

Resilient Greens 2026

Background

Garden Organic is launching a new initiative to mark the 50 year anniversary of its Heritage Seed Library. Resilient Greens is a new initiative that ensures that gardeners and small scale growers have more of a voice in evaluating and selecting vegetable varieties.



In many countries around the world, small-scale farmers and growers select their favourite varieties and evaluate them collectively. A great example of this is the International Potato Centre in Peru where researchers work with farmers, consumers and communities together through citizen science initiatives to evaluate and conserve their important heritage of potato varieties (<https://cipotato.org/>). The technical term for this is 'Participatory Varietal Evaluation' (PVE)

More developed countries, such as the UK, are a long way behind with PVE with commercial seed companies determining the fate of vegetable varieties. Although there are many small scale growers and gardeners, there appear to be no initiatives that collect and collate their experiences in a unified way. Resilient Greens will collect and share this knowledge collected from citizens around the UK growing heritage varieties over a period of years. This will give us a better understanding of how heritage varieties can contribute to resilience. Gardeners and communities will be involved in shaping the work from the outset to ensure that the information we collect is genuinely useful and culturally relevant.

In November 2025, we consulted with a group of 60 gardeners to find out what features they valued in a kale variety. We have collated that information and used it to put together this method of evaluating the kale for resilience. These 3 varieties of kale were selected, taking the views of this group of gardeners into account:

Ragged Jack

Our donor's family had grown this kale for many years. Known as 'Tunley Greens', it had originally come from his wife's grandfather who obtained the seeds in Tunley, Somerset in around 1910. Known in Europe for centuries, it was often grown in cottage and farm gardens. Valued for its hardiness and ability to provide tasty, fresh greens in the depth of winter, its frilly grey-green leaves have a lovely purple tinge.

Tall Kale

Thought to have been available since the mid-nineteenth century, this variety is both hardy and productive. The plants grow to around a metre in height, producing leaves and flowering tips with a flavour similar to that of spring greens.

Uncle Bert's Purple

Our donor's family has grown this variety for several generations and found it to be "the nicest tasting of all kales." Grown extensively before WWII, but seems to have disappeared soon after. Large and prolific; it is both hardy and resilient to pests and diseases. Delicious too, with a slightly nutty flavour.

Aims of this experiment

We would like to evaluate several varieties of heritage kale in a range of locations to analyse their resilience over a number of growing seasons.

What we need from you:

3 x 1 metre squared plots (preferably with a small gap between each).

Growing care: sowing, planting out and watering the plots

Recording online of key dates during the growing season

Instructions

Sowing

- In late April / early May, Sow 20 seeds of each variety into medium size cell trays

Plant care

- Keep the plants in a warm light place to allow them to develop
- Once they have developed a couple of true leaves (the leaves after the first couple of seed leaves), put the trays outside during the day to allow the plants to harden off

Bed preparation

- Weed the bed and add compost so that it has moderate to high levels of fertility

Planting out

- When your plants have 3 – 4 true leaves plant 3 rows x 3 plants (ie a total of 9 plants) in each plot
- Water as necessary and look for slugs at night. Replace any plants that get badly damaged
- Protect with netting if necessary to avoid pigeon damage
- Weed the plots as needed
- From June onwards, plots will need protection with fine netting from cabbage white butterfly

Records

- Date of sowing: April / May 2026
- Date of planting out: June 2026
- Monitoring of growth: June 2026 – May 2027
- Recording Drought resilience: July – Aug 2026
- Monitoring pest and disease resilience: June 2026 – May 2027
- Recording yield: August 2026 onwards

Recording data

Please enter the data online using this link: <https://www.gardenorganic.org.uk/what-we-do/citizen-science-and-research/members-experiments/resilient-greens>

You can now store results on the form as you go – press ‘Save’ and it will email you a link, which you can then use to resume entering results. Please keep this email in a safe place so that you can retrieve the results. If you do lose it, then you will need to email us (experiments@gardenorganic.org.uk) and ask me for a new link. Alternatively you can save the link as a bookmark in your browser so that you can readily access it.

We welcome good quality photos. The best ones may be published in our magazine and on social media. Please send photos to experiments@gardenorganic.org.uk. Unfortunately, we are unable to use hard copy prints.

Recording sheet

Your site

What is the first half of your postcode?

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Soil type

- Very sandy
 Quite sandy
 Silty
 Mix of sand, silt and clay (loam)
- Some clay
 Heavy clay
 Peaty
 Chalky

Shading of plot

- Shaded
 Semi shaded
 Sunny

Exposure of site

- Sheltered
 Semi sheltered
 Exposed

Sowing and planting

What date did you sow the Kale

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What date did they first emerge?

Ragged Jack	Tall Kale	Uncle Bert's Purple

What date did you plant them out?

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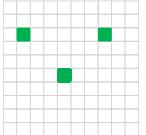
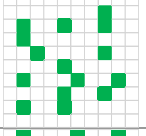
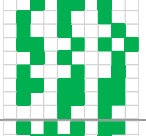
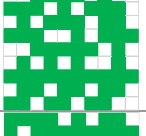


Growth

Establishment score – 1 month after planting out.

- 1 No establishment 2 Very poor establishment - few plants established
 3 Poor establishment - less than 25% established 4 Moderate establishment - 50% established
 5 Good establishment - 75% established 6 Excellent - All plants established

Date measured:		
Ragged Jack	Tall Kale	Uncle Bert's Purple

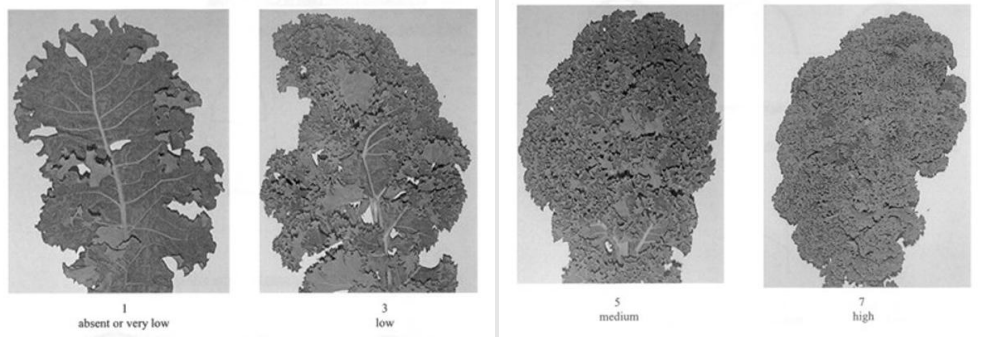
At the beginning of each month give each variety a score for ground cover using the following scoring key:

Score	Range	Description	
1	0 - 5%	One or 2 plants present, very little there	
2	5 - 25%	Covering less than a quarter of the ground, not that much there	
3	25 - 50%	Covering up to half of the ground	
4	50 - 75%	Covering more than half of the ground but still some gaps	
5	75 - 95%	Covering most of the ground, only a few small gaps	
6	95 - 100%	Almost complete cover, gaps are very small	

	Ground cover score measure once a month- see scoring scale above		
Month	Ragged Jack	Tall Kale	Uncle Bert's Purple
June			
July			
August			
September			
October			
November			
December			
January			
February			
March			
April			
May			

Plant characteristics

Leaf colour	Rate the colour of the leaves using this scale: 1 Yellow green 2 Light green 3 Green 4 Dark green 5 Purple / red green 6 Purple red 7 Other (please specify)		
	Ragged Jack	Tall Kale	Uncle Bert's Purple

Curliness	Rate the curliness of the leaves using this scale from 1-7		
			
	Ragged Jack	Tall Kale	Uncle Bert's Purple
Curliness score			

Resilience

Cold tolerance	After a sustained period of <5°C, rate the plants according to cold damage 1 No damage 2 Slight damage (few plants) 3 Moderate damage (still mostly healthy) 4 Considerable damage (more damaged than healthy) 5 Severe damage (Nearly all damaged) 6 All killed		
	Ragged Jack	Tall Kale	Uncle Bert's Purple
Score			
Rank (1st / 2nd / 3rd) for best cold tolerance			

Drought tolerance – assess performance by withholding watering for a short period during a dry period in the summer	Assess Loss after 1 – 2 weeks without rain Count the no days from watering / rainfall until plant first shows signs of wilting		
	Ragged Jack	Tall Kale	Uncle Bert's Purple
Days before wilting			
Rank (1st / 2nd / 3rd) for best drought tolerance			

Aphid tolerance	Give each variety a score for the worst aphid infestation experienced 1 No aphids 2 Very low infestation, 1 or 2 visible on a few leaves, plants healthy 3 Moderate infestation mostly on young leaves and at tops of stems, plant healthy, 4 Heavy infestation, aphids on most leaves and stems, leaves crinkled 5 Very heavy infestation on most leaves and stems, leaves crinkled and yellow, sooty black mould		
	Ragged Jack	Tall Kale	Uncle Bert's Purple
Score			
Rank (1st / 2nd / 3rd) for best resistance to aphids			

Whitefly tolerance	Give each variety a score for the worst whitefly infestation experienced 1 None 2 Low infestation 1 or 2 Present 3 Moderate infestation, whitefly scattered over most of plant 4 Heavy infestation whitefly, densely populated over entire plant, cloud comes off each time plant touched 5 Very heavy infestation, whitefly covering most of plant, continual flying		
	Ragged Jack	Tall Kale	Uncle Bert's Purple
Score			
Overall rank (1 st / 2 nd / 3 rd) for best whitefly resistance			

Fungal disease tolerance – eg Alternaria – black dots, Ringspot – yellow spots with black rings	Give each variety a score for the worst fungal disease experienced 1 No damage 2 Low (0 – 24% leaf area lost), 3 Moderate (25 – 49% leaf area lost) 4 High (50 – 75% leaf area lost) 5 Severe (>75% leaf area lost)		
	Ragged Jack	Tall Kale	Uncle Bert's Purple
Score			
Overall rank (1 st / 2 nd / 3 rd) for best fungal disease resistance			

What date did the plants first start to produce flower buds?		
Ragged Jack	Tall Kale	Uncle Bert's Purple

Any other comments on how kale grew this season?

Flavour and eating

Steam the leaves until just tender, taking care to cook each variety in the same way. Then score each variety for the following flavour qualities:

Flavour quality					
	Very unpleasant	Unpleasant	Neutral	Pleasant	Very pleasant
Ragged Jack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tall Kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncle Bert's purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flavour Strength					
	Very mild	Mild	Moderate	Quite strong	Very strong
Ragged Jack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tall Kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncle Bert's purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bitterness					
	Not at all bitter	Slightly bitter	Quite bitter	Bitter	Very Bitter
Ragged Jack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tall Kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncle Bert's purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sweetness					
	Not at all sweet	Slightly sweet	Quite sweet	Sweet	Very sweet
Ragged Jack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tall Kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncle Bert's purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peppery flavours					
	Not at all peppery	Slightly peppery	Quite peppery	Peppery	Very peppery
Ragged Jack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tall Kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncle Bert's purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutty flavours					
	Not at all nutty	Slightly nutty	Quite nutty	Nutty	Very nutty
Ragged Jack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tall Kale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uncle Bert's purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Describe to us what would your ideal kale variety be like for cooking and eating?

Any other general comments about the kale varieties or the experiment?

Please answer the following questions about this experiment

Please tick which of the boxes you think applied to your experience of taking part in the members' experiments this year.					
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I enjoyed taking part in this experiment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt I learnt something new	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt I was contributing to something useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am likely to take part again	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other comments					
Any suggestions for future Members experiments					