

Satellites help Cape farmers use water more efficiently

Drought-stricken Cape farmers are receiving help from above - through satellite data they are able to monitor their water use efficiency, with reported improvements of at least 10%.



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The Western Cape Department of Agriculture is providing the FruitLook service, brainchild of Dutch company eLEAF, without charge to fruit farmers. From this season, thanks to increased government funding, FruitLook covers all the irrigation areas in the Western Cape, as well as the Eastern Cape section of the Langkloof. This means it is available to all the fruit-producing areas of the Western Cape, running up the West Coast to the north of Vredendal. Even hops farmers in the George district and dairy farmers in the Tsitsikamma are now using it.

In response to the third year of drought, demand for the service has grown and FruitLook recently appointed three technical coaches (TechCoaches) to aid users in interpreting the satellite data and using it in farm management.

An increasingly useful tool

According to Ruben Goudriaan, project manager of FruitLook at eLEAF, their latest figures indicate that approximately 35,000ha is actively monitored through this programme by 500 different users throughout the Western Cape. "According to a survey a few seasons back, over 10% of the users indicated an improvement in water use of up to 30% while more than 60% of the respondents indicated increases in efficiency exceeding 10%."

FruitLook was introduced in 2011 by the far-sighted André Roux, former director of sustainable resources at the provincial Department of Agriculture. He retired last year but was brought back by the Western Cape Premier's office to coordinate and monitor the province's drought activities.

During the period of August to April, fruit growers log into the FruitLook website to compare blocks on their farms in terms of actual biomass production (supported by the vegetation and leaf area index displaying crop health and density), evapotranspiration and the deficit thereof, as well as the biomass produced per m³ of water consumed by the crop. Cumulative biomass, measured in kg/ha, is an indicator of production.

FruitLook allows a producer to determine how much water was needed for a specified amount of growth as well as whether too much water was perhaps used to bring forth a certain amount of growth.

Overview of the orchards aids growers to start recognising trends regarding over- or under-irrigation, to understand growth variation across the farm and it allows a grower to compare blocks over time. By now six years of data is available, rendering the tool increasingly useful as time goes by.

"GrapeLook was the predecessor to FruitLook, running during the 2010/11 production season," Ruben Goudriaan explains. "It was a first attempt at providing satellite monitoring to farmers and only focused on wine and table grapes. From 2011/12 onward, fruit areas were included in the monitoring system, which was subsequently called FruitLook. This is now the seventh season in a row that the FruitLook service is available to the agricultural community."

Nelius Kapp, director of the soil science consultancy Soil2Root Technologies, who has used FruitLook for a number of years and knows it inside out, says: "FruitLook gives you the point in time during the season when things might have gone wrong – no other technology can give you that."

Fresh Plaza

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