I Did It—For Range Sake!

Brandi Linhart

Ladies and gentlemen, there is no doubt about it—Lewis and Clark were correct in describing the Ponderosa Pine as a beautiful and stately tree in the forest stands of what is now western Montana. Almost 200 years later it is still prominent and plays an important part in the western Montana timber industry, resulting in $100 million worth of timber products annually. Its beauty and importance to western Montana's economy were in its favor when it was designated the "State tree of Montana."

This same Ponderosa tree is equally at home on foothill rangelands in many areas of eastern Montana. It has proved it can survive the droughts and compete with the native bunchgrasses. In this drier climate, the Ponderosa Pine is a much slower growing, shorter, scrubby and heavy branched tree. In eastern Montana it has little timber value, and gives the ranchers "fits!"

Yes, many ranchers are losing their rangeland grazing due to the encroachment of the Ponderosa Pine. Forage production is reduced through direct competition from pine reproduction, needle cast, and canopy closure of the ponderosa pine stands.

The encroachment problem increases each year and many ranchers feel they are losing the battle. Field observations indicate the encroachment to be nearly 10% annually. As the pine tree canopy thickens and closes, the grass production decreases dramatically. Studies show grass parks producing 2,000 pounds of forage per acre, compared to only 50 pounds of forage per acre under a 70% canopy. The forage production under the trees decreases to nearly nothing. The grass that is left is shunned by both cattle and elk.

Range ecologists say that, for centuries, fire periodically burned out the thick tree stands, with the grass returning as the dominant vegetation. Frequent surface fires prevented the development of thick stands of coniferous tree seedlings and did little damage to the grasses. This resulted in rangelands that had a scattered tree appearance, with a more continuous grass cover.

For years we have been led to believe that trees are good and anything that destroys them is bad. This attitude towards trees makes the problem of pine tree encroachment difficult to address.

When men began to control wildfires, they eliminated nature's method of keeping a balance between trees and grasses. Without fire, trees will thicken up naturally. The encroachment occurs in a very subtle manner. This is partially why the public is unaware of the encroachment and is against the killing of any trees.

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$35/acre for a two-quart treatment. Recent studies show the promise of using a lesser rate of Garlan per acre, which would reduce the cost.

Mechanical means provide a third method of control. A rotary brush cutter or a chainsaw are often used to clear the trees. This method is costly and time consuming. For this treatment to be successful the site has to be easily accessible and there has to be a minimum amount of rocks to prevent the chance of breaking a blade.

Manual hand grubbing and chopping of Ponderosa pine is another method of control, but it is definitely hard labor and usually applied on the smaller trees.

In summary, Montana’s state tree, the Ponderosa Pine, is a valuable tree to Western Montana’s timber industry. But in eastern Montana, the pine tree encroachment into the foothill and mountain rangelands is becoming a major problem facing livestock operators.

The main concern with pine encroachment is the loss of rangeland due to man’s control of wildfire. In these areas the pine is overtaking the range and is crowding out the valuable forage grasses. Ranchers and range management specialists have been able to use the re-taking of old photographs to document tree encroachment into the grassland vegetation.

For example, I received a photo taken in 1910 showing only scattered trees and grassy meadows surrounding the homestead. A comparison picture, taken in 1987, was also sent. Now the homestead is completely surrounded by Ponderosa pine.

In such areas pine encroachment caused a loss in both quantity and quality of grazable forage. Production can drop by as much as 90% and usable forage can drop by as much as 100%.

Landowners with a Ponderosa Pine encroachment problem should look carefully at the options—prescribed burning, chemical control, mechanical control, and hand grubbing—then evaluate the various trade-offs and develop a control plan compatible with their ranching objectives.

In conclusion I hope I have made you aware that in certain areas there are just too many trees! And like George Washington, . . . I cannot tell a lie—Yes, I chopped this pine tree down, but I did it for range sake!

An Evaluation of Common Use Grazing

Carol Bowns

Ever since the first settlers to America began raising sheep and cattle for domestic red meat production, they have faced many advantages and disadvantages with grazing either alone. Sheep are well adapted to many intermountain ranges because they make efficient use of shrubs, are able to negotiate steep, browse-dominated, ranges with limited livestock water. Sheep production is, however, very labor intensive, and predation as well as other factors make sheep production unappealing to some operators. Cattle on the other hand, require much less labor but are not well suited to steep, rough, browse-dominated, poorly watered mountainous ranges.

For the past several summers I have had the opportunity to be involved in an extensive cattle-sheep grazing study in the mountains east of Cedar City, Utah. The project site is at an elevation of approximately 8,500 feet, where it receives about 30 inches of precipitation. The precipitation on the study comes primarily in the winter and summer months.

The vegetation is a mosaic composed of open grass land, snowberry, oak, and aspen. We have 18 pastures that are grazed either continuously all season or under a deferred rotation system. The treatments consist of sheep grazed alone, cattle grazed alone, or a combination of sheep and cattle grazed together or what we refer to as common use.

It is well known that cattle and sheep prefer and utilize different kinds of plants. When looking at the three main categories of forage we see that sheep grazed alone make the heaviest use of the forbs, lightest use of the grasses, and heaviest use of snowberry, (Symphoricarpos oreophilus) which is the dominant shrub. Cattle when grazed alone make heaviest use of the forbs, intermediate use of the grasses and little or no use of the snowberry. In contrast when cattle and sheep are grazed together there is a heavy use of the grasses, with an intermediate use of both shrubs and forbs. Therefore, these utilization data show that cattle and sheep, when grazed together, make more efficient use of all the plants than either grazed alone.

If we were to look closely at a pasture that had been grazed by sheep only we would see that the sheep defoliate the shrubs or strip them of their leaves when they browse alone. A pasture grazed by cattle alone would show heavy utilization of the grasses with little or no use of the desirable shrubs and forbs.

When cattle and sheep graze together we consider the range utilized to its optimum level. With current utilization data optimum use is estimated to be between 50-60% use of the grasses and forbs, and 30-40% use of the shrubs.

We are currently evaluating trends in range condition by changes in our key species. In the common use pastures we

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