Agriculture 4.0 and loT technology

The new era in modern agriculture uses Internet of Things (IoT) technology to improve crop efficiency and productivity. By taking advantage of connectivity, it creates a more accurate, sustainable and profitable agricultural production system.

IoT technology enables farmers to collect real-time data on environmental conditions, crop health and livestock welfare, allowing them to make informed and timely decisions to maximize their crop yields. Let's learn more about the context of its importance:

By 2050, the world's population is expected to reach

9,7 billion

and the world faces the great challenge of meeting demand with increasingly limited resources.



In fact, to feed that number of people, the agricultural industry will need to generate 70% more food with only 5% more land.

Given this scenario, the use of technology is essential to guarantee production in line with the needs of each country.

Agribusiness 4.0 enables the organization of resources and processes in the stages that are managed during the agricultural production chain, transforming this activity to make it more efficient, sustainable and produce quality food.



In 2021, many Latin American countries, agricultural crops contributed significantly to GDP:

Colombia 7.43%



Chile 3.28%

Peru 6.97%



Ecuador 9.41%



Brasil 6.89%

Argentina 7.13%

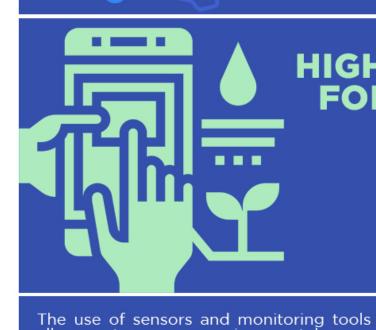
85% of farms in the USA have already implemented precision farming.



It is expected to be one of the most influential trends in the short and medium term.

By 2023, the global Smart Farming market is expected to reach

\$13,500 millones



HIGHER PROFITABIL FOR ENTREPRENEUR **AGRICULTURE**

IoT technology has proven that it can reduce operating costs by 10% to 15%

which helps conserve water resources.

Thanks to this data, the amount of water used in irrigation can be reduced by 40%,

allows us to measure environmental variables that are critical to soil productivity, such as: **Temperature**

Humidity Nutrients

Wind

speed



Atmospheric pressure

pН

dioxide

Carbon

Crop yields

Seeding density

Luminosity

Soil electrical conductivity

crop production every year.



Pests destroy up to 40% of the world's



agribusiness sector of more than \$200 billion dollars. It also contributes to the care of the environment, since using IoT sensors helps reduce the amount of greenhouse gas emissions by 12%.

Thanks to IoT sensors, in pest control, it reduced pesticide use by **80%** and increased crop yields by **50%**.





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