

Incredible Vegetables – perennial vegetables and future food crops

I run a project called Incredible Vegetables in Devon. I'm a grower, researcher of perennial edible plants, budding plant breeder, seed saver and also have a small permaculture plant nursery. I'm passionate about researching sustainable food crops that have built-in resilience as well as wild edibles that have the potential to become future staple foods. The aim of Incredible Vegetables is to create a diverse botanical reserve of useful edible plants. The number of plants I have growing is an ever growing and epic list, and includes perennial edible roots, shoots, tubers and rhizomes, leafy greens and indestructible alliums.

Many plants can provide food for decades from a single planting and are often at their best during the 'hungry gap'. They have the capacity to survive extreme drought, cold and wet conditions. I have witnessed a huge surge in interest in edible perennials over the last couple of years, especially perennial brassicas and have been slowly amassing a collection of perennial kales and collards. In this article I'm going to introduce just a handful of my favourite leafy greens, roots and alliums and ones that could potentially be useful for small-scale market gardeners and farmers.

Caucasian spinach (*Hablitzia tamnoides*)

One edible perennial I would definitely recommend growing is *Hablitzia tamnoides* or Caucasian spinach and this sole species in the genus *Hablitzia*, is a long-lived herbaceous perennial climber native to the Caucasus region. Grown traditionally as an ornamental, it has become well known over recent years thanks to Stephen Barstow and his book 'Around the World in 80 Plants'. It is a remarkable plant that produces heart shaped tender spinach like leaves on a vine. It grows rapidly from a crown of shoots emerging early in the year to more than 3m by summer. Young leaves can be eaten raw as a salad crop and larger, more mature leaves can be cooked and wilted. The early shoots have a beautiful magenta colour and can be harvested like an asparagus spear. Vine tips and emerging flowers can also be eaten raw or cooked, giving many options over the growing season.

The main harvest period is from around February to June, followed by flowering and then dormancy in autumn. It thrives in partial shade where the roots can be kept moist and climbing support of some kind will help the vines grow more vigorously. Perennials in general are far less fussy about soil conditions and position and don't require well-cultivated beds to flourish. This gives them the added bonus of being able to grow in marginal spots not suited for annual production. Although they can take about three years to establish, *Hablitzia* plants can go on to produce for decades. Tasty leaves, few pests, hardy down to -30c and multiple harvests, what is not to love! *Hablitzia* is now being grown commercially in Maine, USA and is particularly valuable due to the early spring harvest.

Other leafy greens

Hablitzia tamnoides is just one of the many perennial leafy greens and shoots which I grow. Good King Henry, Sea beet, Sea kale, Sorrel, Patience dock, Sculpit, perennial chicories, Turkish rocket and a whole host of North American, Korean and Japanese fragrant leaves and shoots all provide good eating. Lurking in my field is the under-rated Cherokee green Sochan (*Rudbeckia Laciniata*) together with Aster scaber, Big leaf Aster, Hostas, *Ligularia fischeri*, *Aralia cordata* (Udo), Ashitaba and Korean wild celery. Not forgetting pungent Lovage whose early shoots can be forced and used like a super hit of micro celery.

Perennial kales and collards

No article of mine would be complete without a mention of perennial kales and collards. What started ten years ago with a lonely Daubenton kale has developed into quite an obsession as my research, together with kind donations, have allowed me to acquire many new specimens. Currently, I have purple tree collards, green tree collards, Daubenton and variegated Daubenton 'Panache'. Spis Bladene, meaning 'eat the leaves' in Danish, Helgoland kale, Sharp leaf OP grex, the curious Portuguese bush cabbage, Asturian tree cabbage, Galician perennial kale, Daubenton x purple tree collard 'keeper', a tree collard x Cavolo Nero cross and not forgetting the mighty Taunton Deane or 'Cottagers kale'.

There is one in there I have called 'roadside rescue kale', an unidentified perennial kale that I used to drive by every week on a busy grassy verge in Bovey Tracey. It finally got run over by a truck, so I jumped out of my car and rescued its flattened



Image 1: Left: *Hablitzia* vines. Above right, *Hablitzia* young shoots, Below right, *Hablitzia* leaves

up-rooted remains, where it now flourishes in my vegetable garden. More obscure members of the club include a thousand headed kale lifted from a friend's allotment, the positively pre-historic wild cabbage from Bere beach, Ken Fern's bush cabbage originating from Ken Fern's original Plants for a Future project in Cornwall and Merritt perennial kale which can produce 2ft long leaves. My latest accession* is 'Walsall allotments kale' thought to be the offspring of some kind of perennial kale of African ancestry. An unruly clump of Egloskerry kale, aka 'the long lost kale of Launceston town' was thrust into my arms at a recent talk by a chap who declared it was an ancient Cornish perennial kale.

Perennial kales and collards vary in longevity, propensity to flower, growing habits and taste. My longest living specimen is a nine year old Daubenton kale which is still managing to squeeze out edible leaves despite its gnarly



Taunton Deane kale

appearance. Perhaps the most useful perennial kale for a market garden is the West Country Taunton Deane also known as Cottager's Kale. The name Cottager's or Crofter's Kale is a reference to its everyday use by ordinary folk for centuries. 'Taunton Deane' is local to the Somerset area and has probably been in cultivation by local people for well over 100yrs. These plants grow huge (up to 2m tall and 2-3m wide with a woody trunk). They produce the best tasting tender leaves and once established, can be harvested for most of the year. Really productive for the first five years, they slow down a little after that. Known to flower periodically, seed collection is possible, but the best way to propagate them is through stem cuttings (a thick side stem with all leaves removed apart from the growing tip), which can either be potted up or popped directly in the soil to root. Taunton Deane does suffer from the same pests as regular brassicas but in my experience has far greater resilience. I don't use any crop covers with mine and although Taunton Deane can be attacked by cabbage whites, it bounces back completely by autumn. I have also found that interspersed plantings of perennial kales greatly reduce the damage to my regular brassica crops by acting as pest beacons, whilst having the innate capacity to survive them. My other favourite is a wonderful compact specimen called 'Keeper' a Daubenton x purple tree collard cross with beautiful deep purple leaves and a nice compact habit. A gift from permaculture plant breeder Graham D. Jenkins-Belohorska, I can see why he named this one 'Keeper' as it has been going strong for three years now and still looks as fresh as a daisy.

* Accession: A distinct, uniquely identifiable sample of seeds (or other genetic material) representing a cultivar, breeding line or a population, which is maintained in storage for conservation and use. (FAO)

Low maintenance, resilient and with minimal watering/feeding and soil disturbance, just an occasional mulch of compost is all these plants need. Perennial vegetables in general have the capacity to lock up more CO₂. Some of the long-lived perennial brassicas have trunks and branches like small trees. Prolific, carbon munching, cut-and-come-again, robust and self-maintaining plants are what we are going to need more of in the future.

Perennial nine star broccoli

Perennial Nine Star broccoli started me off on this perennial vegetable growing adventure. Developed just over a century ago, this wonderful old variety produces a central creamy white 'cauliflower' looking head with satellites of smaller florets, hence the name 'Nine Star'.



Photo: Mandy Barber

Providing all the florets are harvested and it is cut back before seed set occurs, the plant can produce a fresh crop each spring for around five years. This variety was dropped a while back by large commercial producers and it has been left to a handful of small growers and individuals to keep it going. As a result, it has suffered from in-breeding depression and the current seed and plants circulating vary wildly in terms of perennial habits and vigor. As a vegetable close to my heart and one that is rapidly disappearing into the history books alongside so many others, I decided to do something about it. This is when 'Project Nine Star' was launched in 2018 with the aim of restoring some diversity back into the Nine Star gene pool and hopefully coming to its rescue at the same time. Prior to that, I spent two years sourcing seed for the trial and was able to obtain 11 accessions including some 1982 seed from Warwick University seed bank. The trial was the first of many subsequent trials to select for vigorous plants with good perennial habits and decent sized florets. Planted out in 2018, 2.5kg of seed was collected and dried in 2019. Some will be returned to Warwick University, the rest I will continue to work with and also offer it, open source to growers and plant breeders if they would like to contribute to the project.



Perennial Nine Star broccoli field trial

Roots and tubers

Not content with a brassica obsession, my next love is perennial roots and tubers. I am trialling many different kinds including Yacon, Oca, Skirret, Mashua, the aquatic Wapato and Chi-gu, Hog peanut, Earthnut pea, dwarf Jerusalem artichoke, Chinese Artichoke (Crosne) and outdoor sweet potatoes (grown as an annual). Out of all of these, the absolute best tasting and exciting tuberous crop is *Apios americana* or Groundnut. This is also known as Hopniss from the Lenape word 'Hobbenis' and is native to North America where it has long been a staple food for indigenous peoples. It has undergone some domestication and plant breeders have been working to improve it for many years. It has such great potential to become an important high protein food crop. In the wild, groundnut grows along the banks of rivers and lakes, usually found using trees and shrubs for climbing support. It forms long rhizomes under ground with 'chains' of edible tubers resembling a bead necklace.

The delicious tubers can be cooked and used just like potatoes but are more nutritious having more protein, calcium and iron. This plant has everything - fantastic tasting tubers, beautiful climbing vines and scented flowers and can fix nitrogen too. It needs moist but well drained soil in sun or very light shade and plants need climbing support. The taller and more vigorous the vines, the better the yield of tubers. Ideally you want to grow it on a two to three year cycle.

To keep track of all my *Apios* accessions I grow mine in large containers using large 40-50L bottomless pots with 8-10ft canes. The advantage of this method is that the tubers are easy to harvest and can be tipped out of the container in one go. The plant can still draw nutrients through the bottom of the container.

Alternatively, planted direct in the ground in an agroforestry situation, vines will use surrounding plants for support or can be given a permanent trellis of some kind. You can experiment using corn, sunflowers, and Jerusalem artichokes as support plants for the vines, or existing trees and shrubs. The advantage of this method is that your plants will fix nitrogen in the soil, although harvesting is a bit trickier.



Apios americana vines



Apios americana shoots



Apios americana tubers

Apios shows its first shoots in spring, produces climbing vines over the summer usually about 3m tall followed by dusky pink/maroon flowers in late summer. Vines die back in autumn and tubers remain dormant until the following spring, when the whole process begins again. Harvest tubers once vines have died back in autumn.

I have both diploids and triploids growing, the diploids having the potential to produce viable seeds - something that has eluded us so far. I would really like to work to improve the crop and see if it could become a staple foodstuff of the future.

Perennial alliums

My field is also awash with useful edible perennial alliums of which there are many. The collection includes Kyoto market, Rakkyo, Perlzweibel, Victory onion, Nodding onion, Walking onion, Norrlands onion, Everlasting onion, Babington leek, Elephant garlic, Chives, Three cornered leek, Wild garlic, Potato onion, Welsh onion and Poireau perpetuel, a wild French perennial leek.

Poireau perpetuel is resilient and fast growing, emerging December/January and producing a slender leek with a hint of garlic. These leeks are really resistant to rust and are harvested from spring to early summer by cutting at the base and leaving the bulb to re-grow and produce offsets. Some are left to flower and produce heads of bulbils,



Poireau perpetuel flowers

which can be used for propagation or left to scatter and germinate themselves. These bulbils are clones of the parent plant and do not cross with other alliums making it really easy to save them to increase your stock. The equivalent British native wild leek 'Babington' grows in a similar way, but seems a bit more prone to rust.

My latest accession is the St Victor x Oerprei perennial leek, a cross made by Telsing Andrews between Oerprei ('ancient leek', a form of *Allium ampeloprasum*) and a selection of St Victor leek with especially blue winter colouration. These came to me, very kindly, via Alison Tindale of The Backyard Larder <https://backyardlarder.co.uk>. She explains "These are quite special as they are a perennial leek with a true leek flavour rather than the garlic flavour of Babington leek. They form a clump by producing multiple offsets at the base. The shanks can be quite thick especially if fed well. I'm still experimenting but at present I find the best way to use these is to dig up a clump, take the thick ones to the kitchen for cooking and replant the finer ones. I'm also cutting out most of the flower stems to encourage sturdy growth".

Photos: Mandy Barber



Incredible Vegetables perennial vegetable garden

The future is perennial!

Apart from the low maintenance and carbon absorbing side of perennials, many of them are extremely beneficial for insect and bird life and can create shelter and food for all kind of creatures, making your growing space much more biodiverse. There are many perennial alternatives to conventional annual vegetables and they need to be introduced, tasted and tested so they can become more of the norm. My polyculture growing space incorporates edible perennials and annuals as well as many self-sowing plants. Growing food in this way means there are crops to harvest all year round. For me, this is just the beginning, as there are several thousand plants on my list still to investigate. Whilst many perennials are slow to establish they make up for it with their early harvests and years of production. These resilient crops are the ones that are going to help us adapt and survive and feed ourselves in the future.

Mandy Barber

Founder and manager of Incredible Vegetables www.incrediblevegetables.co.uk

Melcourt®

Professional Growing Media

Proven • Safe • Sustainable

100%
peat-free

Proven peat-free growing media and ingredients

- **Sylvamix® Natural** Melcourt's Soil Association-approved sustainable peat-free growing medium is widely used throughout the UK for a wide range of applications from seed sowing to containerisation
- **Bark-based growing medium ingredients** are unrivalled in quality and consistency and Soil Association approved
- **Bark-based mulches** are effective, consistent and cost competitive

All Melcourt products are based on materials sourced and manufactured in the UK - backed up by customer service that is widely acknowledged as being second to none.

Melcourt have been supplying the grower market in the UK for three decades and have been certified by the Soil Association since 1991.

GROWING MEDIA
association



Melcourt Industries Ltd • Boldridge Brake • Long Newton • Tetbury
Gloucestershire GL8 8RT

T: 01666 502711 • F: 01666 504398 • E: mail@melcourt.co.uk

www.melcourt.co.uk

[@melcourtltd](https://twitter.com/melcourtltd)

SEED CO-OPERATIVE

The UK's community owned seed company

www.seedcooperative.org.uk

OPEN POLLINATED ORGANIC AND BIODYNAMIC SEED

Vegetables • Herbs • Flowers

☎ 01775 840592

✉ seedshop@seedcooperative.org.uk

Gosberton Bank Nursery, Gosberton, Spalding, Lincs, PE11 4PB

Biodynamic and Organic Plant Breeding and Seeds Limited, trading as Seed Co-operative
Registered under the Co-operative and Community Benefit Societies Act 2014 as a
Community Benefit Society, registration number 7013.