

Heiko L. Schoenfuss, PhD
heiko@altanursery.com
612-207-4971

Alta Nursery, Inc.
21750 Alessandro Ave
San Jacinto, CA 92583, USA



December 4, 2025

Re.: Plumas Wood Fiber Growth Trials

Synopsis

Alta Nursery, Inc., a wholesale grower of starter plants, ornamental shrubs, and trees, located in San Jacinto, CA, is participating in Plumas Wood Fiber growth trials in fall/winter 2025-26. Alta Nursery, Inc. produces a wide diversity of liners (“starter plants”) through propagation of seed, divisions, and unrooted cuttings. Liners are primarily sold in the California market in 32-cell trays. The nursery annually produces 4-6 million liners. The nursery prepares its own soil mix in larger batches and replaced Peat Moss with a redwood fiber several years ago to become more sustainable in its production.

For the Plumas Wood Fiber growth trials, the nursery selected four plant species and two growth conditions (greenhouse with heat and environmental controls, shade house). Three treatment soils were established: our standard liner soil mix (control), a 50:50 blend whereby half our regular virgin redwood fiber was replaced with Plumas Wood Fiber, and a 100% Plumas Wood Fiber soil mix where all redwood fiber was replaced by the Plumas Wood Fiber (Table 1, below). For each trial, established plugs were transplanted into 32-cell trays using the treatments described above. At least 500 cells were established for each species and treatment. Irrigation, shade, and fertilization through slow-release fertilizer granules was identical for outdoor trials. The indoor trial was maintained at 70-75°F at the root zone of the plants and received a once-weekly liquid fertilizer boost.

A first assessment of plant health and root development was conducted on Wednesday, December 4, 2025. For each species trial, an overall visual inspection of the growth beds was conducted (qualitative only), a random set of three liners from each species, treatment was removed from their cell, and root growth was visually evaluated.

Table 1. Species and trial conditions.

Species	greenhouse/ shadehouse	transplant date
Juniper Scopulorum ‘Moonglow’	shadehouse	October 24, 2025
Rhamnus Californica	shadehouse	November 4, 2025
Rhaphiolepis Umbell Minor	shadehouse	October 28, 2025
Lonicera Heck ‘Gold Flame’	greenhouse	October 24, 2025

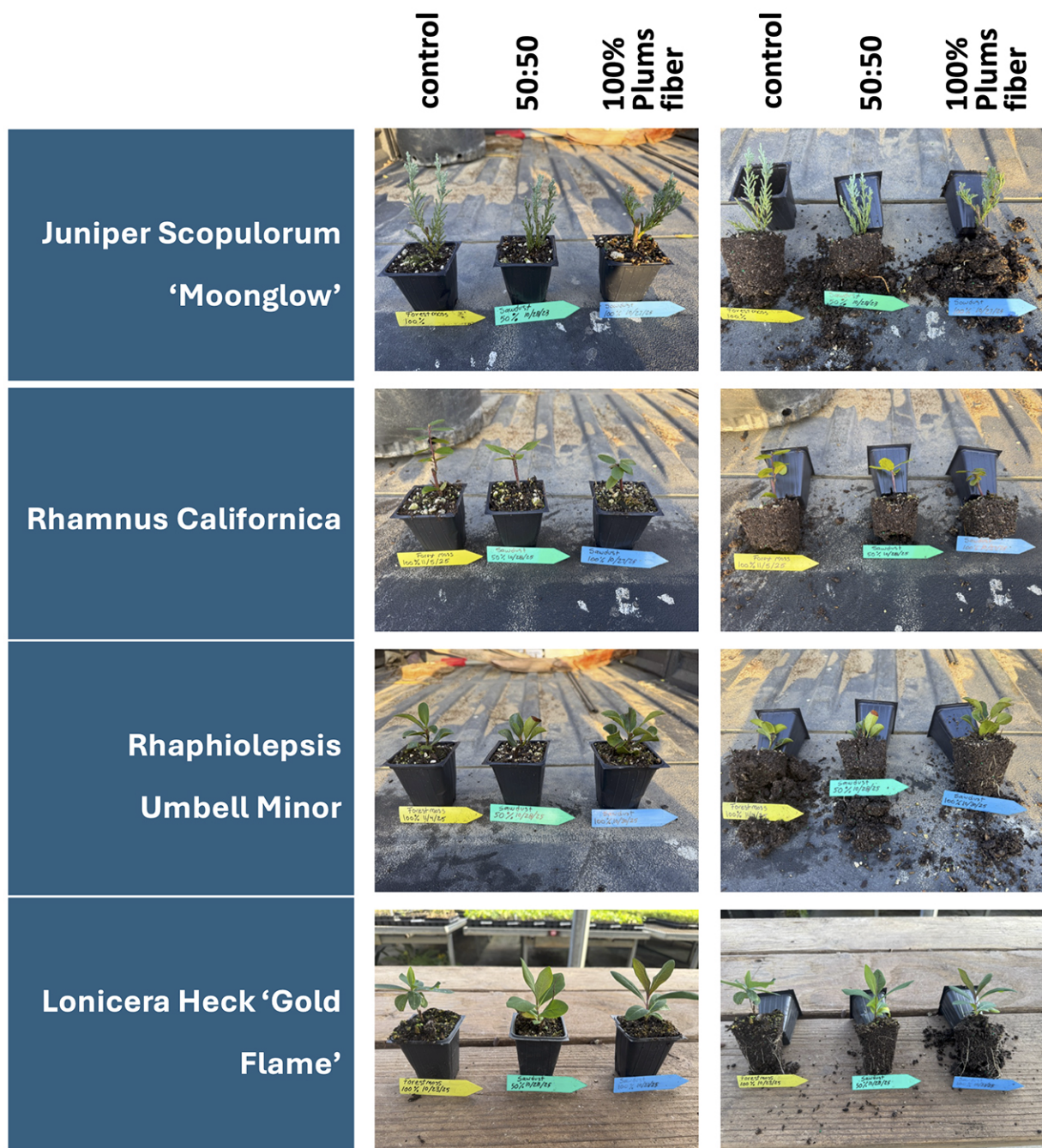


Figure 1. Representative liner plants after 4-5 weeks growth.

Initial Observations

Survival exceeded 95% in all trials and treatments, matching our standard operating conditions and expectations. Few discernible differences were apparent at this stage of development between groups of liners representing the different treatments within each species trial (Figure 1, middle column). The *Lonicera* liners grown indoors were more developed than the three shade-house-grown species, consistent with the falling temperatures in San Jacinto, CA, during the trial period (40°F nighttime lows to 93°F daytime highs). Root development was in congruence with the above-observed trends in plant growth (Figure 1, right column): indoor-grown *Lonicera* had further established root development.

Neither plant growth nor root growth appears to be significantly impacted by any treatment or species at this stage of development. The only discernible difference observed was the soil structure's coherence as the plant was removed from the container (Figure 1, right column): the 100 % Plumas Wood Fiber maintained less shape and disintegrated further than either of the other treatments. This observation was consistent across species and consistent with the a priori observation that the Plumas Wood Fibers were finer than the redwood fibers usually used in the soil mix.

Next Steps

Plants will be re-evaluated for survival, growth, and root mass approximately 5 weeks later, when the indoor plants should be nearing readiness for sale and the outdoor plants should have a fully developed root ball. At the time, for the indoor trial at least, a larger number of plants will be compared. A final evaluation of all species and treatments is planned for early March 2026 (the *Lonicera* trial evaluation may occur earlier if the plants are ready for sale and need to be shipped).

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