Satellites help ensure efficient use of pesticides

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A new service, developed in the framework of an ESA-supported project, is using satellite images to compare agricultural crop sites across Europe in order to ensure the more efficient use of pesticides.

Pesticides currently used within the European Union (EU) must be registered with the national members of the European and Mediterranean Plant Protection Organization (EPPO), which requires efficiency data derived from field trials. EPPO has defined zones of comparable climates across Europe that allow data generated in one country to support registration in another country within the same climatic zone.

The new service, Site Similarity Certification (SSC), merges satellite images with conventional data like temperature, precipitation, soil characteristics and recurring natural phenomena to improve the scientific approach in defining comparable zones and the transferability of field trial results achieved in one EU member state to another.

"In view of the needs for testing and regulating Plant Protection Products within EPPO member countries, the continuation of the already successfully started efforts to integrate the use of satellite images into the process of pesticide registration seems to be a promising tool," Dr Udo Heimbach a member of the EPPO Working Party said. "Satellite images are intended to be used to prove the similarity of trial sites and herewith to improve the procedure of mutual recognition of trial results throughout Europe, which is one of the aims of EPPO."

Proving the comparability of cropping sites saves the pesticide industry from carrying out expensive perennial trials, allows field trials to be planned more efficiently and creates the possibility of substituting missing field trials for Site Similarity Certifications.

Source: European Space Agency