

Technology Innovation in Agriculture sector to Grow Crops more efficiently

Innovation is an important part of modern agriculture as compared to 40 years ago. The whole business is facing immense challenges, from rising prices of supplies, a shortage of labour, and changes in client preferences for transparency and property. There's increasing recognition from agriculture companies that now it is necessary to have some solutions for these challenges.

Modern agriculture is continuously having improvements in digital tools and knowledge. Also, the government and other researchers across the public and private sectors are launching several programs and doing collaborations with farmers.

During the 1960s revolution, India can achieve self-reliance in food product production if this sector will use modern ways of agriculture by choosing the better quality of seeds, proper irrigation systems, chemical fertilizers, and pesticides.

As time passed, advanced technology appeared in the agriculture sector. The tractor was introduced with new tillage and harvest equipment, irrigation, and air seeding technology, which results in higher yields and improved quality of the food and fibre that was fully grown.

Farmers can use scientific information and technology to enhance crop yields and keep themselves up-to-date with innovative ways of farming.

Here are some methods that can improve agriculture with the help of modern technology:

1. Observation and controlling crop irrigation systems via smartphone

Mobile technology is playing a crucial role in monitoring and controlling crop irrigation systems. With this modern technology, a farmer can control his irrigation systems from his phone or laptop instead of visiting every field. Moisture sensors in the ground are ready to communicate data regarding the amount of moisture present at such depths in the soil.

2. Ultrasounds for livestock

Now ultrasound is not only for checking on babies in the womb. It can also be used to discover what quality of meat can be found in an animal before it goes to the market. The testing of DNA helps producers to find animals with good pedigrees and many other fascinating qualities. This data can be used to help the farmers to improve the standard of their herds.

3. Usage of mobile technology and cameras

Some farmers and ranchers use apps like 'Foursquare' to manage their staff. They also put some cameras around the farm to look after the places 24×7 without visiting those places. Livestock managers are wiring up their barn feedlots and pastures with cameras that send pictures back to the central location like a workplace or a computer. Through this method, they can keep a closer eye on the animals when they are away from the place.

4. Crop Sensors

Crop sensors also help apply fertilizers in a very effective manner, maximizing uptake. They sense how your crop is feeling and return the potential leach and runoff into groundwater. Instead of creating a prescription fertilizer map for a field before you leave to use it, crop sensors tell application equipment how much to use in real-time. Optical sensors are ready to see how much fertilizer a plant might have, based on

the number of light reflected by the detector or sensor.

Vision regarding Modern Agriculture

Currently, everyone is working hard for the future of modern agriculture in a more efficient way. There are a large number of technologies that can change the transition of modern agriculture in the fields. Some technologies will need to be developed specifically for agriculture, whereas many other technologies have already developed for other areas that may be adapted to the modern agricultural sectors like autonomous vehicles, AI, and machine vision.

If these technologies will be applied to modern agriculture then in a very short period several farmers will be able to have the benefit of the acquisition of real-time farm data.

Many farmers don't pay any attention to matters like getting farm knowledge and what measures should be taken with the help of modern technology to improve the standard of their agriculture or farming. Also, they don't know what to do in case there is any natural disaster. It is tough to predict the future of technology in agriculture however some promising trends and projects can be introduced in the farming sector.