A REVIEW

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Fertility management of the soil-rhizosphere system

P.M. VAGHASIA*, L.L. JIVANI AND V.H. KACHHADIYA

Main Oilseeds Research Station, Junagadh Agricultural University, JUNAGADH(GUJARAT) INDIA

ABSTRACT

Very small proportion of rhizosphere soil is of critical importance for plant growth and health. The soil-rhizosphere zones occupied less than 0.5 to 20 % volume of the upper surface soil in a annual crops or fruit tree. Designing sustainable management practices that focus on rhizosphere soil is more efficient and cost-effective for improving crop productivity with fewer agrochemical inputs. The innovative Starter Solution Technology (SST) for applying nutrients directly to the soil-rhizosphere system. The SST reduces fertilizer application, increases crops yields, decreases fertilizer residues in the soil and is simple to apply. Other practices for managing the fertility of rhizosphere soil, such as supplying nutrients through drip irrigation, applying organic fertilizers and biocharcoals to increase soil-buffering capacity and localized amendment as strategies for problem soils are also discussed. All of the proposed management practices can be easily adopted by Asian farmers.

Key words : Soil rhizosphere, Fertility management, Plant growth

*** Author for correspondence.**