HPGen improves growth and health of organic blueberry crop

Crop	Unit type	Irrigation system	Results
Organic blueberries	HPGen A1000	Drip	• Improved blueberry plant growth and health • Number of flowing drippers increased from 70 to 95 % • Soil organic matter content increased from 0.33 to 0.8 %

The customer

Organic blueberry plantation in Huelva, Spain

Located in the Huelva region in southern Spain, the blueberry plantation has an area of 24 hectares and is part of a successful organization producing high quality organic berries. The soil in the region is dry, the climate warm and organic fertilizer is used. The plants are grown directly in sand under tunnels and are irrigated with a modern drip irrigation system.

The problem and solution

Pythium protection and improved production with HPGen™

Together with the operators of the farm and leading agronomists, we analyzed the site and evaluated how to improve blueberry yields. Two main issues were identified:

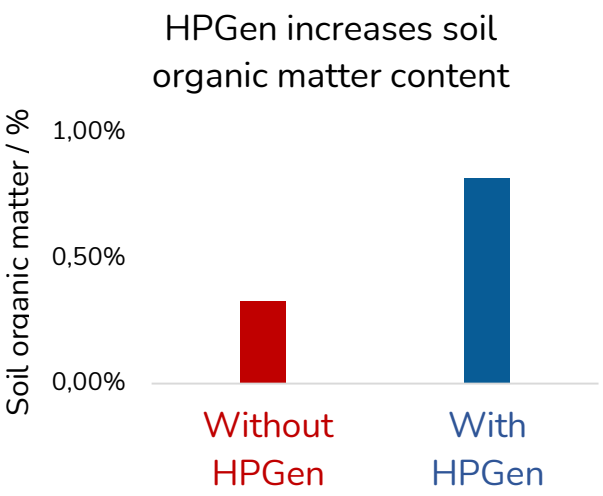
1. Clogging of drippers leads to non-uniform irrigation and insufficient water and fertilizer delivery to part of the crop, which results in production losses. Up to 30 % of the drippers were clearly clogged, despite extensive use of industrial oxidizers.

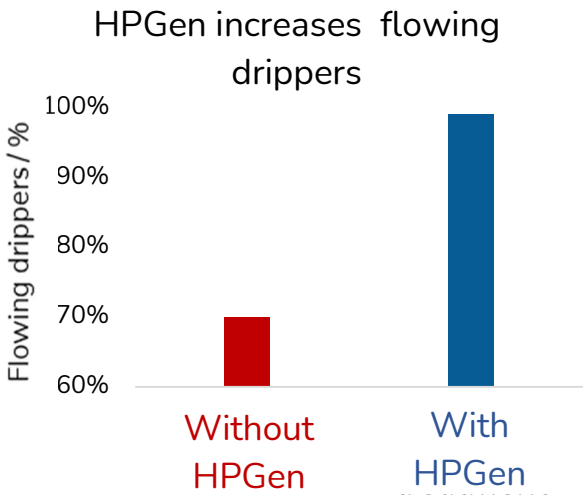
2. Poor dissolution of organic fertilizer in irrigation water, leading to low levels of organic matter in the soil which hampers plant growth. Analysis showed that organic matter content was of 0.33 %.

On top of this, costs related to these issues are high, with replacements of drip lines up to twice a year, as well as manpower used to identify and replace clogged drippers and ongoing chemical costs to attempt cleaning of the irrigation lines.
To overcome these issues, an HPGen system was installed and integrated with the irrigation system. Half of the field (12 hectares) was treated with Peroxide UltraPure™, while the other side remained with standard weekly treatment with chemicals.

After just six weeks of running with the HPGen, field operators observed that all drippers in the treated section were flowing, differently from those in the non-treated section were 30% remained clogged. Soil quality was analyzed once more and found to be greatly improved. The results indicated organic matter levels increased from 0.33 to 0.80 %. Improvements in the crop were also clearly visible after 6 months of treatment, with more plant vigor and vegetative growth 6 months after starting dosing of Peroxide UltraPure™. The plants in the treated section could be directly compared to a section without treatment, where all other parameters were kept the same as the section treated with HPGen.

Comparison of organic blueberry crop without (left) and with (right) HPGen treatment



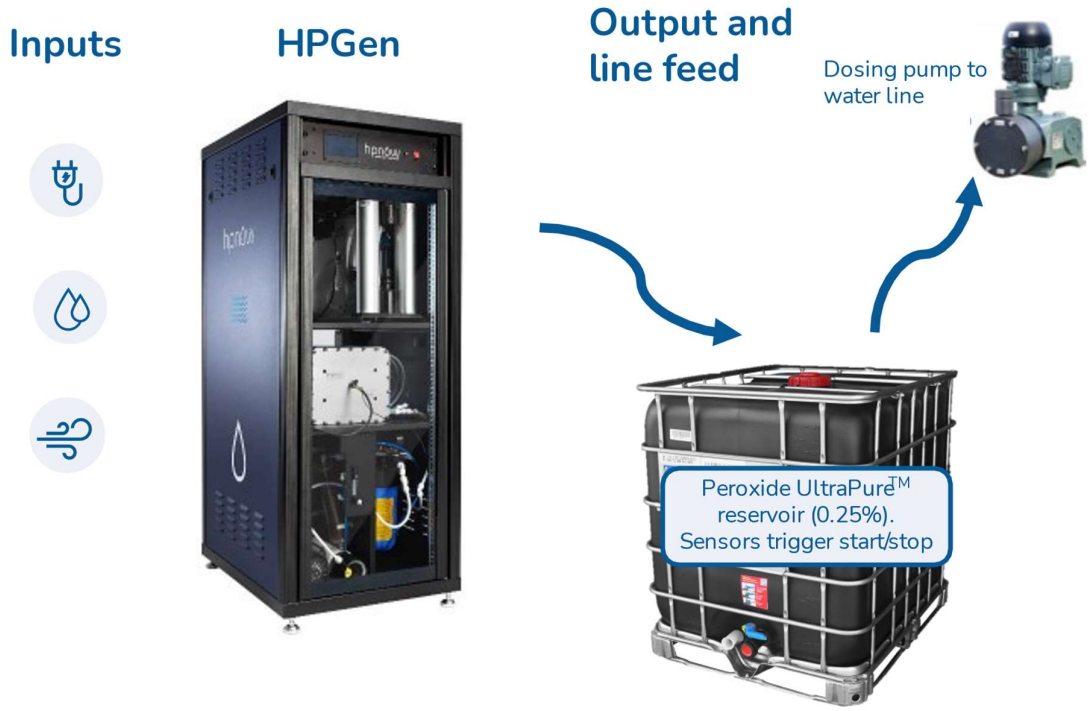


Thanks to HPGen, the crop is well irrigated and is healthier, which results in better growth and higher blueberry yields. The results are explained by the oxidizing power of Peroxide UltraPure™, which will oxidize organic matter in the irrigation lines and make it available to the crop. This ensures irrigation lines are clean and drippers flowing, getting water and fertilizer uniformly throughout the field while at the same time improving plant nutrition. José María, irrigation manager at the blueberry plantation comments:

In the sector treated with HPGen, the plants are more vigorous, and the sprouting is substantially more than in the non-treated sector. It is clear that HPGen has resulted in all drippers being clean. José María, Irrigation Manager

HPGen setup

The HPGen was installed in the irrigation room and set to automatically fill a buffer tank with Peroxide UltraPure™. Dosing was done through a proportional dosing pump, which is both simple and effective. The system operates completely autonomously, without need for user intervention. Peroxide UltraPure™ is generated at a concentration of 0.25%, which is very safe and poses no danger to humans, plants or equipment, but is strong enough to effect the desired operational results.



Learn more about the HPGen™ system and its benefits for agriculture at:
https://www.hpnow.eu/irrigation-water-treatment/