

Research Article

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Incubation study of the stromatolyte as a natural source of liming material for management of acid soil

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Summary

The possibility of using the stromatolyte as a soil amendment in an acid soil was investigated. Stromatolyte contained 79 per cent calcium carbonates plus small amount of magnesium and sulphur. An incubation study was conducted with an acid soil upto 50 days and the treatments included various doses of stromatolyte (0.1, 0.2 and 0.3 LR) with and without FYM. Results indicated the application of different doses of stromatolyte raised the pH from 5.1 to 6.2 and maintained from 14th to 28th days of incubation period. But when these different doses of stromatolyte mixed with FYM, it raised the pH from 5.4 to 6.4 and maintained from 21 to 28th days of incubation period. The application of different doses of stromatolyte neutralised the acidity (from 1.13 to 0.62 Cmol (P⁺) / kg), exchangeable Al⁺³ (from 0.60 to 0.43 Cmol (P⁺) / kg) and exchangeable H⁺ (from 0.50 to 0.19 Cmol (P⁺) / kg). But the combine application of different doses of stromatolyte with FYM neutralised the acidity (from 1.08 to 0.54 Cmol(P⁺)/kg), exchangeable Al⁺³ (from 0.56 to 0.40 Cmol(P⁺)/kg) and exchangeable H⁺ (0.49 to 0.04 Cmol (P⁺) / kg) more. The application of ST @ 0.3 LR mixed with FYM raised the pH (6.4) and neutralised the acidity (0.54 Cmol(P⁺)/kg), exchangeable Al⁺³ (0.40 Cmol (P⁺)/kg) and exchangeable H⁺ (0.04 Cmol(P⁺)/kg) more compared to the other treatments.

Key words : Stromatolyte, pH, Exchange acidity, Acid soil

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