



Unit 19 Technology and Robotics in Agriculture

✦ Glossary

Forecast: to predict

Widespread: widely diffused

Plough: to turn up the earth of an area of land with a farming implement

👉 Push button agriculture

In many countries farming is the major occupation and up to 70% of the population is involved. The introduction of farm machinery has progressively reduced human involvement in many farming activities.

Push button agriculture involves recent and futuristic techniques. It is a kind of agricultural revolution that was initiated for the benefit of both farms and human populations worldwide. Push button agriculture is **forecast** to dominate the global crop production strategies in the very near future.

Push button agriculture is a phrase that indicates that farmers are destined to utilize machines, computers, automated vehicles and other gadgets that are easily driven using electronic push button systems. Such autonomous, pre-programmed machines are to meant to alleviate human labour. At the same time, they offer greater accuracy in all crop production procedures.

Robotics use is already **widespread** and it is destined to dominate crop fields in the near future. Autonomous tractors with GPS-RTK guidance systems are widely used in many countries. They do not need drivers and can be programmed to **plough** straight rows in a field. Robots that perform various tasks such as fruit picking on plantations are gaining in popularity.

Drones are being introduced in agricultural farms worldwide and they are highly versatile in their ability to perform tasks while airborne. They can also carry out a number of tasks, such as monitoring and spraying with great ease and at remarkably high speeds.

Satellites have been in vogue in the agricultural sector for the last four or five decades. Satellite imagery has been a blessing to farmers with regards to early warning of pestilence, disease affliction and disasters such as floods, erosion and drought.

Push button agriculture was devised as a concept to suggest that we can produce crops by amalgamating and coordinating robots, drones and satellites. It is believed

that push button agriculture could lead us to food generation with few or no farm labourers – a situation never imagined before. Therefore it could be a great help in supporting the global farming community that is destined to produce food for over 9 billion human beings by 2050.

(Adapted from: K.R. Krishna, *Push Button Agriculture*, Apple Academic Press, 2016)





Understanding the text

1. Read the text and find adjectives and terms that are associated with the following words. Translate those that you do not understand.

- 1. machinery
- 2., techniques
- 3. vehicles
- 4. labour
- 5. accuracy
- 6. farming community

2. Answer the following questions. Use some of the word associations from the previous exercise.

- 1. What is push button agriculture?
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- 2. What are its main objectives?
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- 3. Which worldwide problem could it help solve?
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3. List the machines and devices mentioned in the text and specify what they are and can be used for.

Machine / device	Function
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4. > Pair work < Agriculture has witnessed a series of great inventions and improvements in the course of its history. Can you mention at least two of them?

- 1.
- 2.