

Hatfield, J. L. and B. A. Stewart eds. (1992) Limitations to Plant Root Growth (Advances in Soil Science 19). Springer-Verlag, Berlin.

Development and growth of crop root system (Betty Klepper)  
: introduction, monocotyledonous root system, dicotyledonous root system, needed research.

Soil environment constraints to root growth (R. W. Zobel):  
introduction, the rhizosphere environment, root system morphology, root-soil interactions conclusions.

Root function in water transport (J. M. Baker, J. M. Wraith and F. N. Dalton): introduction, water entry into roots, root function during drought, concluding remarks.

Wheel-induced soil physical limitations to root growth (W. D. Voorhees): introduction, soil physical limitations to root growth, extent and influence of wheel traffic, root growth, root growth and crop yield, subsoil compaction, conclusions.

Soil chemical factors limiting plant root growth (C. D. Foy)  
: introduction, soil chemical factors, solving the shallow rooting problems, challenges for future research, summary, acknowledgments.

Root extraction of nutrients associated with long-term soil management (A. N. Sharpley, J. J. Meisinger, J. F. Power and D. L. Suarez): introduction, effects of long-term soil management on root extraction of nutrients, interaction among management factors, modeling long-term management effects on root extraction of nutrients, conclusions.