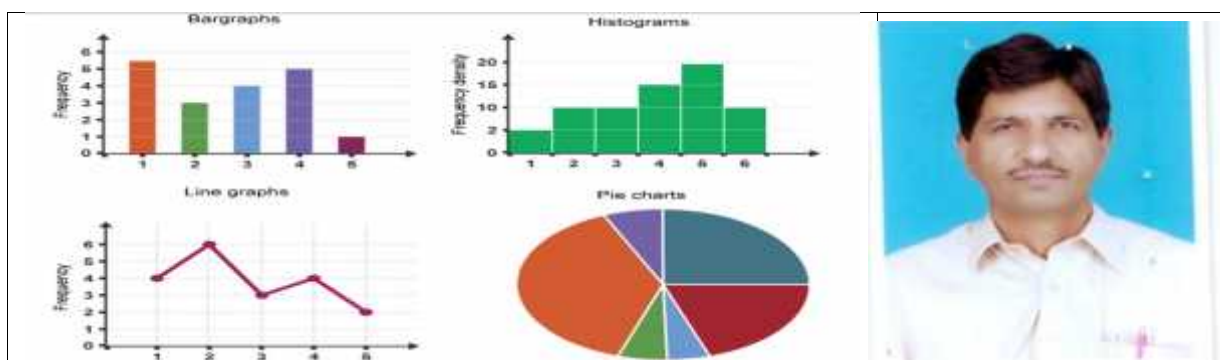


Annual Abridged Report of Statistical Section, AARI, Faisalabad 2018-19



OVERVIEW

Statistical Section was added to University of Agriculture, Faisalabad (former Punjab Agriculture College & Research Institute) in 1946 due to realizing the importance of the application of statistical techniques in Agricultural Research. On the bifurcation of Research and Education in 1962, administrative control of this section was transferred to Ayub Agricultural Research Institute, Faisalabad.

OBJECTIVES

The main objective of this section is to help to agricultural researchers of AARI in planning and designing of their research experiments, analysis of research data obtained thereby and interpretation of results. Vetting of annual research programs of the various disciplines, evaluation / identification of problem data and physical verification of layout of research experiments are the additional responsibilities of this section. Training of research scientists of Ayub Agricultural Research Institute on data analysis and interpretation of results are also being conducted. Data regarding area, production, yield etc. of all crops is being maintained to provide to the research scientists for the purpose to write their articles and research publications etc.

ACHIEVEMENTS

Advisory Services for Designing of Experiments.

This section provided the advisory services to 297 (up to June, 2019) research scientists for designing their research experiments according to their objectives and by keep in view the resources available with them. Guidance was also provided to researchers in

collection of data, interpretation / presentation of results for writing research papers, articles etc.

Evaluation / Identification of Problem Data.

The data of research experiments received from various institutes were examined, evaluated with statistical standards and problem data were identified for the purpose of validity of the research data collected by the Agri. Scientists.

Physical verification of layout of field experiments.

According to the vetted annual program of research work, the layouts of field experiments were physically checked /verified by paying visits to the experimental areas of different Directorates/Sections at Ayub Agricultural Research Institute, Faisalabad and outstations. The problems regarding experimental design faced by the researchers were discussed in detail and suitable solutions were suggested at the spot. Various points of mutual interest pertaining to the number of replications and shape & size of plot were also discussed. Technical staff was also suggested to send their layout plans to the Statistician for approval / vetting before sowing. The discipline wise detail of the experiments is as under:

Sr. No	Name of Institution/Section	No of Experiments
1	Soil Chemistry Section (ISCES)	18
2	Adaptive Research Farm Gujranwala	10
3	Oil Seed Research Institute, Faisalabad	12
4	Fodder Citrus Research Institute & Citrus Research Institute, Sargodha.	27
5	Pulses Research Institute, Faisalabad	21
6	Wheat Research Institute, Faisalabad	11
7	Oilseed Research Institute, Faisalabad	8
8	Agronomic Research Institute, Faisalabad	14
9	Horticultural Res. Instt. FSD	1



Technical staff visiting the research experiments during the physical verification of layouts

Statistical Analysis of Data

Statistical analysis of the data carried out through the year and a total of 1192 data sets/tables/parameters (up to March, 2019) of experiments conducted by different institutes / sections under the umbrella of Ayub Agricultural Research Institutes were statistically analyzed. Design wise detail of these data sets processed statistically during the year 2018-19 is as under:

Sr. No	Name of Experimental Design/Statistical Procedure	No. of parameters /tables processed statistically
1	RCBD	527
2	CRD	36
3	Factorial Experiments	42

4	Split Plot Design	54
5	Split Split Plot Design	1
6	Pooled ANOVA	26
7	Incomplete Block Design(Alpha Lattice)	3
8	Path Analysis	1
9	Bio Data	6
10	Augmented Design	12
11		
12	Multiple Comparison Test	643
13	Principal Component Analysis	15
14	Cluster Analysis	8
15	Correlation Matrix	16
16	T-Test	7
	Total	1397

Vetting of Annual Program of Research Work

Annual program of research work of Rabi and Kharif, 2018-19 of various disciplines of Ayub Agricultural Research Institute were vetted and improvements/ modifications were suggested where deemed necessary.

Training of Research Scientists

One of the thrust areas of this section is to provide training to the scientists of AARI in the disciplines of Agricultural Statistics in order to meet the challenges of Agricultural Research. Trainings were conducted on monthly basis for agri. researchers to enhance statistical aptitude and necessary understanding of design of experiments and interpretation of results to make them able to cope with the practical difficulties faced during experimentation.



A training class is engaged in Computer Lab.

The course covers the fields of Design of Experiments, Regression Analysis and Multivariate Techniques etc. and lays more emphasis on statistical computation by using different statistical software.



A group photo with trainees

April, 2019	Rice Research Institute, Kala Shah Kaku	3
May, 2019	Oilseed Research Institute, Faisalabad	7
June, 2019	Arid Zone Research Institute, Bhakkar	6

Discipline wise distribution of 57 (up to March, 2019) trained scientists under this program is as under:-

Month	Institute/Directorate	No. of Scientists
Aug, 2018	Soil Chemistry Section, Faisalabad.	6
	Soil & Water Testing Lab., Faisalabad.	
Sep, 2018	Soil Salinity Research Institute, Pindi Bhattian.	5
Oct, 2018	Regional Agriculture Research Institute, Bhawalpur.	6
Nov, 2018	Citrus Research Institute, Sargodha.	6
Dec, 2018	Barani Agricultural Research Institute, Chakwal.	5
Jan, 2019	Sugarcane Research Institute, Faisalabad.	4
Feb, 2019	Rapid Soil Fertility Survey & Soil Testing Institute, Punjab, Lahore.	3
Mar, 2019	Directorate of Floriculture (T&R) Punjab, Lahore.	6

List of Scientists

Mr. Jafar Salim

(Assistant Statistician)

Cell No. 03336553910

Email: jafarsalim44@gmail.com

Mr. Khalid Mehmood Mughal

(Assistant Statistician)

Cell No. 0336-4464570

Email: khalidmughal63@gmail.com