



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

19AGB302 – FARM IMPLEMENTS AND MACHINERY

2020-21 BATCH - III YEAR V SEMESTER

**UNIT IV. SOWING EQUIPMENT AND FERTILIZER APPLICATION
TOPIC – L 20- SOWING AND PLANTING METHODS**



DEFINITION OF SOWING



Sowing is an art of placing seeds in the soil to have good germination in the field.

A perfect sowing gives

- i) Correct amount of seed per unit area.**
- ii) Correct depth of sowing**
- iii) Correct spacing between row-to-row and plant to plant and iv) Correct seed rate**



METHODS OF SOWING



METHODS OF SOWING :

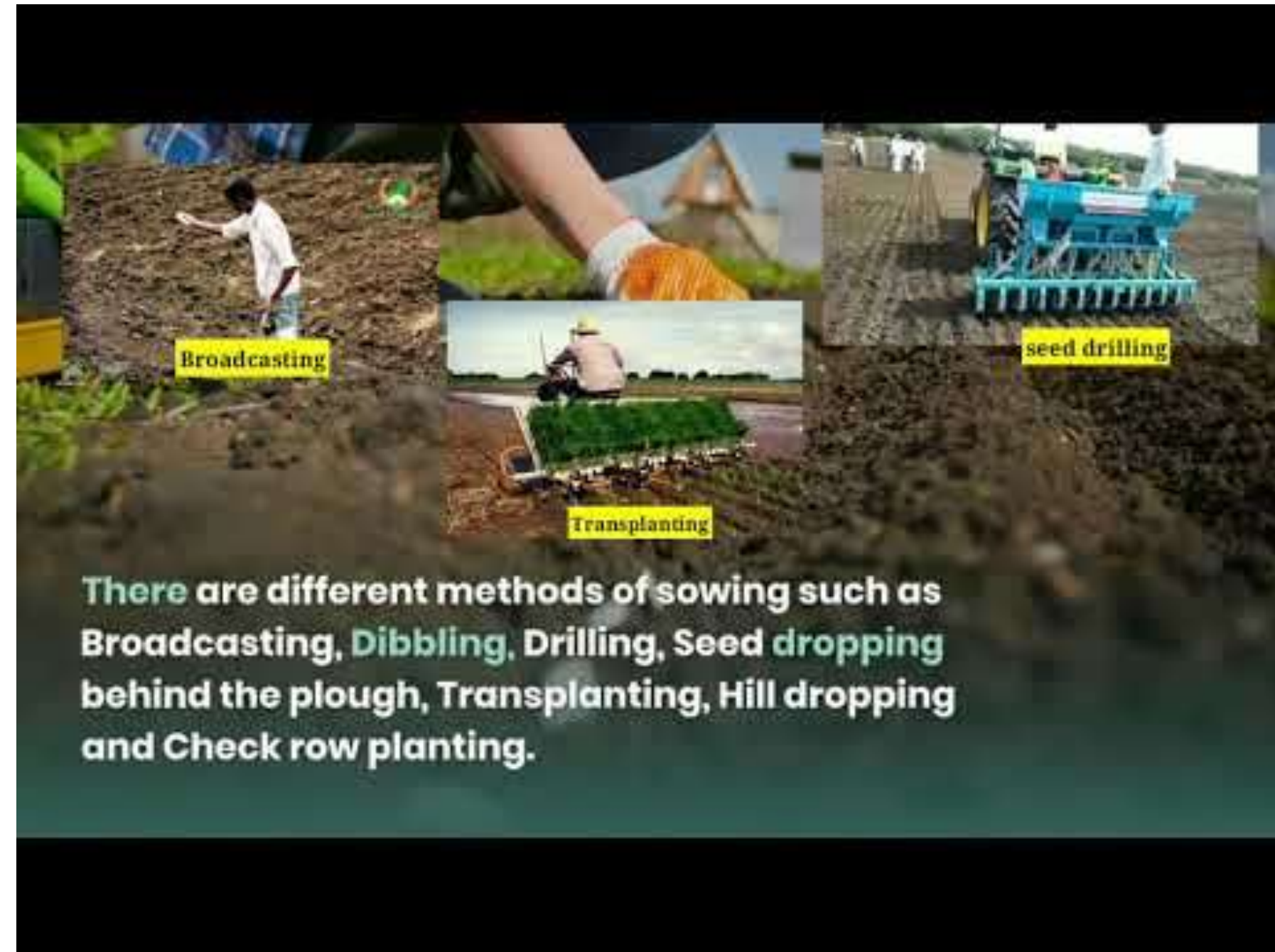
- (i) Broadcasting
- (ii) Dibbling
- (iii) Drilling
- (iv) Seed dropping behind the plough
- (v) Transplanting
- (vi) Hill dropping
- (vii) Check row planting



BROADCASTING



- **(i) Broadcasting** Broadcasting is the method of random scattering of seeds on the surface of seedbed. It can be done manually or mechanically. When broadcasting is done manually, uniformity of seed placement depends upon the skill of the man scattering the seeds.
- Soon after broadcasting the seeds are covered by planking or some other devices. Usually higher seed rate is obtained in this system. Mechanical broadcasters are used for large-scale sowing. The device scatters the seeds on the surface of the seedbed at controlled rates.





(ii) Dibbling

DIBBLING

- Dibbling is the process of placing seeds in holes made in the seedbed and closing the seed with soil. In this method, seeds are placed in holes made at definite depth at fixed spacing. The equipment used for dibbling is called dibbler.
- It is a conical shape instrument used to make proper holes in the field. Small hand dibblers are made with several conical projections made in a frame (Fig.1). This is very time consuming process, so it is not suitable for small seeds. Mostly vegetables are sown in this way.



DIBBLER



SEED DROPPING

- **(iii) Seed dropping behind the plough**
- It is a very common method of sowing followed by farmers in villages. This method is used for seeds like maize, gram, peas, wheat and barley. A woman/ man walk behind a plough ploughing the land and drop the seeds in the furrows made by the plough. Sowing behind the plough can be done by a device known as malobansa .
- It consists of a bamboo tube provided with a funnel shaped mouth. It is fitted to the handle of the plough. One man drops the seeds through the funnel and other man handles the plough and the bullocks. This method is a slow and laborious method.





DRILLING



Drilling consists of dropping the seeds in furrow lines in a continuous stream and covering them with soil. The spacing between the seeds is not uniform. Seed metering may be done either manually or mechanically. The number of rows planted may be one or more (Figs.2-5). This method is very helpful in achieving proper depth of sowing, proper spacing between seeds and proper seed rate. Drilling can be done by using seed drills of tractor drawn and animal drawn types





TRANSPLANTING

- **(v) Transplanting** Transplanting consists of raising the seedlings in a nursery bed and then planting the seedlings in another field (main field). It is commonly done for paddy, vegetable and flowers. It is a time consuming operation. Equipment used for planting the seedlings in the main field is called transplanter.





HILL DROPPING

- (vi) Hill dropping In this method, few seeds are dropped as a hill at a fixed place and not in a continuous stream. The spacing between hill to hill in a row is constant The equipments are called planters





CHECK ROW PLANTING



- (vii) CHECK ROW PLANTING It is a method of planting, in which row-to-row and plant-to-plant distance is uniform. In this method, seeds are planted precisely along straight parallel furrows. The rows are always in two perpendicular directions. A machine used for check row planting is called check row planter.





YOUTUBE LINK



- <https://www.youtube.com/watch?v=xle2EjQ>
[Nols](#)
- METHODS OF SOWING



TEXT BOOKS

- | | |
|----|--|
| 1. | Michael, A.M. & Ojha, T.P. “Principles of Agricultural Engineering Vol. I & II”, Seventh Edition, Jain Brothers, New Delhi, 2011. (Unit I,II,III,IV,V) |
| 2. | Jagdishwar Sahay. “Elements of Agricultural Engineering”, Standard Publishers and Distributors, 2010. (Unit III,IV,V) |
| 3. | |
| 4. | |



THANK YOU