

% of activity relevant to the Horticulture Sector:



20% HORTICULTURE ACTIVITY **247** BUSINESSES REGISTERED with Farming Connect are from the Horticulture sector.

Demonstration Site Network

Farming Connect is working with farms across Wales, trialling new techniques and implementing best practice. Examples of events linked to the horticulture sector include:

Establishing a modern 'pick your own' soft fruit enterprise

32 attendees attended an event on Great Pitton Farm Focus Site, demonstrating equipment, tunnels and set up for a 'pick your own' soft fruit enterprise.

The site has 20 Spanish polytunnels (with a gap all around the bottom) with tabletop height troughs containing coir bags where the strawberries are grown hydroponically. Four of the tunnels are given over to raspberries grown on canes in pots. Programmable cropping means that the cold stored strawberries have been bought in and planted at three-week intervals to provide a 14-week picking period. A large water silo has been installed next to a corn store shed, which harvests roof rainwater (to which nutrients are added) in an adjoining pump house to feed the fruit. The concentration of nutrients and the amount of water the fruit receive need to be varied according to the stage of growth of the plants and weather conditions. The plastic will be taken off the tunnels in the autumn and reused again for next season. Spraying with an adapted machine on the back of a quad bike is carried out for mildew, and it is hoped that IPM (Integrated Pest Management) will be practiced to control thrips and aphids on the crops.

Attendees commented that it was very valuable to see a real installation and to be able to learn about what was involved.



Mulch Systems and Direct Planting in Horticulture

The aim of the event was to give farmers and landowners information about innovative mulching systems and how they can be applied to their own horticultural practices.

Specialist Johannes Storch gave an overview of the principles of nature, keeping soil fertile and how these principles find practical application in organic horticulture i.e. permanent root and soil cover, as well as crop rotation with intensive use of cover crops and how a crop rotation can feed itself with mulch material.

Key take home messages:

- There are always roots in fertile soil, so aim to imitate nature and incorporate organic matter into the soil.
- All measures taken with regard to crop rotation, fertilisation and tillage must aim to increase root production.
- Exact mulch spreading (7-8cm) is necessary since the main aim is to take away light and avoid the regrowth of cover crops and weeds.

Mixed Vegetable Farming



Tyddyn Teg Focus Site hosted an event to demonstrate the potential of farm diversification through mixed vegetable farming and how to develop a sustainable local food system that sells produce directly to the local population.

The day involved learning about the economics of

Tyddyn Teg as a workers' co-operative and how they operate as a Community Supported Agriculture (CSA) on six acres of land. The farm supports five full time, self-employed staff to service 120 active box scheme members who pay £40 - £60 per week for a box of seasonal mixed vegetables. Selling direct is imperative to keep the business economically viable and sustainable. 75% of the income comes from direct box sales; they also sell to local restaurants and shops, and there is a self-service shop on-site.

Attendees were also given an insight into how best to manage the land and nutrients to maintain and, if possible, improve soil fertility in accordance with Soil Association organic regulations.

Key take home messages:

- If on a meter, factor in water as it can seriously affect the economics and viability of the business.
- Be aware of what crops are easy to sell, such as aubergines, tomatoes and peppers.
- Aim to mostly use F1 seed varieties as they're more reliable and store better, and when growing sub-tropical crops, give them every chance by choosing early and dwarf varieties.

EIP Wales



Feasibility study on squill production in North Wales

White squill (*Drima maritima*) is a perennial herb that contains compounds used in cough syrups. This project is assessing whether the plant will grow in North Wales and whether it will produce sufficient levels of the compound to make it a viable enterprise.



Bulbs were planted in 2018 and monitored to see how they were growing and whether weeding was required. The bulbs were harvested in July 2019 and are undergoing assessments for levels of the active compounds.

Analysis of the use of a computerised robotic weeder in small scale horticultural operations

This project is looking at whether robotic weeding is a viable option for small scale farms, particularly organic farms, where herbicide use is prohibited. The robotic weeders will be compared to hand hoeing with attention paid to cost, time and how effective they are at removing weeds.

During the first year of the project, problems were encountered with the robotic weeder not being able to cope with the layout of the field. The robotic equipment needs a level site with a crop that is planted uniformly. The group are currently assessing what improvements can be made when sowing the crop as well as adjustments to the equipment.

Recent advances in the control of late potato blight

This event provided an opportunity to learn about:

- An EIP project to assess the potential for ivy extract to manage late blight
- Alternative methods of blight control, avoiding the use of chemical sprays including the use of copper
- An Innovative Farmers field lab on the use of mesh covers to control late blight
- The Sustainable Potatoes Wales project, using potatoes bred for blight resistance

Work carried out at Bangor University has shown that relatively crude extracts of ivy fruit and leaf are very effective in controlling late blight, and an independent trial in a high blight summer demonstrated that they were as effective as the standard cocktail of petro-chemically derived treatments. The relevant ivy extract is Hederin, a saponin or 'soap forming' molecule, and four replicates of four treatments had been established at Ty'n yr Helyg.

- | | |
|----------------------|-----------------|
| 1. Water | 3. Hederin 0.1% |
| 2. Cuprolyt (copper) | 4. Hederin 0.3% |

The trial plots revealed the onset of late blight clearly spreading from one end of the site. A visible treatment difference was observable with the 'no treatment' plots showing a greater blight infestation.

Discussion Groups



5

DISCUSSION GROUP MEETINGS

related to the Horticulture sector



48

ATTENDEES

KE Hub

The following technical articles have been produced by the KE Hub:

- YOUR FIGHT AGAINST BLIGHT
- WAR OF THE WEEDS: THE RISE OF THE ROBOTS
- CUT YOUR LOSSES: MAXIMISING THE BENEFITS OF A NUTRIENT MANAGEMENT PLAN

The following factsheets have been produced by the KE Hub:

- DOCK CONTROL
- EARTHWORMS AND SOIL HEALTH

Strategic Awareness Events

116 Events Held Key topics included:

LIVING OFF 10 ACRES



Clinics

In July 2019 Chris Creed of RSK Adas visited three farms on Anglesey to discuss alternative land use for horticultural crops.

The soil type and quality were visually assessed at each location, and Chris discussed the different types of viable horticultural production.

The three crops identified as being most geographically suited were:

- Grapes
- Hops
- Soft Fruits

Crop establishment, nutrients and plant health threats were discussed on site. Chris also advised which crop species to choose and when best to harvest. The clinics gave the beneficiaries a lot of information that was bespoke to converting to horticulture production on their land, and gave them the opportunity to view alternative cropping as an achievable enterprise.

Venture



4 HORTICULTURE OPPORTUNITIES



6 SEEKERS ARE LOOKING FOR HORTICULTURE OPPORTUNITIES

Agrisgôp

40 MEETINGS HAVE BEEN RELATED TO THE HORTICULTURE SECTOR



Group themes include:



Practical beekeeping



Strategic planting and cropping



Producing cider



Branding



Understanding consumer demand



Micro horticulture businesses



Mentoring Programme

We have **9 Horticulture Mentors** on the framework (including 1 Viticulture and 1 Apiculture)

Click here for **Andy's profile**

Click here for **Jim's profile**

Click here for **Barbara's profile**

Click here for **Robb's profile**

Click here for **Carys' profile**

Click here for **Romeo's profile**

Click here for **Gary's profile**

Click here for **Teifi's profile**

Click here for **Jenny's profile**

50 mentees are being mentored on Horticultural issues, which is **12%** of all mentees.

Topics discussed to date include:



Training

There have been four application windows between October 2018 and September 2019 with **808** instances of training delivered during this period.

Of this number, **21** instances were from businesses including Horticulture as their primary or sub-sector.



BUSINESS IMPROVEMENT

7

INDIVIDUALS TRAINED



TECHNICAL TRAINING

5

INDIVIDUALS TRAINED



MACHINERY & EQUIPMENT USE

9

INDIVIDUALS TRAINED

E-learning

Some of the e-learning courses completed within this period relating to the Horticulture sector:

Organic Horticulture



Improving Soil Health



Click [here](#) to visit the website.

