Basic consideration in the planning of Field Experiments:

1- Experimental Errors / pitfalls of Experiment: mistake during conducting of experiments i.e in paper work sowing rate rate is present in another place but practically it is not present according to layout.

2- Faulty Experimental Design: For lab and for fields experimental designs are different. we should focus on the experiments.

3- Failure to control personal bairness: during data recording data is only collected from one plot, not from others. data should be collected from area where we throw quadrate, not personal bairness. one person should record data from all replications of mistake will be occure. it will be equal for all plots i.e to avoid error one person should apply or for recorder.

=) During recording observations (i.e No. of plants, plant height, no. of tillers, spike bearing tillers etc) i.e. uniform procedure should be adopt. entrance in replications must be according to layout.

=) Improper method of data analysis. Recent trends are not adopted in pakistan.

4- Poor interpretation: Sometime there is new or new technologies techniques in experiments and have no idea how to present the data. we make hard work to collect data but poor presentation. most graphic data is best for presentation but we never adopt this thing.

Correction of Errors:

How to correct these errors:

⇒ Select the uniform piece of land.

Plot size should decrease.

⇒ Increase no. of replications.

⇒ Sample/data should be stores until or unless data is seen by supervisor. i.e grain: straw should be dried.

⇒ Sometimes experimental calculations are not known by students. Students not known by about gross plot data, net plot data etc. even students does not record complete data.

⇒ plant population should be control but it is very difficult in the summer crop because moisture is not present and population will be less.

⇒ Improper interpretation of results should be avoided.

⇒ Sometime data is adequate but relationships are false i.e we observe fertilizer at 0, 50, 100, 150 and 200 rate but above 200 rate, students make their own data. that is false/wrong way.

Plot size: closely spread crop, where row to row distance are less and plot size should be small plot size should be according to nature of crop. there will be lengthwise plan to plant distance in chick. pea but no plan to plant distance in wheat, oat, barley etc.

for: plot length 400 cm (4m) and chick pea having 60 plant - plant distance then plot should be 6.6 which are correct.

⇒ No. of treatments ↑ increase, plot size should be small
⇒ method of preparation i.e somebody is interested in tillage operation, then large plot size should be to run the machinery.
⇒ Resources available for experiment i.e labour, area, funds etc. then according to resources, plot size should be maintained.
⇒ For nursery sowing, plot size is small, so, plot size may vary.

uniformity of operations: Except the factor under study, all other factors should be uniform i.e seed rate, sowing date under study should be vary but other all factors should be uniform.

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Basic consideration in planning of field Experiments:

(1) Shape of plot/block/Replication: Fertility is in horizontal (→) condition & direction either increasing or decreasing so, ⇒ replication should be made across the fertility gradient not along the fertility gradient. So, by this, variation between the replication should be maximum. By this, replications are more representative.