Open-land Machine Planting

Where Applicable:

Open-land machine planting is a method of mechanical planting used most often in open fields or pastures. Limitations include sites with excessive slope, extreme wetness, large brush or other vegetation, numerous obstructions, etc. This practice can follow a subsoil operation where necessary.

Description:

Open-land machine planting is usually accomplished using rubber-tired tractors pulling relatively lightweight covered or open topped planters. As the planter is pulled along, a coulter blade cuts through grass and small roots opening a narrow slit in the ground. The coulter blade is then followed by the planting foot which opens a slightly wider furrow to a minimum depth of 10 inches. One person rides in the planter and “feeds” the seedlings into mechanical arms or directly into the furrow depending on the planter model. The seedlings are placed at a predetermined depth and spacing that can be adjusted manually or mechanically and should remain somewhat uniform and consistent across the planting site. As the seedlings are planted, the furrow is closed around the seedling roots and the loose soil is packed back in around the roots by slightly tilted packing wheels on the rear of the planter. This practice is usually conducted during the months of December through March.

Benefits:

Machine planting can often be less expensive and offer several benefits over the more labor-intensive hand planting. This method generally produces higher survival rates due to less handling, exposure and stress on the seedlings. An open-land planter can plant 10 – 15 acres per day and seedlings are typically planted more consistently with fewer L-roots and J-roots. Straight rows and uniform spacing is an additional advantage gained over hand planting.

Other Recommendations:

Several factors need to be considered to ensure a quality planting job. Planting operations should be conducted on the contour to prevent possible erosion problems. Precautions should be taken to ensure that the planting foot is cutting the furrow to the proper depth, that the packing wheels are closing the furrow properly and that no debris is allowed to fall into the furrow. Some areas may be inaccessible due to their small size, steep slopes, excessive wetness, etc. and will have to be hand planted. Landowners should check with their vendor on his or her ability to fill in these areas by hand. It is not feasible to plant extremely small tracts with this method. It is recommended that the landowner have a planting contract with the vendor to protect both parties in the event that problems arise. Landowners should also check to make sure that the planting vendor can furnish the appropriate documentation for proof of Department of Labor Registration, Worker’s Comp or other Insurance, etc., if required. While it is possible to use an open-land planter in heavily vegetated fields, it is preferred to mow or burn the grass prior to the operation. This reduces the amount of debris that gets in the planting furrow. Also, the grass not cut by the coulter wheel can clog the planter requiring the driver to stop and manually remove the debris before proceeding. Many open fields may have gophers present and should be checked and treated if needed to prevent seedling mortality.

Cost:

Open-land machine planting usually costs between $40 and $55 per acre. Costs are determined by tract size, severity of the site, availability of vendors, etc.