FLORIDA'S COTTON BATTING

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All progressive nurserymen are continuously on the outlook for materials and ways of producing higher quality seedlings at cheaper prices.

During the summer of 1962, Barnhardt Manufacturing Company sent each of our nurserymen a 20-inch square of cotton batting held together by tissue paper. one of our nurserymen brought this to my attention and we discussed the pros and cons of its use to replace sphagnum moss. We agreed that the cotton had definite advantages and decided to test it. I wrote the Company and asked for 100 pieces 20-inches wide and 6-feet long. Instead of sending us the 100 pieces they sent one piece, 600-feet in a roll. As it turned out, the roll was better than the short pieces would have been.

I have a few slides to illustrate to you how ire handle our seedlings during the shipping season. The first slide illustrates seedlings being lifted from the bed, after the lifting blade has run under them, and being placed into galvanized tubs. These tubs are transported to the packing shed. Two graders work from one tub grading and counting seedlings. Cull seedlings are thrown on the floor and plantable seedlings are placed on the grading belt in groups of 10. These groups of 10 are accumulated in groups of 100 and placed on the rotary table at the end of the grading belt and accumulated there in groups of 500. Then, 4 groups of 500 each are put into the bale completing a 2,000 seedling bale.

Previous to using cotton we used sphagnum moss as the water-holding media in our baled seedlings. We have just substituted cotton for the moss in the bale. Then, the next few slides illustrate our method of baling seedlings using cotton.

Once the bale is completed, it is placed on a pallet and stored in racks by the use of a fork lift until they are ready for delivery.

This is the method in which we baled <u>all</u> seedlings in our study and our present method of baling using cotton. In the study, we baled 2,000 seedlings each Wednesday in December, 1962, and the first Wednesday of January, 1963. All seedlings in storage were watered once a week. The second Wednesday in January, the seedlings were delivered to the regular planting crew on the Blackwater River State Forest and planted as they were planting their regular seedlings. Seedlings baled with moss were stored and planted with those baled in cotton. Their survival rates are as follows:

Survival of Seedlings Stored With Cotton and Moss

Date baled	Weeks stored	Survival percent	
		Cotton	Moss
December 5, 1962	5	91.0	86.6
December 12, 1962	4	90.2	88.8
December 19, 1962	3	93.5	90.0
December 26, 1962	2	94.5	95.0
January 2, 1963	1	98.8	99.3

All seedlings planted January 9, 1963.

This study was not designed statistically; that is, randomized or replicated and it is, therefore, not subject to the usual statistical analysis. It was designed to compare cotton versus moss as a water-holding medium for baled and stored slash pine seedlings under production conditions. This was accomplished, both in the baling process and field planting. The results indicate that cotton is equal to or superior to moss as a medium for baled slash pine seedlings, particularly when the seedlings are stored for several weeks.

Some of the advantages of using cotton in place of moss is that it is usually cheaper (if you buy your moss) and possibly reduces a source of infection from a fungus disease known as Sporotrichosis. Labor is saved in not having to prepare and wet the moss down the previous day, as the cotton is wet as it is placed into the bale. Cotton does not slow the operation; in fact, it speeds it up, particularly on cold days and especially if the moss has ice or thorns in it.