

# AGRICULTURAL TECHNOLOGY

Advancements and developments in the last 60 years

## Improved crop varieties

Hybrids with higher production.  
Seeds resistant to diseases.  
Seeds that require less water.

## Fertilization

Greater absorption of nutrients.  
Development of biostimulants.

## Mechanization

Planters and tractors with GPS.  
Increased use of solar energy vs fossil fuels.

1950

1960

## Biotechnology

Food with higher nutritional content.  
Drought-resistant seeds.  
Genetic editing technology, CRISPR.

## Crop Protection

Pesticides with greater efficacy, less toxicity.  
Lower doses per hectare.  
Safer packaging  
Use of nanotechnology.  
Better application techniques and equipment.  
Boom of biological products.

1990

## Irrigation technification

Sprinkling.  
Micro-irrigation.  
Drip.  
Telematic irrigation.

## Precision farming

Satellite images and weather stations to make precise decisions about nutrition, protection and productivity.



### BENEFITS

- :: Simplify the work of farmers.
- :: Contribute to food production.
- :: Decrease the environmental footprint of agriculture.
- :: Contribute to development.



### CHALLENGES

- :: Democratization and transfer of technology.
- :: Good Agricultural Practices.
- :: Inclusive development.
- :: Greater appreciation of agrotechnologies in the cities.



## Digitization

Information and communication technologies (Big Data).  
Agricultural sensors to measure humidity, pests, nutrients, etc.  
Internet of things.  
Drones.

## Robotics

Use of Artificial Intelligence.  
Automation and traceability.

2020

What comes next...