Wildland Machine Planting

Where Applicable:

Wildland machine planting is a method of mechanical planting on cutover sites which provides the same advantages that were previously only available on openland planting jobs. This technique is most applicable to cutover sites that have had some form of site preparation to clear logging debris. Limitations include sites with excessive slope, extreme wetness, and large rock or other debris.

Description:

Wildland machine planting is accomplished by using a heavy tracked vehicle to pull the planting apparatus. A wildland planter is a heavy planting machine usually enclosed to protect the seedlings and occupant from the weather and limbs or other brush passing over and around the planter. The planter is heavy because of the roughness of the sites that it is used on and to allow it to cut through root systems and debris that are left on cutover tracts. As the planter is pulled along, a coulter blade cuts through roots and other obstacles opening a narrow slit in the ground. The coulter blade is followed by the planting foot which opens a slightly wider furrow. The furrow should be at least 10 inches deep. The seedlings are placed in a mechanical arm that plants the trees in the furrow at a predetermined spacing. As the trees are planted, slightly tilted wheels behind the planter pack the seedlings and close up the furrow. Burning, piling, or some other form of site preparation may be needed before planting on sites with heavy debris. A dozer equipped with a v-blade can also be used to push debris aside at the same time that the tract is planted. This practice is usually conducted during the months of December through March.

Benefits:

This operation has several advantages over other planting techniques. This method generally produces higher survival rates than hand planting. The higher survival rates are due to many factors. A machine planter breaks up the soil, which promotes better root growth of seedlings. The planter also produces less j-rooting of seedlings because of the deep furrow that it cuts and the consistency in the way seedlings are put in the ground. Also, the soil is packed more firmly around the seedling roots than when trees are hand planted. Another advantage is that machine planting provides a uniform, precise spacing.

Other Considerations:

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 their ability to fill in these areas by hand. It is not feasible to plant extremely small tracts with this method. Sites harvested within six months of planting should be planted with pounce treated seedlings to minimize mortality due to pale weevils. 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.

Cost:

Approximately $75/acre ($60-$90/acre depending on tract size, topography, amount of debris on site, availability of vendors, etc.). Plants between 5 and 15 acres per day depending on the degree of vegetative/debris cover present, terrain, etc. Extra charges may apply for vendor pickup and delivery of the seedlings, planting pounce treated seedlings, dipping the roots in terra sorb prior to planting, other special requests, etc.