

## Application of RS & GIS in NRM for Outgoing Students

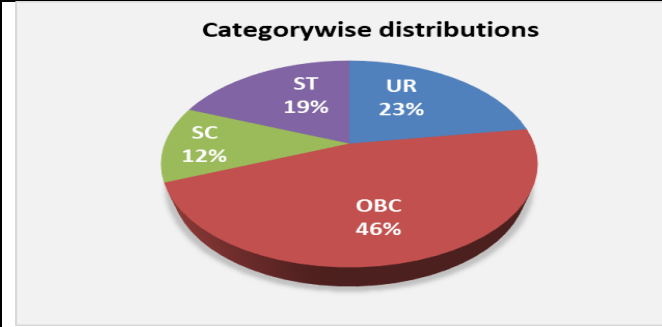
“Twenty-one days training program on Application of RS & GIS in NRM has been organized from 22.6.2021 to 12.7.2021 for outgoing student Agricultural Engineers. During first week of training program, students were exposed to structures design, soil sample analysis and different irrigation methods. Second week of the training program was devoted to information about remote sensing process, GIS and its functionalities, image interpretations, RS and GIS application in field of Agriculture, use of different types of thematic maps i.e. weather, road, Human, physical geography, landforms, physical features, land use and land cover (LULC), soil, slope, drainage and temperature map. Useful apps prevailing in NRM domain and different types of open source GIS software like QGIS plugins, gvSIG, GRASS GIS, ILWIS, SAGA GIS and GeoDa were also exposed. Surveying and levelling and area identification through open source GIS software has been covered in third week of the training program. 84 participants registered for program out of which 62% were male and 38% were female. They belong to UR (23%), OBC (46%), SC (12%) and ST (19%) categories. The detailed training schedule is listed below.

### Training schedule

Date	Topic
22.06.2021	Common structures and load distributions and force analysis
23.06.2021	Analysis of soil sample – sand, silt, clay, sieve analysis, and Hydrometry
24.06.2021	Determination of soil mechanical properties.
25.06.2021	Types of drippers, laterals and filters and their layout in drip design.
28.06.2021	Maintenance against clogging and fertigation techniques.
29.06.2021	Design, layout and evaluation of a sprinkler Irrigation system.
30.06.2021	Common satellites, resolutions, supplying agencies and data acquisition.
01.07.2021	Thematic maps its preparation and use.
02.07.2021	Introduction to open source software
05.07.2021	Useful apps prevailing in NRM domain.
06.07.2021	Working out area of an irregular field
07.07.2021	Levelling exercise
08.07.2021	Working and use of Total station
09.07.2021	Measurement and estimation of quantities of work.
12.07.2021	Costing for quantities SOR for PWD and SOR for WK

**Table 2.1 Participants on Application of RS & GIS in NRM**

Number of Students						Percentage of participation of Category			
Gender	UR	OBC	SC	ST	Total	UR	OBC	SC	ST
Male	7	32	5	8	52	13	62	10	15
Female	12	7	5	8	32	38	22	16	25
Total	19	39	10	16	84	23	46	12	19



### Types of Micro Sprinklers

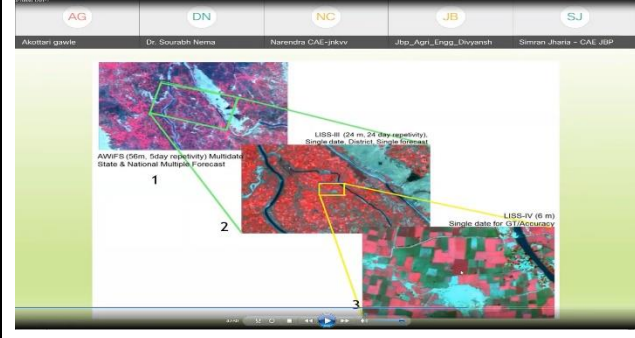
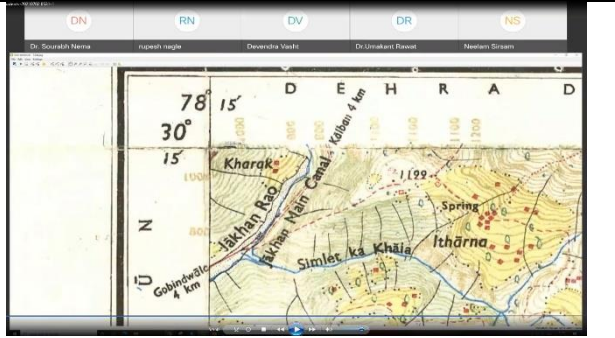
**SUPERNET**

Micro-sprinkler, with a unique regulation mechanism ensures even water and nutrient quantities per tree, uniform distribution and wetting diameter, regardless of sprinkler's inlet pressures or area topography.

- Applications:
  - Irrigation of tree plantations
  - Frost fighting
  - Overhead cooling

### Geography Matters...!!!

- Geographic Information' is information which can be related to specific locations.
- Most of human activity depends on geographic information.



By focusing on a specific topic, or theme, maps like these show information about some aspect of physical or human geography.

**2.1 Glimpses of training program on Application of RS & GIS in NRM**