Effect of Nitrogen and Phosphorus Application on the Yield and Mineral Composition of Groundnut (*Arachis hypogaea* L.) Grown on Calcareous Soils Low Either in Copper or Molybdenum or Both

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In order to study the nature of interrelationships of N and P with native soil Cu and Mo, experiments were planned on some soils of Junagadh district, which were low either in Cu or Mo or both.

Application of N alone is detriment for the yield of pod as well as soil content of groundnut. The pod yield increased by the P application and it was maximum with the application of N @ 12.5 kg N//ha together with 50 kg P_2O_5/ha. This combination also produced highest yield of oil.

Since the chemical composition of a crop is dependent on the level of nutrients supplied to the crop, in terms of the economical return of groundnut crop, the main criterion should be the yield of kernels. The treatment which gives the highest yield is at 12.5 kg N together with 50 kg P_2O_5/ha at which the chemical composition of groundnut kernel is as under:

N–4.107 (per cent);
Ca–0.069 (per cent);
Fe–49.88 (ppm);
Cu–12.59 (ppm);
P_2O_5–0.986 (per cent);
Mg–0.214 (per cent);
Mn–11.93 (ppm);
Mo–1.892 (ppm);
K_2O–0.661 (per cent);
S–0.557 (per cent);
Zn–11.63 (ppm);

Maintenance of such a plant composition on soil deficient in Cu or Mo can be achieved by supplementing the deficient micronutrient which may react physiologically and promote the process of nutrient absorption so as to maintain higher yield.