

RURAL REALITY

Wasabi grower making

Horticulturalists Dr Sean Kitson and son Zak, aided by daughter Sofia, from Laurelvale Road, Tandragee, have been feted for growing Wasabi, an ancient and highly prized Japanese herb renowned for its taste impact and health qualities. Growing and selling from 2017, the first on this Island, **Ian Harvey** wondered how they viewed its production and market potential since the creation of Wasabi Crop Ltd.

It was Zak's idea, Ian, to try growing the nutritious Japanese herb Wasabi Japonica as a possible horticultural crop on our small holding," explained Dr Sean Kitson.

Sean is a full time Radio Chemist working for Almac in Portadown, a highly successful global company doing contract pharmaceutical development and manufacturing services.

"It was a great suggestion, something totally different and extremely challenging as we soon found out the more we delved into its history in Japan, researching its health-giving properties, eating potential and production possibilities.

"As a crop to grow it's certainly not for the faint-hearted, nor is it a route to cheap production, but the rewards of doing it successfully are great and the potential in terms of making changes to people's idea of eating seem endless."

Sean was talking to me from his family home during his Easter break, having spent the morning helping Zak in their two plastic tunnels doing daily grower tasks. Their dedicated and fully accredited horticultural holding is on the Laurelvale Road, Tandragee, in County Armagh, and the growing tunnels are sited on a quarter of an acre with lots of potential to expand.

"The crop is not officially designated organic but it is grown organically as you will discover when I talk you through our production process.

"I should add that Zak, who is currently studying Catering at SERC, Portadown, is the actual grower. I'm the technical director of the company we formed to grow and market our produce.

"With my science background and training, I'm well placed to do research work and also help out practically in my spare time.

"Our daughter Sofia is currently applying for a degree course in digital marketing and in the meantime writes all the blogs and marketing articles for our Wasabi crop, looking after the photography side of things."

The use of Wasabi as a medicinal



ORIGINATOR: Nineteen-year-old Zak Kitson, of Laurelvale Road, Tandragee, who is studying catering at SERC Portadown, gets down to the production complexities of growing the rare crop of Wasabi, having initiated the idea on the family's land. FW-1A.

PICTURES: Sofia Kitson

herb has been traced back in Japanese history to the Asuka period, which is said to have lasted from 538 to 710, so its record of certain health-giving properties has been well established for over 1,000 years. It first appeared

as a cultivated crop to complement Japanese 'sushi' (a rice dish often incorporating raw fish) for two reasons - because of its stimulating heat, since it's of the brassica family related to mustard and horseradish,



GROWING SITE: The Kitson family's artisan crop of Wasabi is chiefly grown within two plastic tunnels (16m x 8m and 11m x 4m). Plants are watered with a dilute seaweed nutrient feed. FW-1B.

and because it has antibacterial values.

The ancient Japanese Shogun warlords took control of the crop's growth and distribution so it became a food for the elite in society and therefore very expensive. After the demise of the Shogun dynasty it was cultivated more widely and became popular but continued to be a rare and expensive food complement.

Sean explained its growing relevance to today: "In its natural state in Japan it grew alongside mountain streams and rivers, but always in the shade of trees.

"It doesn't like direct sunlight and prefers to be damp but not soaked in water, prefers temperatures between six and 26 degrees C and a ph of 6-7 units found in the gravel banks it grew in along waterways, containing all the natural minerals and nutrients needed to thrive.

"What we as modern growers do, as closely as we can, is to replicate the Wasabi plant growing in its natural environment.

"For that reason we're developing several ways of doing this by using

controlled conditions within plastic growing tunnels.

"Growing Wasabi takes two years, sometimes a little longer, to grow to full maturity, that's to say until the rhizome or main root stem, which is the most versatile and sought after part of the plant, generally reaches anything up to 200gms, but it can grow to over 300gms.

"The good thing is that for each plant the numerous edible heart-shaped leaves and leaf stems can be harvested a few times each year right through that growth period and are being packed and sold fresh to customers with prompt delivery for salads.

"With a staggered growing regime that means the crop is available to be harvested and sold all year round.

"Growing from seed, even if it's possible to buy the correct Wasabi seed, since most on the market is only masquerading as Wasabi, is quite difficult, so we searched for a reputable supply of young plant starters in 2016.

"By 2017 we were growing the young plants with small roots directly planted into a grit, soil and compost



RAISED BEDS: For research, the large tunnel has raised beds growing up to 150 Wasabi plants in each bed with individual shades over each. When crowded they're thinned to 400 plants and put in 10 litre shaded pots at the tunnel sides. FW-1E.



HYDROPONICS: Another growing method being used is hydroponics with three plants in each 18 litre pot using neutral ph clay pebbles with a nutrient organic solution, watered using aeroponics, an oxygenator inserting tiny air bubbles. FW-1F.



RARE FLOWERING: Wasabi edible flowers are quite rare and sought after and don't occur in large quantities during the two year overall growing period for a fully grown rhizome stem harvest. FW-1H.



Leading agricultural journalist and broadcaster **IAN HARVEY** looks behind the scenes at rural community issues and how farmers are meeting the challenge of developing the farm business and supporting the farm family

inroads into healthy eating



HARVESTING: The Wasabi plant produces heart shaped leaves and stems which are harvested and re-grow, adding real bite to salads, while the rhizome root continues to grow, being highly prized for its refreshing kick and medicinal values. FW-1J.



CELEBRITY CHEFS: During 2019, celebrity chef James Martin, standing left of Zak, with celebrated Belfast chef Paul Rankin, visited County Armagh where James created a salmon dish with Wasabi that was filmed for his TV series. FW-1G.



WASABI PASTE: A harvested Wasabi rhizome stem, freshly grated, forms a paste which can suit your cuisine and can be used to add a zingy flavour to everything from fish to meat and helps circulation, hypertension and respiratory disorders. FW-1K.



GROUND LEVEL: One of the methods being used to grow Wasabi in the smaller tunnel employs overhead water sprinklers with plants grown in 10 litre pots containing pea shingle, a growing media, and all-over shading from sunlight. FW-1D.

"At one end there is a shaded growing system in operation, raised off the floor, where Wasabi plants are growing in 18 litre pots with clay pebbles, using an aeroponic system to insert tiny air bubbles through the hydroponic watering system of diluted nutrient rich organic seaweed.

"So as you can see we're testing every possible modern concept, short of vertical growing, to check how well each system works.

"The positive outcome is that we

have a plant which not only offers edible leaves and stems, including a valuable rhizome stem after two years, but edible flowers as well.

"The flowers are more of a rarity and don't appear on every plant each year, but they're highly prized and therefore priced accordingly.

"Since there is a limited supply worldwide, the entire Wasabi plant, known as 'Green Gold,' is ranked as one of the most valuable plants in the world as readers will see if



FATHER AND SON: The production of Wasabi at an early stage of growth in 2017 was a business created by Zak and his father Dr Sean Kitson. They are the first on the island of Ireland to grow this rare and valuable 'foodie' crop. FW-1C.



FRESH SALES: The fresh packed Wasabi growing plant can be sold to customers with instructions (pot and growing media excluded) and can be ordered with prompt delivery, a way of taking young shoots to grow on and harvesting as you grow. FW-1L.



HERBS: Wasabi Crop Ltd is currently researching controlled environment agriculture using red and blue light on herbs such as Shiso Perilla Red, which belongs to the mint family and used in soups, to garnish salads and season fish dishes. FW-1M.

they check it out on our website www.wasabicrop.co.uk

"By grating the fresh Rhizome stem

with a single-sided grater a pale green paste is the result, which is used as a hot zingy condiment to complement guacamole, for example.

"Its food and drink possibilities are endless such as tiny amounts infused in ice cream or even vodka flouring, never mind as a complement to fish and meat dishes.

"The heat effect is temporary and found to be nasal rather than the tongue like chilli or mustard.

"As far as the health and medicinal value of Wasabi is concerned, the isothiocyanates (ICTs) responsible for its pungent flavour can have a number of health benefits, which includes antibacterial effects."

It's been considered to have anti-inflammatory properties and research studies continue to evaluate potential health benefits for certain diseases such as cancer.

Be that as it may, Wasabi has for a long time been a culinary success story world-wide with apparent health benefits and the fascinating and evidently rewarding growing efforts of the Kitson family in County Armagh can only add to the development of an exciting crop. I'll leave the last words to Sean.

"We have found a ready market with private customers who order online through our website shop for a prompt delivery service throughout these islands and who are coming back again as repeat customers.

"Today people are thinking about their health needs, enriching their diet and lifestyle.

"We're already expanding and have started to grow three different Japanese herb plants to complement what we do, so look out in the future for herbs like Shiso Perilla Red of the mint family, used to garnish soups for example."

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