

Cover crop for enhancement of soil and water quality

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ABSTRACT: Soil and water quality are the important parameters with respect to soil health and crop production, as they get degraded due to various factors such as- water logging, salt accumulation, desertification, injudicious use of fertilizer and pesticides. Soil erosion is one of such major cause involved in reduction in soil fertility and productivity. Therefore, an approach is needed for enhancement of soil and water quality. One of such approaches is the use of cover crops. Cover crops are the crops that cover the soil and reduce soil erosion and mostly grown during the fallow periods, it could be a winter cover crop or summer cover crop. Cover crops are also known as 'catch crops' or 'green manure crops'. The present investigation was done to enhance the soil and water quality by introducing cover crops into annual cropping system by taking into account the earlier reports, which suggested that cover crops are helpful in increasing organic matter, carbon, and nutrients content of soil and thereby increasing biological, chemical and physical activity of soil. Cover crops are also helpful in reducing load of heavy metal from soil and decreasing nitrate leaching, which improves the quality of water.

Key Words: Soil carbon, soil nitrogen, soil microflora, soil temperature, phytoremediation, soil water.