

Report On One Week Training On “Statistical Analysis of Agricultural Data Using R Program”

Training on “statistical analysis of agricultural data using R program” was organized under NAHEP-IDP being operated at UHS Bagalkot with the kind support from Indian Institute of Rice research, Hyderabad and Centre for water resources development and management, Kerala from 30.01.2023 to 04.02.2023. A total of 65 participants across India were registered for the training program from different states like Karnataka, Kerala, Tamilnadu, Andhra Pradesh, Orissa, Uttar Pradesh, Maharashtra etc. Within 3 days of circulation of the brochure the registration was closed on 29.01.2023 with 65 registrations with the huge demand and response. The participants were mainly Ph.D scholars and faculty members from different disciplines of horticulture, agriculture and allied sciences.

Inaugural Programme:

The training started on 30th January with the formal Inauguration at “D” block, Seminar hall, Vegetable Science, UHS Bagalkot, after the registration of participants in the gracious presence of University officers, IIRR and CWRDC faculties (online) and participants. Invocation was sung by Ms, Aishwary and Vidya PG students UHS, Bagalkot. Dr. Venkateshalu. B., Nodal officer, NAHEP-IDP welcomed the chief guests and participants for the training program. Introductory remarks were presented by Dr. R. K. Mesta, PI, NAHEP-IDP.

Honorable Vice chancellor UHS Bagalkot, Dr. K. M. Indiresh inaugurated the training program by watering the plant, and Dr. Ravindra Mulge, Dean PGS, UHS Bagalkot presided the function. In the gracious presence of other dignitaries as chief guests, Dr. H. P Maheshwarappa, Directorate of research, Dr. R. M. Sundaram, Director ICAR-IIRR, Dr. Manoj Samuel Executive director of CWRDM, Kerala, Dr. P. Muthuraman Principal Scientist (Agricultural Extension) ICAR-IIRR, Hyderabad and other heads of both the institutes (attended through virtual mode) this one-week program was inaugurated. During the inaugural address honorable Vice chancellor UHS Bagalkot, Dr. K. M. Indiresh wished good luck to the participants to learn the R program properly and to take best use of this one-week training program which will help the students and faculty in writing their thesis and research project reports and for their career.

All the chief guests present physically and virtually in the inaugural program enlightened the participants regarding the scope and importance of R program in analyzing the agricultural data, ease in drawing scientific conclusions and attractive graphical representations to make their research reports and publication manuscripts of wider acceptable and effective. Dr. Ravindra Mulge, PG dean UHS Bagalkot during his presidential address expressed the importance of statistical analysis and their systematic inference for better planning of the continued research and for good research publications in higher impact journals.

Dr. Sarvamangala Cholin, Co-PI, NAHEP, IDP, was the coordinator to organize the training program,. Most dynamic and nation-wide popular scientists for R program such as Dr Santosha Rathod, Scientist and experts of R program from Indian institute of Rice research, Dr. Naveen K, Scientist from CWRDM, Kerala and Senior Scientist Dr. Susheel Sarkar from Indian institute of agricultural Statistical research Institute, New Delhi served as speakers of the training program for one week. The inaugural program was concluded by vote of thanks delivered by Dr. Sarvamangala Cholin, Co-PI, NAHEP-IDP, UHS Bagalkot.



Dr. K. M. Indiresha Hon. VC and other dignitaries inaugurating training program by watering the plant

After inaugural session, training started with the installation of R and dependent packages. The recent and most important topics relevant to Agriculture, horticulture and allied sciences research experiments were covered in the training program with the hands-on sessions after every theory class.

This one week training program included the following topic for brief theory followed by rigorous hands on practices. Introduction to R, Data Visualization through ggplot2, Data Manipulation using Tidyverse, Basic Statistics in R, Testing of hypothesis, Correlation

Analysis, Regression Analysis, Time Series Analysis, Trend analysis, Breakeven Point Analysis, Design of Experiments – Basic, Discrete TS Modeling, Introduction to Machine Learning Regression, Classificatory Machine Learning Models, Stability and G*E Analysis, Design of Experiments – Advance, Data Classificatory Techniques:- Cluster analysis, Data Classificatory Techniques:- Discriminant Function Analysis, Data Reduction Techniques:- Principle Component Analysis, Data Reduction Techniques: Factor analysis, Meta-Analysis. All the sessions of the training were very interactive and course co-coordinators were so cooperative and patient enough to address every ones issues during hands on sessions. Feedback was collected from all the participants in the Google form and the score obtained form the participants about the training was on an average of **>8.5/10.0** score with the “excellence of conduct of training program”.



Participants enjoying the lecture hours and hands on practice with course teachers

After successful completion training schedule, on February 4th valedictory session of the training program was started at 12.00pm with an invocation song by Ms. Anusha. Honorable vice chancellor, Dr. K. M. Indiresh presided the chair for the valedictory ceremony. Dr. S. I. Athani Director of Extension, UHS Bagalkot was chief guest along with Dr. R. M. Sundaram, Director ICAR-IIRR, Dr. Manoj Samual Executive Director of CWRDM, Kerala, Dr. P. Muthuraman Principal Scientist (Agricultural Extension) ICAR-IIRR, Hyderabad and Dr. U. Surendran Principal Scientist (Soil Science) CWRDM, Kerala were invited as chief guests

to attend virtually. Welcome note was delivered by Dr. Venkateshalu B., Nodal Officer, NAHEP-IDP, UHS Bagalkot.



Valedictory session

Opportunity was given to some random participants to express their experience regarding the training program. The words by the participants who shared their experience were proving the fruitfulness of the training along with their comfortable stay and blissful hospitality provided by the university faculties and hostel students. Progress report of the training program was presented by **Dr. Sarvamangala Cholin, Co-PI, NAHEP-IDP, UHS Bagalkot**. Chief guests addressed the gathering and wished them best for their research career, further they inspired the participants to spread the gained knowledge horizontally among their friends and colleagues. All the dignitaries joined hands in distributing the participation certificates to all the participants.





Participants sharing their experience about one week training program



Participation certificate distribution by the dignitaries

At the end of the session, all the dignitaries present over there felicitated both the course coordinators, Dr Santosha Rathod, Scientist (Ag. Statistics), Indian institute of Rice Research, Hyderabad and Dr. Naveen K, Scientist B, CWRDM, Kozhikode, Kerala as a token of honor. Dr. K. M. Indiresch honorable vice chancellor, UHS Bagalkot delivered his presidential remarks, further he assured to extend necessary facilities and encouragements in near future for such useful training programs for the students and faculties on a regular basis. The session was completed with vote of thanks by **Dr. R. K. Mesta**, PI, NAHEP-IDP, UHS Bagalkot followed by Group photo.



Felicitation to the course teachers by Dr. K. M. Indiresh, Honorable Vice-Chancellor, UHS bagalkot and other dignitaries of the university.



Group photo of the participants with dignitaries and course teachers