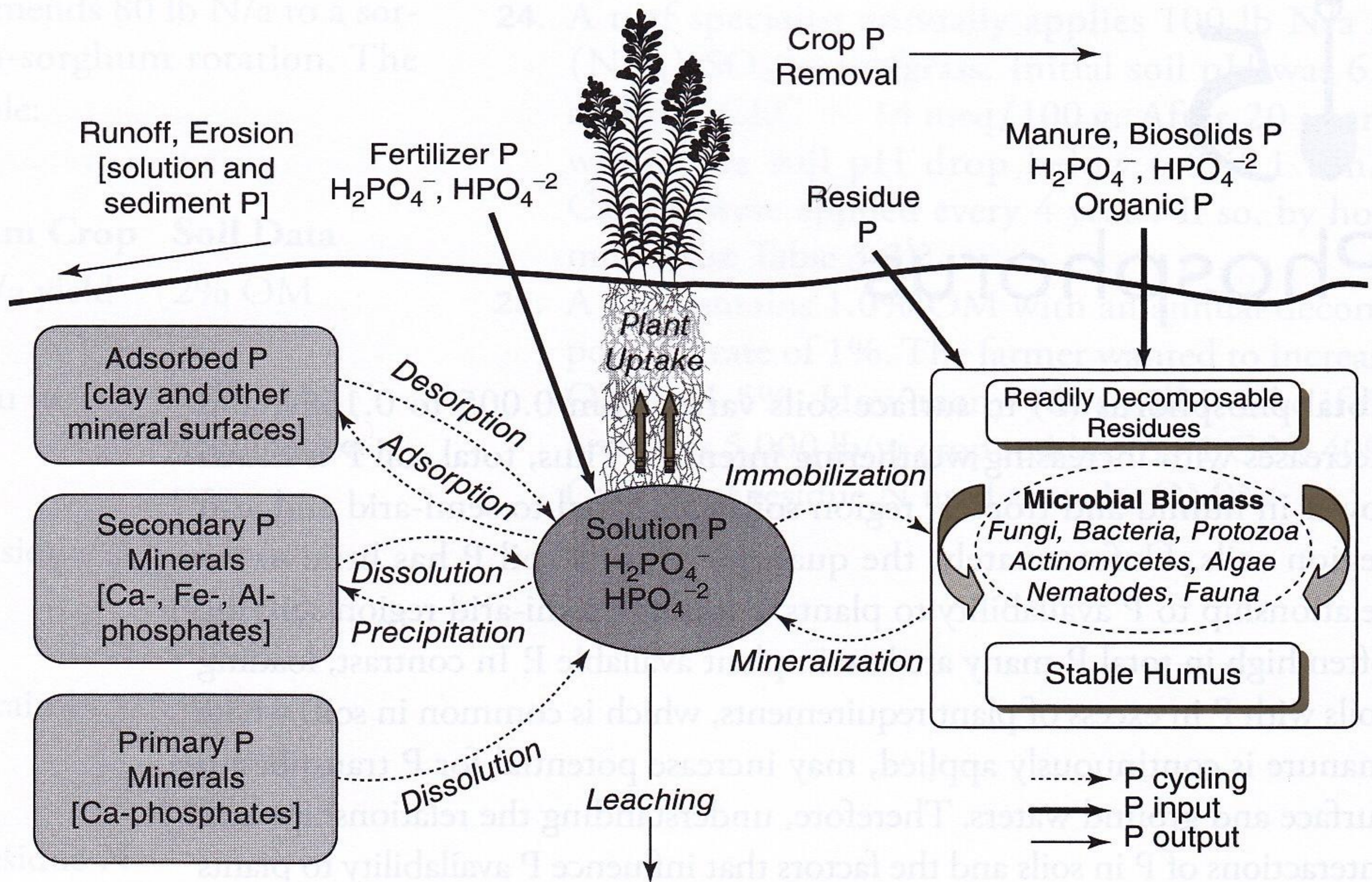
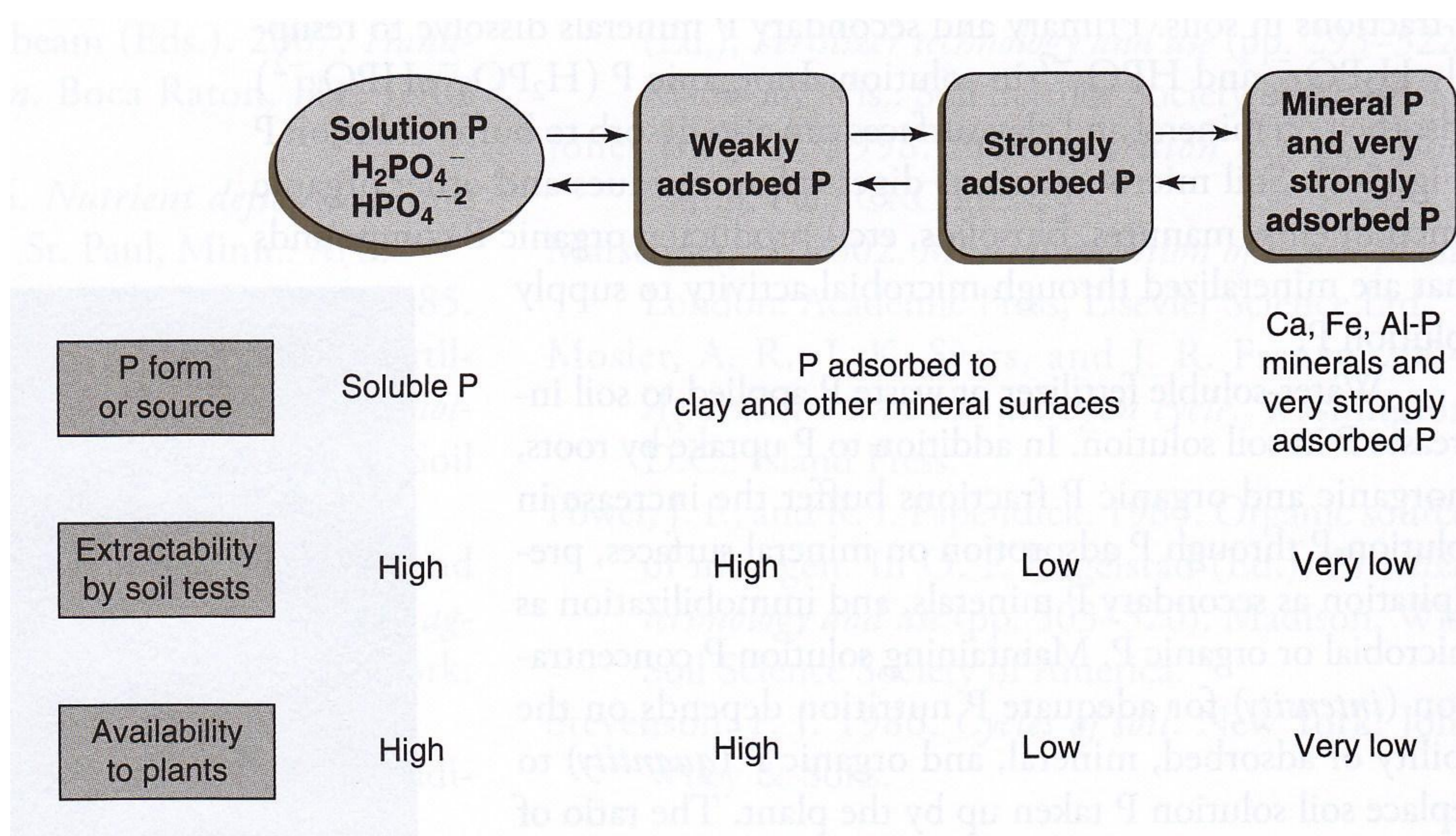


Phosphorus cycle in soil



Internal P cycling between soil solution phosphorus and adsorbed P, solid mineral P, and organic P controls phosphorus availability to plants. Removal of phosphorus from the system occurs primarily through crop removal; however, phosphorus losses occur from soil erosion, runoff and leaching.



$H_2PO_4^-$ or HPO_4^{2-} in soil solution or weakly adsorbed to AEC sites on mineral surfaces are the dominant P sources immediately available to plants. The strongly adsorbed and P-containing minerals provide little immediate plant available P. The arrows between P forms indicate that solution P can be converted to any adsorbed or mineral P form. While weakly adsorbed P (labile P) can be readily desorbed to solution (long arrow), strongly adsorbed (non-labile P) and mineral P conversion to soluble P is substantially lower (short arrow),