



SNS COLLEGE OF TECHNOLOGY

**An Autonomous Institution
Coimbatore - 35**

Accredited by NBA – AICTE and Accredited by NACC – UGC with 'A+ Grade
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

DEPARTMENT OF AGRICULTURE ENGINEERING

19AGT203 – AUTOMATION TECHNIQUES IN AGRICULTURE ENGINEERING

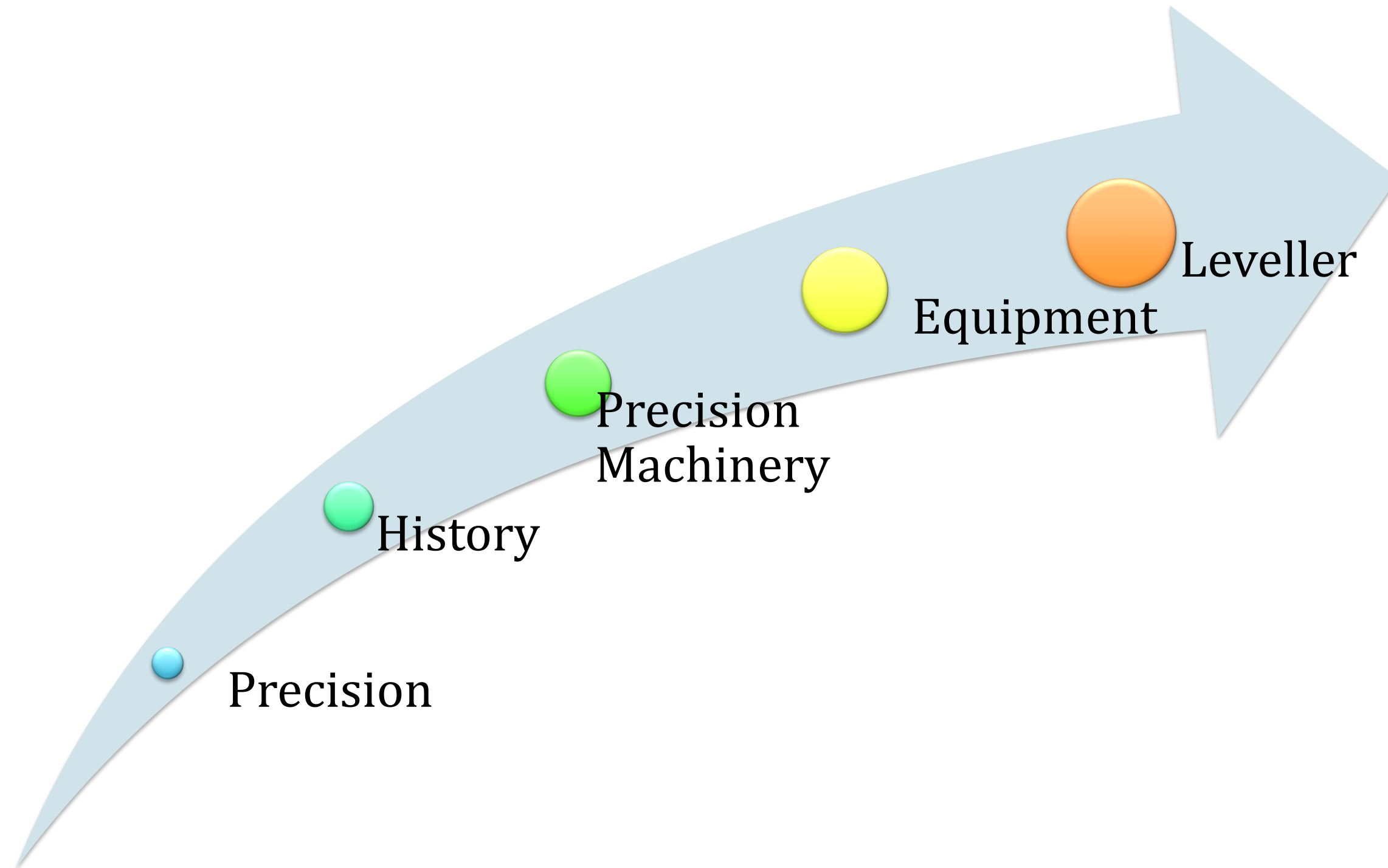
II – YEAR IV SEMESTER

UNIT 1 – ADVANCED MACHINERY/EQUIPMENT IN AGRICULTURAL ENGINEERING- I

TOPIC 4 – VACUUM OPERATED PRECISION PLANTERS



Last Class Review





Vacuum Operated Precision Planters



- ❖ Vacuum planters have individual row unit seed boxes. Each row unit has an associated vacuum seed meter. The seed is drawn into the meter using a vacuum to hold the seed to the disk. This planter uses gravity to drop the seed into the seed trench.





Working Principle

- ❖ Precision vacuum seeders have a metering plate with metering holes on a predetermined radius.
- ❖ A vacuum is applied to these metering holes by means of a race machined in a backing plate.
- ❖ As the plate rotates, the vacuum applied to the metering holes enables them to pick up seeds from the seed hopper





Benefits

- ❖ to achieve accurate placement of seeds with a minimum of skips and doubles
- ❖ Unlike other types of planters, vacuum planters do not need to have uniform seed size to provide singulation and accurate spacing
- ❖ This avoids the extra cost of purchasing sized seeds





Specifications

Parameter	Value
Overall dimensions, mm	1450 × 2450 × 1250
Weight, kg	200
Number of rows	6
Row spacing, mm	250 and above
Type of blower	Aspirator
Seed metering	Pneumatic disc suction principle
Change of seed spacing	By changing appropriate size of sprocket
Number of holes on disc	16
Seed hole diameter, mm	3
Working width, mm	2700
Power source	Tractor 25 kW and above



See You at Next Class!!!!