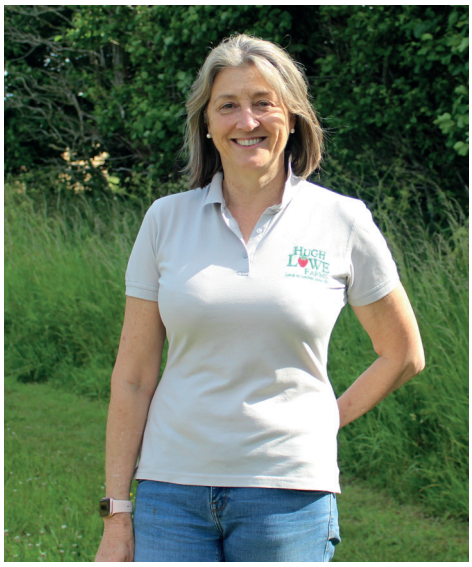
Marion Regan – Hugh Lowe Farms Ltd

Hugh Lowe Farms Ltd farm a total of 750ha and produce 5,000 tonnes of strawberries and 1,000 tonnes of raspberries and blackberries under tunnels and glass on 170ha. The rest of the land is in an arable rotation, with 15% managed for wildlife/environmental purposes.



"IPM is not instead of chemistry, it's as well as. Chemical controls are an integrated part of our integrated pest management."

The farm is not part of any stewardship schemes as they found them too prescriptive, but they have taken the best advice from the guidance available in order to manage their margins and grassland more effectively. The farm buys their own bespoke seed mixes to plant flower margins which aim to reduce the number of plant species that are attractive to thrips and optimise the number of species that are attractive to hoverflies. This also benefits other pollinators as well. They have found that umbelliferous flowers are most attractive to hoverflies and this has been supported by work done by NIAB EMR. Marion understands that controlling thrips with biological controls means that it is about thresholds and balance rather than total elimination and recognises that to encourage predators, there must be a threshold level of the thrips present.

As well as planting the seed mixes, the farm also introduces beneficials early in the season. For thrips they use breeder packs of *Amblyseius cucumeris*, introducing them at regular intervals at the start of the growing season and then supplementing with loose beneficials over the top of the canopy throughout cropping. This helps to establish a population of beneficials that predate the thrips' larvae. *Hypoaspis miles* are a soil dwelling mite that is added to the coir and predates the pest at the pupal stage. Finally, *Orius* pirate bugs are added which are a voracious predator of thrips' larvae and will also eat adult thrips.

Marion believes that they manage the pest, weed and disease burden on both strawberries and raspberries well into the season without using any pesticides, apart from the occasional spot treatment. This is because they avoid spraying at the onset of a problem in order to allow time for the beneficials to build up numbers and become effective. The farm carries out regular monitoring for all pests and predators to assess numbers accurately.

To combat fungal diseases and other pests, the farm believes that the best method is to carry out hygienic picking, removing any overripe fruit and disposing of it properly and managing the microclimate within the tunnels. The tunnels are an integral part of their IPM strategy and have prevented the risk of botrytis, which used to be a problem when soft fruit was grown outside, touching the soil or getting rain splash.

"You have to be of the mind-set that there is not one silver bullet for controlling pests or diseases, you need to work with a whole range of tools, including the physical environment."

Another important tool in Marion's armoury is the end of season clean-up process. Most crops are planted annually, but with raspberries, there can be in an issue as some plants are overwintered. The farm regularly replants in the same pot with the same coir for two or three crops. This means that they simply remove plant crown to be composted, rather than taking all of the substrate away. At the end of a couple of cycles, they compost the coir. However, the farm is looking at treating and reusing the coir, though they would need to be sure they can prevent the carry-over of pests and diseases.

An additional pillar of IPM is the variety choice and genetic improvements which are being made. Breeding programmes are currently making progress in developing genetic markers, for example for susceptibility to fungal diseases. For growers, the availability of resistant varieties would be a huge win. Marker assisted breeding and selection would help in making much more rapid progress in getting varieties that have a level of resistance to these diseases.

POLICY ASKS

- Take advice from experts about the holistic problem of pest and disease management.
- Consider the development of resistance when authorising actives and products because it is a big worry. Do not automatically assume that multiple residues below the MRL in samples are bad; it actually shows that one is using an integrated strategy to prevent resistance developing.

> "In the rush to codify the way of looking at active approval or removal, we're going to lose a lot of really beneficial and environmentally beneficial actives."

- On breeding programmes: pre-competitive challenges for growers should not be left exclusively to private enterprises. Companies are developing technologies for which they maintain the rights, so there is a risk that growers are not going to have easy access to new varieties or technologies. Or, you will have to join a supply chain to gain access, and then it is prescribed to you. I'm a big believer in some open access, particularly to new genetics.
- AHDB soft fruit panel consider it important to fund some public breeding efforts. This allows growers to have choices over which varieties they grow. AHDB funding of pest and disease control research is also good because it benefits everybody and it's just as important for my neighbour to control pests as it is for me. The government and AHDB need to look at how pre-competitive challenges and genetic improvements to control pests and diseases will be funded.

FOR MORE INFORMATION, PLEASE VISIT:

https://www.hughlowefarms.com/

http://www.emr.ac.uk/horticultural-research-programmes/genetics-crop-improvement/

http://www.emr.ac.uk/horticultural-research-programmes/pest-pathogen-ecology/

Work done by NIAB EMR