

Modified manure spreader efficient in applying sawdust mulch

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Figure 1.—Sawdust shaker drive assembly attached to the manure spreader's drive mechanism.



In the Lake State's, frost heaving of seedlings in years of early snow melt can be a serious problem, particularly with 1-0 black and white spruce.

Sawdust is used as a mulch because of its availability. The usual method of spreading sawdust as a mulch was to haul it on a trailer and spread by hand. This required a tractor operator and two additional men to spread the mulch with shovels. The major disadvantages of this method were: (1) Difficulty in getting an even spread by shovel, (2) failure to remove wood chips and bark from sawdust, (3) high cost of mulching.

To eliminate these disadvantages, a shaking screen was attached to a John Deere PTO-driven manure spreader with two rear beaters. The operating principle of the shaker could probably be adapted to any similar spreader. A carrier frame of 1½ inch angle iron 22 inch wide x 60 inch long is attached below the lower beater. The sliding screen frame is driven by means of an oscillating drive assembly attached to the eccentric gear of the front feed arm assembly of the spreader.

The amount of sawdust falling on the screen is regulated by inserting a barrier of 2 inch x 4 inch lumber just ahead of the beaters, leaving an opening on the apron for sawdust to pass through. This permits the spreader to be run in a faster gear, giving a more even shaking and spreading

action. The screen is mounted to provide a 3 inch pitch to the outside so the wood chips can be shaken off the screen into the seedbed path.

This spreading method is three times faster than the usual one. The even spreading of sawdust with the shaker lessens chances for covering too heavily in spots, thus reducing the stock dis-

coloration which often results from hand spreading of sawdust. By separating larger wood chips and bark, mechanical equipment such as weeders or vertical root pruners can perform more effectively. The shaker is easily removed, thus making the equipment available for other uses.

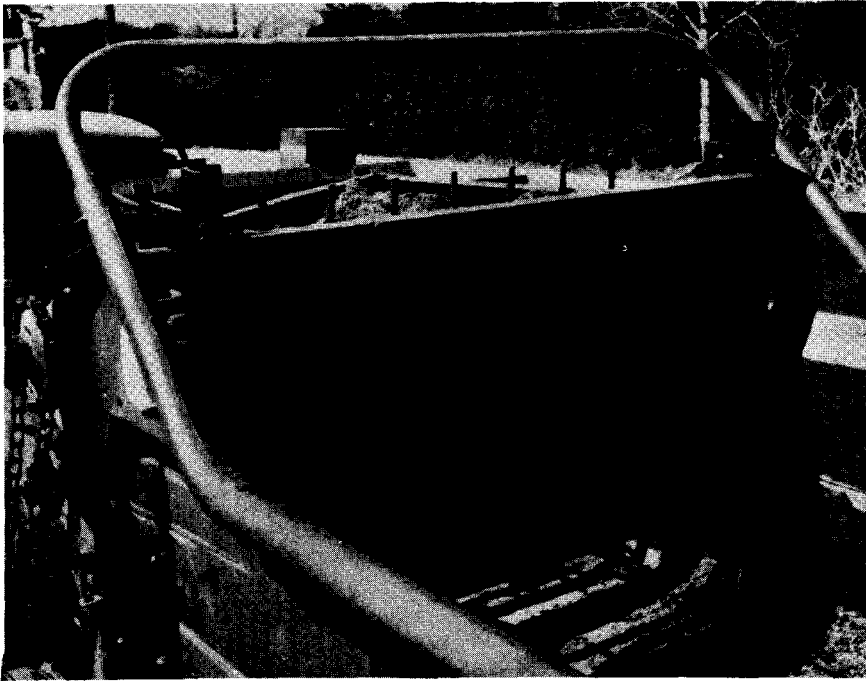


Figure 2.—Front view of feed gate that controls the amount of sawdust being fed onto the shaker.

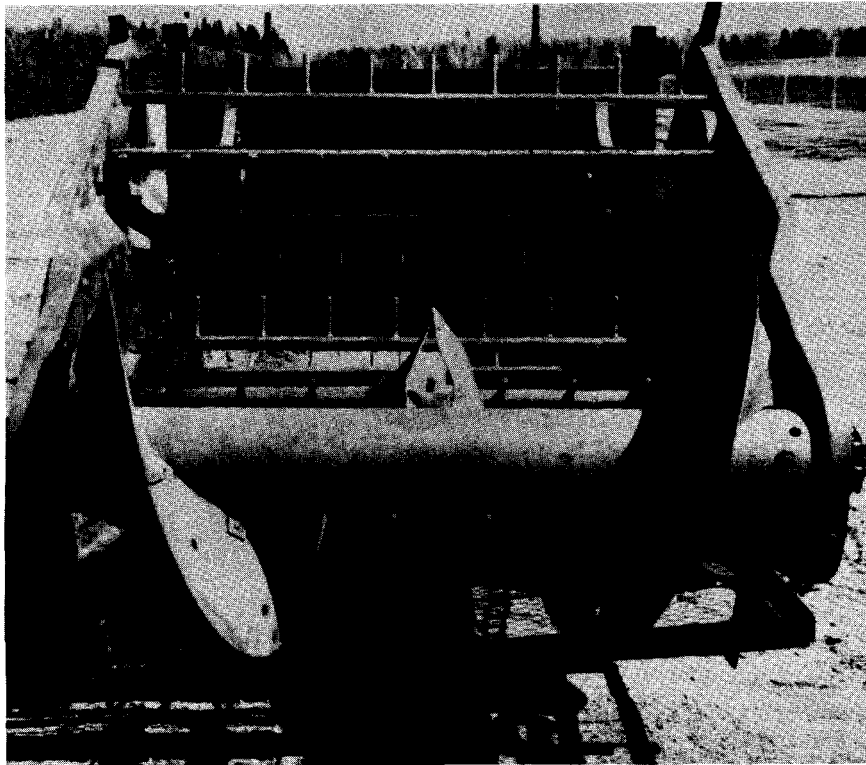


Figure 3.—Sawdust shaker with incline to divert trash between beds, allowing the finer sawdust to fall through the screen uniformly.