

Mulching: Materials, Advantages and Crop Production

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Abstract

Mulching materials in crop production plays a pivotal role in minimizing the weed menace, decreasing dispersion of soil particles by rain drops and containing soil erosion, balance of soil temperature and soil moisture conservation. Mulching materials of organic origin are found to be major stakeholders in more moisture retention in the root zone depth and improved soil physical properties, nutrients supply and enhanced growth, yield and quality of crop and up on decomposition adds organic matter to the soil. Vegetable production is an enterprise demands huge inputs like irrigation water, fertilizers, plant protection chemicals and intercultural operations. Likewise, the establishment of seedlings in the field is a tedious work in scanty rainfall regions which is considered as a dwindling natural resource. In view of advantages by mulching particularly in insulation of soil temperature and moisture conservation in hot arid and semi-arid areas, the practices of mulching in crop production is recommended to reduce the cost of cultivation.

Keywords: Mulching, organic mulch, synthetic mulch, crop production

1. Introduction

Protected cultivation is one of the revolutionary ways for realizing optimum yields over a decade amid the challenges like globalization of markets, shrinking cultivable lands and climate change. This is the technique wherein the microclimate around the plant is controlled fully or partially to protect the crop from adverse conditions and presently it is catching up in tropical countries for high value flower and vegetable cultivation (Maitra *et al.* 2020). Mulching is one of the potential protected cultivation approaches to serve this purpose. It is a protective ground cover that can include manure, saw dust, seaweed, litter, stubbles, sands, pebbles, plastics, and other natural