

Rocket science

Rocket is an increasingly popular leafy salad vegetable, either in packs on its own or as an ingredient in mixed salad bags. There are actually two different genera, *Eruca sativa* (or salad rocket) and wild rocket, which is *Diplotaxis* sp., though they are often treated the same. It is a fast growing crop, capable of at least two cuts and certainly much faster and more productive than the lamb's lettuce that we focused on in OG11.

Leafy veg trials

Garden Organic is a partner in a four-year EC-funded project 'Leafy Veg', which aims to conserve and stimulate the use of genetic material of the leafy vegetables most important for Europe. The project is led by the Centre for Genetic Resources (CGN) at Wageningen in the Netherlands and has 12 partners from 10 countries, including universities, gene banks and NGOs active in genetic conservation. Having previously trialled the Heritage Seed Library's lettuce collection with commercial varieties (see OG7), in 2009 we turned our attention to the so-called minor leafy vegetables, rocket and lamb's lettuce. Project partners in the Netherlands (CGN) and Germany (Leibniz - Institute of Plant Genetics and Crop Plant Research - IPK) had characterised their *Eruca* accessions and selected promising material for us to trial in UK conditions. There are 146 accessions of *Eruca* maintained in the collections of project partners. These accessions (germplasm) can be heirloom varieties or landraces (farmer-developed cultivars of crop plants which are adapted to local environmental conditions), ex-commercial varieties, breeding lines or material collected from the wild.



Harvesting the rocket trial at Garden Organic Ryton

Ten accessions were chosen and four commercially available controls included in the replicated trial at Ryton, near Coventry. The trial site has a sandy loam soil, a pH of 7, P index 1, K index 2+ and Mg Index 3. The seed was sown in modules rather than direct-drilled, due to shortage of available seed of the gene-bank material. They were sown on the 29th July 2009 and transplanted at 15 x 30cm spacing in 4m beds on the 28th August. They were not covered. The first harvest was on the 22nd September 2009. After

the cold period in January, when night temperatures dropped to as low as -12.5°C, the plots were assessed for frost damage.

Variety	Total marketable yield (t/ha) Harvest 1	Total marketable yield (t/ha) Harvest 2	Total marketable yield (t/ha)	Bolting 1 (%) 16/9/09	Bolting 2 (%) 2/10/09	Frost tolerance 1 = completely destroyed, 9 = no visible damage
Rucola	5.7	7.8	13.6	0.0	35.0	3.0
Salad rocket	5.7	7.5	13.2	0.0	40.6	2.7
Sky rocket	3.4	3.7	7.1	0.0	18.8	1.7
Voyager	2.5	0.5	3.0	11.3	49.4	1.0

Rocket tasting

A taste test was carried out by Garden Organic staff and there was a public taste test involving more than 100 people at The Organic Harvest event at Ryton on the 4th October 2009. Many people were surprised that they didn't all taste the same and that there were real differences in flavour, texture and sweetness. Although there was a wide range of scoring for each variety, showing that perceptions of taste can differ widely, the results from the staff tasting and the public tasting were remarkably similar, especially for appearance and overall pleasantness.



Public taste testing at Organic Harvest - Ryton Organic Gardens

Variety	STRONG FLAVOUR 1=weak, 3=medium, 5=strong	OFF TASTE 1=no off taste, 3=mediocre, 5=strong off taste	SWEETNESS 1=not sweet, 3=slightly sweet, 5=very sweet	TEXTURE 1=too soft, 3=slightly crunchy, 5=very crunchy	APPEARANCE 1=very unappealing, 3=acceptable, 5=very appealing	PLEASANTNESS 1=not pleasant, 3=OK, 5=very pleasant
Rucola	3.6	2.5	2.1	3.1	3.1	3.0
Salad rocket	2.9	2.6	2.0	2.4	2.9	2.9
Sky rocket	3.4	2.5	2.1	3.1	4.3	3.3
Voyager	3.7	2.5	2.1	2.7	4.1	3.4

Taste results: Garden Organic staff (commercial varieties only)

Commercial varieties are summarised below in descending order of marketable yield.

Rucola (organic seed). The highest yielding of all in the trials, with good yields, especially on second harvest. Slightly more frost tolerant than the others in the trial. Comments included "strong bitterness but not much taste", "peppery tingle!", "hot, but sweet also, quite nice" and "not nice".



Salad rocket (organic seed). Similar performance to Rucola. Comments from tasting included "Bitter, acrid after-taste" and "mild taste".



Sky rocket (untreated seed). Tozer bred variety. This was slow to bolt and attractive but yielding only 52% of Rucola. Comments from the taste test included "peppery and nice" and "nice and peppery"(!)



Voyager (untreated seed). This is a Tozer selection of wild rocket, included for comparison purposes in the trial. This had the lowest yield, but also was considered to have the best taste and to be the most attractive. Comments included "the best", "good and peppery", "soft texture, not very nice" and "hot".



How did the accessions perform?

There were some quite promising performances from the accessions. Although the commercial varieties of salad rocket performed best, two of the accessions weren't far behind them. Yield isn't everything and slowness to bolt, interesting leaf shape and flavour are all important. ERU41, an accession from IPK was slow to bolt, had a strong flavour and was considered most pleasant and attractive.



This rocket (ERU41) was the best performing accession

Phil Sumption

Research officer at Garden Organic

Photos: Phil Sumption / Garden Organic

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