

MULCHING PRACTICE IN ONION

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INTRODUCTION

Onion (*Allium cepa*) is a major bulbous vegetable and spice crops. Onion is the second most important vegetable crop after tomatoes in terms of income generation. It is a short duration and quick growing herb having various uses such as vegetables, spices and for medicines. Onion is extensively used as a condiment in preparing curry, chutney and pickle. It promotes appetite and is useful against malaria, night blindness which also lowers blood pressure. Mulching is an important technology which leads to decreases soil water loss through evaporation and conserve soil moisture, thus reduces the irrigation requirements, increasing root development, promoting faster crop development, reducing weed attack and inducing earlier harvest of crop. In context to soil management relationships, mulch has been reported to influence organic matter content, activity of microorganisms, and availability of soil nutrients, control of erosion and soil compaction and regulating soil temperature. Use of various mulches like black polythene, transparent polythene, rice straw, sawdust, water hyacinth reported conserving soil moisture efficiently in garlic and onion. Mulching is an effective cultural practice to ensure crop production, especially in the dry season. It also helps in better utilization of all the nutrients in the soil. Onions require frequent irrigations. The upper layer of soil must be kept moist to stimulate root growth and provide adequate water for the plant. Black and white polythene mulch or organic mulch are reasonable expense and conserve soil moisture. Mulching with plant residues and synthetic materials is a well-established technique for increasing the profitability of many agricultural crops. Such effects are mainly contributed to the capacity of mulch to conserve soil moisture in onion.

BENEFITS OF MULCHING:

Soil environment

1. Conserve soil water
2. Reduce evaporation
3. Reduces soil temperature
4. Insect and pest control
5. Minimize weed growth
6. Improve soil health
7. Increase nutrient status

Economic

1. Enhance crop yield
2. Increase fruits quality
3. Increase water use efficiency
4. Improve water holding capacity
5. Earlier harvest
6. Profitable

Problems associated with mulching:

1. Mulching with plastic film leads to cause extreme increase in soil temperature during warm weather in sub-tropical areas.
2. It can be unsuitable for crops that need fine sandy soil to flourish (for example: carrots) or are subject to collar rot in moist conditions (for example: garlic).
3. It offers cover for small slugs, which can devastate crops such as peas and carrots.



CONCLUSION

Mulching has become an important water conservation practice in modern agricultural production in arid and semi-arid areas. The mulch practices protect soil surface from sunlight exposure, which reduces evaporation by altering temperature of soil and preserving soil water. Mulching is not only a water-saving technique but also responsible for the beautification of the farm. The selection of various mulch materials largely depends on availability of material, climate, durability, and cost-effectiveness. It also needs to be environmentally viable for sustainable use. Hence, it is deduced that the use of various mulching material in crop can save the water resources which help to improve crop yield in rainfed cultivation.