MINERAL NUTRIENT STUDIES OF
LEMONGRASS (CITROPOGO: FELAVOGUS)

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Five field trials were conducted at Aligarh (India) during 1979-1981 to investigate the feasibility of cultivation of lemongrass in Western Uttar Pradesh and to study the effect of basal and foliar application of mineral nutrients on growth, herbage and essential oil yields, essential oil percentage and quality (citral percentage and citral yield) and NPK contents in leaves of lemongrass. The data were found mostly significant.

In Experiments 1-3 (1979), based on simple randomised block design, the effect of 3 levels each of basal N, P and K was studied. Considering the entire results on various parameters studied at three cuts, it was noted that individual application of 300 K2O/ha, 125 K2O P2O5/ha and
160 kg K₂O/ha proved optimum.

Experiment 4 was performed in 1980 according to simple randomised block design to investigate the effect of combined NPK (selecting three levels of each of these nutrients on the basis of results of first year of study) in all possible combinations. Another departure from the previous year's studies was that this trial was started one month early to avoid the coincidence of winter (dormant period of lemongrass) with the last harvest. Taking into consideration all characteristics studied at all three cuts, it was found that N₂₅₀ P₁₀₀ K₁₆₀ and N₂₅₀ P₁₂₅ K₁₂₀ appeared to show an overall superiority over the other combinations tried.

Experiment 5 was laid in 1981 according to split plot design to study the effect of leaf-applied K and P alone and in combination (sub plot treatments) in the presence of two basal doses of combined N and P (main plot treatments). Here, only two cuts could be taken as it was considered desirable to allow sufficient time for the sprayed nutrients to get metabolised in the leaves. The basal treatment N₃₀₀ P₁₅₀ proved better for most of the parameters studied at both cuts. Of the sixteen spray treatments, K + P sprays proved generally superior to sprays of N or P alone with N₁₀ P₂ proving optimum. Considering the interactions
between basal and spray treatments, spray of $\mathrm{N}_2\mathrm{P}_2$ proved generally better for all significantly affected characteristics irrespective of the basal dose.

On the basis of the results of these experiments, it was inferred that lemongrass can be cultivated successfully in Western Uttar Pradesh. Transplantation in early March, which ensured ideal growth and better yields, is a new finding. Similarly, the selection of optimal basal NPK dose, the establishment of fertiliser economy using foliar application technique and the effect of nutrients on the NPK contents in leaves of lemongrass is being reported for the first time.