

# Oman Agriculture to Benefit from Remote Sensing and GIS



Widening the use of remote sensing facilities will be a boon for the Sultanate's agriculture sector, Khalifa Al Kindi, a Geographical Information Systems (GIS) educator and remote sensing researcher in the Sultanate, said in the Times of Oman. The data can be used as a mapping tool to classify crops and examine their health and viability, to monitor farming practices and to measure soil moisture across a wide area instead of at discrete point locations that are inherent to ground measurement.

Based on these spatial differences, variable rate application of inputs such as fertilisers or pesticides can be made. Remote sensing information can be used to establish sub-field management zones for variable rate application, providing a less expensive and finer resolution option than grid sampling. The technologist added that the potential for profitable use of remote sensing by farmers is less frequently studied.

Khalifa has recently gained a Masters degree in GIS and remote sensing from the University of New England in Australia and is currently conducting research into hydrography and GIS in the Sultanate.

Khalifa said that hyperspectral remote sensing is a relatively new technology being used in the discovery and identification of precise agriculture, mineral exploration, urban investigation, water stress, and others. It can be useful for monitoring and mapping water stress, detecting plant pests and diseases, detecting the hydrocarbon, monitoring and mapping crop quality and growth, wetland, water quality and phosphorus and nitrogen deficiencies in corn.