

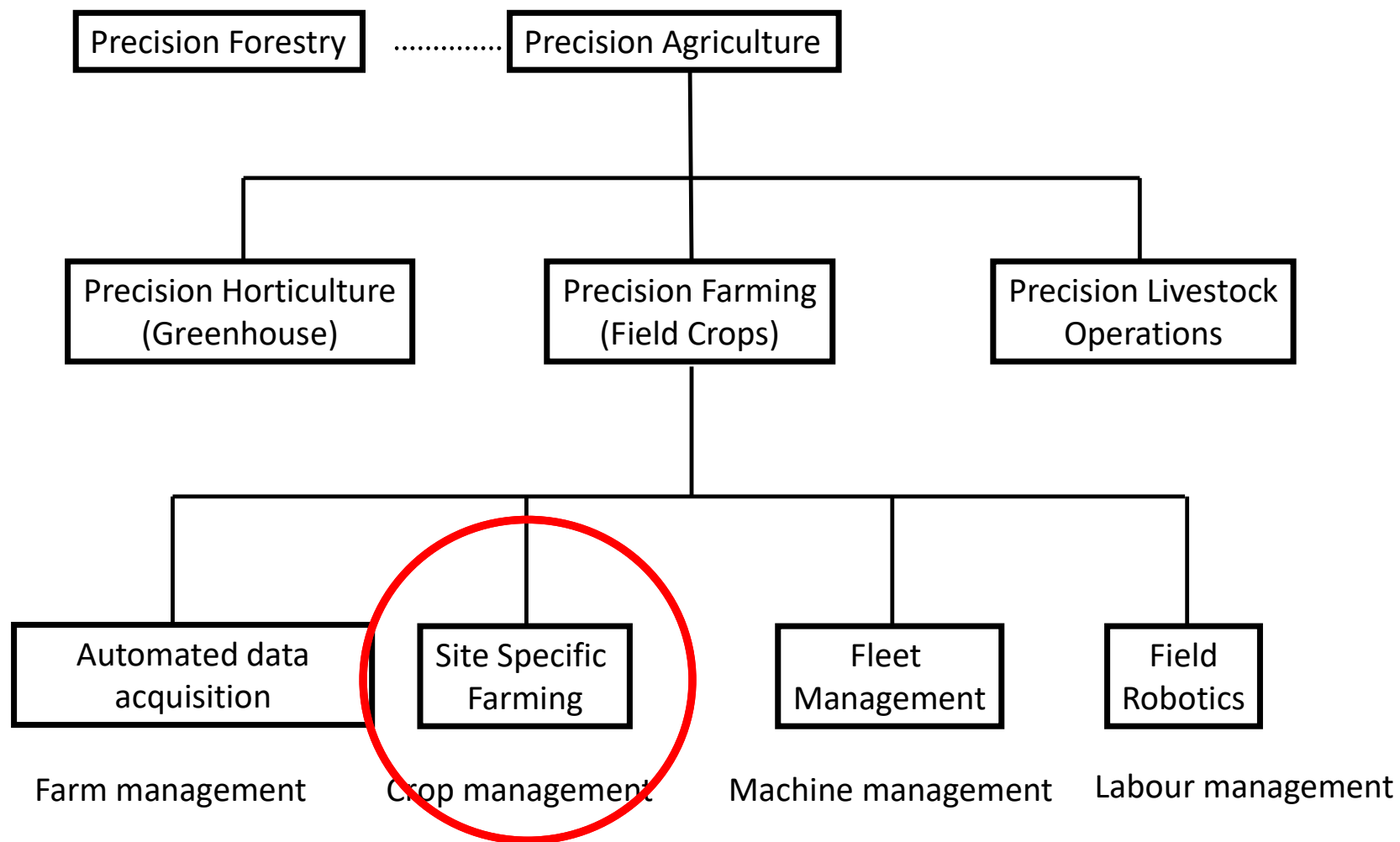


# Applicazioni sito-specifiche per la Maiscoltura. A che punto siamo?

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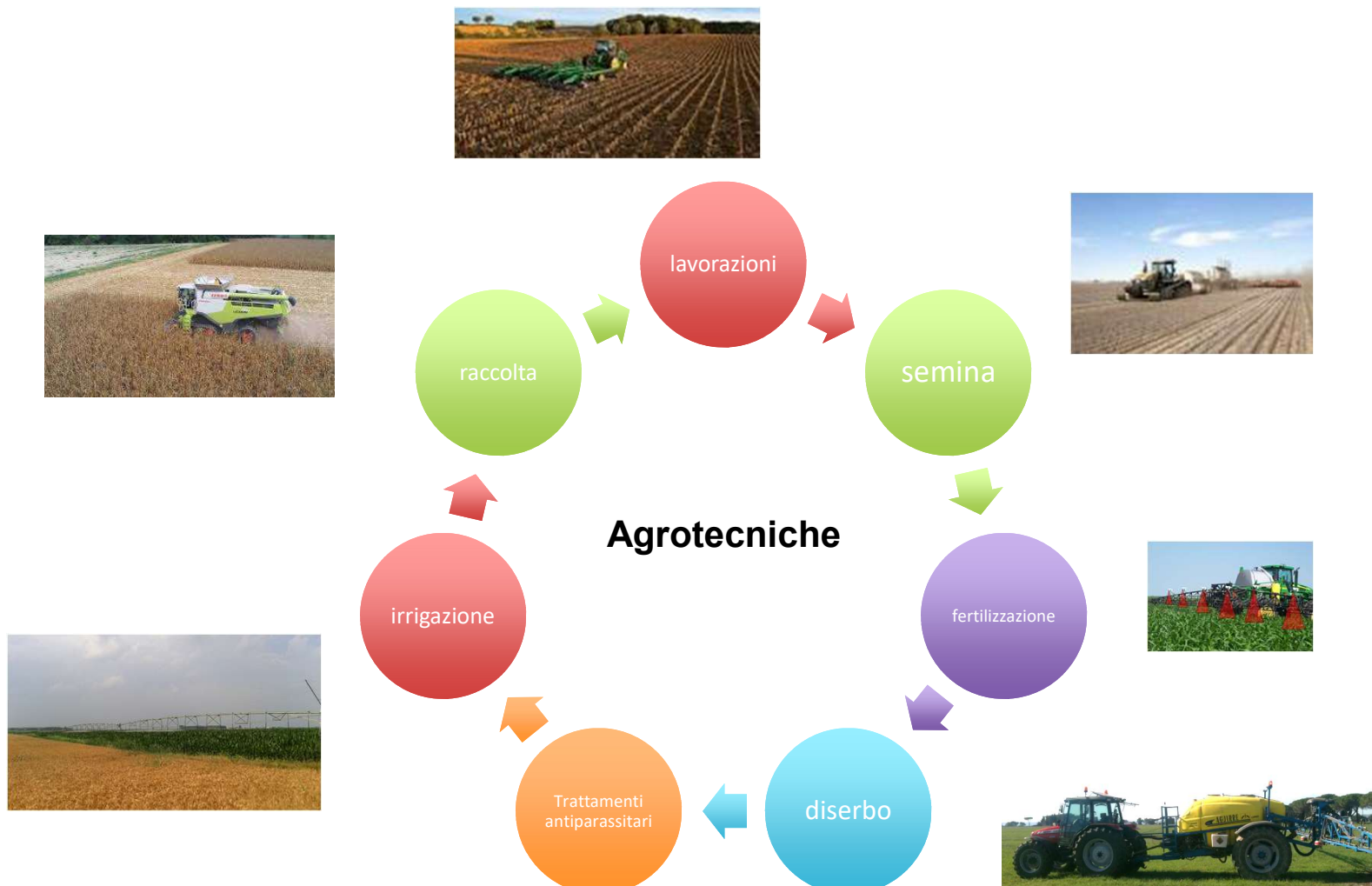
Francesco Morari

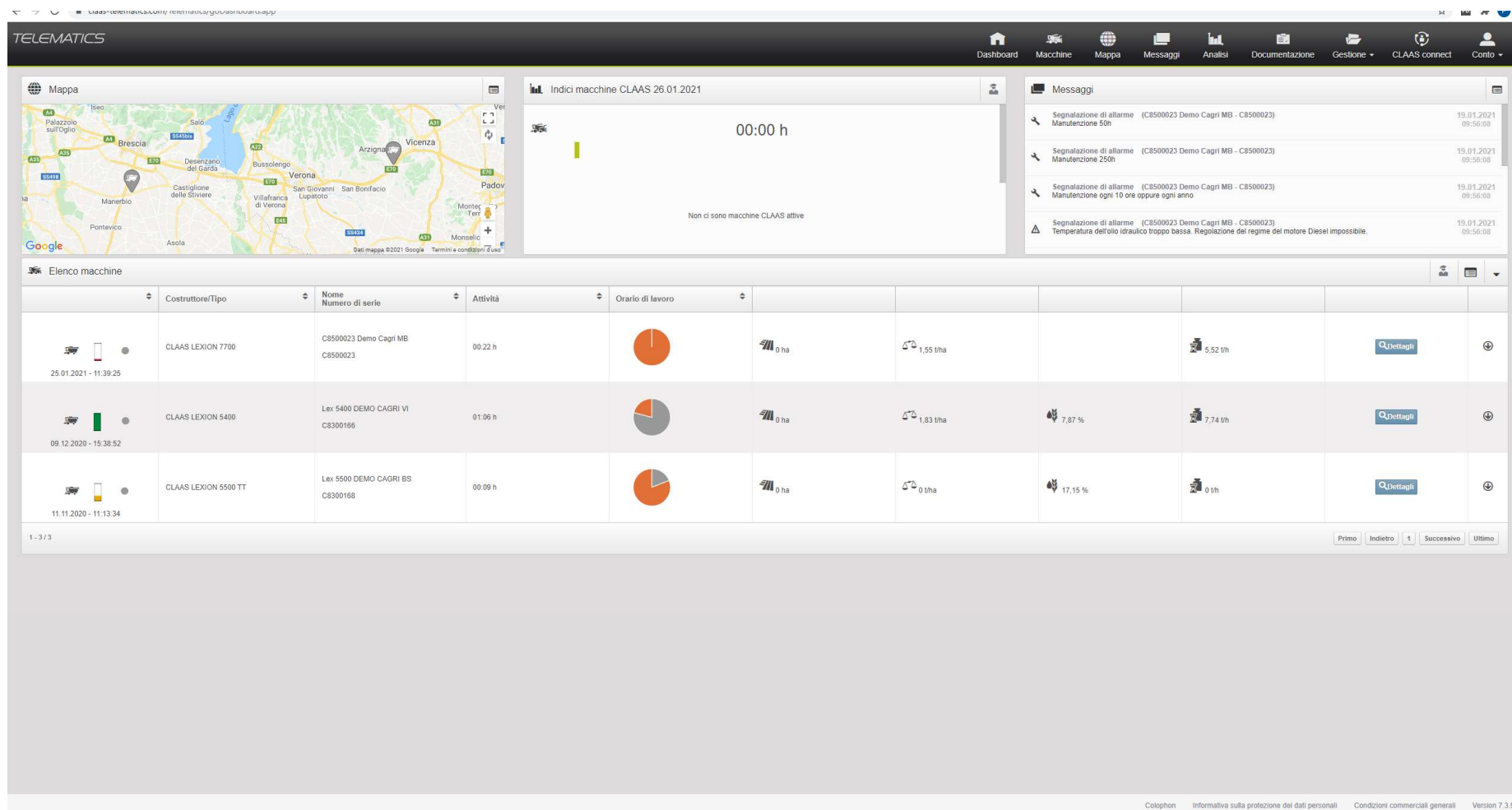
Dipartimento di Agronomia Animali Alimenti Risorse Naturali e  
Ambiente (DAFNAE) , Università di Padova



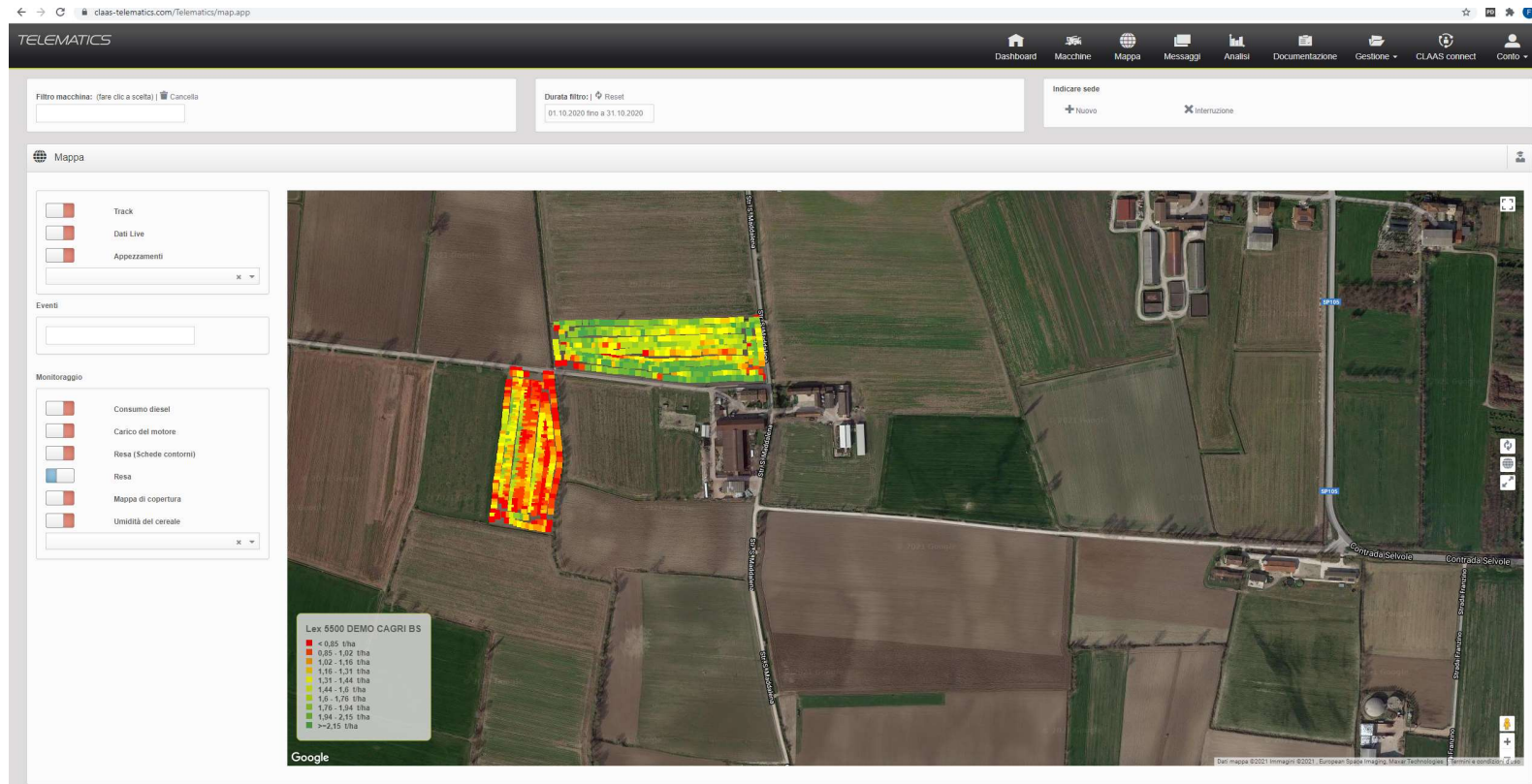
(Mod. Vellidis & Auernhammer, 2009)

# Dalla semina alla raccolta .....

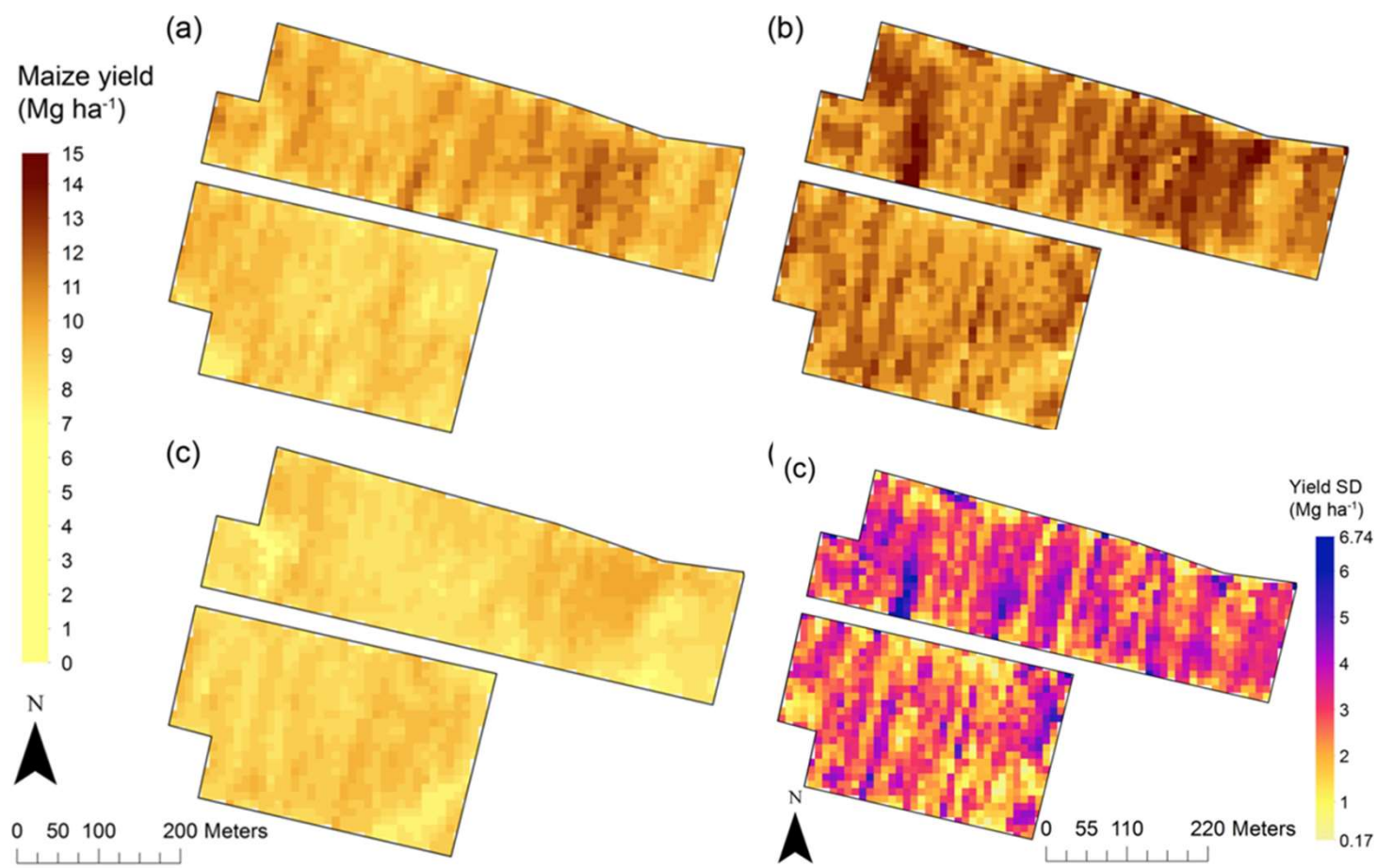




( By courtesy of Claas Italia)



( By courtesy of Claas Italia)

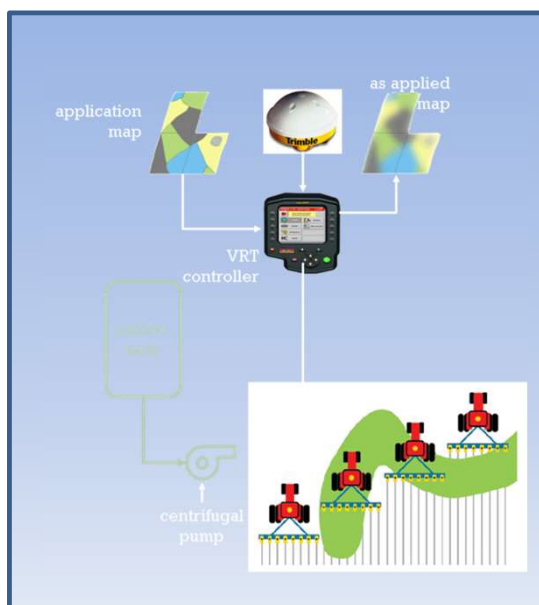


(Scudiero et al., 2014)

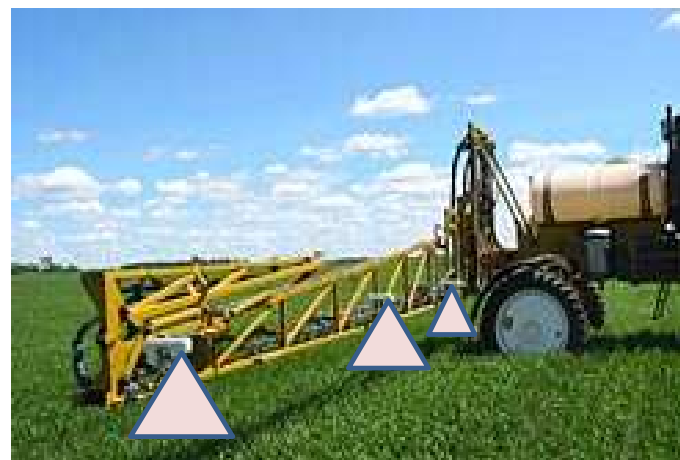


# Applicazione a rateo variabile

## Mappe di prescrizione



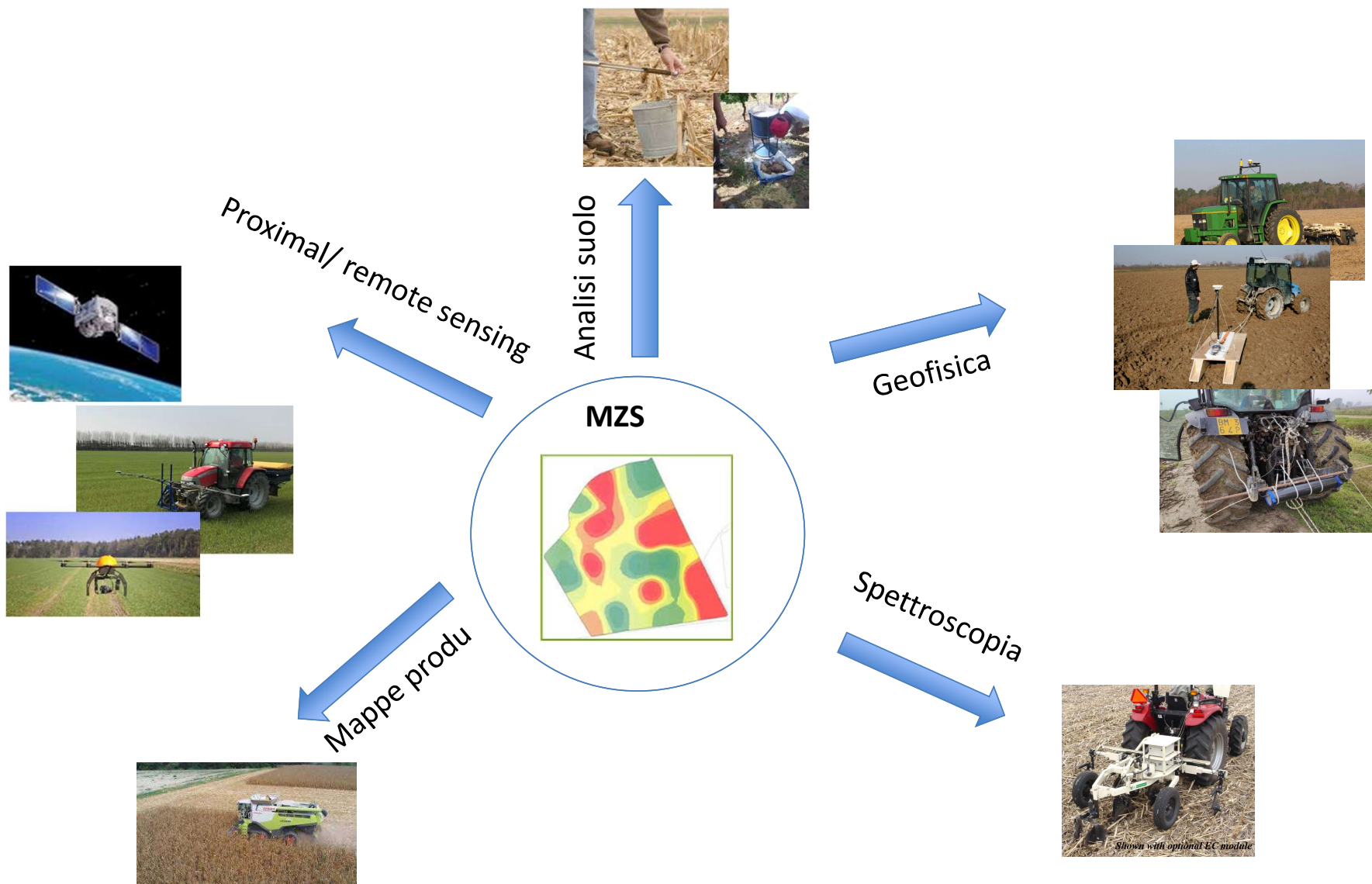
## Sensori in real time



## **Mappe di prescrizione**

- 1) Identificazione delle zone di gestione**
- 2) Calcolo dell'input**
- 3) Valutazione dei risultati**







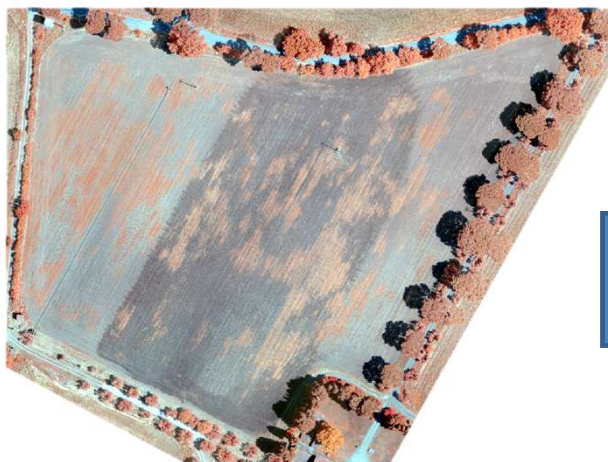
## *Cyperus rotundus*

*Malva sylvestris*

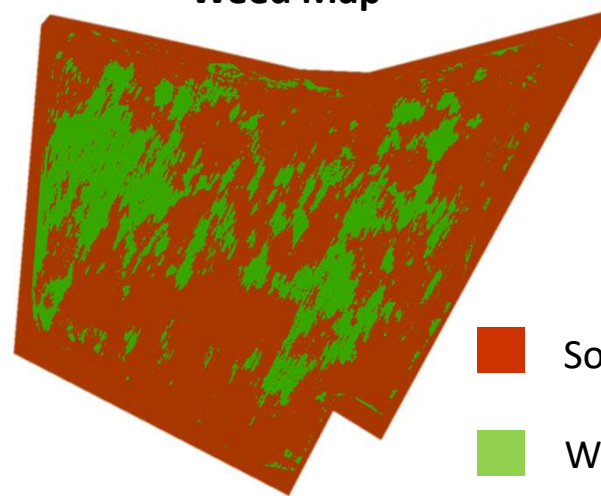
*Cynodon dactylon*

*Artemisia vulgaris*

*Polygonum aviculare*



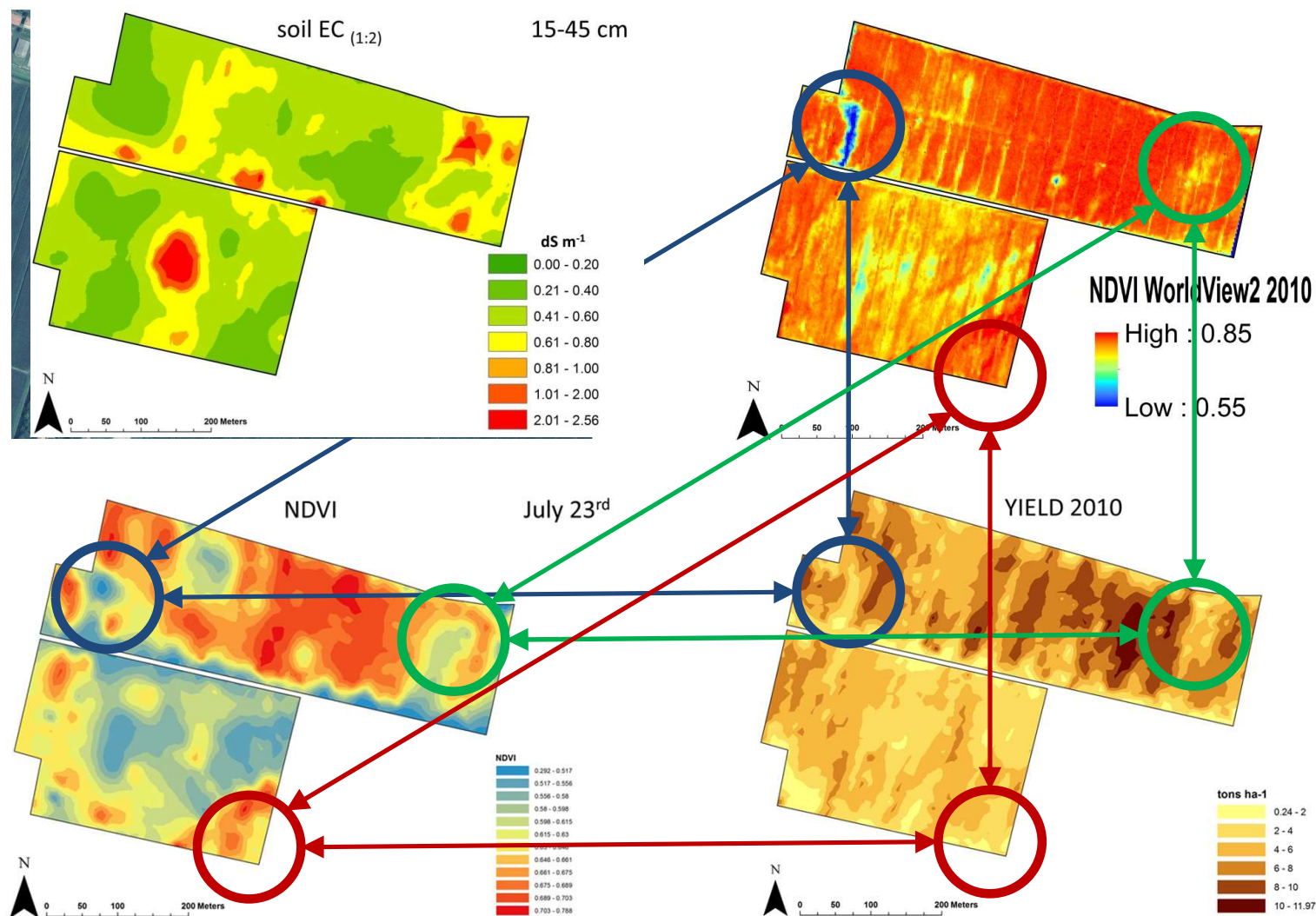
Weed Map



Soil

Weed

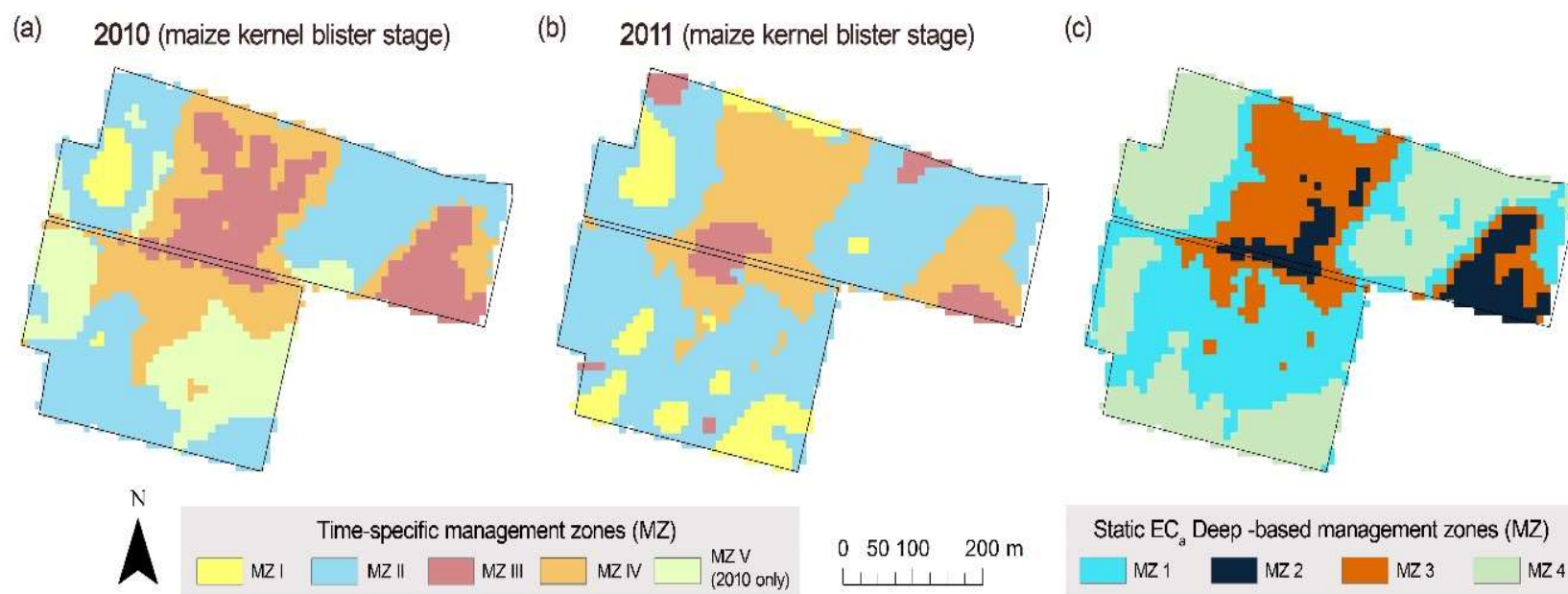
(By courtesy of Raffaele Casa)



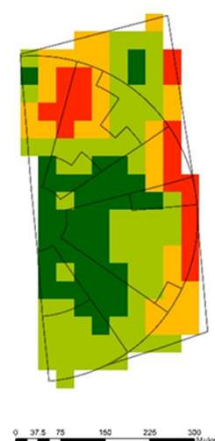
(Teatini et al., 2011)



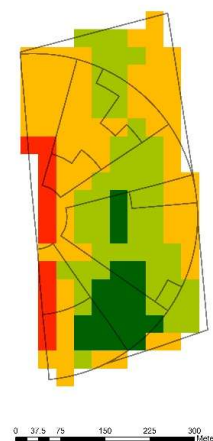
## Zone statiche vs Zone dinamiche



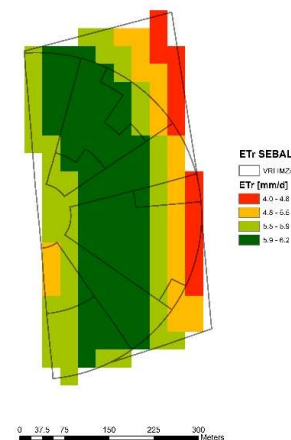
(Scudiero et al., 2018)



June 2<sup>nd</sup>,

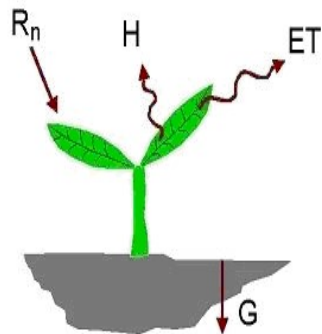


July 2<sup>nd</sup>



August 6<sup>th</sup>, 2015.

(Gobbo et al., 2019)

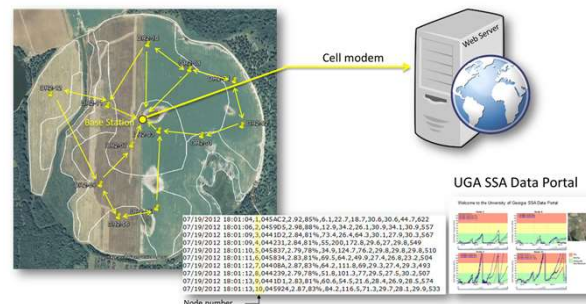
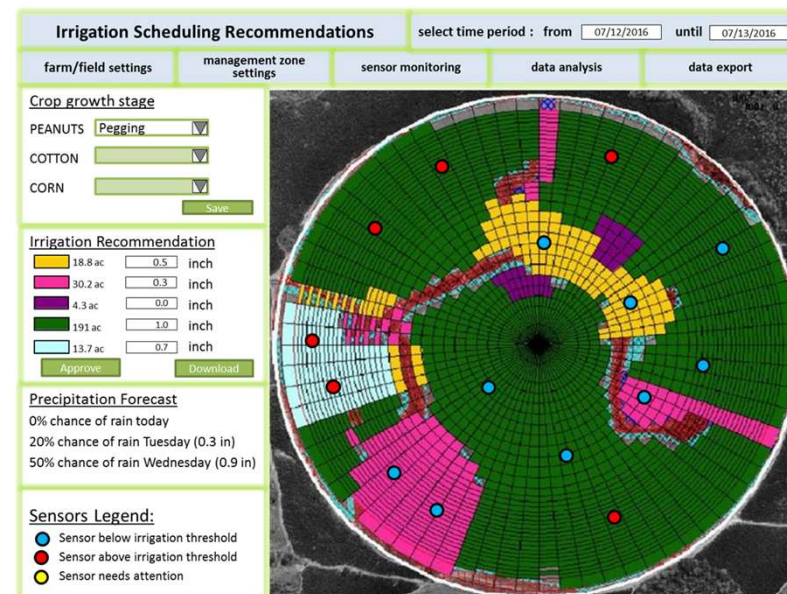


SEBAL Surface Energy Balance  
Algorithm for Land



Dynamic VRI

## Irrigazione dinamica



(By Courtesy of George Vellidis)

## Mappe di prescrizione

1) Identificazione delle zone di gestione

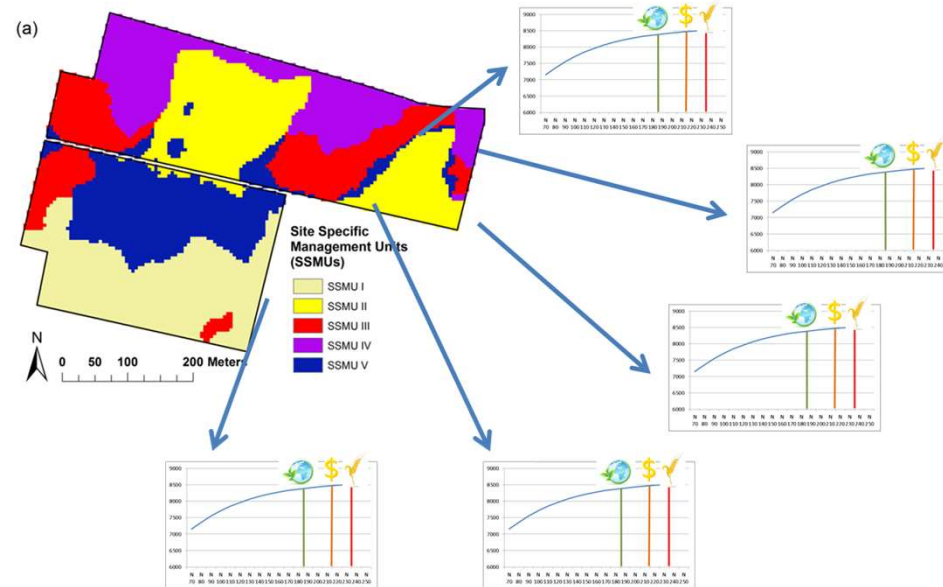
**2) Calcolo dell'input**

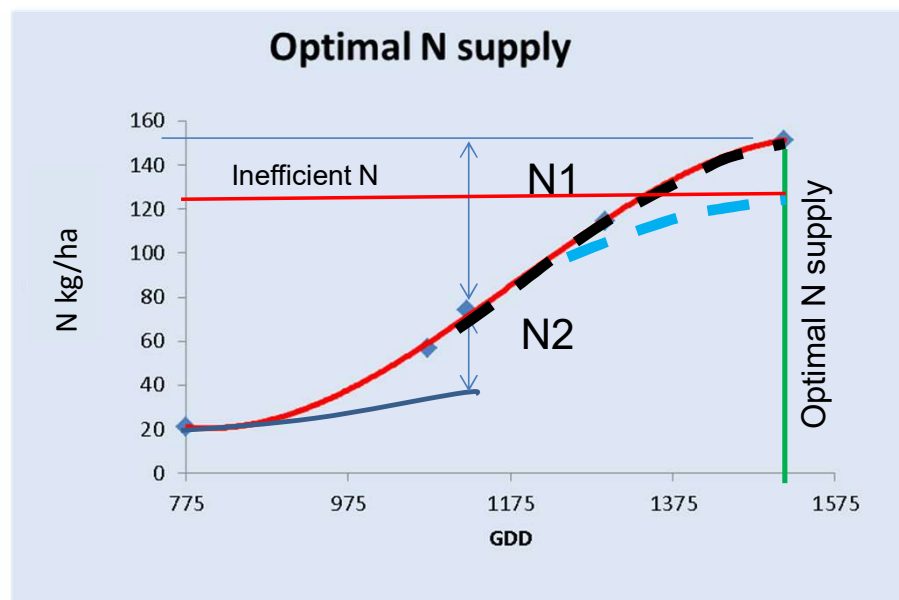
3) Valutazione dei risultati



## Come definire l'input?

1. Esperienza dell'agricoltore
2. Assistenza tecnica case produttrici
3. Sperimentazioni aziendale
4. Modellistica





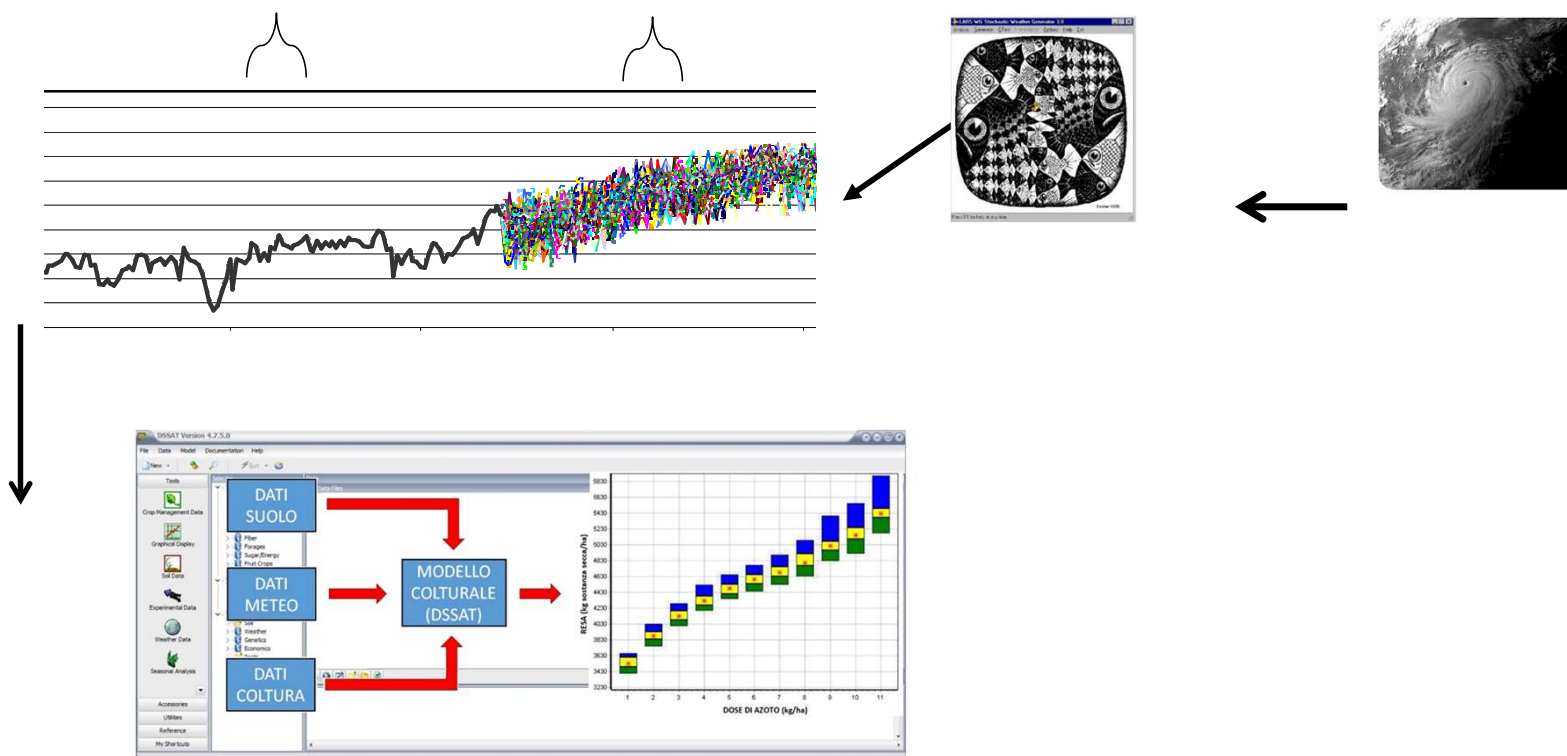
**Ogni metodo  
utilizzato considera  
un andamento meteo  
medio**

Observed meteo data

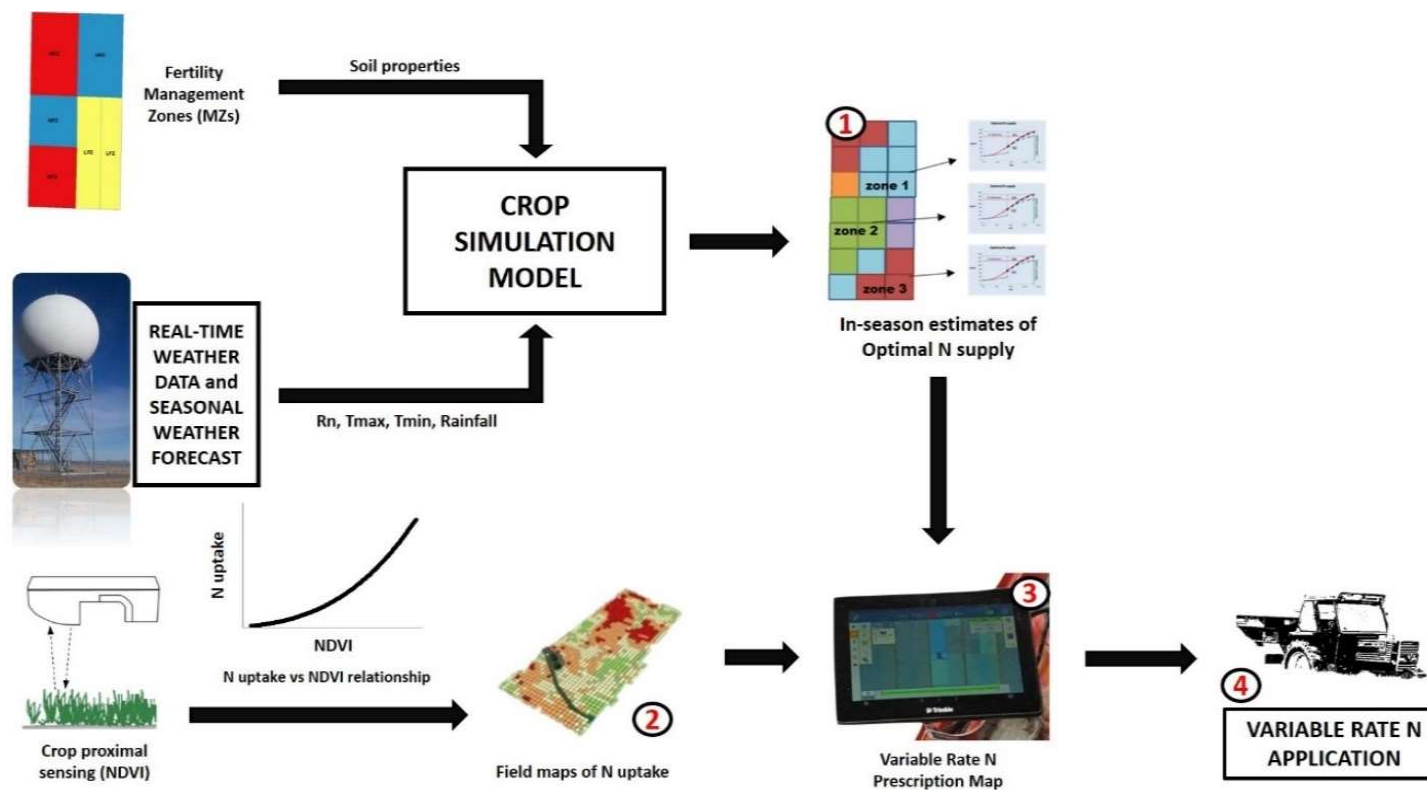
Weather  
forecast

**Year 2019**

General Circulation Model

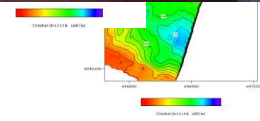


## Sviluppo di un nuovo prototipo



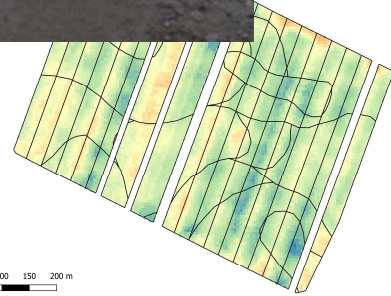
(Morari et al., 2021)

# Valutazioni



Tematismi x MZs

Mappe di



Mappe di  
produzione

## Conclusioni

Non sempre applicare la VRA è conveniente economicamente per l'agricoltore

Nel complesso delle casistiche, la VRA è sempre conveniente in quanto comporta evidenti benefici ambientali

La tecnologia è uno strumento nella mani dell'agricoltore, non viceversa  
Notevoli vantaggi indipendentemente dalla VRA

Importanza dell'assistenza tecnica e dei contoterzisti

## La tecnologia è nulla senza l'agronomo

