

The Future of Agriculture: Technology and Innovation

# Autonomous Robots

*Can we decrease the demand for farm laborers by using robotic machines to harvest fruits and vegetables rather than picking them manually?*

Describe it...



What are the benefits?



What are the limitations?



See it in Action!



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# Agriculture Sensors

*Can high-tech sensors be used to alert farmers on their smart phone when crops are ready to harvest or need water, nutrients, or pest control?*

*Tip: Search 'precision agriculture' and 'smart farming.'*

Describe it...



What are the benefits?



What are the limitations?



See it in Action!



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# Arial Crop Imaging

*Can drones help farmers pin point specific problems in their fields?*

Describe it...



What are the benefits?



What are the limitations?



See it in Action!



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# Agriculture Data Systems

*How can data analyzing software help farmers interpret and use data from their farms?*

*Can data sharing programs combine data from multiple farms?*

Describe it...

A large, empty rectangular box with a blue border, intended for a user to describe the system.

What are the benefits?

A large, empty rectangular box with a blue border, intended for a user to list the benefits of the system.

What are the limitations?

A large, empty rectangular box with a blue border, intended for a user to list the limitations of the system.

See it in Action!

A large, empty rectangular box with a blue border, intended for a user to describe how the system is used in action.

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# Global Positioning Systems

*What can GPS and GIS technology do to make farming more efficient?*

Describe it...



What are the benefits?



What are the limitations?



See it in Action!



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# Vertical Farming

*What are the benefits of growing fresh produce in cities and factory buildings rather than in soil on large plots of land?*

Describe it...

A large, empty rectangular box with a blue border, intended for a student to describe vertical farming.

What are the benefits?

A large, empty rectangular box with a blue border, intended for a student to list the benefits of vertical farming.

What are the limitations?

A large, empty rectangular box with a blue border, intended for a student to list the limitations of vertical farming.

See it in Action!

A large, empty rectangular box with a blue border, intended for a student to see vertical farming in action.

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# Livestock Activity Monitors

*Are there Fitbits for livestock? How would they help?*

Describe it...



What are the benefits?



What are the limitations?



See it in Action!



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# Fish Farms and Aquaponics

*Can saltwater fish be farmed thousands of miles from the ocean?*

Describe it...



What are the benefits?



What are the limitations?



See it in Action!





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# Insect Protein

How can we use insects as a protein source in our diet? Why would we choose this?

Describe it...

A large, empty rectangular box with a blue border, intended for a user to describe insect protein.

What are the benefits?

A large, empty rectangular box with a blue border, intended for a user to list the benefits of insect protein.

What are the limitations?

A large, empty rectangular box with a blue border, intended for a user to list the limitations of insect protein.

See it in Action!

A large, empty rectangular box with a blue border, intended for a user to see insect protein in action.

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# Cultured Meat

Could “meat” created in a lab be a feasible method of producing quality protein without harvesting it from animals? Would it be more sustainable?

Describe it...

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What are the benefits?

A large, empty rectangular box with a blue border, intended for listing the benefits of cultured meat.

What are the limitations?

A large, empty rectangular box with a blue border, intended for listing the limitations of cultured meat.

See it in Action!

A large, empty rectangular box with a blue border, intended for seeing cultured meat in action.

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# New Seed Varieties

Can a gene editing system (GMOs or CRISPR technology) assist in editing plant genomes to make them more heat resistant, drought tolerant, etc.?

Describe it...

A large, empty rectangular box with a blue border, intended for a detailed description of the seed variety.

What are the benefits?

A large, empty rectangular box with a blue border, intended for listing the benefits of the seed variety.

What are the limitations?

A large, empty rectangular box with a blue border, intended for listing the limitations of the seed variety.

See it in Action!

A large, empty rectangular box with a blue border, intended for a visual representation or demonstration of the seed variety in action.

Describe it...



What are the benefits?



What are the limitations?



See it in Action!



Describe it...



What are the benefits?



What are the limitations?



See it in Action!



Describe it...



What are the benefits?



What are the limitations?



See it in Action!

