

UNIFORMITY IN SEEDBED MULCHING USING CHEMICAL MULCH

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Seedbeds at State Tree Nurseries in Pennsylvania are normally sown with a broadcast spreader, covered with a fine coat of pine needles, and then covered with sand and sawdust. Finally, they are covered with either snow fences or snow fence shades. For the past 4 years, the Penn Nursery has been using a product called Soil Gard (manufactured, by Alco Chemical Corp., Phila., Pa.) as a liquid mulch for seedbeds.

The application process is as follows:

1. Seeds sown with a broadcast spreader on beds.
2. Beds covered with $\frac{1}{8}$ - $\frac{1}{4}$ inch of a sand and sawdust mix.
3. Soil Gard solution sprayed over the beds.
4. Snow fence shades used only on Norway spruce (*Picea abies*).

The application cuts labor costs of sowing, be-



Figure 1.—Very uniform germination of *Pinus nigra* after using liquid mulch.
Note: NO BED-EDGE EROSION.

sides greatly reducing the time necessary to sow when other pressing tasks are equally important.

At the present time, the liquid mulch is used when sowing the following species during the spring sowing season:

Japanese larch (*Larix leptolepis*), white pine (*Pinus strobus*), red pine (*P. resinosa*), pitch pine (*P. rigida*), jack pine (*P. banksiana*), Austrian pine (*P. nigra*), and Norway spruce (*Picea abies*).

The Soil Gard is colored green, preferred by us for moderate heating. The best results have been

achieved when the soil is moist, and the soil temperature, at the surface, is 50° F.

The mulch is mixed with water at a ratio of 1:5 in a boom sprayer drawn by a farm tractor. The nozzles used are teejet #8006, aluminum. The solution is sprayed over the beds at 225 p.s.i., at the rate of 92 sq. ft. coverage per gallon of solution. Besides being a cheaper method of mulching beds, seeds germinate earlier than by using the normal method of mulching. Germination is more uniform than before, and little or no washing occurs during heavy thundershowers as it did previously (fig. 1).