Trees versus Water and Grass

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It's an old, old story—overgrazing by livestock, denuded ranges, and erosion.

But it is a brand new story—the overproduction of trees can be just as disastrous.

Cattle numbers on the Mud Tank and Beaver Creek allotments of the Coconino National Forest of Arizona have decreased by approximately 85 percent since 1910. Part of this reduction was necessary as there were too many cattle. Ranges were over grazed. A reduction of 50 percent should have corrected this, but ranges continued to deteriorate. In spite of stockmen's efforts to make better use of the ranges by water development and fencing, ranges responded, only temporarily, to the reduced numbers. There is one exception. The lower winter ranges have improved substantially.

Further reductions up to 35 percent have been made, but the ranges continue the downward trend. Increased game numbers have contributed to this trend, but in my opinion the greatest cause of range deterioration is the unrestricted, increased growth of trees —cedar, juniper and jack pines, as well as brush.

Cattlemen have known for several

years that they were losing the fight of adjusting cattle numbers to available feed supplies. Year by year the encroachment of trees and brush was choking out the grass. Trees became thicker and larger.

The viewpoints of an Arizona rancher on securing multiple use of our forested and brushy range lands. Mr. Wingfield gave this talk at a meeting of the Tall Pines Farm Bureau Local near Rimrock, Arizona, on July 18, 1954. With his son, Kenneth, Mr. Wingfield owns and operates the Apache Maid Ranch.

Space for grass became smaller and smaller. He also has learned from experience that a stock tank built in a draw below a jack pine thicket won't catch much water. The draw in front of this house has only run twice in six years.

It reminds me of the story in our early history. The Indain chief asked the white chief to sit with him on a log while they discussed a peace treaty. Every few minutes the red chief would nudge the white chief and ask him to move over. At last the white chief sat on the end of the log. The Indian chief gave him another nudge and asked him to move over again. "I can't move farther. I am at the end of the log." This illustrates the cowman's position today. He can't move farther. He has reached the end.

Grazing of livestock on the forest takes about third place in importance; water being first and timber second.

Timber management today is possibly making the same mistakes range management made 50 to 60 years ago by placing over-emphasis on numbers instead of quality.

Every cowman was striving to build up his herd. In the old days yearlings were sold by the head. It was the numbers that counted. The greater number of yearlings the cowman sold in the spring, the bigger his bank account. Cows were not getting enough to eat. The size of the cow and the yearling were getting smaller. Their stomachs adjusted to the smaller amount of feed. Cattlemen never sold cows. The cows would raise another yearling, so nature had to do the adjusting. The cows died. The ones that survived were small and stunted.

Doesn't this same rule apply to trees?

Timber management seems to be aimed at growing the largest possible number of trees regardless of whether many of the trccs are worthless. Wouldn't it be better to grow fewer trees; trees with higher quality? There is just so much water. The soil and space will only support a certain number of high quality trees. One tree, given room, will grow to four or five feet in diameter; fifty trees on the same space can't grow at all. Like the cow they starve. They die. In the end a few stunted trees remain. It takes several of them to equal the one that has not been stunted. While this process of elimination is taking place, spread over 100 to 150 years, water is being sacrificed, space for grass is being wasted, and time is being wasted, as a tree with room grows much faster.

It has been a popular belief that the more trees the more lumber. That's exactly what the early day cowmen thought about cattle raising. They weren't considering what the cattle were going to live on, or the damage to the range. And too, it is believed by many people that trees are beneficial and necessary on the watershed to increase the water to stream and reservoir.

Only in the past year or two has there been a gleam of hope favorable to the cattlemen. The cedar and juniper thickets, once the pride and joy as a soil saver and water conserver, have been pronounced a fake. Not only do they waste water, but cause erosion as well. They have crowded out the grass, the only true savior of the soil. Thanks to the Indian Service for bringing the above facts to light.

Only recently the Salt River Valley Water Users have released to the public their records showing the steady decline in stored water whereas of today the watershed releases for storage only 70 percent as much water as some 45 years ago. These figures coincide with the decline in cattle numbers covering the same period of time. The average annual rainfall remained the same. We believe the answer to both is the over-production of trees and brush and the accumulation of trash on the forest floor. A tree that can be sawed into lumber is useful and is an asset. A shade tree on a hot summer day is also an asset. The 49 jack pines that never reach the size of a saw log are a liability and should be destroyed. The cottonwood and willow trees lining our streams are extremely wasteful of water.

Trees growing on the watershed are in direct competition with farm crops. For the watershed to deliver the same amount of water to stream and reservoir as it did some 45 years ago, it is necessary to rid the forest of the surplus trees, underbrush, and trash accumulated over this period of time.

The cost of controlling forest fires has increased as the fuel to feed these fires has accumulated year by year. When fires were first controlled the floor of the forest was clean. There was very little to burn. For the first few years the local farmers and cattlemen could easily control the fires, and the only weapons for fighting fire were a rake and axe, and sometimes a saw.

Much time was spent going to fires, as the men had to ride horseback and pack their equipment. Using the same methods today, the control of forest fires would be impossible. The amount of money spent for the control of forest fires is enormous, but very little is spent to minimize the hazard that causes destructive fires.

There is a happy medium in the use and care of our natural resources. Abuse or misuse them and they get off balance. Our economy suffers.

Our goal is not unreasonable. We merely wish to see the preachings about multiple-use put into actual practice. We merely recommend that federal foresters apply intensive forest management practices on a more widespread scale to benefit not only commercial timber production but also the production of forage and water. We recommend that thinning, a good but limited forest management practice, be extended. Thinning of dense stands would undoubtedly help maintain a constant supply of forage and would help increase water yields by reducing the amount of water used and intercepted by excessive numbers of trees. We recommend that pruning, another good but limited forest management practice, be extended to larger areas, to help reduce the tree canopy that intercepts rain and snow. We recommend the removal of excessive numbers of limby wolf-trees that have little or no commercial value and that crowd out forage grasses and wastefully use and intercept snow and rain. Finally, we recommend the disposal of excess slash and trash on a forest wide basis rather than limiting this forest management practice to the main traveled forest roads. Disposal of excessive slash on a forest wide basis would not only help reduce the fire hazard but would also help reduce the amount of forage that is choked out by heavy piles of limbs and would help reduce the amount of snow and rain that is intercepted and absorbed by limbs and stems which may not rot away even after 50 to 75 years. We believe that these recommendations would give the greatest benefits to the greatest number.

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