

Problems of Hardwood Seed and Planting Hardwood Seed

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The problems of hardwood seed will be covered by better qualified speakers than myself. I will keep my discussion confined to planting problems and touch on seed only as a planting problem. Many planting problems are caused by seed conditions. These problems are compounded when the planting supervisor or nursery manager are left out of the seed process. The nursery manager or employee in charge of planting should be involved in setting seed procurement standards. Total seed processing should be delayed if seed is to be stored for extended time. The rate of deterioration of stored seed will be very high in first few weeks of storage. This damage is from insect-disease and other defects that are very hard to detect at time of harvesting.

PLANTING PROBLEMS RELATED TO SEED QUALITY, SEED CONDITION, SEED SIZE AND OTHER SEED CHARACTERISTICS

Seed lots containing mixed sizes are hard to plant with some planters. Seed lots with mixed sizes are hard to obtain uniform bed density.

Seed that has started the germination process will be a problem to plant regardless of planting method.

Seed lots that contain high percentages of full nonviable seed need not be discarded as a total loss.

To prevent or minimize these losses we have developed three planting systems or methods.

The plate (drop) planter with revolving plates with control of plate revolutions plate hole size, and ground speed.

The plate revolutions are controlled by a restriction valve in hydraulic power supply. The ground speed is controlled by equipment operator. The hole size in plates can be changed by installing different plates five to ten minutes to change plates. This unit is completely shop made and has the capability to:

1. Open planting slit
2. Drop acorns of any desired density
3. Cover slit after acorns are dropped
4. Requires two employees
5. Plant in eight hours the equivalent of a large hand crew (15 man days)

The sprouted or poor germination potential seed is planted using a shop made seeder attached to rear of an old Ford manure spreader.

The manure spreader serves as a supply wagon for large volumes of seed that will be applied to seed beds.

This seeding device has four basic components:

1. Hydraulic controlled agitator to move seed over
2. Drop gate (restricted hydraulic valve) for agitator
3. Adjustable drop gate opening
4. Drop gate closure for on and off positions

The seed can be broadcast through drop gate then covered with mulch if desired.

The last method is a combination of all the methods with the addition of an old bed shaper.

The bed is tilled, then leveled with a bed shaper and slits opened with the plate planter. The seed is applied with the manure spreader unit. Bed shaper is used to move seed on surface of bed to slit opening made with plate planter. The nursery manager has the option of covering bed with mulch or rolling bed to close slits.

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