

Unit 2 - Tillage and Tilth

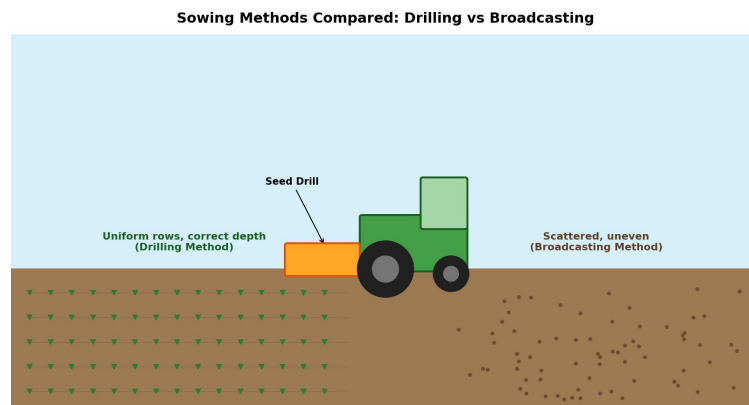
UNIT 2: TILLAGE AND TILTH

Topic 4: Advanced Sowing Methods

Introduction — Sowing Kyun Important Hai?

Sowing ka matlab hai beej ko khet mein sahi tarique se place karna, taaki achha germination ho aur healthy crop stand mile. Sowing method ka direct asar plant population, spacing, growth uniformity, aur ultimately yield par padta hai. Galat sowing method ya galat technique se beej ki bahut zyada wastage ho sakti hai, ya phir crop establishment hi poor reh jaati hai.

Niche di gayi image mein aap dekh sakte hain ki seed drill se ki gayi sowing (drilling method) aur broadcasting method mein kitna farak hota hai:



Sowing Methods Compared

Is image mein left side mein aap dekhenge ki seed drill se beej uniform rows mein, sahi depth par lage hain. Right side mein broadcasting method dikhayi gayi hai, jahan beej bina kisi pattern ke pure field mein bikhre hue hain.

Mukhya Sowing Methods — Vistaar Se

1. Broadcasting

Broadcasting sabse purani aur simple sowing method hai. Isme beej ko haath se ya machine (jaise seed broadcaster) se pure khet mein scatter (bikhera) kiya jaata hai.

Fayde: - Bahut fast method hai, bade area mein jaldi sowing ho jaati hai. - Labour aur time dono kam lagte hain. - Simple tools se bhi kiya ja sakta hai, koi advanced machinery zaroori nahi.

Nuksan: - Beej zyada quantity mein lagta hai, kyunki distribution uneven hota hai aur kuch beej bahut close, kuch bahut door gir jaate hain. - Depth uniform nahi hoti — kuch beej surface par reh jaate hain (jo birds kha sakte hain ya sukh sakte hain), kuch bahut gehre chale jaate hain. - Germination asamaan (uneven) hota hai, jisse final crop stand bhi patchy reh sakta hai. - Weeding aur inter-cultivation operations mushkil ho jaate hain, kyunki rows nahi hoti.

Yeh method usually wheat, paddy (broadcasting method mein), ya fodder crops jaise kam-value, dense crops ke liye use hoti hai.

2. Dibbling

Dibbling mein, mitti mein fixed spacing par chhote-chhote gaddhe (holes) banaye jaate hain — yah haath se ya dibbler tool se kiya ja sakta hai — aur har gaddhe mein ek ya do beej daale jaate hain, fir unhe halki mitti se cover kar diya jaata hai.

Fayde: - Beej ki significant bachat hoti hai, kyunki exact quantity hi use hoti hai. - Plant-to-plant aur row-to-row spacing dono uniform rehti hai, jisse har plant ko equal resources (sunlight, paani, nutrients) milte hain. - Crop stand bahut uniform hota hai.

Nuksan: - Yah method labour-intensive hai — bade area ke liye bahut zyada manpower aur time chahiye. - Isiliye yah mainly chhote farms, high-value crops (jaise vegetables), ya widely-spaced crops (jaise cotton, maize kuch regions mein) ke liye use hoti hai.

3. Drilling (Seed Drill Ka Use)

Drilling ek modern aur efficient method hai, jisme seed drill machine (tractor se chalayi jaane wali ya manual) ka use hota hai. Yah machine beej ko (aur kai baar fertilizer ko bhi simultaneously) sahi depth aur uniform row spacing mein place karti hai.

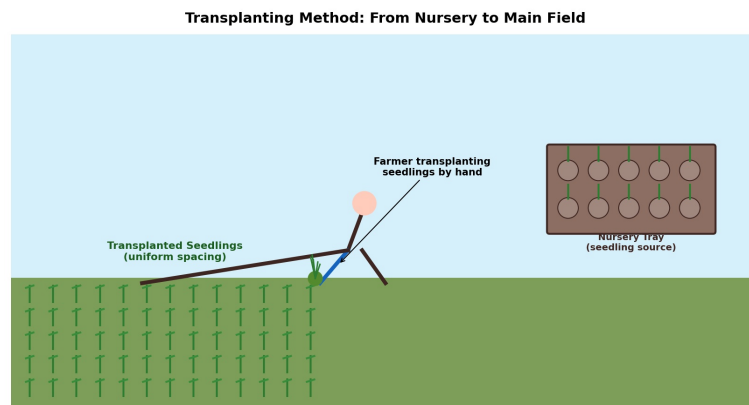
Fayde: - Sabse efficient aur widely recommended modern method hai. - Uniform depth aur spacing milta hai, jisse germination percentage bhi high hota hai aur uniform bhi. - Time aur labour dono ki bahut bachat hoti hai compared to manual methods. - Beej ki quantity precisely control ki ja sakti hai, jisse wastage minimum hoti hai. - Rows mein sowing hone se baad mein inter-cultivation (jaise weeding, hoeing) aasan ho jaata hai. - Bade commercial farms ke liye yah best suited method hai.

Seed drill mein alag-alag types hote hain — jaise conventional seed drill, zero-till seed drill (jo bina extra tillage ke directly sowing kar deta hai, residue ke upar bhi), aur multi-crop planters.

4. Transplanting

Transplanting ek do-step method hai. Pehle, beej ko ek chhoti, specially prepared nursery mein ugaya jaata hai jab tak seedlings ek certain age/height tak nahi pahunch jaati. Fir in seedlings ko carefully ukhad kar main field mein, sahi spacing par, replant kiya jaata hai.

Niche di gayi image mein transplanting process dikhaya gaya hai — kisan nursery se seedlings leke unhe field mein lagate hue:



Transplanting Method

Fayde: - Nursery stage mein hi weak ya unhealthy seedlings ko discard kiya ja sakta hai, sirf best seedlings field mein jaati hain. - Main field mein crop ka establishment time kam hota hai, kyunki seedling already kuch weeks ki badi hoti hai. - Field mein weed competition kam hota hai initial stage mein, kyunki seedling already established hoti hai jab usse transplant kiya jaata hai. - Uniform spacing milta hai, jisse optimum plant population maintain hoti hai.

Nuksan: - Yah method labour-intensive aur time-consuming hai — pehle nursery raise karni padti hai, fir transplanting bhi manual labour maangti hai. - Transplanting shock (seedling ko ukhadne aur dobara lagane se hone wala stress) ka thoda risk rehta hai.

Yah method especially rice (paddy), tomato, onion, chilli, aur cabbage jaise crops mein commonly use hoti hai.

Sahi Sowing Method Kaise Choose Karein?

Method ka selection kayi factors par depend karta hai:

1. **Crop ka type** — chhote beej wali crops (jaise wheat) ke liye drilling suitable hai, jabki bade beej ya transplant-friendly crops (jaise rice, vegetables) ke liye transplanting better hota hai.
2. **Available labour aur machinery** — agar labour mehenga ya kam available hai, to mechanized methods (drilling) better hain. Agar labour cheap aur available hai, manual methods (dibbling, transplanting) bhi viable hain.
3. **Field ka size** — bade commercial farms ke liye seed drill jaisi mechanized method efficient hai. Chhote farms ke liye manual methods bhi manageable hain.
4. **Mitti ki condition aur moisture** — kuch methods specific soil moisture conditions mein better perform karte hain.
5. **Economic consideration** — beej ki cost, labour cost, aur expected yield ko dhyan mein rakh kar decision lena chahiye.

Conclusion

Sahi sowing method choose karna crop ki successful establishment ke liye bahut critical hai. Traditional broadcasting method abhi bhi kuch jagah use hoti hai apni simplicity ke karan, lekin modern farming mein seed drill jaisi advanced techniques se time, labour, aur beej teeno ki significant bachat hoti hai, saath hi yield bhi consistently improve hoti hai. Transplanting un crops ke liye essential hai jinhe nursery stage ki

zaroorat hoti hai, jaise rice aur vegetables. Har method ke apne specific advantages hain, aur ek achhe farmer ya agriculture professional ko apni crop, resources, aur conditions ke hisaab se sahi method select karna aana chahiye.