



Effects of biological, organic and chemical fertilizers on yield, hydration coefficient, cookability, and mineral composition of groundnut seeds

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A field experiment was carried out to investigate the effects of *Bradyrhizobium*, VA Mycorrhizal inoculation, phosphorus, nitrogen and chicken manure on yield, 100-seed weight, cookability, hydration coefficient and mineral composition of groundnut (*Arachis hypogaea*) seeds. The results showed that nitrogen, phosphorus and chicken manure treatments significantly ($p \leq 0.001$) increased yield, 100-seed weight, non-soakers, and hydration coefficient, in the absence of *Bradyrhizobium* and/or VA mycorrhizal inoculation. The results also showed that *Bradyrhizobium* and/or VA mycorrhizal inoculation significantly ($p \leq 0.05$) increased yield, 100-seed weight, cookability, hydration coefficient, P, Na, K, Cu and Mg contents. A positive correlation ($r = 0.87-0.94$) was observed between the hydration coefficient and cookability. Na, K and Cu content of seeds were significantly ($p \leq 0.05$) increased with N, P and manure treatments, whereas, the Mg percentage increased by N and P treatments and decreased when 0.01 mton manure were applied. The results of this investigation indicate that *Bradyrhizobium* and mycorrhizal inoculation are promising biological fertilizers because they are cheap, easy to handle and improve groundnut growth, yield and seed quality. © 1998 Elsevier Science Ltd. All rights reserved.

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