

Since half the irrigated groundnut is summer groundnut, it may be that the crop is taken on sugarcane field when cane is in its initial stages and N dominates so that we get N-P level for irrigated groundnut at 17-7 Kg/ha and 24-19 Kg/ha respectively which is not only below 25-50 recommendation but there is considerable imbalance with P being highly inadequate.

Among the crops not included in the 13-crop list (on which sampling is based) are rice, wheat and gram for which we have analysed data collected from the selected farmers. Rice which is fourth largest among foodgrains in terms of area (7 per cent of GCA by official statistics) is the second largest supplier of foodgrains and over 1967-83 the productivity has increased from 10 to 15 quintals/ha with production growth rate being 3.9 per cent p.a. In the sample it has only 2 per cent of GCA representation and the main regions of Region I and IV are not consistently represented over the two years. For irrigated component N-P level is 79-14 Kg/ha and 50-9 Kg/ha for the two years (by official data 25 per cent of crop area is irrigated) and the recommended doses are 100-50 Kg/ha for HYV-irrigated or assured rainfall areas and 50-25 Kg/ha for TV irrigated or rainfed. With 60 per cent area under HYV, there must be considerable area under HYV-irrigated and hence scope for increased fertilizer use exists. For unirrigated component, we have N-P usages at 22-5 Kg/ha in 1983-84 and 50-9 Kg/ha in 1984-85. Again there appears scope as there must be substantial HYV area in this component. Wheat, which is fifth in terms of area among foodgrains, (5 per cent of GCA) is the third largest supplier and has good production growth rates of 6.84 per cent p.a., highest among foodgrains over 1967-83 but in comparatively recent period of 1977 onwards, the crop appears to be stagnating. Proportion of HYV is very high, between 75 to 80 per cent by official statistics and the proportion of irrigated is constantly increasing with 53 per cent area being irrigated in 1980-83 triennium. For irrigated HYV or TV, N-P of 75-50 Kg/ha is recommended for tall variety and 120-60 Kg/ha for short variety. For selected farmers, we get N-P levels around 70-20 Kg/ha which appear satisfactory as tall varieties are likely to dominate. For unirrigated wheat 25-25 and 40-20 are the recommended N-P levels and the sample estimates are quite low at 3-1 Kg/ha and 7-2 Kg/ha in the two years so for unirrigated wheat use-levels can be increased. For pulses including gram, N-P usage is 2-0 Kg/ha and 9-5 Kg/ha in 1983-84 and 1984-85 which is not only below recommended 12.5-25 Kg/ha but there is imbalance with N dominating instead of P. This may be due to the pulses being taken as a mixed crop. But if the imbalance is due to ignorance, it should be removed. Among other crops, onion is important and in fact is included in the 13-crop aggregate on which sampling is based. For 1983-84 we get N-P usage at 62-47 Kg/ha and for 1984-85 it is 37-26 Kg/ha. By Table 4.3(b) the recommended level is 50-50 Kg/ha and observed levels appear satisfactory but by Table 4.3(a) recommendation is 100-50 Kg/ha and the observed levels are low. It is difficult to assess the scope for further use of fertilizer for this crop.

For the purpose of examining relationship between size of farm and levels of fertilizer use, 1984-85 data of 600 cultivators were considered. The classical size-inputs inverse relation also emerges true for size-fertilizer input relationship. Classifying data by size of cultivated area by intervals of upto 2 hectares, 2 to 4 hectares, 4 to 6 hectares, 6 to 8 hectares and final interval