

**PURPOSE:** Designed to provide as wide a range of forest soil treatments as is possible with one machine in one pass.

**BACKGROUND:** In some pastures and old fields, the competition from grasses can be severe. These same grasses act as breeding grounds for white grub type beetles that feed on the roots of pine seedlings. Also, shallow and deep hardpans may exist that prevent proper root growth of the seedling, which may increase mortality or stunt growth.

The idea of providing a vertical slicing coulter to cut through deep surface slash, a horizontal slicing blade at a depth of 10 inches, to rip out the root systems of competing vegetation in the planting microsite, an adjustable ripper shank with a small wing near the tip, to rip and shatter compacted soil; two to four disks on the back, to pull together all the topsoil and valuable surface mulch into the center of a small bed; gives a complete site preparation system in one pass of one machine.

**EQUIPMENT:** Different size plows will require varying types of tractors with different horsepower ratings. The basic requirement is to be able to penetrate and shatter the soil to a depth of around 18" to 24". This is normally done behind crawlers but can be performed using larger 4WD rubber tire tractors. It is safest to work at less than 4 mph.

**METHOD OF APPLICATION:** Due to the conditions found on this site, plowing will be performed prior to tree planting. Plowed rows should be spaced at set intervals following the contour of the site. This interval will coincide with the width between tree planting rows as designated in the "Specification for Tree Planting". The plowed rows will serve as the planting rows. Plowing should be completed during June through October, as the bed should settle at least 3 months prior to planting.

**ENVIRONMENTAL CONSIDERATIONS:** All practices performed should follow Alabama BMP guidelines and have no adverse effect on threatened or endangered species or habitat. All forestry practices are to be performed in such a manner as to maintain soil productivity, limit soil erosion, and protect water quality. Therefore, plowed rows must follow the contour of the site. Failure to follow contour may cause severe erosion and will result in disapproval of the entire forestry practice and non-payment of cost share.



This information is provided by the Alabama Forestry Commission

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