Soil microorganisms play a significant role in the transfer of phosphorus (P) within terrestrial ecosystems. Microbial processes in soil are important for the distribution of P between various inorganic and organic P fractions and subsequently for the potential availability of phosphate for plant acquisition. Microorganisms that interact with plant roots and their associated processes within the rhizosphere are of particular importance. Interest in the management of rhizosphere microorganisms involved in phosphate uptake by plants is driven by both an objective to maintain productive yields that are economical and sustainable and to avoid P loss from soil-based production systems, which can contribute to eutrophication of aquatic environments. The relative importance of these objectives clearly depends on regional characteristics, from a predominance of the issue of high P uptake efficiency in areas with low P soils and low fertilizer inputs, towards a predominance of the eutrophication issue in soils that are either relatively high in P or receive substantial amounts of manure applications (Sims et al., 2000). Furthermore, there is increasing need to develop agricultural systems that are more P efficient, given that the world’s reserves of high-quality rock-phosphates are finite and that the costs to alleviate P deficiency are often prohibitive, particularly in developing countries and on acidic soils in tropical and subtropical regions (Hedley et al., 1995). Consequently, the role of rhizosphere microorganisms also varies accord-