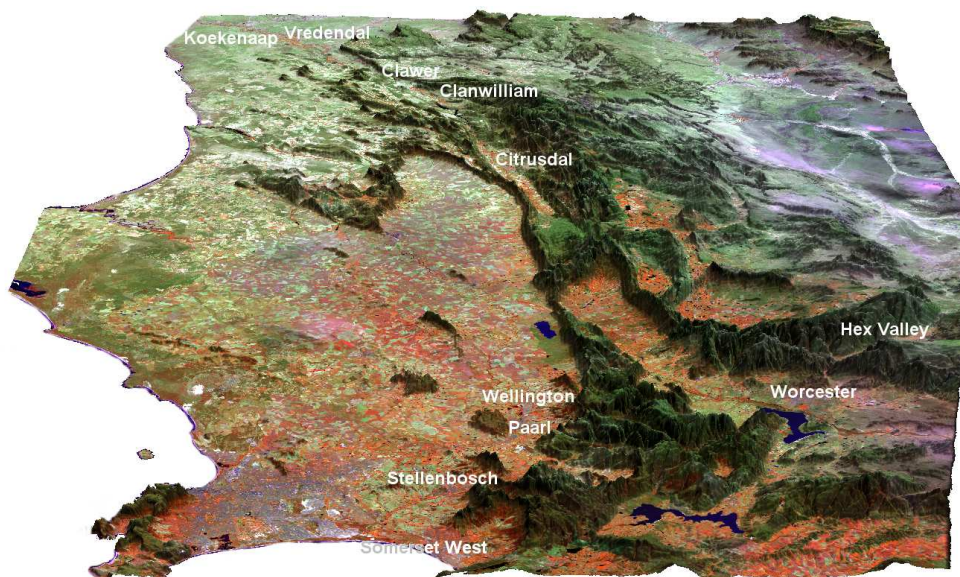




Operational Remote Sensing System for Monitoring of Efficient Crop Water and Nitrogen Use of Grapes, Western Cape Province

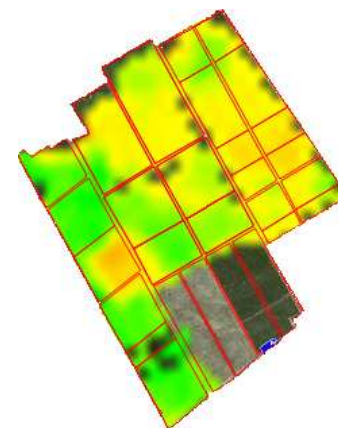
Recently the Department of Agriculture: Western Cape (supported by the Department of Agriculture, Forestry and Fisheries) started a new project focusing on operationally monitoring efficient crop water and nitrogen use of grapes in the Western Cape. The European Space Agency co-funded the project. The objective of the project is to assist grape farmers with the daily management of irrigation water resources



The summer of 2010-11 will be the demonstration year, in which all farmers, irrigation advisors, water user associations and irrigation boards have free online access to weekly updated semi-real-time information on their production, irrigation water demands and crop nitrogen status. Information will be available for vineyards in De Doorns, Worcester, Stellenbosch, Somerset West, Paarl, Wellington, Citrusdal and Vredendal.

The project aims at:

- increasing the water use efficiency in vineyards;
- promoting sustainable optimal resource utilization;
- reducing input costs (e.g. fertilizers); and
- protecting the environment.



For a limited number of “demonstration farmers” the project produces regular irrigation advice. As a demonstration farmer you are requested to provide inputs on your field boundaries and irrigation management. At some of the demonstration farms soil moisture status and surface temperature will be monitored throughout the growing season.

To make a success of the project, your participation is essential. You will have online access to all data. Visitors to the website are encouraged to provide feedback on the data provided. Furthermore we need to know your specific needs concerning irrigation advice in order to further improve the tool.



For more information, please contact Annemarie Klaasse (a.klaasse@waterwatch.nl)
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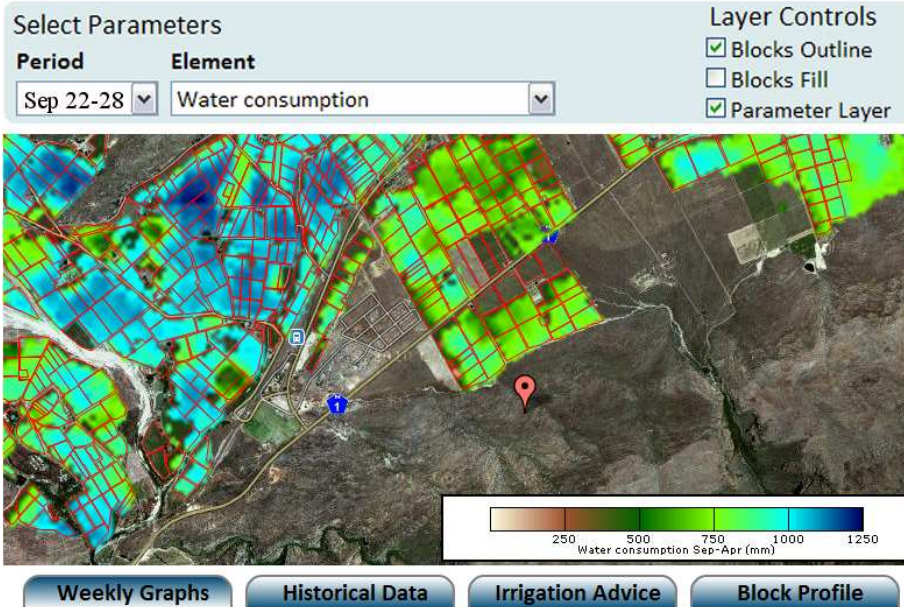
Standard package

www.grapelook.co.za

Demonstration package

- Free online availability
- All grape farms in the study areas
- Regular (weekly) updates and end-of-season totals
- Detailed within block information

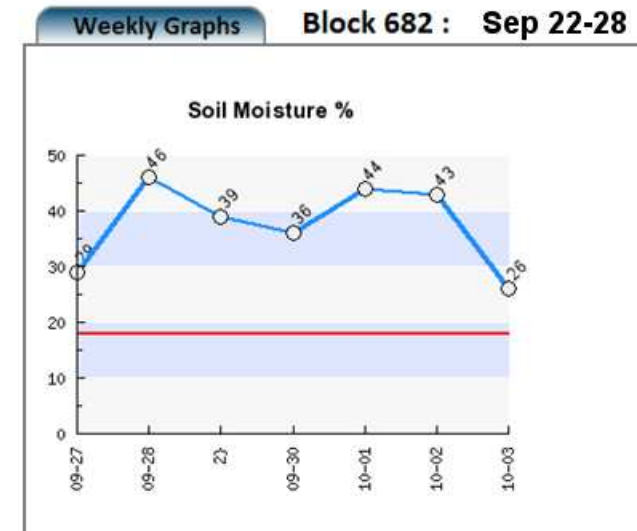
Block Parameters



Data sets:

- Actual evapotranspiration [mm/week]
- Evapotranspiration deficit [mm/week]
- Biomass production [kg/ha/week]
- Leaf Area Index (LAI) [-]
- Nitrogen present in the entire plant [kg/ha]
- Crop coefficient [-]
- Biomass water use efficiency [kg/m³/week]

- Free online availability
- Demonstration farms only
- Updates when satellite image is acquired
- 6-day soil moisture forecasts per block



Data sets * :

- Soil moisture available in the root zone [mm] and [%]
- Transpiration deficit [mm/day]
- Actual transpiration divided by potential transpiration T_{act}/T_{pot} [%]
- Irrigation water requirements [m³/day]

* Data are shown with irrigation (irrigation scheduling advice) and without irrigation application assumed.