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Use of Mulches in Crops: An Opinion

Manpriya Chopra*

Bhagwan Mahaveer Public Senior Secondary School, Banga, India

***Corresponding author:** Chopra M, Bhagwan Mahaveer Public Senior Secondary School, Banga, India; E-mail: mnpriyachopra25[AT]gmail.com

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In this 20th century, with the increasing population demand of food also enhances. To cope up with the rising demands, various techniques are used to increase productivity of crops. The major cause that decreases the productivity of crops is weeds. Weeds are considered as unwanted plants that interferes the normal growth and development of plant by obtaining useful nutrients from soil, competing main plants for space etc. Commonly growing weeds are *Chenopodium, Amaranthus, Cannabis, Medicago* etc. They decrease the yield of main crop also. To get rid off from weeds, certain weedicides are used that decrease the growth of weeds, but they may also affect soil, health of the organisms that consumes it after harvesting. So basic practices used by farmers, now a days is mulching. Mulching is a treatment that is given to crops to protect it from weeds. In this treatment, soil is covered with a substance (known as mulch either organic or inorganic) and weeds do not get proper conditions to grow. It suppresses the growth of weeds by covering the top layer of soil and thus weeds don't get proper conditions to germinate. Two types of mulches are seen exclusively in the fields, organic mulches and inorganic mulches. Organic mulches include bark, dry leaves, saw dust, newspaper, ash etc. while inorganic mulches include plastic mulches (black plastic mulch, red plastic mulch etc.). The type of mulch used in crop depends upon the type of soil and weather climates of the area [1].

Mulches not only control weed growth, it also act as insect repellent (plastic mulch in honeydew, blackpepper), reduces risk of soil borne diseases (clear plastic mulch used in muskmelon), provide minerals to soil (seaweeds used in gardens) etc. [2]. Organic mulches are considered better than organic mulches, as organic mulches costs less and suppress growth of weeds to great extent. They also retain moisture content in soil and hence decrease dependability of plant on water. In an experiment, to check which mulch (organic mulch or inorganic mulch) gives better result in *Stevia* crop, it is found that organic mulch (stubble from rice field) gives better result than inorganic mulch (Red plastic mulch) [3]. In another experiment different organic mulch treatment was given to crop and it was observed that plots mulched with organic mulches enhances the nutrient level in soil. In, garlic field, ash is abundantly used as mulch to control weed growth and it also gave good results. Different mulches gave different results depending on the crop in which it is used or climatic conditions of the area.

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Organic mulches used in crops provide nutrients to soil and also conserve soil moisture. It helps soil to maintain proper warmth. It enhances growth of beneficial microorganisms that are required for the proper growth and development of a crop, hence its productivity enhances [4]. Organic mulches increase the fertility of soil as well. It also helps in suistainable development of environment. On the other side inorganic mulches or synthetic mulches however increases crop yield but it is damaged by birds, colourful mulch may act as attractant to many insects or birds that damage crops, black plastic mulch enhances warmth of soil etc. Moreover, inorganic mulches are more expensive than organic mulches.

So, in the end, I hold my strong opinion that organic mulches gave better result than inorganic mulches. If a person has good knowledge of mulches and its uses, it will increase the crop yield to 40% to 85%. Organic mulches also help in suistainable development, as the stubble and dry leaves they burn causes pollution in environment, so instead of burning, this material will be used as mulch, that increases the yield of crop and also helps to clean the environment. In today's era, technology is there but it lacks proper implementation. Knowledge of such things must be given to farmers through social media, campaigns etc. so that they can use waste of their fields as mulch and increase productivity of their crops.

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