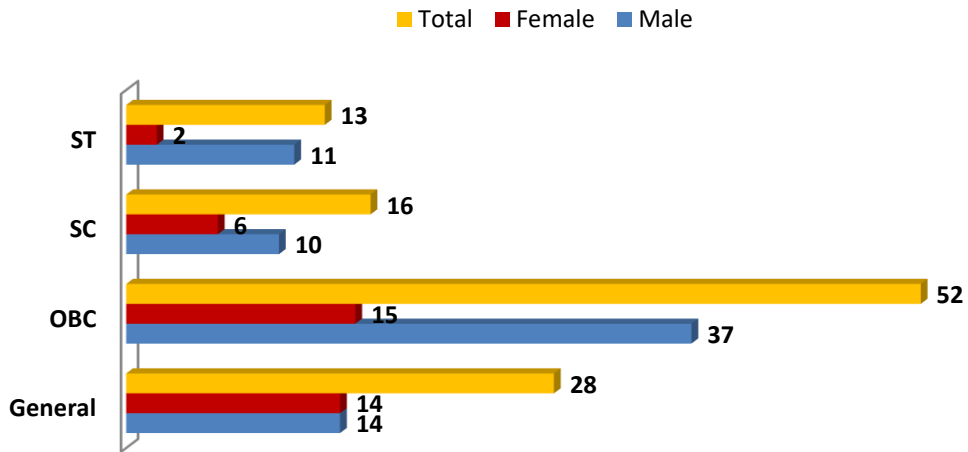


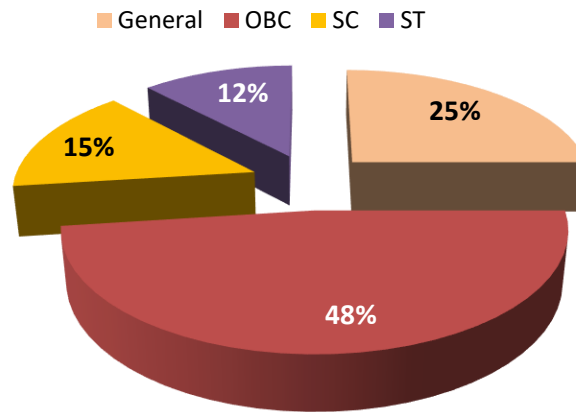
Awareness Programme on Remote Sensing Application in Student Research	
Date of Workshop	June 29, 2021
Time	3.00 pm – 4.00 p.m.
Location	CAE, JNKVV, JABALPUR
1. Objective	
Awareness Programme on Remote Sensing Application in Student Research.	
2. Participants	
Technical staff- Dr. R.N. Shrivastava, Dr. A.K. Bajpai, Dr. Shivran Krishnan, Dr. R.K. Nema, Dr. Dr. M.K. Awasthi, Dr. S.K. Sharma, Dr. Sourabh Nema, Dr. Minakshi Meshram, Anjali Patel, Rachit Nema, Krishna Singh, Sumit Kakade, Om Prakash Prajapati.	
3. Content of Events	
Welcome	A warm welcome to by Dr. A.K. Bajpai, Professor, SWE, discussed about aim of Program, Dr. R.N. Shrivastava and Dr. A. K. Bajpai coordinated the programme. Principal Investigator, Dr. R.K. Nema has also addressed the students about remote sensing and GIS application in Agriculture.
Programme Summary	Dr. Ramakrishnan, discussed for Remote sensing process area and application of RS in the agricultural sector, capabilities of RS and GIS, Details about EMR Spectrum, Satellites, Sensors and space programs, About GPS, Brief about GIS and its functionalities, Image interpretations, Applied RS and GIS application in field of Agriculture, Preparation of integrated maps for decision making.
Discussion with participants	Summed – up by Dr. R.N. Shrivastava, and appreciated to the students who tried to understand about Remote Sensing and GIS. Listening to any prominent personality in Awareness programme helps the student to gain information. Overall it was totally enjoyed and learned a lot in a comfortable environment.
Output of programme	One hundred nine participants registered for the awareness programme and out of these eighty-one students have attended on training on the subject.

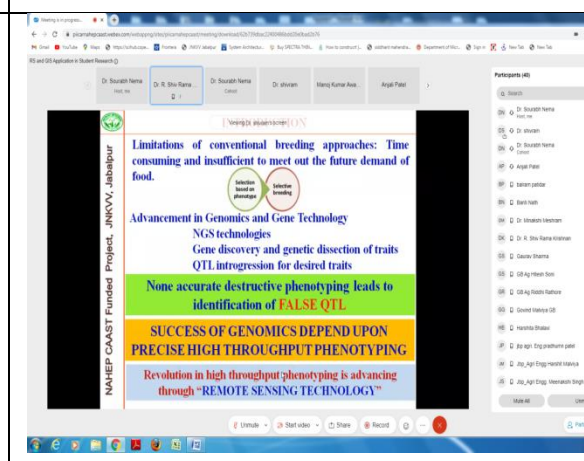
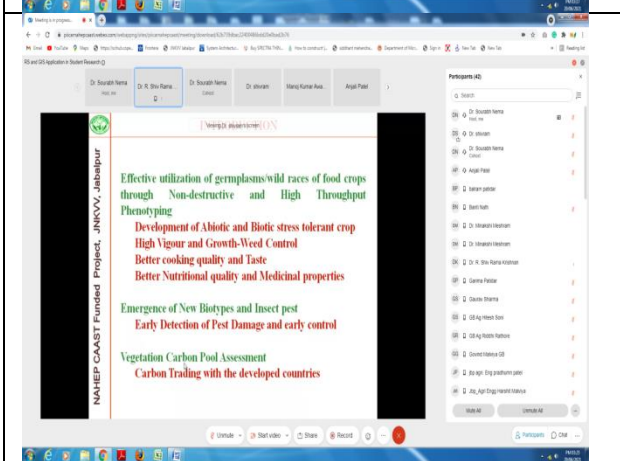
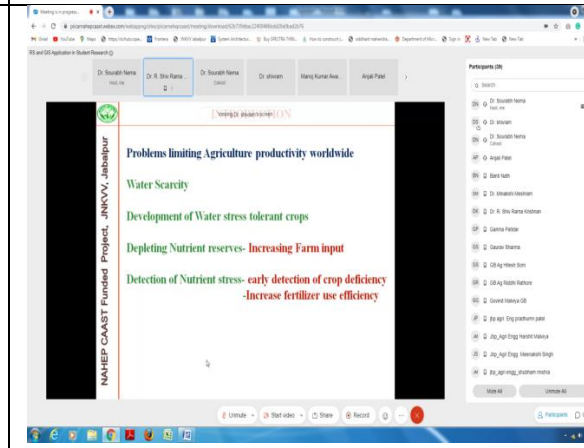
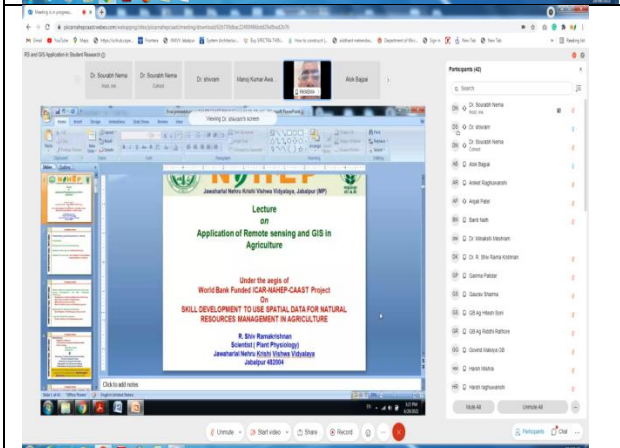
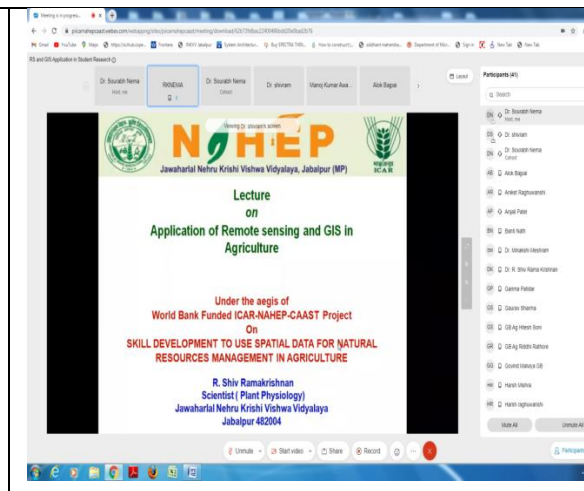
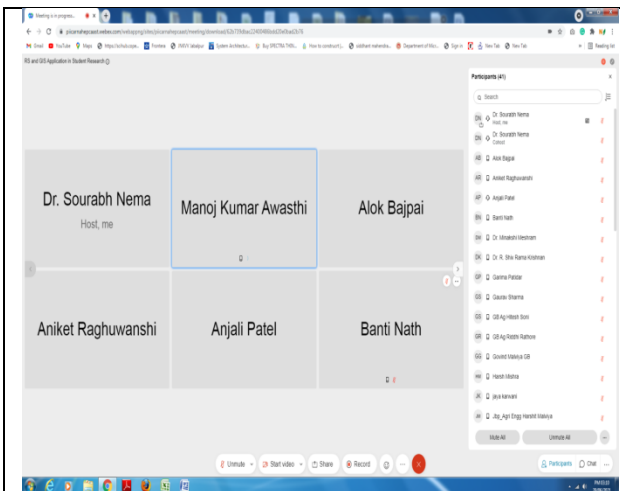
Category	General	OBC	SC	ST	Total	General	OBC	SC	ST
Male	14	37	10	11	72	19	52	14	15
Female	14	15	6	2	37	38	40	16	6
Total	28	52	16	13	109	25	48	15	12

RS & GIS Application in student Research



Percentage wise distribution





Basic Remote Sensing

Principle of Remote Sensing

All objects based on their structural, physical and chemical properties reflect different amount of Electromagnetic radiation in different spectral ranges, which forms a basis of recognition of these objects on a remotely sensed multispectral image.

Pixel Density

It refers to the size of the smallest possible feature that can be detected. Defines the pixel size of a digital image. Images are composed of a matrix of picture elements, or pixels, which are the smallest units of an image.

Normalized Difference Vegetation Index

HEALTHY (REFLECTANCE) STRESSED (REFLECTANCE)

NDVI = 0.72 NDVI = 0.14

$$NDVI = \frac{NIR - RED}{NIR + RED}$$

Scale: -1 to 0 (Dead/Non-photosynthetic tissue), 0 to 0.33 (Slightly stressed), 0.33 to 0.66 (Healthy), 0.66 to 1 (Very healthy forest)

Image processing steps used in the extraction of plant's projected shoot area from 3D visual images

(1) Visible light imaging

Solution M.R. et al (2011) Plant Methods 7:2