webGRAS: a web application to estimate the potential forage quality in permanent meadows at first cut in South Tyrol

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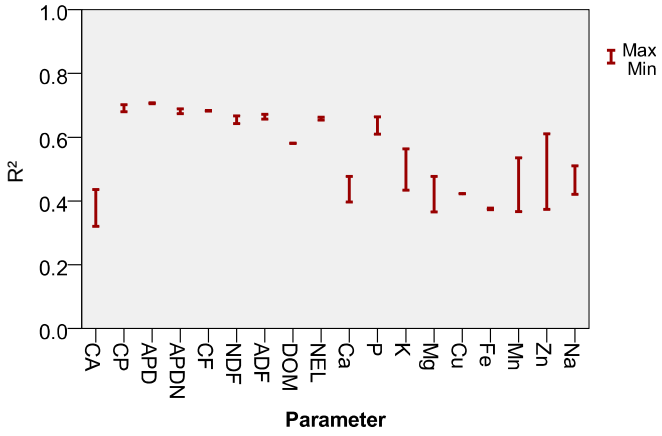
Introduction

- Aim: developing a **user-friendly web application** implementing statistical predictive models, which enables farmers and advisors to estimate the **potential forage quality** (quality of green herbage, unaffected by forage conservation) at the first cut of permanent meadows in South Tyrol, Italy

Material und Methods

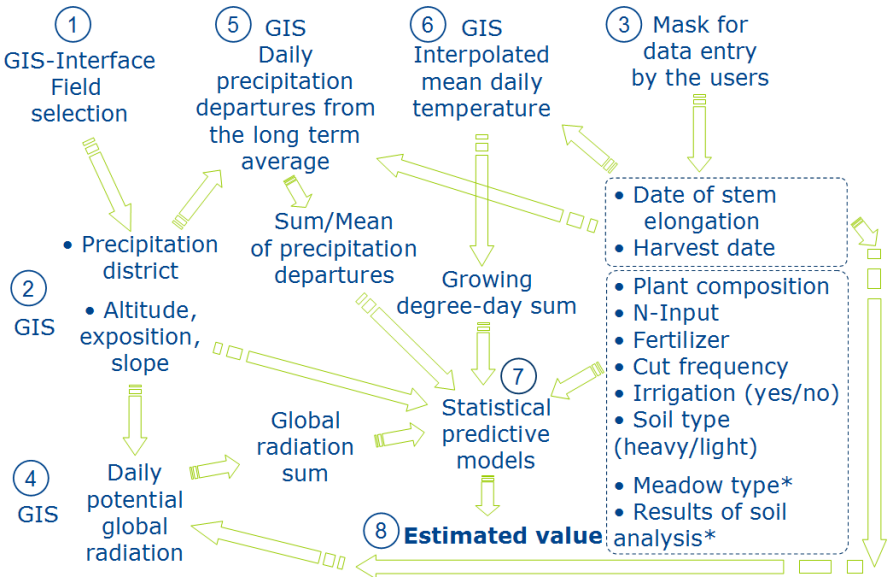
- Implementation of statistical predictive models for 18 parameters of forage quality for whole South Tyrol
- Dataset for model development: sequential sampling starting from stem elongation for six weeks, 209 environments, 667-1593 m a.s.l. altitude, 2 to 5 cuts per year
- Meteorological/climatic, topographic, botany- and management-related variables as well as soil properties were taken into consideration for model development
- Four different models were developed for each parameter on the assumption that not all independent variables are always known to the users: ○ with all available variables, ○ without the soil properties, ○ without the meadow type, ○ without soil properties and meadow type



Summary of predictive accuracy of the statistical models. Max refers to the model taking all available variables into account

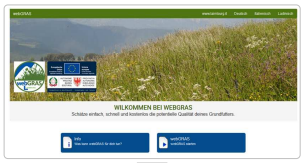
Results and discussion

Workflow of the web application

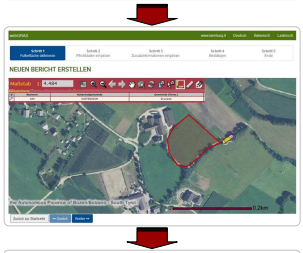


Information supplied by the user, * indicates facultative entries; all meteorological/climatic variables are generated by the system based on field selection, the date of stem elongation and the harvest date

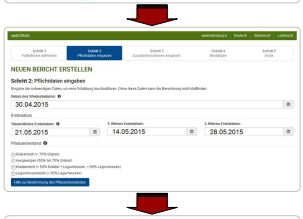
Examples of user interface



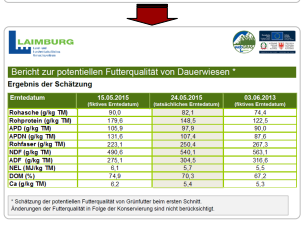
Start page



Field selection



User data entry



Report

Conclusion

The web application is currently in the final stages of implementation and will be freely available in the coming year

Contact

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