

Annual Abridged Report of Statistical Section, AARI, Faisalabad 2017-18



OVERVIEW

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

OBJECTIVES

This section extends help to agricultural researchers in planning and designing of research experiments, analysis of research data obtained thereby and interpretation of results. Vetting of annual research programs of the institutes, evaluation / identification of problem data and physical verification of layout of research experiments are key responsibilities of the 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.

ACHIEVEMENTS

Advisory services for Designing of Experiments.

There are number of factors which contribute a lot in minimizing experimental error but the choice of suitable design is the important one. For this purpose, advisory services were provided to 280 (up to June, 2018) research scientists for designing their research experiments. 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.

To ensure the validity of the research data collected by the Agri. Scientists, the data of research experiments received from various Institutes were examined, evaluated with statistical standards and problem data were identified.

Physical verification of layout of field experiments.

The layout of field experiments was physically checked /verified according to the vetted annual program of research work by paying visits to the experimental areas of different Directorates/Sections at Ayub Agricultural Research Institute, Faisalabad. The difficulties 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 is as under:

Sr. No	Name of Institute/Station	No. of Experiments
1.	Cotton Research Institute, Faisalabad	09
2.	Oilseed & Pulses Research Institute, Faisalabad	18
3.	ISCES, Faisalabad	10
4.	Pulses Research Institute, Faisalabad	20
5.	Wheat Research Institute, Faisalabad	20
6.	Vegetable Research Institute, Faisalabad	10
7.	Maize Research Station, Faisalabad.	19
8.	Agronomic Research Institute, FSD	7

Statistical Analysis of Data

The staff remained busy throughout the year due to the pouring a number of data sets for statistical analysis. A total of 1102 data sets/tables/parameters (up to April, 2018) 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 2017-18 is as under:

Sr. No	Name of Experimental Design / Statistical Procedure	No. of parameters / tables processed statistically
1	RCBD	523
2	Split Plot Design	31
3	Pooled ANOVA	34
4	Multiple Comparison Test	478
5	Correlation Matrix	14
6	Cluster Analysis	2
7	Principal Component Analysis	09
8	Chi Square Analysis	01
9	Path Analysis	02
10	C.R.D	3
11	Split Split Plot Design	5
Total		1102

Vetting of Annual Program of Research Work

Annual program of research work of Rabi and Kharif, 2017-18 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 develop trained scientists of AARI in the disciplines of Agricultural Statistics 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.



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.



Discipline wise distribution of 71 trained scientists under this program is as under:-

Month	Institute/Directorate	No. of Scientists
Jul, 2017	ISCES, Faisalabad	6
	Soil Fertility Section, AARI, FSD	
Aug, 2017	Sugarcane Research Institute, Faisalabad	5
Sep, 2017	Oilseed Research Institute, Faisalabad	6
	Pulses Research Institute, Faisalabad	
Oct, 2017	Agronomic Research Institute, Faisalabad	6
Nov, 2017	ISCES, Faisalabad	6
Dec, 2017	Horticultural Research Institute, Faisalabad	6
Jan, 2018	Entomological Research Institute, Faisalabad	6
Feb, 2018	Rice Research Institute, Kala Shah Kaku	6
Mar, 2018	Citrus Research Institute, Sargodha	6
Apr, 2018	Fodder Research Institute, Sargodha	6
May, 2019	Vegetable Research Institute, FSD	5
June, 2019	Cotton Research Sub Station, Jhung	7

Other Assignments

- Weekly crop situation reports were compiled of various institutes and sent to Agricultural Economist for the submission to DGA(R) and Secretary Agriculture, Lahore.
- Uploaded of data regarding “Farmer facilitation through modernized agricultural extension services 2.0” through Soil Fertility Research Institute, Lahore.
- Prepared the merit list of house allotment and provided to Director General Agri. (Research) as directed etc.

List of Scientists

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