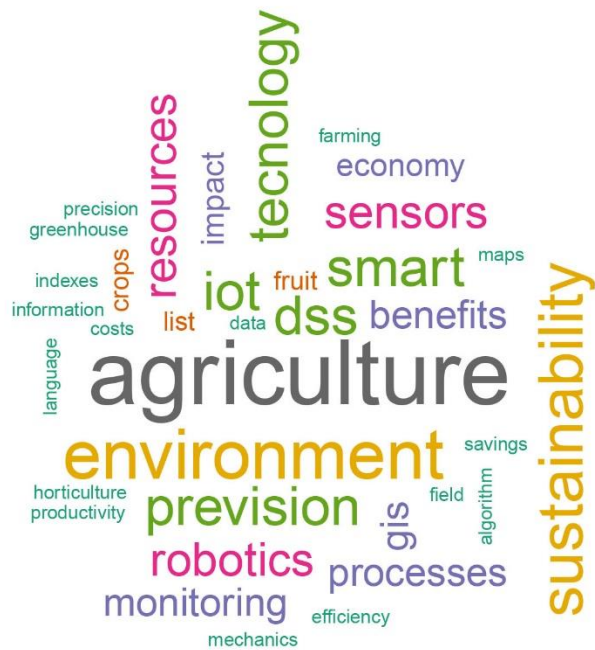*Improving management practices by means of precise, real time and georeferenced measurements of quanti-qualitative variables, linked to productive performances, is the main aim.*
The following analyses intend to augment the sustainability and resilience of business production processes.

CONTACTS

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tecnology resources impact farming economy precision greenhouse sensors indexes crops iot fruit smart maps information list data dss benefits costs language agriculture environment savings horticulture productivity prevision gis field algorithm sustainability robotics processes monitoring efficiency mechanics
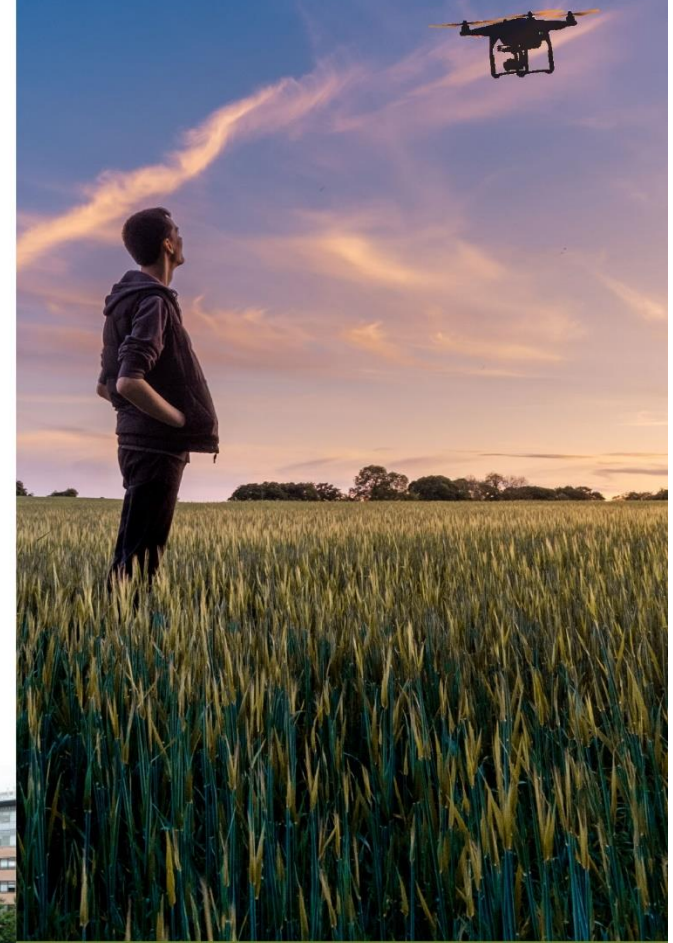
ALMA MATER STUDIORUM
UNIVERSITY OF BOLOGNA

Department of Agricultural and Food Sciences
V. le Fanin 40-50, 40127
Bologna

Precision agriculture

Expertise

Objectives

Appraisal of **quanti-qualitative characteristics** of production systems

Forecast modelling

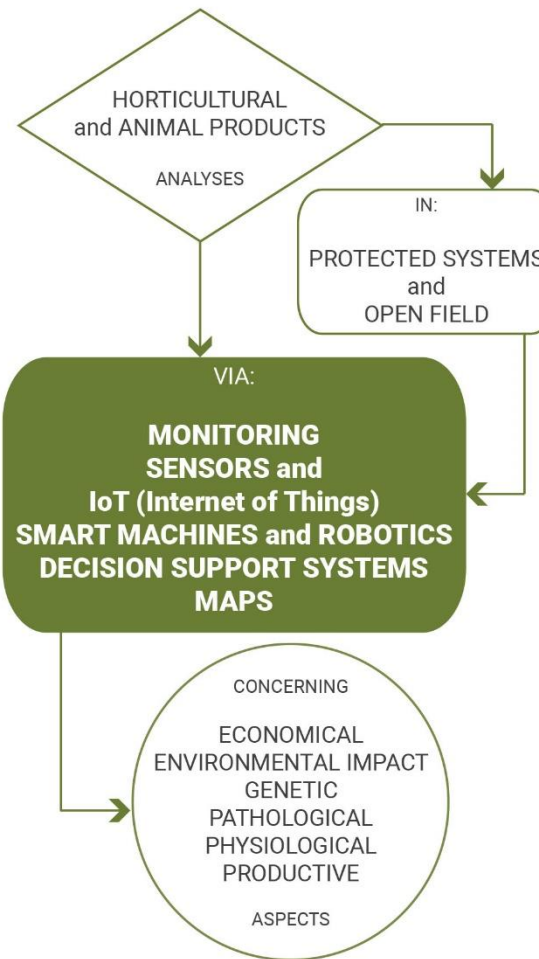**Biotic and abiotic stress** detection

C**ost-benefit** analyses

Precision agriculture impacts on CO_2 emission and **life-cycle-assessment** evaluation

Product tracing

Analyses of business and production processes **digitalization**

Geodatabase analysis and management

HORTICULTURAL and ANIMAL PRODUCTS

ANALYSES

IN:

PROTECTED SYSTEMS and OPEN FIELD

VIA:

**MONITORING
SENSORS and
IoT (Internet of Things)
SMART MACHINES and ROBOTICS
DECISION SUPPORT SYSTEMS
MAPS**

CONCERNING

ECONOMICAL
ENVIRONMENTAL IMPACT
GENETIC
PATHOLOGICAL
PHYSIOLOGICAL
PRODUCTIVE

ASPECTS

Awareness of resources use, as to improve the 3 E's (environmental, economic and ethical) sustainability

Detecting **strategies** and **indexes** for properly planning and reaching goals of production processes

Tools and methodologies application that allows to increase and improve **target response forecast**

Adoption of new tools and procedures in the commercial environment to **transfer knowledge** at the business level

Assessment of Precision Agriculture techniques on **business** and **consumer preferences models**