

Netafim brings the next irrigation revolution to South Africa

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Netafim South Africa officially launched NetBeat™, the first irrigation system with a brain, for implementation in South Africa and SADC countries. The launch took place at the beautiful Landscap Estate in Devon Valley, Stellenbosch on 5 June 2019.

“At Netafim, we are confident to call NetBeat the greatest irrigation innovation since drip irrigation,” said Etienne Erasmus, MD of Netafim South Africa. “As an all-in-one platform, it is the only irrigation and Fertigation™ management and control system that integrates real-time monitoring; smart analysis and decision support; and automation and control.”

Netafim has been involved with the automation of agricultural irrigation and other farming activities for the past 20 years and has brought many digital farming tools to the table. “We started as a dealer of automation technology, but in 2002 decided to build our own irrigation controllers,” said Mark Hill, digital farming manager at Netafim South Africa. The first product was the Netafim Mid-Range Controller (NMC), which was developed to fill a gap between small-scale and large-scale controllers. The development of irrigation controllers, fertigation controllers and later monitoring equipment followed.

Erasmus added that Netafim is working hard to bring the exciting fourth industrial revolution into the world of irrigation. “It was obvious that the company needed to take its existing automation and crop management technology to an even higher level. Never did we know how special this move will be. We would have never been able to imagine the unlimited potential of digital farming. Where will self-learning crop modelling take us?”

Bringing it together

All of the automation capabilities existed in silos. This left the farmer with the daunting task of analysing and processing the segmented data. “We needed to create a platform that would combine it all. Netafim experts from around the world convened at the Netafim headquarters in Israel to pen down the framework for NetBeat as we know it today. It is the result of the best software development experts putting their heads together,” said Hill.

Digital irrigation innovation

NetBeat allows you to leverage data, making it work for you to maximise your farm’s true potential while minimising water usage and gaining greater piece of mind. The platform tracks the plant’s developmental stage, based on crop physiology models, it then recalibrates itself according to actual and forecasted environmental data from multiple sources, such as weather, soil, crop sensors and remote imagery.

Hill explained that, although NetBeat was the first to combine these functionalities, this could easily be replicated by competitors. “Something had to differentiate NetBeat. Enter the Integrated Dynamic Crop Models™ as decision support service. This opens up very important artificial intelligence capabilities that combines the more than 50 years of agronomic knowledge within Netafim with data from the field into irrigation and fertigation recommendations. These tailored recommendations can be accepted, rejected or even edited by the user.”

Hill explained that the platform's massive computing ability is made possible by the fact that it is cloud-based. It further makes possible multiple remote access and control, the integration of cloud-based third-party data and keeps the farm's data safe.

"This does however not mean that the system requires a full-time internet connection." NetBeat consists of mainly two hardware components - a main control unit (MCU) and a remote-control field unit (RTU). Both are equipped with the latest technology, making it capable of all supporting devices currently available and yet to come."

A gateway MCU connects to a secure cloud server via an array of connection methods, whilst the RTUs connect to the MCU via a bi-directional Lora radio connection. "NetBeat is capable of operating normally, with marginally reduced functionality, without being connected to the cloud."

Easy to use and scalable

NetBeat was designed to make irrigation and fertigation management simple. Even for complex systems. This is why both the user interface and the application are easy to use and offers most any capability that a farmer could need.

Hill said a common misconception is that digital farming solutions are out of reach for smaller or even medium-scale farming operations. Although this may be true of many other digital farming platforms, NetBeat offers a digital irrigation management platform that is scalable to the size of the operation's requirements and budget. Scalability is made possible by adding MCUs and RTUs according to the size of the farm and the attached requirements.

Grow more with less

Netafim is driven by its slogan, 'Grow more with less™'. "This is a perfect fit for farmers in the water-scarce South Africa and SADC-region, where the global trend of limited resources and higher input costs hit especially hard," said Erasmus. The monitoring, analysing and automation capabilities allows the farmer to use every input more efficiently and finally grow more with less and get more bang for his buck.

"I believe that NetBeat will have an important impact on food production in our region. The capabilities of the platform are experienced and implemented differently in each of the many countries where it has been launched. It is a journey that we are excited to start."

For more information visit www.netafim.co.za

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