

## **Implementation of Technical Know-how for Agricultural industry**

As major economy of India depends on agriculture sector, but still the agriculture sector is undeveloped. For the development of agricultural sector, we are encouraging our students to build their own project on agricultural industry. As our institute belongs to rural area and which is surrounded with agricultural area. Our major feeder zone is from rural area and students belongs to farmer family so they are familiar with agricultural sector.

Lack of agricultural Labors is a serious issue in the development of the agricultural sector so in order to reduce manpower it is essential to implement automation in agricultural work. For encouraging this practice we are organizing some industrial visits to agricultural industry like dairy industry, Rahuri Agricultural university etc. We also encourage students to visit near-by sugar factory for cogeneration of products like Electric energy, ethanol etc. We have completed some agricultural projects and they are as follows.

1. All the students of TE E&TC have implemented their Mini Project on Dairy automation system, different groups have implemented different modules of Dairy and if we combine all the modules it will form fully automated dairy farm. Students have used different sensor and processors to design this project. The different modules of dairy automation system are cleaning module, feeding module, temperature and humidity control module and Milk testing module.
2. Students from BE Mechanical have implemented Solar based grapes drying system which is used for production of raisins from grapes. The whole project works on solar energy which is a green energy project. The project which was implemented like a prototype but if we implement it on a large scale then it will form a large Raisin manufacturing industry.
3. Another agricultural project from students of BE mechanical is “Multiple fruit grading machine”. They have developed a machine which can be used to separate the spherical and circular fruit size wise. The machine can separate the fruit in three grades i.e. small, medium and large. A drive is provided to the machine by using electric motor.
4. Our student from BE E&TC have implemented microcontroller based plant watering robot which measures humidity of soil and depending on humidity level robot ON/OFF the water pump.
5. With inspiration from incubation center project of design and development of Mango pulp extractor machine is undertaken by the BE Mechanical engineering students. This project is concentrating on the smart means of separating the pulp from the Seed, saving energy and providing an alternative source of food supplements and taste. The project is sponsored by Deepa Industry, MIDC, and Ahmednagar.

This practice helps us to enhance the use of technology in agricultural industry and motivate students to become entrepreneur.