 – 15 days from the earliest to latest flowering and pod set within the mid 50% of participants.

Latvian peas flowered and set pods significantly earlier than Carlin peas, flowering 8 days earlier and setting pods 4 days earlier ($P < 0.0001$).

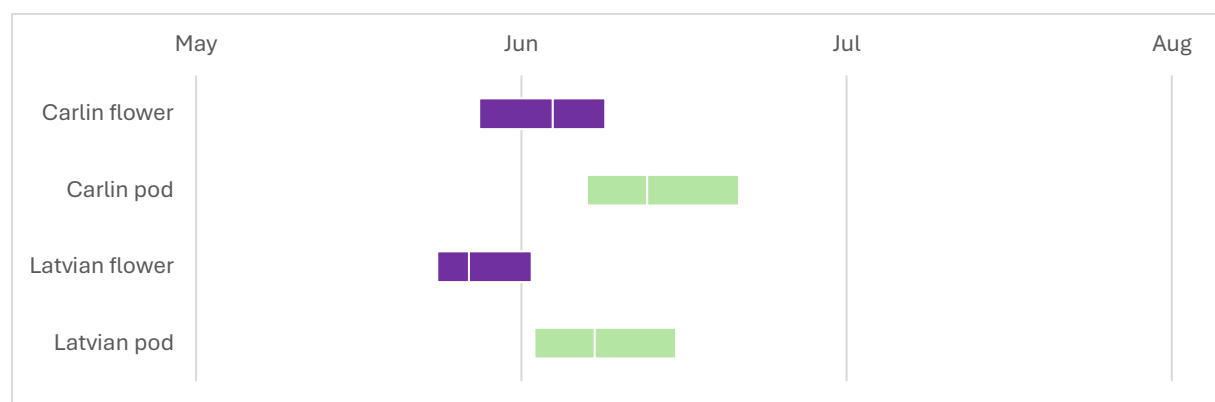


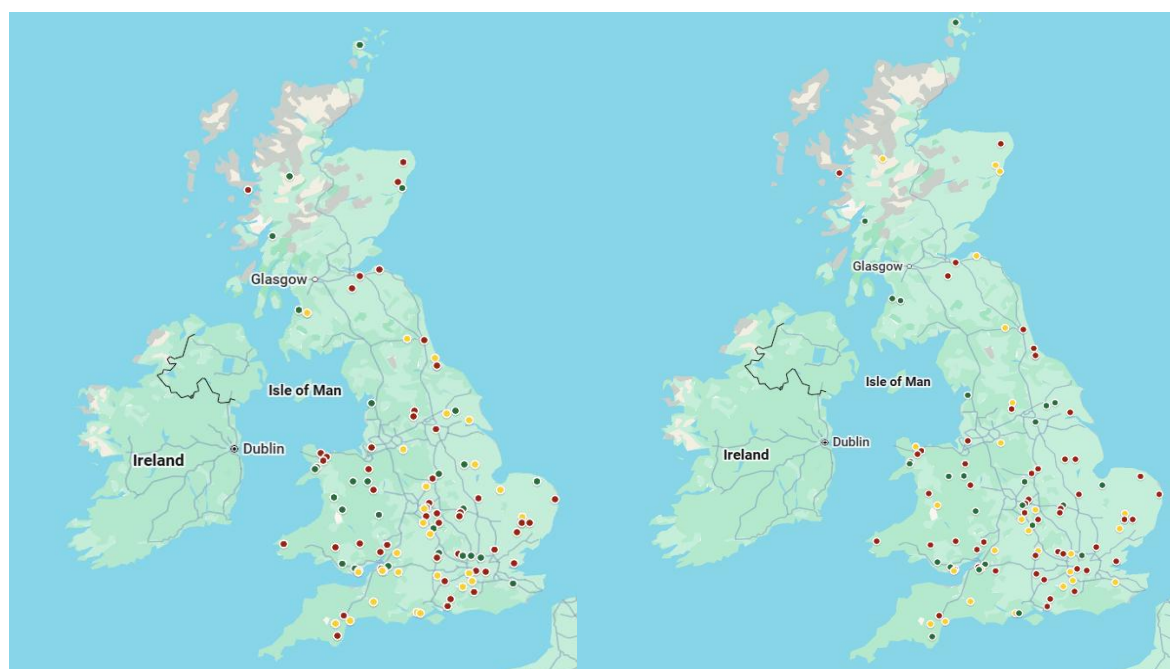
Figure 2 Flowering and pod set of pea varieties.

Boxes represent interquartile range (middle 50% of participants) and white lines represent median values

Yields

There was a very wide range of yields with many crop failures due to the dry weather.

“The peas survived the first 2 heatwaves, but not the third. In the third heatwave, flowers were scorched off, or withered, and only a few set and produced pods which all had pea moth larvae”



a) Carlin

b) Latvian

Figure 3 Yields of Carlin and Latvian Peas.

● Very poor < 50g/m² ● Poor 50 - 140 g/m² ● Fair > 140 g/m²

The small differences between the varieties were not significant with mean yields of 105g/m² for Carlin and 108g for Latvian. This is equivalent to 1 t/ha which is low by commercial standards. A typical figure for an organic crop of Carlin peas is 1.5 – 2.0 t/ha⁹ although typical yields of drying peas in general is around 3 t/ha¹⁰. However, a sizeable minority of participants achieved yields around 400 – 600g/m² which shows that highly productive yields of dried peas can be obtained from small-scale garden plots.

Yields were plotted on a map of the UK (Figure 3). Although it was difficult to make out any strong trends, there did appear to be a higher proportion of fair yields in the west side of the country and in Wales where higher rainfall may have helped.

The map also demonstrated that Carlin Peas could be grown successfully at a range of latitudes in the UK ranging from Kent and Devon in the south to Perthshire and Orkney in the north.

Pests and Diseases



By far the most common pest was pea moth (*Cydia nigricana*) that was mentioned by 27% of respondents. This often rendered large parts of the crop inedible as the peas were chewed and there were large amounts of droppings in the pods.

The moth lays its eggs in the flowers so the only way to avoid pea moth is with a very early or late sowing so that the crop is not flowering during June and July. Fine mesh netting applied during May or June is effective at preventing pea moth but is difficult to use.

Rating

In the majority of cases, the ratings for Carlin and Latvian peas were very similar with no significant differences, so the average rating for both varieties is presented.

Ease of growing

A majority of 65% of participants found Carlin Peas easy to grow, showing that they were suitable for home garden cultivation.

Productivity

Only 41% agreed or strongly agreed that they were productive with a similar number (38%) disagreeing or strongly disagreeing. The very dry weather is likely to have curtailed growth and reduced yields, where even where watering was frequent. Poor drought resistance is a factor that was frequently mentioned in the comments.

Enjoyable to eat

A majority of 61% found them enjoyable to eat, with 27% feeling neutral towards them, and only a small minority of 10% not enjoying them.

An alternative to chickpeas

Just over half 55% agreed that they make a good alternative to chickpeas, with 27% feeling neutral and a minority of 20% not agreeing.

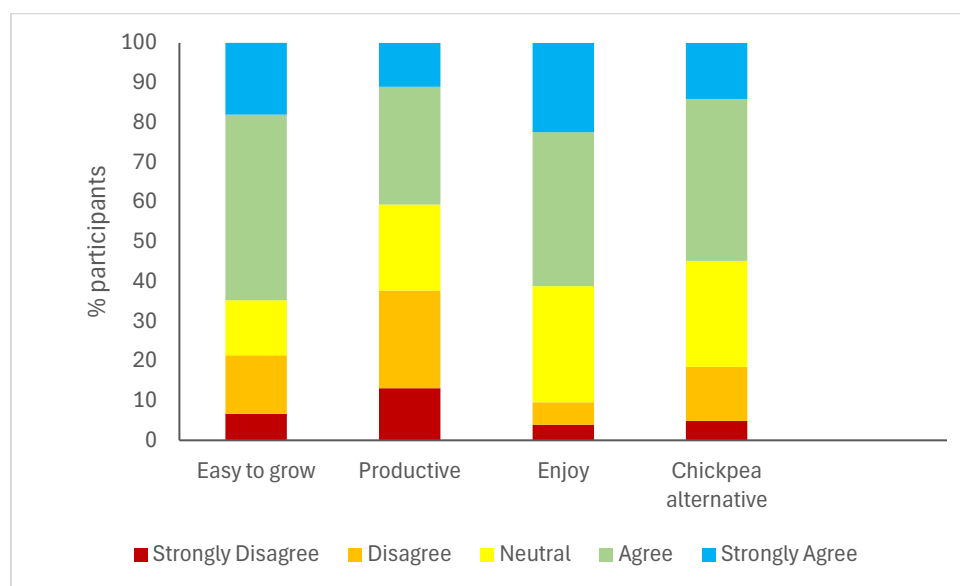


Figure 4 participant ratings of Carlin and Latvian peas

Would they grow Carlin pea again?

Opinions were divided quite equally. 22% would definitely grow them again and 22% were quite likely to grow them. 20% may grow them again and 29% probably wouldn't, leaving 7% who would definitely not grow them again. There was no difference between the varieties.

"I'd never heard of Carlin peas before this experience. I will grow them again as an early cropping and alternative protein source to both chickpeas and beans. I have found chickpeas have also been quite productive this summer. I wouldn't grow Carlin peas as an alternative to chickpeas but as an addition to them."

Taste test

Participants were asked to score pleasantness, sweetness and bitterness using a Likert scale

The main findings were that:

Pleasantness

Most (70 – 80%) participants rated Carlin and Latvian peas pleasant or very pleasant. Around 20-25% were neutral towards them and only a few 2-3% found them unpleasant.

Sweetness

Participants were divided as to whether they tasted sweet. Around 40% thought they weren't at all sweet and around 45% though they tasted only slightly sweet.

Bitterness

Most participants (80%) thought that they didn't taste at all bitter, and only 15% thought they tasted slightly bitter.

Additionally, participants ticked a box if they thought that the peas tasted salty, nutty, earthy or mealy.

Saltiness

Very few (3%) thought they tasted salty.

Nuttiness

Slightly over half, (61%) thought they tasted nutty, which is a desirable flavour for a chickpea substitute.

Earthiness

Slightly less than half, around (40%) thought they tasted earthy, which is a flavour also sometime associated with chickpeas.

Mealiness

More respondents thought Carlin (35%) was mealy, compared to Latvian (0%). This difference was significant ($p < 0.0001$).

Cooking

There was a wide diversity of cooking methods. Some just steamed the pulses in order to taste them. Others used them as chickpeas would be used in a variety of stews, curries, falafels and hummus with many commenting that they compared very favourably to using chickpeas. Some also tried cooking them as 'parched peas' in a traditional Carlin pea dish, where butter, salt and vinegar is added after cooking.

“As a substitute for chick peas in a Moroccan carrot couscous.”

“In place of chickpeas in mixed veg curry and in Mediterranean veg stew.
Hummus. With onion and herbs.”

“Great in a vegetable curry.”

“With sauteed aubergine, courgette and onion plus rice.”

“We made roasted aubergine, tomato & Latvian Peas with a green lemon sauce”

Conclusion

In many respects, the Carlin peas and the Latvian peas fulfilled the criteria for a homegrown replacement for chickpeas: they were easy to grow, pleasant to eat and they had a similar nutty earthy flavour to chickpeas. People enjoyed taking part in the experiment with people citing that it was an important topic researching into homegrown protein alternatives.

Some enjoyed the heritage connection of the Carlin pea:

“I can remember my dad bringing dried carlins back from the pub in a little paper bag in the late fifties and early sixties but have no memory of ever eating them. I was drawn to this experiment to put that right!”

Drought was a the most common challenge mentioned and some commented that other pea varieties may show better resilience than the Carlin and Latvian peas grown here. Evaluating drought tolerance of legumes is clearly a topic that should be evaluated in future work.

References

1. Whittall, B., Warwick, S. M., Jackson, M. & Appleton, K. M. Barriers and facilitators to consuming pulses: a qualitative exploration including effects of trying recipes at home. *J. Nutr. Sci.* **13**, e6 (2024).
2. Didinger, C. & Thompson, H. J. The role of pulses in improving human health: A review. *Legume Sci.* **4**, e147 (2022).
3. Poore, J. & Nemecek, T. Reducing food's environmental impacts through producers and consumers. *Science* **360**, 987–992 (2018).
4. Scarborough, P. et al. Vegans, vegetarians, fish-eaters and meat-eaters in the UK show discrepant environmental impacts. *Nat. Food* **4**, 565–574 (2023).
5. Committee on Climate Change. Policies-for-the-Sixth-Carbon-Budget-and-Net-Zero. (2020).
6. Zhang, J., Wang, J., Zhu, C., Singh, R. P. & Chen, W. Chickpea: Its Origin, Distribution, Nutrition, Benefits, Breeding, and Symbiotic Relationship with Mesorhizobium Species. *Plants* **13**, 429 (2024).
7. NIAB. NEWS: New feasibility study on domestic chickpea production | Niab.
<https://www.niab.com/news-views/news/news-new-feasibility-study-domestic-chickpea-production> (2023).
8. Wholefoods, H. Prize Peas - Put Some Organic British Carlin Peas in Your Pantry. *Hodmedod's Wholefoods* <https://hodmedods.co.uk/blogs/news/2016-boom-award-winner-organic-carlin-peas> (2016).
9. Cairns, G. Crop mixtures slides.
10. Ceres Rural. Yield-Summary-2025. (2025).