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SODSAT

The aim of the SODSAT project is to increase the competitiveness of turf grass producers by providing a novel remote intelligent turf management system by means of Artificial Intelligence and satellite imaging.

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Richter Rasen Slovakia SRO
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Ostfolf Gress AS
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SODSAT

A novel remote intelligent turfgrass sod production system

www.sodsat-project.com

The Need

The agricultural surfaces employed for turf grass sod production are increasing yearly due to the expanding demand and the relative profitability of this type of crop. Sod (natural turf) production in the EU can be estimated to be in excess of 80,000 ha and involves 20,000 workers, generating a revenue of approximately €2.4 Billion. As such, turf grass sod production is gradually shifting from the status of niche production to agricultural crop proper.

In order to maintain the current profitability in an increasingly competitive market, sod growers need to increase or maintain certain quality parameters (such as uniformity of colour, texture and density), while addressing spiraling costs for fertilizers, pesticides and irrigation water. Naturally, an optimization in the use of these inputs would not only keep production costs down, but would also greatly diminish the environmental impact and footprint of sod production.

The Solution

Satellite spectral imagery, on account of the frequent high correlation between spectral reflectance parameters and several crop parameters, would go a long way in identifying excesses or deficiencies in irrigation and fertilization.

Although satellite imagery analysis for crop production already exists, it is aimed and calibrated for traditional crops (such as wheat and maize) and not for turf grass sod production. As a result, the development of dedicated new tools to be used in such production fields is required to address this state of affairs. Such an addition of on-site valuable sensing will also increase the yield on natural turf grass production.

The Innovation

The main objective of the SodSat project is to increase the competitiveness of turf grass producers by providing a novel remote intelligent turf management system by means of Artificial Intelligence and satellite imaging.

This two-year project proposes to address the current situation by developing a web based expert system, multi spectral satellite imaging analysis and on-site sensing and portable devices software to aid decision-making in sod farms, in order to decrease chemical and agronomical inputs, while maintaining or increasing turf grass quality. The system will provide expert agronomical recommendations based on its historic and current data and current multi spectral image processing and on-site sensing.