

HYDROMULCH USE AT INTERNATIONAL PAPER COMPANY NURSERIES

Ricky D. Horton

Abstract.-- An overview of operational procedures used. Advantages and disadvantages discussed.

In 1980, International Paper Company, new in the pine nursery business sought a mulch material that was free of weeds, fungi, and pathogens, could be economically applied, and could be purchased at a reasonable price. After reviewing the literature and viewing several operational nurseries, a wood fiber mulch applied mechanically was found to suit our needs best.

Our current operational procedure for mulching requires using a hydroseeder (manufactured by Finn Equipment Company or Bowie Industries) equipped with a nursery board to spread a mixture of water and wood fiber evenly over each nursery bed. Mulch is applied at a rate of 1200-1400 lbs. per acre immediately after sowing. Application rate and manufacturer source vary with each nurseryman depending on slope of fields, depth of planting, and climatic conditions.

We consider the following to be the advantages in using a fiber mulch:

1. Sterile medium that does not require any chemical treatment prior to application.
2. Prepackaged volume and weight that allows for rapid mixing and precise application and can be handled economically.
3. A color that provides a visible gauge for metering bed coverage.
4. Wood fibers that, once dried, result in a mat that provides some resistance to erosion by wind and water, reduces evaporation of soil moisture, and provides some insulation from temperature fluctuation.

¹ Nursery Superintendent, International Paper Company, Supertree Nursery #1, Bluff City, Arkansas.

² The mention of a company or trade name that does not imply endorsement by the International Paper Company.

5. Reduction of the sun's reflection as compared to the bare soil; thus, minimizing potential for sun scald during early seedling development.
6. Addition of small amount of organic material.

Disadvantages:

1. Heavy rains immediately after application will move the fiber across bed top, causing thick and thin layers that impact seed germination.
2. With higher rates it tends to splash upon stems and cotyledons restricting plant growth.
3. Problems have occurred with mulch clogging machine nozzles.
4. Some dust problems have occurred with mixing on hydroseeders.

In summary, a wood fiber type mulch applied with hydroseeders has met the needs of I.P. Nurseries. Current economics of pine seedling production may dictate the amount and type of mulch we use in the future. Careful consideration should be given to the value of mulches vs your current planting technique.