How to save and regenerate California's most valuable tree—the sugar pine, is the subject of an interesting experiment being conducted by the United States Forest Service California Forest and Range Experiment Station in a virgin tract of sugar pine in the Stanislaus National Forest, some 35 miles east of Sonora, Calif.

Cooperating with the Forest Service is the Pickering Lumber Corp., Standard, Calif. The logging is being done by a small experiment station crew using equipment from the Black's Mountain ponderosa pine experiment with good cone crops maturing in the current season or following logging. Sugar pine seed trees were mapped to enable estimating the area requiring seeding or planting.

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Variable Cutting

"The variable cutting is resulting in no unusual difficulties or expense in logging and no trouble has been encountered in maintaining daily log deliveries.

Although the first cutting is highly important, it is only one of many measures that must be properly coordinated if sugar pine management is to be successful. At least three more cuttings during the conversion period probably will be necessary for release of reproduction and advance growth, to hasten the growth of reserves, salvage dying trees, harvest maturing timber, and regenerate additional groups as they mature. Two or more thinnings in young growth will be necessary to bring sugar pine through to crop-tree size. Pruning crop-tree pines also will be necessary. Unwanted advance growth fir is selectively culled for Christmas trees to prevent needless loss in regeneration fellings.

"Fill-in seeding or planting with sugar pine will be necessary on at least 5% of the area even with the best of luck with natural seeding.

"The importance of blister rust control in sugar pine management scarcely needs mentioning. Rodent control also is indispensable.

First indications of success of the experiment will be looked for in June, 1949, when sugar pine seedlings should make their appearance. The first cutting will produce about three million feet of logs from a little more than 60 acres."

1. A virgin stand of sugar pine with typical understory of white fir and brush. 2. A stand of sugar pine cut-over 24 years ago. Although numerous large sugar pine seed trees were left, the advance growth fir has prevented successful pine reproduction. 3. Advance growth fir and brush have been cleared from within the group of sugar pine seed trees and have been bunched with the slash for winter burning.

4. Heavy slash of tops and cull logs resulting from group clear cutting is bunched with a large tractor and trailbuilder. Lighter slash is heaped up with the heavy material by a small tractor with special brush rake. 5. The variable experimental cutting requires numerous small landings. An expensively mobile log loader is an essential item of equipment. One of Robert O. Sharp's fleet of Chevrolet trucks, with forklift two-wheel trailer, and load of 4500' of pine logs at the dock of the Pickering Lumber Corp., Standard, Cali. Brakes are Bendix-Westinghouse air brakes.