Pennoxstone Court Farm resides in the horticultural heartlands of Herefordshire. A producer of soft fruits for more than 150 years, it is now a mass producer of strawberries, raspberries, and blueberries in the UK, but the farmer had a problem: Vine weevils. Although adult insects can cause cosmetic damage, the serious damage to crops is done by their larvae which feed on the roots, leaving the plant to wilt and die. In addition, vine weevil biology means populations can grow rapidly. In horticulture, this is a serious problem costing > £40 million crop damage to UK horticultural industry.

Chemical methods for larval control were phased out in 2016, resulting in limited pest control options for Pennoxstone Court Farm. With the farm experiencing three grubs per plant, they had an infestation and therefore needed a highly effective solution. Bionema, a leading UK biopesticide technology developer, suggested its highly effective nematode solution for biological control against vine weevil larvae - led by Dr Minshad Ansari, a biological expert with more than 20 years experience.

Bionema helped the farm develop a plan using its unique Tri-Component solution:

1. **Beneficial selected nematodes:** NemaTrident®H: NemaTrident®Cold
2. **A biocompatible wetting agent:** NemaSpreader®
3. **Expert training and advice**

Urgent pest control was required for the forthcoming growing season, so Bionema recommended conducting split nematode applications in the spring and autumn seasons, two weeks apart, to prolong nematode quality and efficacy in the soil.

The nematode application was integrated with the farm’s drip irrigation system and Bionema’s on-site training ensured maximum nematode delivery into the root system, where the larvae were feeding.

Five weeks after the first application, Bionema returned to review the crops’ condition.
The results

The plan had worked. No vine weevils were found anywhere around the strawberry plants and this early prevention resulted in unhindered plant growth, which led to a season of highly productive crops for Pennoxstone Court Farm.

The feedback

Vine weevils are pretty much public enemy number one for growers… and we had, on average, three vine weevil larvae per plant – a serious level which would leave us with dead plants. Working with Bionema, we gained some very helpful training which guided us through the nematode application process.

After 5 weeks, we did not see any further vine weevil damage… and the plants are doing well. We have done our best to apply the nematodes across the whole crop, and now it looks likely that we do not have a vine weevil problem anymore! Our supermarket clients encourage our use of biological controls because it's what their consumers – people who eat the fruit – want!

Neil Cockburn, Soft fruit grower, Pennoxstone Court Farm, 2019

The benefits

Successful rapid control of vine weevil at Pennoxstone Court Farm has led to:

- A bumper crop of strawberries
- Improved crop yields leading to financial reward
- Prevention of a new generation of vine weevil

About Bionema

Bionema is a leading UK biopesticide technology developer, specialising in chemical-free, biological crop protection for safe and sustainable agriculture.

Our research is focused on the development and commercialisation of naturally occurring microorganisms to protect crops from pests and diseases while reducing the use of synthetic pesticides – minimising the environmental impact and increasing crop yields.

The company develops and commercialises biocontrol products for the horticulture, turf amenity and forestry sectors and provides training aimed at increasing product efficacy.