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## A STUDY TO ASSESS WEED CONTROL TECHNIQUES USED FOR TOMATO CROP IN AMRAVATI REGION

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### Abstract

I find the solution on the problem of weed control in tomato field by using various techniques. I read the 15 various research paper on this topic. Weed control in tomato can be done by various techniques in various regions. Like in India weed control in to tomato can be done by using mulching paper, this is the most used technique in India. Mulching paper is the technique where mulching paper is spread on the field and holes are made on that for the tomato plant that means only tomato plant can grow on field and not the weed. Then biodegradable mulching paper is also used where mulching paper is degrade itself after use. Most of the tomato cultivator in Amravati region are currently using these techniques.

**Keywords** – Weed, Tomato, Mulching Paper.



### Introduction

Weed is the major problem in Amravati and many regions also. Yield get very low due to weed and many losses occurs due to weed. There are many causes of growing weed in farm like stagnant water at one place, falling of seeds while sowing, excess irrigation, not properly weeding etc. On the problem of weed in Amravati region many farmers use many techniques to control the weed. But when I conducted the survey I found that most of the farmers use mulching Paper for controlling the weed. A mulch is a layer of material applied on the soil to reduce the weed growth, conservation of soil moisture, to improve fertility and health of soil etc. There are two basic kinds of mulch: organic and inorganic. Organic mulches include formerly living material such as chopped leaves, straw, grass clippings, compost, wood chips, shredded bark, sawdust, pine needles, and even paper. Inorganic mulches include black plastic and geotextiles (landscape fabrics). Farmers in the Amravati Region mostly use plastic mulch, this type of mulching utilizes polyethylene film. Price of the Silver Iris Tomato mulching paper is 1,500/Roll and each roll is consists of 400 meters.



### Literature Review

There are many ways to control the weed. There are some Effective ways mentioned in the weed control method handbook. There are some manual and mechanical control techniques like weed pulling – where pulling or uprooting plants can be effective against some shrubs, tree sapling and herbaceous and floating weeds. It minimize disturbed by pulling our weeds slowly and carefully and replace soil to disturbed areas where possible. Then hand pulling is also effective way. There are many techniques mentioned in handbook like Pulling using tools, mowing Brush-cutting, weed eating, girdling, mulching, tilling, soil solarization, flooding.

Then Grazing is also the good way to control the weed. Cattle, goats’ sheep and even geese may be used to control weed. Prescribed fire is also used to control weed. Biological is the use of animals, fungi or other microbes to feed upon, parasite or otherwise interfere with a targeted pest species.

In the Oregon state university journal there are five general categories of weed control methods i) Preventative ii) Mechanical iii) Biological iv) Chemical.

Preventative weed control means the any control method that aims to prevent weed from being established in a cultivated crop, a pasture, or a greenhouse cultural weed control refers to maintaining field conditions such that weeds are less likely to become established or increase in number. Cultural weed control would be crop rotation.

Mechanical weed control refers to any technique that involves the use of farm equipment to control weed i. e. tillage and mowing. Biological weed control refers to any technique that involves use of natural enemies of weed plants to control the weed germination of weed seeds or the spread of established plants i.e use of sheep to control tansy ragwort or leafy spurge. Chemical weed control refers to any technique that involves the application of a chemical to weeds or spoil to control the germination or growth of the weed species  
Ex. 2, 4 D EPTC

### Research Questions

**1) Which weed control technique you use currently?**

- A) Weedicide
- B) Hand weeding
- C) Mulching Paper
- D) Crop rotation
- E) Ploughing between rows
- F) Other

**2) Since how much time you used these technique?**

- A) Less than 1 Year
- B) 1 to 3 years
- C) 5 to 7 years
- D) 7 to 9 years
- E) 10 or more than 10

**3) Which are the previous techniques you used?**

- A) Weedicide
- B) Hand Weeding
- C) Mulching paper
- D) Crop rotation
- E) Other

**4) Which are the most efficient and ideal weed control technique for Tomato crop in Amravati region?**

- A) Weedicide
- B) Hand Weeding
- C) Mulching Paper
- D) Crop rotation
- E) Herbicide
- F) Irrigation Management
- G) Ploughing between rows
- H) Field Preparation
- I) Soil Treatment
- J) Other

**5) Which are the cheapest and effective weed control technique?**

- A) Weedicide
- B) Hand Weeding
- C) Mulching Paper
- D) Crop Rotation
- E) Herbicide
- F) Irrigation Management
- G) Ploughing between rows
- H) Field Preparation
- I) Soil Treatment
- J) Other

**6) Which are the causes of weed growth in your farm?**

- A) Water logging
- B) Falling of seed while sowing
- C) Timely Weeding
- D) Timely Spraying of weedicide

- E) Timely Ploughing
- F) Other

**7) In which season weed is mostly affect the crop?**

- A) Summer
- B) Winter
- C) Mansoon
- D) Post Mansoon or Autumn

**Research Methodology**

**Objectives**

- 1) To find out the efficient way to contact the weed in tomato field in Amravati Region.
- 2) To suggest Ideal Weed control technique for tomato crop in Amravati.
- 3) To explore current weed control technique used in Amravati for Tomato crop.

**Geographical Scope** - All Talucas of Amravati region, (Maharashtra)

**1) Primary Data**

Collecting response by circulating structured questionnaire.

**2) Secondary Data**

Journals, Books, Internet Searches

**3) Sample Size** - 50

**4) Research Type** - Quantitative Research

**5) Research Tool** - Questionnaire

**6) Sample Unit** - Tomato Growing Farmers

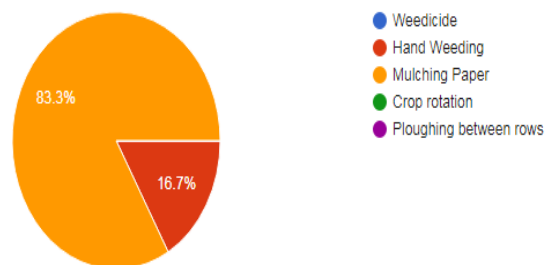
**Sample Size** - 50 Farmers.

**Scope of future Study-**

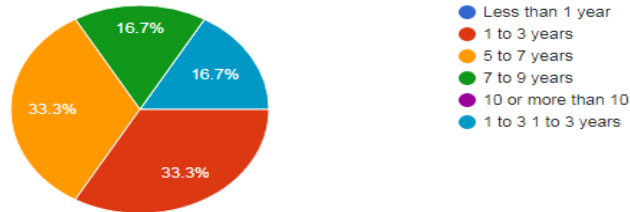
- 1) Efficient way to control the weed in tomato crop.
- 2) Mulching paper and the Biodegradable Mulching paper are the two best methods to control the weed.
- 3) Mulching paper is the easiest way every Farmer can do this. Longer time effect.
- 4) Environmentally safe. Economically good (Low cost). Mulching paper have low cost. Mulching paper is the current weed control technique in Amravati region.

**Data Collection**

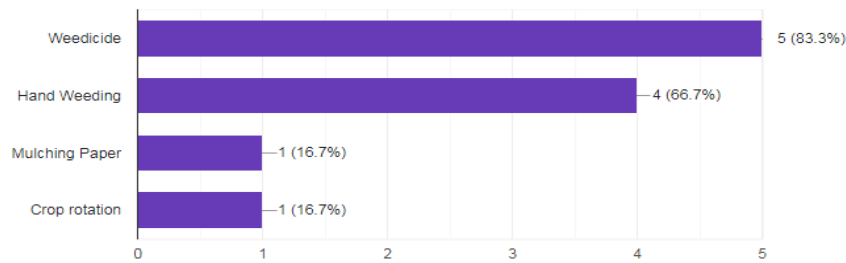
Q. 1 - Which weed control technique you use currently?



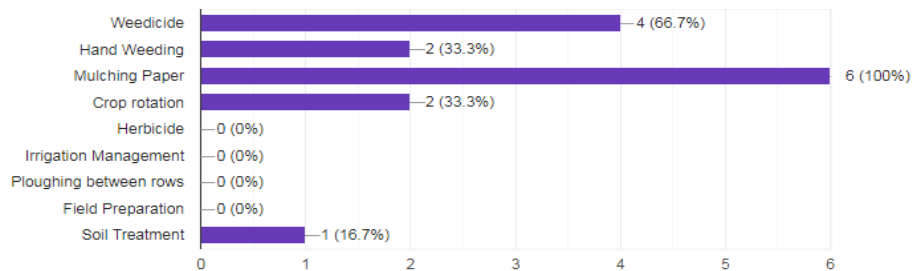
Q. 2 - Since how much time you used these technique?



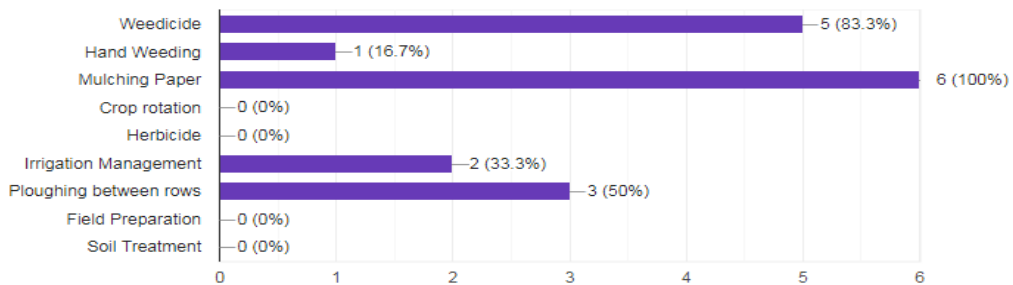
Q. 3 - Which are the previous technique you used?



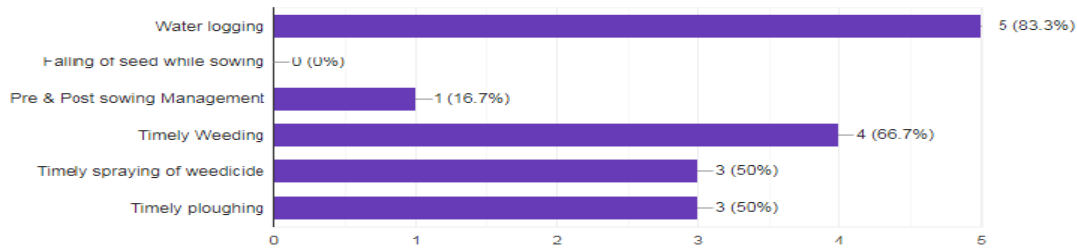
Q. 4 - Which are the Most efficient and ideal weed control technique for Tomato crop in Amravati region?



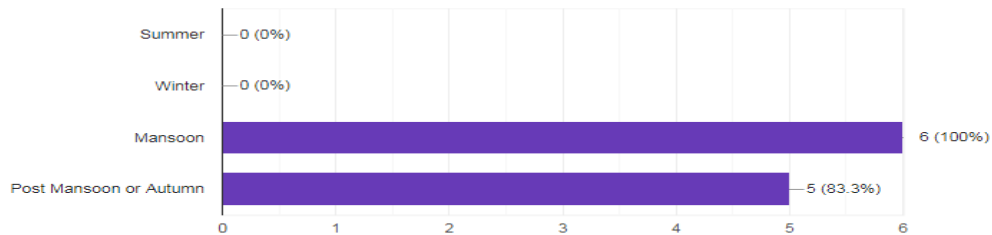
Q. 5 - Which are the cheapest and effective weed control technique?



Q. 6 - Which are the causes of weed growth in your farm?



Q. 7 - In which season weed is mostly affect the crop?



### Data Analysis and Interpretation

Most of the Farmers said they used mulching paper for weed control in tomato crop. Most of the Farmers out of 50 said they used Mulching paper and it is the cheapest and effective technique to control the weed in tomato crop. Almost all the Farmers used Mulching paper to control the weed in tomato crop. Most of the Farmers used hand weed of chemical applications to control the weed. Mulching paper is the current ideal weed control technique used in Amravati region. Most of the Farmers said 'Yes' Mulching paper technique in effective in all seasons. Mulching paper is effective in all the seasons. Mulching Paper is the most effective and ideal weed control technique according to tomato growing Farmers.

### Conclusion

As I take the interview of 50 farmers in Amravati region and villages in Amravati region almost all the farmers said that they used Mulching paper technique to control the weed in tomato crop. Because this technique is the easiest, Cheapest and Ideal weed control technique. All most all the farmers in Amravati region used this technique in all the seasons. Because mulching paper does not allow the weed to grow. Hence this is the Ideal weed control technique used in Amravati region. Mulching paper have many more advantages other than weed control like maintaining soil moisture etc. Mulching paper is available easily. Tomato yield gets increases by reducing the weed and weed is mostly get reduces with the help of mulching paper.

### References

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