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Course name :

**Crop Production Technology-II
(ASAG 2204)**

Course credit :

(2-1-0)

Lecture 19

Topic: TOBACCO



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30.1 WATER MANAGEMENT

- Tobacco cannot tolerate with water logging under any circumstance.
- **FCV tobacco** grown in Blackcotton soils **rarely requires irrigation**. However, grown in **light soils requires regular irrigations**.
- Irrigation through all furrow system is a general practice, but it consumes **more water** and requires **more labour** and **leaching losses of nitrogen and potassium are also more**.
- The **alternate skip furrow method of irrigation** is more economical and checks the wastage of irrigation water, electricity and time.
- **It improves the leaf quality and gives 10-20% higher yield than all furrow irrigation.**



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30.2 Irrigation time and method

At the time of planting in plough furrow	15mm
1st irrigation 15-20th day after planting by surface irrigation, if needed	24mm
2nd irrigation 30-35th day after planting as surface irrigation	24mm
3rd irrigation 40-45th day after planting all furrow irrigation immediately after ridge formation	48mm
4th irrigation 50-55th day after planting all furrow irrigation	4mm
5th irrigation 65-70th day after planting by alternate skip furrow method	24mm
6th irrigation 80-85th day after planting by alternate skip furrow method	24mm
7th irrigation 95-100th day after planting by alternate skip furrow method	24mm
8th irrigation 115-120th day after planting by alternate skip furrow method	24mm



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30.3 Critical stages:

- Critical stages for irrigation is **knee height to bloom**
- Scheduling at 50 % DASM is ideal for Tobacco.
- Quality of water for irrigation to tobacco in respect of chlorine content is paramount important.
- Limit of is up to **30 ppm** and should **not exceed 50ppm**.



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30.4 WEED MANGEMENT :

- The first cultivation usually commences about **10 to 15 days** after planting by which time the plants are well established.
- For each interculture, the soil around the plants is loosened with a hand-weeding tool (**khurpi**).
- These operations help in eradication of weeds, mulching the surface soil and promoting rooting at deeper layers by driving out the moisture at the top.



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- Crop is **very susceptible to poor aeration and water logging.**
- **Orobanche** which is a root parasite and is menace to the tobacco crop is kept done by hand pulling.
- The only way to control this weed is to collect and destroy it before seed formation.

30.5 TOPPING :

- Topping is the **process of removal of flower head alone or with few top leaves.**
- Removal of the flower bud (topping) arrests the apical dominance.
- Done just before or after emergence of the flower head.
- This stimulates the development of the remaining leaves.



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- It gives a uniform quality product and prevents excessive coarseness in leaves.

30.6 DE-SUCKERING

- After the tops have been removed the buds in the axils of the leaves which otherwise remain dormant become active and suckers soon develop in the axils of the leaves.
- These suckers should be removed by hand before they become large enough to retard the development of the leaves.
- **Removal of these suckers is called desuckering.**
- **The main aim of topping and desuckering operations is to divert the energy and nutrients of the plant from flower head to leaves which influence the yield and quality of tobacco.**



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topping desuckering





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30.7 Diseases:

Damping off , Black shank, Frog eye leaf spot

Powdery mildew, Anthracnose, Leaf curl and Tobacco mosaic.

Control

- Plant only healthy seed before planting .
- Seed treatment thiram or carbendazim at rate 2.5 g/kg of seed
- Follow three year crop rotation
- plant resistant varieties/tolerant varieties should be taken.



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30.8 Insects:

Tobacco caterpillar & Looper

Stem borer

Ground beetles

Tobacco capsule borer

Control

spraying of monocrotophos 36 EC or endosulfan
(1ml in 1 L of water)



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30.9 Storage pests:

Cigarette beetle

- Control
- Uninfested items can be cold- or heat-treated to ensure that any undetected infestations are killed. To prevent reinfestation, clean up spilled **flour**, mixes, crumbs, etc. and thoroughly vacuum and clean areas where the contaminated items were **stored**. Store foods in airtight glass, metal or plastic containers.



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30.10 HARVESTING :

- The right stage for harvesting the crop is when the leaves are mature ; when the **normal green colour changes to yellowish green or slightly yellowish and become thick, spotted and sticky to touch.**