

## 009

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time in context with the purpose of the experiment taken into the research programme. In our laboratory investigations, the Assigned Causes of Variations are usually eliminated by suitable experimental techniques and the variations in the result being unassignable are due to chance causes. If our experimental techniques are improved we shall be able to assign more causes of variations and thus reduce the variation due to chance. Since one living thing is never exactly like another living thing so in biology or medicine or human genetics, when we have to deal with the experimental determinations, this Chance Variations will always be present. This is why the selection of materials with the experiment itself should be carefully controlled.

In fact, it is painful to say that no systematic research planning and programming based on statistical techniques (which is a must) has yet been developed in these areas of research in the country. Except a few, most of the research programmes are being conducted without any statistical basis of methodologies. For example, if a research worker wants to conduct an experiment on certain objectives, he selects a design himself (whether it is a CRBD, RCB, Lattice, Latin Square or factorial or any other design) and accordingly does the layout also. But if he is not well acquainted with basic principles of an efficient design, discussed earlier, will definitely fail to minimize the experimental errors. He does not consider even some of the influencing factors which are responsible for increasing the experimental errors. And when the project activities are over the research worker come to the statistician for compilation and interpretation of data (collected unscientifically) which creates a very complex and delicate situation to give any indication for decision-making to the objective of the programme. Even sometimes, they compile the data themselves without statistical interpretation which is meaning less to a researcher.

At times, complain goes like this. the statisticians in these sectors cannot always help the researchers in planning of the research programmes and that is why they do not go to the statistician. This blame is, to some extent, not undue. The thing which is true in this case, is the lack of applied training of the statistical personnels in the respective fields of these organisations. And so long much importance was not also given in this respect. The preference of Personnel Career Development Programme in the discipline should also get the equal priority as it happens in other disciplines.

If this is the pictorial-trend of the overall research activity in the country, the future of research is simply hopeless and mere misuse of resources of the hungry millions.

One of the most effective and back-gearing constraints working in major research organisations of the country, is the lack of team-spirit of the research workers irrespective of professional position and status. Every research worker, specially the team leader of a research programme should always be co-operative, open and readily available to other members of the team. Even it should be to a junior researcher of a different discipline who is useful to this programme. But unfortunately, this of non-cooperative attitude is still lying with some of the senior scientists in different research organisations of the country. It is also applicable in seeking statistical service which is not desirable. I think though late, it is the time for the removal of such attitude which will lead to a better contribution for improving over-research precision.

Besides, all other laboratory research experiments are to be designed and analysed by other different biometrical tools required from time to

It is also to note that research is said to be a continuous

make it meaningful  
hungry country. millions  
Partially reflecting the  
of the Forest Economist  
Karl J. Mostanola (Econ  
mics, Planning and Statistics  
1974 Field Document No. 4  
of FAO/UNDP Project), the  
following out lines are recom-  
mended for a better research  
atmosphere in our country.

Firstly, in order to ensure  
efficient design of research  
projects, it is suggested that  
inclusion in the insti-  
tutional must be checked  
programme in the insti-  
tutional must be checked  
designated statistician.  
Secondly, projects which even  
proposers opinion.  
Thirdly, and interpreta-  
tion of the possibility  
of the possibility  
of such results  
of such results  
could be  
the work  
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