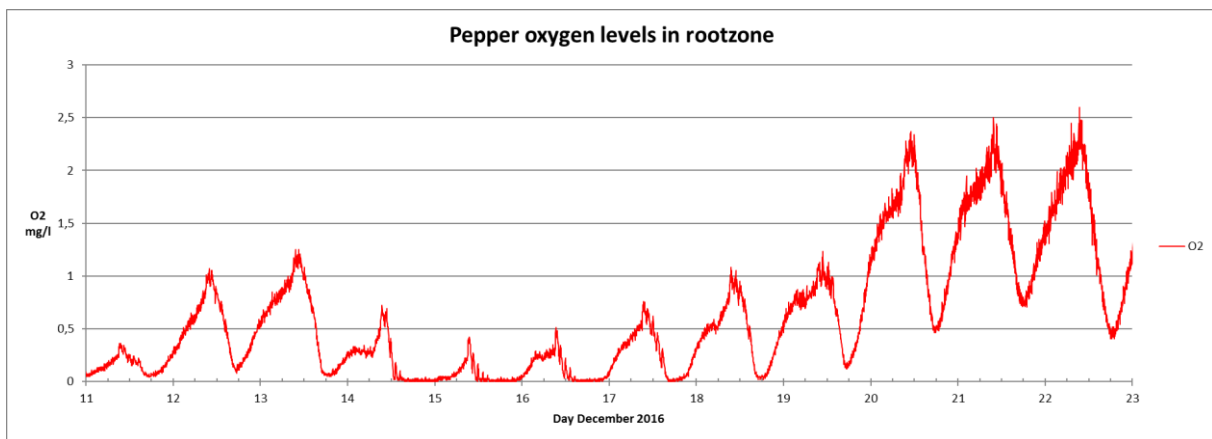


# ShowCase Agro O<sub>2</sub> – Agro

## Sendot Research B.V.

It is common knowledge that sub-optimal oxygen levels in growing substrates can cause a reduced production of crops. Very low oxygen levels can even create situations where plants are more vulnerable to diseases. Monitoring of oxygen levels in the root zone is nowadays seen as common sense. Although currently the control of those oxygen levels is not always possible there are still many options to bring down the risks. Factors like the BOD (Biological Oxygen Demand) content of the feed water, the feed water oxygenation, the microbial contamination, Biofilms inside the feed water system, can all be the cause of increased risk of low oxygen levels in the root zone.



**Graph 1: Oxygen levels in rootzone of Pepper plants.**

As can be seen in graph 1 in certain situations root zone oxygenation can drop to zero, reducing production and increasing vulnerability to diseases. Optimization of substrates and feed water strategies are two tools to reduce this risk. To be able to monitor the oxygen levels in root zones of crop substrates, Sendot research has developed a reliable tool: the Sendot Oxygen sensor with built in optical temperature compensation.



**Figure 1: A Sendot O<sub>2</sub> sensor, probe inserted 1 cm above bottom substrate, in action.**