

Satnav technology could save precious water



Farmers need a lot of water for their crops

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A group of farmers in the USA have a problem: for many years they have been using large amounts of water to grow crops in huge fields, but now their supply of water is running out. Help may come from an ESA spin-off technology that could help to preserve water supplies, while also making sure that crops do not go thirsty!

The plan comes from a former ESA employee called Javier Marti. He realised that some fields are watered too much, which is very wasteful. Could there be a way to use satellites to see which fields really need water? Javier thinks so!



Circular fields as seen from space

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Satellites orbiting Earth, normally used to help people find their way using satnav systems, are the key. By analysing reflected satnav signals Javier discovered that it is possible to measure how much water there is on the ground below: in soil, snow, wetlands, and even water levels in reservoirs. These signals can reveal which fields need watering, and which are fine as they are.



Irrigation systems like this sprinkle water over fields

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Over the next few months several farmers will be using this data to control how much they water their fields. It is hoped that this more efficient method will save them 30% of the water they normally use. As an added bonus, the crops may grow even better because they will be receiving the perfect amount of water!

If Javier's idea works then it could be used around the world to help save water, all thanks to satellites that are already in orbit around Earth.

Cool fact: Analysing reflected satnav signals is a breakthrough technology, and over the next few years we may see many more uses for it!