

## Design and Development of an Agro Device for Planting Multiple Seed Types



**V. K. Sethuraman**

sethu.vgm@gmail.com  
Ph. No: 0 97866 37878

**Student's Name**    **V. K. Sethuraman**                      **PD (FT-2012)**

**Academic Supervisor(s)**    C. Dileepa and Sharath S. Shirsi

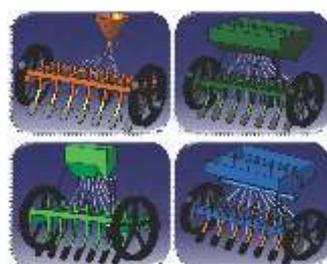
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**Abstract:**

Agriculture is the backbone of India and it stands at second place all over the world in the production of agricultural products. To increase the production rate it needs technological growth in the agricultural field. Increases in agro products are important because they are the life source and the important source of survival for mankind. So, to increase the production, many of the industries manufacture agricultural machineries and the prices of the products are quite high and the machines existing are for single purpose usage. Hence, it is important to develop the technology to produce products for multiple usages. The proposed project titled "Design and Development of an Agro Device for Planting Multiple Seed Types" was taken up.

Through literature review, it was found that there are many types of machinery designed and sold in the market depending upon the purpose and the crop to be planted. It was found that most of the machinery available was not for multiple usages. The other thing was the cost of the machineries were high and could not be owned by all Indian farmers, because most of our farmers have less land and one economically poor. To understand the user and the product environment, data collection process was carried out with the farmers in their agricultural fields. It was found that most of the farmers sow the seeds by the conventional methods and rarely farmers own the machineries. There are several tasks done in agriculture, but seed planting is the important task. The other design processes like product study, market study, ethnography were done and the data collected from the user's voices were considered and QFD was generated and from which PDS was generated. It was decided to design and develop the multiple seed planting machine. Doodles and ideation sketches were done four end concepts were developed. From the four concepts one was selected as final concept, detailing and rendering was done using Keyshot and CATIA software. Finally, full scale working model was fabricated. Validation was done and user feedback was collected. The results were positive and satisfactory.



**Various concepts**



**Rendered model**

**Final working model of seed planter**

