



Sustainable irrigation solution/technology for Kenyan horticulture

Saving irrigation water & improving product quantity and quality year

Water scarcity calls attention to good water management. The Kenyan horticulture can contribute to food security and food safety, but also to the wellbeing of its population. Therefore, the Green Farming Water Management Demo Project is initiated by Bosman, in cooperation with the innovative automation company, Hoogendoorn.

On January 15, 2012 the Green Farming Water Management Project was launched in Kenya. This project is developed by Green Farming members Hoogendoorn, Bosman, Van der Knaap Group, Wageningen UR Greenhouse Horticulture and others. Bosman is in charge of the whole project implementation, from beginning until end, for which Hoogendoorn supplies the full automation, including training.

Food security and quality Together with the Kenyan horticulture industry, Hoogendoorn and Bosman's priority is to provide food security and quality by using water-efficient technologies. Through the state of the art

technology and local support, sustainable water-usage is ensured. With Bosman's local service in Kenya, technical advice and support can optimally be aligned with the customer's needs. Besides, spare parts are kept in inventory locally.

As well, small as large sites can be controlled with the HoogendoornSii computer, from water to climate management. The smart water management project is completely controlled by the automation of Hoogendoorn. Four water sources are being



used: rain water, drain water, water from the lake and water borehole.

The Hoogendoorn process computer determines exactly the best choice, which leads to greater convergence of costs and results. Through charts and graphs the grower can continuously follow the situation in his greenhouse and watering is precisely done on the plants need. The easy to use software allows employees at Van den Berg Roses to get the most out of the crop, allowing good quality roses to be produced.

Purpose of the project
The aim of this project is

good water management. Moreover, optimizing irrigation level based on the needs of the crop throughfor example measuring drain water enables crop to grow vigorously.

Coco substrates
For the Green Farming Water Management project, coconuts substrates are provided by Van der Knaap Group. The big advantage of coco mats is that they are very homogeneous, especially compared to loose-filled substrates and open fields. This homogeneity ensures a stable air rate and thus a much controllable substrate. The homogeneity of the substrate

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to save 40-60% of irrigation water while achieving a 10% increase in yields. In order to provide food security and quality, water-efficient technologies are required. This enables horticulture greenhouses and farms to use clean water and use it as economical as possible, without wasting it. As a result of the recirculation of drained water, water is saved in a sustainable manner.

Collected rain water and surface water need to be cleaned before being used as irrigation. However, borehole water is in essential clean. The possibility to re-use collected drain water in soil based as well as in substrate cultivation is essential for

results in a homogeneous and uniform crop. Coco mats ensure good rooting and initial growth of rose plants. As coco mats can be re-used as a soil improver, it is a very sustainable substrate.

Project at Van den Berg Roses
The demonstration of the project takes place at Van den Berg Roses company in Naivasha, Kenya. Van den Berg Roses is one of the upper end Kenyan roses exporters with a more than ten rose-variety. In cooperation with the Kenyan Jomo Kenyatta University of Agriculture and technology, Wageningen UR will be monitoring the project and presenting the results.

