

INTRODUCTION

- **Scientific name** : *Nicotiana tobaccum*
- **Family**: *solanaceae*
- **Chromosome number** : $2n=4x=48$
- **Origin** : *America*

IMPORTANCE

- **Nicotiana** is one of **five** large genera of **solanaceae** and it is represented by about 60 species
- **INDIA** is the **4th largest producer** of tobacco after USA, Brazil, Canada.
- India is the **8th largest exporter** of tobacco

ORIGIN AND EVOLUTION

- *Nicotiana sylvestris* X *Nicotiana tomentosa*
2n=24



2n=24

F1(sterile)

Natural doubling of
Chromosome



Nicotiana tobaccum

2n=2x=48

continued

- *Nicotiana paniculata* X *Nicotiana undulata*

- $2n=24$

- $2n=24$



- F1(sterile)

- Natural doubling of

- chromosome



- *Nicotiana rustica*

- $2n=4x=48$

FLORAL BIOLOGY

- The inflorescence of tobacco is a **terminal raceme**
- The flowers are **pedicellate** and **hermaphrodite**
- Calyx contain **five sepals**
- Corolla contain **five petals**

CONTINUED

- The **stamens** are **five** in number
- It has **superior ovary**
- It is self pollinated crop but;4-10; of cross pollination occurs due to insects. therefore it is
- Grouped into **often cross pollinated crop**

CONT.....

- Pollens are viable for 24hrs
- Stigma is receptive one day before and after flower opening

SELFING TECHNIQUE

- Covering entire inflorescence with paper bag will ensure the selfing technique



CROSSING TECHNIQUE

- It involves emasculation followed by pollination
- For emasculation select the unopened flowers with pink colour tip and anthers are removed with five pointed forceps after tearing petals
- Collect the pollen grain from matured flowers and dust it on the emasculated flower
- Bag the pollinated flower and then tag it



IMPORTANT VARIETIES

- **Godavari,swarna,krishna,thangam**
- **Sona,maragandam**