

DNA Anchor Developing working prototypes to aid farmers with day-to-day manual operations

Engg students design farmer-friendly machines

Mechanical engineering students at IIT G'nagar retrofit objects into nifty gadgets for farmers

DNA Correspondent @dnaahmedabad

Ahmedabad: Mechanical engineering students in their third year at the Indian Institute Of Technology, Gandhinagar (IITGn) exhibited various working models of farmer-friendly machines at the institute's campus on Thursday.

Keeping in mind the inaccessibility and non-availability of high-end machinery and tools for agricultural operations to poor farmers, academi-

cians of the institute came upon the idea of developing working prototypes of machines that would aid farmers with operations they typically perform manually.

The main aim of the class project was to come up with the list of possible prototypes. Students visited nearby villages like Palaj and Vasan and interacted with farmers to study various farming operations and think of technical solutions to improve agricultural output while reducing manpower requirement. "In order to get more out of limited resources, we need to improve the efficiency of various farming tasks," Vineet Vashista, a professor at IITGn said.

This activity, which was a part of the curriculum, will be evaluated.



Milking machine

This apparatus will help farmers to milk cows without even having to bend, thus reducing back and knee-related problems. Subodh Kumar, part of the team that developed the device, said, "The most common issues faced by farmers are related to knee and spine as a result of carrying heavy loads and bending down for long hours to work. The rationale behind this device was to enable farmers to milk cows without having to bend."

Plough boat

It is a three-in-one machine that helps plough, sow, and harrow the soil at one go. Vinod Ramakrishnan, one of the students who designed this device, said, "These processes are usually done with tractors and most farmers cannot afford one. But these manually operated devices could cost as low as Rs2,000.



Automatic pesticide and fertiliser sprayer

As the machine is pushed through the field, a lever connected to the wheels of the cart moves the pump of the spray gun. Karan Gohil, one of the students who helped make this device, said, "Carrying fertiliser tanks, which are quite heavy, on your back is harmful to the spine and leads to chronic backache in the long run. This device addresses this problem as there is no need to carry the loads."

