Agri-Vator System for Plasticulture: mechanization for the rice paddy

The Agri-Vator System for Plasticulture is an all-inclusive ground preparation and planting system designed for introducing mechanization to the Asian rice paddy cultural practices. The Agri-Vator System is configured with a unique design that has the ability to condition soil that would normally be too wet for conventional tillage practices. It consists of a central power unit with three basic accessories. First, the power bed maker is a new design, which utilizes concepts from a rototiller and a hammermill to grind and condition the wet, heavy, clod-laden soil into a fine consistency, leaving a raised bed in its path. Second, a mulch layer presses and shapes the soil into a pre-determined profile while covering the bed with plastic mulch. Third, a manual-type wheel planter places transplants into the raised mulch covered bed.


Bunks boost efficiency of wood handling and transport

Multi-Modal Wood Bunks for Small Diameter Roundwood enable efficient transport of wood from forest thinning programs and provides labor-efficient handling of smallwood at community-based forest product firms. The all-steel bunks are designed to hold approximately 1.5 cubic meters (1/2 ton) of roundwood. A pallet jack or forklift can move the bunks at a production facility. The design facilitates tipping by automated equipment to feed roundwood onto a log deck or into a processing line. The bunks also can be lifted from the top by a log loader for easy stacking, placing, or loading in the forest. The bunks can be hauled on a self-loading flatbed trailer, conventional flatbed truck, and small trailers. The bunks are designed to nest when empty so they may be efficiently stored or transported back to the forest from town.