

Quick, Inexpensive Broadcast Seeding

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Planting stock must be of high quality with a particularly vigorous root system for adequate survival rates in North Dakota. Seedlings, even though root pruned, have proven inadequate. Since transplanting must be resorted to, seedbed densities of about 50 per square foot for pines and 90 per square foot for spruces have given the best results. Lower densities create a weed problem, and the resulting seedlings are difficult to transplant.

Since broadcast seedbeds had in the past been considerably superior to drilled seedbeds at the North Dakota Forest Service Nursery at Towner, an inexpensive, quick method of putting in broadcast beds had to be devised. This spring a system was tried with very good results.

Beds were shaped with a Gandy bed shaper, seed sown with a Gandy seeder, and seed pressed into the soil by passing over the bed twice with a Brillion grass seeder. Burlap was placed over the beds until germination had occurred, a period of 10 days for unstratified seed of Scotch pine, Black Hills spruce, and Colorado blue spruce.

Since Black Hills spruce has been unavailable from its native range for several years, seed picked locally had to be used. It was of very poor quality with viability of only 13 percent and with 242,000 seeds per pound.

Conditions had to be nearly perfect to get a good stand from seed of that kind, and a good stand did result.

The same amounts of Scotch pine and Colorado blue spruce seed were used as in drill sowing and the resulting stands were too dense, an indication that the new system could save seed.

In 5 hours, four men and two tractors installed 7500 linear feet of seedbed. About half the time was spent in calibrating the drill, hooking up machinery, and discussing procedures that were new to those doing the work.