

A web application to estimate soil Nitrogen mineralization available for crops in Brittany

L. Beff¹, Y. Lambert², H. Squidadant¹, B. Lemercier¹, A. Elazhari¹, Y. Benchekroun¹, S. Vincent¹, R. Béra¹, G. Le Hénaff¹, P. Pichelin¹, P. Germain¹, T. Morvan¹

¹ UMR INRA –Agrocampus SAS, Rennes, France

² Chambre d'agriculture de Bretagne, Rennes, France

Introduction

How best calculate crop's Nitrogen fertilization?

How integrate the variability of soil properties of my farm?

What is the impact of climate?



In Brittany, Nitrogen (N) fertilization is an important environmental challenge. It is thus essential to well predict the N mineralization of soil organic matter

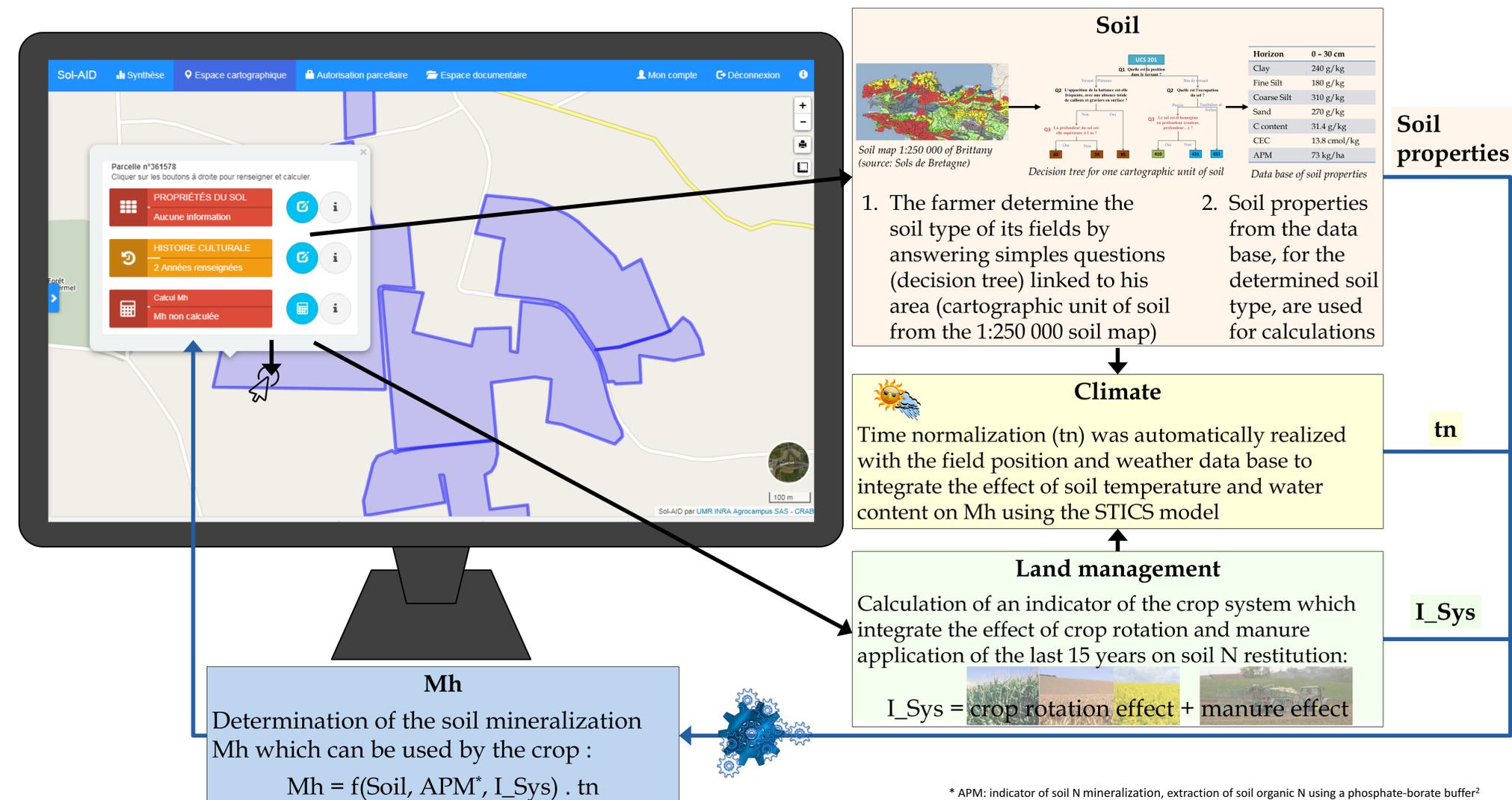
The " regional Mh¹ project " allowed to establish experimental references and to develop a new predictive model of the mineralization of the nitrogen of soil organic matter (Mh) which considers the organic and cropping history, soil characteristics and the climate

But how can this be made available to farmers?

By creating a WEB tool where they will be able to :

- Identify the different types of soil of their farm and the associated properties necessary for the calculation of the mineralization Mh
- Calculate an indicator of crop history that depends on rotations and organic inputs
- Calculate Mh with the new predictive model according to the climate of the farmland

Sol-AID web application



Conclusion

Sol-AID is a user friendly web application to easily estimates soil nitrogen mineralization Mh considering soil properties, cropping system and climate. It will be available to the farmer in 2020.

Références

¹ Projet Mh: <http://geowww.agrocampus-ouest.fr/portails/?portail=mh>

² Rocca, C. et al.: La mesure d'Azote Potentiellement Minéralisable (APM) : un indicateur pour préciser le poste minéralisation du sol. Les 11^{èmes} rencontres COMIFER – GEMAS de la fertilisation raisonnée et de l'analyse (Poitiers, les 20 et 21 novembre 2013).