

The range improvement program in Mariposa County for the year 1952 has progressed in the number of persons conducting controlled burns, in the number of acres bulldozed for the removal of brush, and in the number of persons doing reseeding following controlled burns. A total of 51 individuals made application for controlled burns and permits were issued for the same. Of this 51 persons, 3 did not burn after they had been issued a permit to burn. Some of the controlled burns were exceptionally large in acreage, others were small. It is estimated, according to an analysis of the "Great Register" just issued in Mariposa County for this general election, that there are approximately 350 farmers or ranchers. With 51 of these ranchers conducting controlled burns, it means that approximately 15% of the farmers of this county removed brush by controlled burning in 1952.

There is no way to determine just how many people removed brush by the use of bulldozers. At the present time, however, there are 12 known operators of bulldozers who have spent most of their time this summer in this county bulldozing brush. The acreage bulldozed per operator would run from 5 acres to 150 acres. Various estimates of brush removal for fire and mechanical methods run from 17,000 to 21,000 acres.

In 1951, during the controlled burn season, it was common conversation among many of the people helping on controlled burns that it wasn't important to keep the fire controlled within the area for which the permit had been issued. With constant conversation, however, on the part of the Forest Service and the Farm Advisor in 1952 the conversation among people helping on fires showed almost a complete reversal of attitude. The common statement heard was "we must not let this fire get out of control." The Range Improvement Association on the north side of the Merced River was under observation during a large fire by Mr. Nelson and Mr. Metcalf of the State Division of Forestry. Before leaving the area both expressed that the Groveland-Coulterville Range Improvement Association was by far the leading association in the state from the standpoint of operating a controlled burn and attitude of the growers with reference to controlling the fires.

Much time was spent during the actual operation of the controlled burns in talking to the various growers about the value of reseeding and proper management of the range. As a result, it now appears that before the first rainfall probably 25% of the areas burned will be reseeded.

The ranchers in the vicinity of the town of Mariposa are now aware of the fact that they are in need of a range improvement association in this area. Much time has been spent talking to leading ranchers regarding the need of an efficient association. Plans are now set for a December meeting to develop this organization in preparation for the 1953 controlled burns. It is hoped that a committee of 5 or 7 will result from this meeting. These 5 to 7 committeemen will each then secure a fire crew to operate under him of at least 6 or 7 men that can absolutely be depended upon. If this operates as planned there would be approximately 50 men for every burn plus what each one of these 50 men might be able to secure in the way of additional manpower.

In the controlled burn program this year, several growers had been induced to do some trampling down by a bulldozer of strips of brush for the purpose of developing a greater amount of kindling. Growers who did not do any of this and had burns this year recognized that their burns would have been much more successful had they provided for an additional amount of fuel by trampling down the brush with a bulldozer. Some indications are that this coming year, as a result of this year's trampling down, that an anchor chain may be secured whereby two bulldozers will operate together and smash down a strip 300' wide as they go. This will improve the burn and will aid in developing necessary fireguards.

they can be pastured according to a management schedule. Both ranchers have agreed to pasture according to our recommendations.

In addition to this type of range seeding, cooperation has been given to Dr. G. L. Stebbins, Jr. of the University who at this time has 8 test plots of a research nature already established. Two additional plantings will be established, in cooperation with Dr. Stebbins this year. The grasses used in these particular research plots by Dr. Stebbins are those which he has personally crossed and bred for drought resistance. The outstanding grass is a cross that he developed between cereal rye and perennial rye grass from Iran. This particular grass sprouted with the first rains in the fall of 1951. By fall of 1952, the grass was established and had produced a seed crop with seed stocks 3' high. By October 25, 1952, we found by examining these plots that the original seed stocks were still standing with ripe seed and a second seed crop had been established and was in the dough stage with seed stocks about 2' high. In July as well as in October, these particular plants had a crown of green leaves from 2" to 3" in length. On October 25, those plants that developed perennial characteristics were divided at the crown and one half of the crown was taken back to Davis to be transplanted for breeding purposes. The other half of the crown remained in place. All of the seed from this particular strain whether it was a portion of the plant that developed to be annual or perennial was seeded in the plot for the purpose of seeing what it might do under range conditions. This research plot has been growing under regular pasture conditions. The cattle on this range were operated the same as in previous years. They were removed from the range about June 15. Up until that time, however, they were grazed according to the ranch schedule.

In the past, small plots when established have a difficult time to exist even though they are not pastured by the ranchers due to three types of rodents - gophers and moles, rabbits, and deer and many times the plot proves to be a failure due to the fact that it is the only green grass available. These particular plots were established in a 2,000 acre pasture that had been controlled burned and the entire area seeded to annual and perennial rye grass. It was very prevalent at the research plot and made competition for the newly bred plants that otherwise would not have existed. Even so, these cross bred plantings have done an outstanding job of reproducing.

Other strains used were Orchard grass, Harding grass and brome. The orchard grass proved to be probably not as successful as the cereal rye and perennial rye but better than the Harding grass or brome grass combinations. It appears that this plot may be the beginning of a new grass that would be adapted to this area. Dr. Stebbins is so well pleased that he now plans to continue his research work in this county for the next several years.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
U.S. Department of Agriculture and the University of California cooperating

PROGRESS REPORT

MARIPOSA County

Name of Project HYBRID GRASS TEST PLOTS

PROJECT NUMBER: State 4029 County 1

REPORT PREPARED BY John Anderson
Farm Advisor

DATE December 15, 1959

Are project and progress reports to
continue? Yes _____ No X

I. PROCEDURE USED:

Same procedures as outlined in original Project and Progress Report of May 9, 1955. However, it seems that a more complete write-up of procedures is now necessary.

Hybrid Grass Test Plots State Project 4029 started December 3, 1952 with Dr. G. Ledyard Stebbins, Jr., Professor of Genetics, University of California, as leader. Hybrid perennial grasses resulting from crossbreeding of various strains were to be tested; compared with strains available commercially, and native species. All grasses planted were replicated at least twice and in most cases four times. A total of six plots were seeded, all on ash where brush had been burned off. One plot a year was seeded each year, 1951-1956.

III. CONCLUSIONS:

- 1) No perennial grass tried in Mariposa County to date has been found to spread by reseeding and thus do not compete with native forage plants and this is true even where protected from grazing.
- 2) However, a second conclusion may be made as a result of this project, which is: some perennial grasses if seeded carefully where little, if any, native competition exists at seeding date and where ashes from previous existing brush cover have provided some fertilization, then these original perennial grasses can survive and produce feed under all extremes of weather and grazing.

(continued on attached sheet)

II. RESULTS:

Many of the original rows are still present in most plots but the plants are gradually thinning out. It is definite that no plant has been developed that will reseed itself and spread. The few seedlings that have been found after first-year stand do not survive.

SIGNATURE _____

Farm Advisor

Make sufficient copies of this report to supply one to each signer of the project or project addition.

III. CONCLUSIONS: (continued)

3) This project as a farm advisor project and county project should be terminated as of this date for the following reasons:

(a) Farm Advisor formal project work with a project of this nature is unnecessary duplication of efforts by Dr. Stebbins.

(b) Other work demands the time and would give more immediate and practical value to county.

This project is formally terminated as County Project #1 and State Extension Project #1029 as of this date. However, all possible cooperation will still be extended to Dr. Stebbins to help him obtain and establish field trials for his breeding work.