



SUCCESS STORIES



Western Bark Beetle Initiative 2008

Region 5

Helping Grow Superior Genes

A Partnership between Forest Health Protection, Stanislaus National Forest and the Institute of Forest Genetics



Figure 1. Pine trees prior to treatment.

A high value research plantation will continue to provide valuable genetic information due to the successful planning and implementation of much needed thinning. That's the prognosis for the Crusher Progeny Genetic Plantation on the Mi-Wok Ranger District, Stanislaus National Forest, thanks to the cooperative efforts between the Tuolumne County Resource Advisory Council, Mi-Wok Ranger District, Forest Health Protection (South Sierra Shared Service Area), and the Institute of Forest Genetics.

The 55 acre plantation was initially planted with ponderosa pine in 1978, with additional plantings of ponderosa pine and white fir in 1988. Superior stock of both species were planted to determine their genetic performance. The dense, 11-15" DBH, ponderosa pines had intertwined crowns (Figure 1), and red turpentine beetles were starting to attack the stressed trees. White fir, initially planted at 6' by 6' spacing, had nearly 100% survival, and similar to the pines, were becoming severely overcrowded. In addition to being highly susceptible to bark and engraver beetles, the density of the trees and the manzanita and *Ceanothus* species proliferating in open areas, greatly contributed towards fuel loads; the potential was high to lose the plantation to wildfire.



Figure 2. Thinned white fir trees.

Masticators with rotating drum heads were used for most of the work except for hand felling of the larger diameter pines. Residual tree selection involved identifying specific trees needed to monitor for future growth, rather than the typical distance-based spacing used in many plantations. Injuries to residual trees were to be minimized during project implementation and all slash had to be shredded to reduce the potential for subsequent attack by pine engravers or other bark beetles.

Treatments were implemented in October 2008 (Figure 2). Machine operators carefully cut selected trees and thoroughly scarified slash to accelerate wood drying. Logs were cut into short lengths, skidded and piled on landings, and later removed by woodcutters or hauled to a specialty wood mill. Monitoring in future years will help determine the success of the project and further performance of residual trees. The determined and tireless efforts of all cooperators are greatly appreciated.

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