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INNOVATIVE AGRICULTURAL TECHNIQUES TO BOOST

ENTREPRENEURIAL SKILLS OF FUTURE FARMERS"

FARMERS FOR

FUTURE

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IEK KAVALAS, GREECE

New business strategies

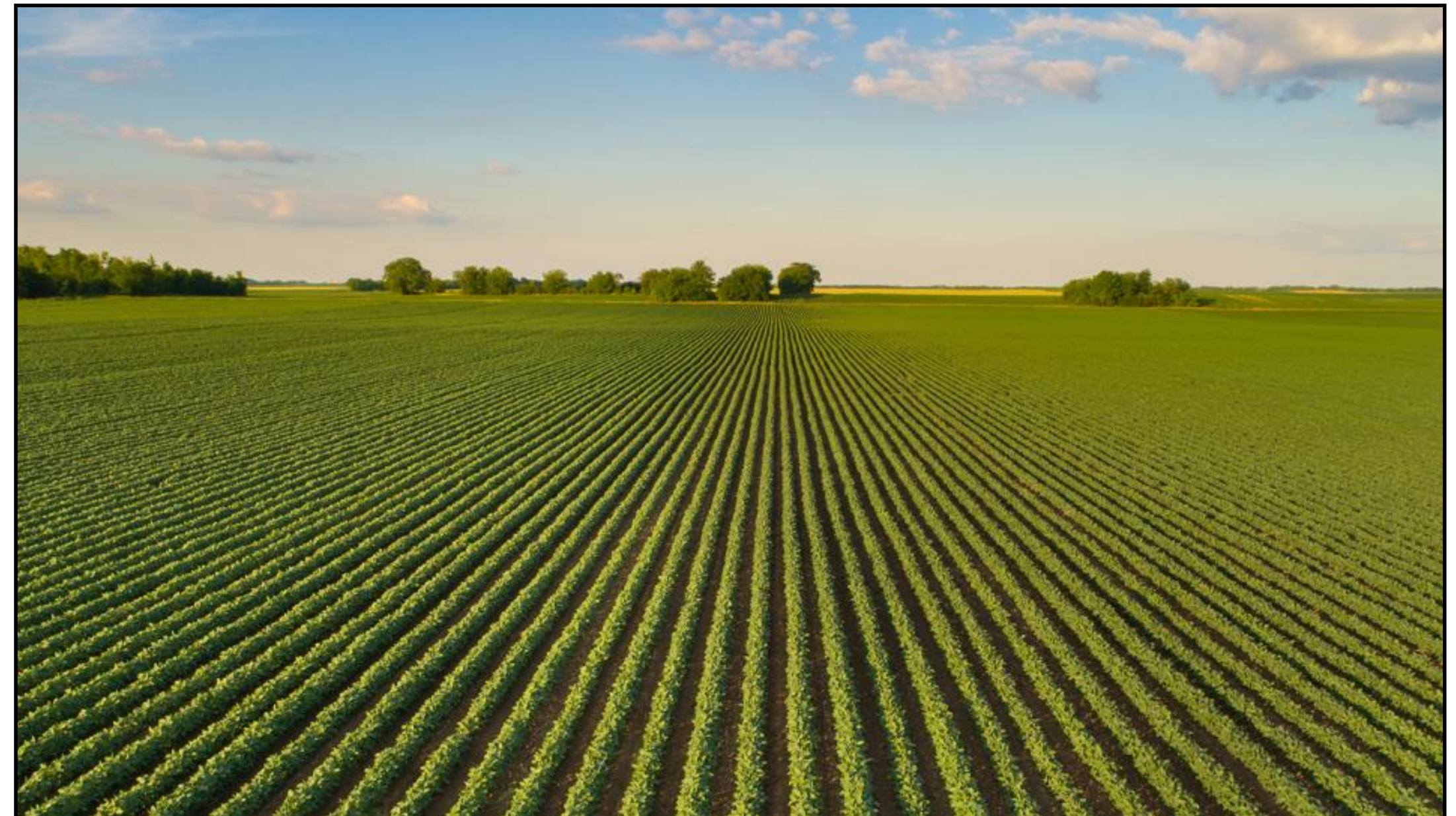
“Farmers for future”



INTRODUCTION

Business strategies focus on the direction of the business in terms of expansion, maintenance, contraction, etc. Your business strategy should create and sustain a competitive advantage that enables you to consistently earn above-average returns.

- Growth Strategies - expanding the size of the business
- Stability Strategies - maintaining the size of the business
- Restructuring Strategies - refocusing the business for improved performance
- Succession Strategies - transferring the business to the younger generation
- Exit Strategies - ending and leaving the farm business



Growth strategies

Growth strategies involve various ways of expanding the size of the farm business. Growth may take many forms and directions.

- **Replicate** - This is a form of capacity expansion where the existing operation is replicated at a different location. This strategy is often used for livestock operation when further expansion at the current location is not feasible
- **Networking** - This involves working with others to gain advantages not available to individuals. Networking may leverage the activities and resources of your business operation. It may also increase the efficiency of the business operation. Networking can be used for either vertical or horizontal expansion. Networking can be accomplished through information arrangements, contracts or various types of joint ventures.

Succession Strategies

These are strategies for transferring a farm business from one generation to the next. The younger and older persons are often related but don't need to be. Succession strategies are often combined with estate planning by the parties.

- **Multi-person** - A younger person is brought into the business and the current operator and the young person farm together in the same business. At the retirement of the older person, the younger person takes over the operation of the entire business. So the life of the business continues beyond the retirement of the current operator. Arrangements for transferring ownership and management of the business from the older to the younger person are developed.
- **Spin-off** - A younger person initially returns to the farm business but after a year or so starts his/her own farm business. The younger and older parties may work together and share machinery, equipment, etc. However, each party operates his/her own business. At the retirement of the older party, the younger person merges the two businesses together and operates them as one business.

Precision Agriculture

Precision agriculture is an agricultural resource management strategy that collects, processes, and evaluates data and offers insights to help farmers optimize and increase soil quality and productivity.

Management decisions count on precision agriculture data points to improve farmland and farm produce across several key areas, including:

- Resource use efficiency
- Sustainability
- Profitability
- Productivity
- Quality

This innovation in agriculture technology uses big data to aid management decisions, enabling farmers to control crop yield variables like moisture level, soil condition, and microclimates to maximize output. It relies on remote sensing systems, drones, robotics, and automation to improve crop health and optimize agricultural resources, leading to more productivity.

Indoor vertical farming

The average yield of rice per hectare is between three and six tonnes. However, farmers don't have to face this limitation when using indoor vertical farming. This Indoor vertical farming grows farm produce stacked above another in a closed and controlled environment. The technology uses growing shelves mounted vertically to increase crop yield in limited spaces.

Quite often, the shelves don't require soil—they're either hydroponic or aeroponic:

- **Hydroponics** is a gardening practice that grows plants in water and nutrient solutions.
- **Aeroponics** suspends the roots of the crops in the air, with emitters intermittently spraying them with water and nutrients.

Indoor vertical farms enable growers to control variables such as light, temperature, water, and sometimes, carbon dioxide levels, allowing them to get healthier and bigger yields.

Other benefits of the technology include 70% less water usage, which conserves energy, and reduced labor costs due to the use of robots for harvesting and planting.

Farm automation

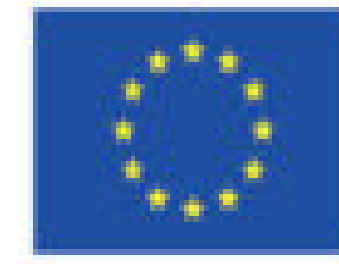
Farm automation brings together agricultural machinery, computer systems, electronics, chemical sensors, and data management to improve equipment operation and decision-making, and ultimately, reduce human input and error.

Reduced labor time, higher yields, and the efficient use of resources are driving the large-scale adoption of the technology. Farmers now use automated harvesters, drones, autonomous tractors, seeding, and weeding to transform how they cultivate their crops. The technology takes care of menial and recurring tasks, allowing them to focus on more critical functions.



Sources

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 - <https://masschallenge.org/articles/agriculture-innovation/>



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