

Topping technology (Intercultural Operation Tool):

A sustainable method to increase yield of crop

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INTRODUCTION

Topping is a process by which mower or similar implement is used to ‘top’ or to remove aerial parts of a crop. Benefits of topping is to increased root growth, reduced weight in the top of the plant, and reduction of the translocation of nutrients and moistures from lower leaves to support the growth and demonstration of upper leave



CROPS OFFERD IN TOPPING TECHNOLOGY

1. TUR CROP (*CAJANUS CAJAN*) ---

Topping in tur is done by two methods

- Only one cut to be given - give betn 35 to 50 day after sowing
- If three cut to be given - give on 30,60 and 90 day after sowing

2. GRAM CROP (*CICER ARIETINUM*)

Topping is quite common in gram crop throughout the Maharashtra.

Time to give cut - 25 to 35 days after sowing.

3. Cotton crop (GOSSYPIUM SPECIES)

In cotton due to overuse of nitrogenous fertilizers. Cotton reaches to more than desired growth. So many farmers use growth retardant and sometimes proportion of chemical isn't given correctly results in disturbance of reproductive growth i.e. topping practices turn out effective

Time for cutting - 40 to 60 days after sowing.

How to use topping machine

1. Traditionally it was done by hands and turns out to be time and money consuming.
2. So topping machine is best alternative to do this practices.
3. Source of operating machine - knapsack sprayer.
4. Connect the assembly to knapsack sprayer.
5. Cut the 4 -5 cm top portion of aerial parts of crop.

BENEFITS OF TOPPING PRACTICES by machine

1. Increase in yield up to 10 to 20 %
2. Reduces evapo-transpiration rate.
3. Forces crop grow more secondary and tertiary branches.
4. Manual labours charges more for topping practices and time consuming.
5. Cost of machine is minor and can be manufactured at home (materials given below)

Manual for making of topping machine.

1. Material required

- a) Battery operated sprayer (cost not included. assume it is having with farmer)
- b) Rotor machine : Rs 150 (available at any electric shop)
- c) Pipe : Rs 50 Length 2.5 ft (77 cm) diameter 4 cm
- d) Key, wire, solution etc: Rs 200

Total: Rs 400

A) Make blade from steel and hard scale which is available in market cut 15 cm drill and sharp it.

B) Connect the assembly as per image



PRECAUTION

- A. Check the low nut before use
- B. Use safety belt
- C. While in starting, cutter should be always in downward direction and away from workers body.
- D. After topping give crop one fungicide spray to reduce fungal growth on dead portion formed by cutted portion.
- E. To increase more productivity farmers can also give spray of water soluble fertilizers.
Ex. 19.19.19 fertilizer.