How readily soil particles cling together to form aggregates, called crumbs or peds, is the measure of soil structure. Soils that bind together to form loose, granular aggregates about the size of cookie crumbs (left) retain moisture and nutrients and are well aerated—ideal for the growth of plant roots. The key to this good structure is organic matter and thriving communities of soil organisms. Sandy soils (center) do not bind together and tend to have the consistency of cake mix. Compacted soils (right) have a “platy” structure, with multiple layers of flat, thin peds. Weight bearing down on the soil has caused the larger pores to collapse, restricting the movement of air and water and limiting the growth of plant roots.