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## SOIL ORGANIC MATTER: An Overlooked Resource

Soil is the foundation of every farming enterprise. Surprisingly, many farmers have only a rudimentary understanding of this important farming asset and even less knowledge of the role played by organic matter in the soil.

Soil contains inorganic and organic material. The inorganic material is derived from the soil parent material and fertiliser and other additions. The organic matter arises from living organisms - plants (roots, stems, leaves), earthworms, insects, fungi, bacteria etc and the residue of these organisms either after they die or have been eaten by other animals (dung etc).

**Why is organic matter important?** Organic matter is vital because of the range of functions it performs in the soil. It improves soil stability and structure; it increases soil water holding capacity and prevents the leaching of nutrients. It enhances the supply of essential plant nutrients, especially of nitrogen, phosphorus and sulphur plus trace elements like boron and copper. Organic matter is the primary food and energy source for soil micro-organisms, which in turn release nutrients stored in the organic matter back into soil solution. Organic matter improves the cation exchange capacity of a soil and, because it is a dark colour, it helps to absorb more of the sun's heat into soil. All in all, organic matter is critical for a healthy, living and productive soil.

**What impact does organic matter have on a soil's fertility?** Farming extracts significant amounts of nutrients from a soil. Consequently, if production is to be maintained, fertility must also be maintained or improved. Practically, this usually means the application of fertiliser, which in our modern world equates to the addition of inorganic salt based manufactured compounds. At about this point, the important role that is played by the organic matter is forgotten. Instead, based on a limited soil test largely based on the inorganic fraction of the soil, the farmer believes he has all the information he needs. Now of course, cost and convenience are important issues, but care is needed to ensure that such soil test results are not misinterpreted or oversimplified.

To base one's farm management decisions on the inorganic soil fraction without regard to organic matter levels is like skating on thin ice. Why would one knowingly overlook such a valuable resource? Soil fertility arises from the culmination of both inorganic and organic material. Good decision making requires the acquisition of good information. How then can any farmer make good farm management decisions without an appreciation of the organic component of his soil asset?