

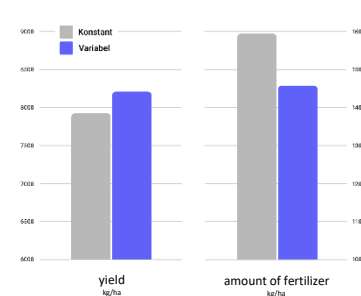
TerraZo - free application map creation and deployment based on field trials

Geyer S.¹, Prankl P.¹, Gansberger M.¹

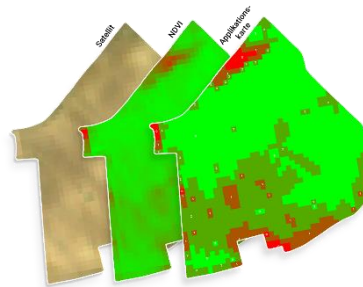
¹ HBLFA Francisco Josephinum, 3250 Wieselburg, Austria

TerraZo, developed by Josephinum Research, is a web application designed to facilitate site-specific fertilization for farmers without requiring high acquisition costs for new equipment or expensive software. Based on Sentinel 2 satellite data and field trials, vegetation indices are calculated, and fertilizer recommendations for each subarea are generated using models. The application maps that are generated can be easily exported and imported into compatible tractor terminals, enabling seamless utilization in the field. Alternatively, smartphones or tablets can be used for site-specific fertilizer application. Result is that variable and site-specific N-fertilization leads to savings in inputs and tailored plant nutrition. In addition, site-specific fertilization ensures a balanced N-budget, higher N-efficiency, and lower greenhouse gas emissions. Nevertheless, the creation of application maps requires not only technical expertise but also the incorporation of agronomic and location-specific characteristics of the fields. Both aspects are considered to simplify the technical barriers for the user and support them in site-specific fertilization through proposed fertilizer quantities. It is important that the user can customize all suggestions to accommodate their personal preferences and experiences. Another important point is that when we able to established such a system on a wide scale, new knowledge is transferred directly to the point of application. This can lead to widespread adoption and implementation of site-specific fertilization practices. By incorporating advanced technologies and data-driven approaches, practice and science can benefit from each other and more informed nutrient management decisions can be made. In order to put this into practice, seminars, training courses and practical events as well as several projects with farmers are carried out as part of the Innovation Farm.

Figures:



constant vs. variable nitrogen fertilization
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generation of application maps
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