

Table 2 lists the composition of the native plants found in the treated and untreated strips in 1990. The untreated check has 16 forbs. The Tordon spray treatment shows none of the forbs in the check four years after being sprayed. A small amount of the shrub western snowberry started to show up in 1990. The Tordon sprayed strip had the greatest reduction of forbs and shrubs.

Conclusions

1. Although the herbicide treatment strips visually appeared quite different, the range condition did not change very much. Herbicide treatments removed most of the broadleaf plants, reducing composition and allowing the native grasses to increase in size and yield.

2. Increased and early precipitation in 1990 resulted in a 33% grass yield increase. The average grass yield in the untreated fields produced 841 lbs/acre and the treated fields produced 1,274 lbs/acre.
3. The herbicide treatment, increased April and May precipitation in 1990, and deferred grazing increased grass production which comes close to paying for the treatment. Therefore we can conclude the herbicides may be one of the options to be considered for improving a range condition problem.

A Nevada Ranch Family: Their Success Through Four Generations

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Family cattle ranching is becoming more difficult in northern Nevada, due to economic constraints and public land uncertainties. For family-operated ranches to persist, the owners must adjust to changing conditions. Successful ranchers have been cautious, managing their operations as efficiently as possible, and tend to be dedicated and progressive. Following is an account of a family ranch operation which has met this challenge over time.

Ranch Family

The T Quarter Circle Ranch is located along the Humboldt River, approximately 4 miles west of Winnemucca, Nevada. Various ranchers raised cattle on this land since the 1870s. William Pearce, an experienced cattleman, purchased the ranch in 1913 and it has been managed under the same family ownership since that time. Three generations were interviewed who either are or have been living and working on the ranch. Family members interviewed included Kelly Pearce and his sister Lillian Pearce Harrer, children of the original purchaser, William Pearce. Also, Jane (Lillian's daughter) and her husband, Hank Angus; and Nancy (Jane and Hank's daughter) and her husband, Frosty Tipton, were interviewed. A fifth generation of this ranching family are Nancy and Frosty Tipton's children, Katie, Karla, and Guy.

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The T Quarter Circle Family. First row: Karla Tipton. Second row: Jane Angus, Hank Angus, Guy Tipton. Third row: Nancy Angus Tipton, Katie Tipton, Frosty Tipton. Taken by Nancy Tipton, 1990.

Ranch Description

Deeded property on the T Quarter Circle Ranch covers 1,200 acres, mostly riverbottom land with native meadow. These meadows were hayed to supply winter cattle feed prior to 1985, yet are now incorporated in the ranch's summer grazing plan. The ranch also uses 11,200 AUMs, on approximately 300,000 acres of public lands (administered by Bureau of Land Management) and leased railroad-grant lands. The ranch, like most Nevada ranches, runs a



Kelly Pearce. Taken by Nancy Tipton, 1980.

generation allowed the younger generation to become equally involved in making decisions and choices for the ranch. This is in contrast to other ranches where the older generation often is reluctant to share management control with the younger generation. The T Quarter Circle has been fortunate in having a continued interest and shared intent of family members to keep it a productive and operational ranch.

Along with ownership and management responsibilities, Hank, Frosty, Jane, and Nancy are the main work



Lillian Pearce and her great-grandchildren. Taken by Nancy Tipton, 1987.

cow/calf operation (carrying 1,100 head of brood cows), but unlike many ranches, the operation is year long grazing. The rangeland surrounding the T Quarter Circle is dominated by sagebrush/grass and salt desert shrub communities, averaging 25 to 30 acres/AUM. The sagebrush/grass is grazed in the late spring and early summer, whereas, the salt desert shrub is usually snow free in winter and the cured vegetation provides forage during the cold months.

Family Ownership

Since 1913, there has been at least one member of the younger generation who stayed and worked on the ranch, and had the desire and ability to learn the operation. Jane and Hank Angus are still actively involved with ranch work and decisions, yet they were willing to transfer responsibility to Frosty and Nancy Tipton. The older

crew of the T Quarter Circle operation. There has been no outside income supplementing the range since the Depression. Additional sources of help are Frosty's uncle, mom, and dad, who are retired ranchers, yet available and willing to assist. The family also hires cowhands on a daily basis. Hiring for one day is expensive, but may be cheaper than a full-time employee in the long run. The cost of full-time labor is too high to be balanced by current returns on the ranch, and available labor has become scarce due to competition from local mines and other businesses.

Outside factors often influence ranch management. The ability of ranchers to work together with federal, state, and county agencies, other ranchers, and public groups can affect the ranch's performance. This ranch family tries to stay current on political and environmental issues related to ranching, and update their ranching



Frosty Tipton moving cattle from the summer range to the deeded ranch meadows. Taken by Nancy Tipton, 1991.

technology for improved economic operation. The younger generation is actively involved with local public land agencies in promoting range management practices. Progressive attitudes are indicated by membership in the Society for Range Management and a strong desire to keep abreast of new developments.

No Debt, No Mortgage

This important concept, commented on by various family members, was the advice of William Pearce. His main

concern was to avoid debt, and especially never to mortgage the ranch. No matter what happened, the ranch could always provide a home and subsistence for the family. Apparently, family members listened well as the ranch has never been sold or mortgaged. Cattle were used as collateral if any loans were necessary. The concept of no mortgage may not be the most efficient use of capital for maximizing returns, but the safety factor can not be beat. This operation has been sufficiently profitable that borrowing against accrued value on the ranch was not necessary for continued operation.



The T Quarter Circle cow herd on Humboldt River meadows during the mid-summer months. Taken by Nancy Tipton, 1991.

The foresight of family members in employing estate planning allowed the transfer of the ranch from generation to generation without a break in ownership. Continued family ownership has minimized capital requirements for the ranch and maximized the continuity of ranching expertise. Today, ranches are usually purchased at a higher cost than production profits can cover, and outside income is often necessary. Additionally, new ranch buyers often do not have the experience or knowledge to optimize a particular cattle range.

Efficient Cattle Production

Cattle production efficiency has been an important concept as the ranch has evolved exclusively into a beef cattle operation. At one time, the T Quarter Circle was more diverse, selling hay, vegetables, chickens, and eggs. Currently, consumer goods are reasonably priced and available at local stores making it preferable to invest labor and economics solely into calf production.

When the ranch was first established in the 1870s, native vegetation was grazed all year-round. Without any grazing control on the open range, the "first come, first served" attitude held. This encouraged ranchers to extensively use vegetation resources resulting in overgrazing. Severe winters and drought years compounded forage availability problems. In the early decades of the 20th century, the T Quarter Circle Ranch hayed their river meadows to provide guaranteed winter forage along with any available native range. By the 1950s, the T Quarter Circle began cutting progressively less hay for winter feed and shifted to greater use of the federal native range with sufficient forage available for winter grazing.

Additional alterations of the grazing pattern were made when wildfires in 1985 burned the current year's forage on extensive areas of the T Quarter Circle range. To adjust for the loss, cattle were herded from the summer range earlier than in past years and permitted to graze the Humboldt River meadows. That meadow forage which had previously been hayed is now consumed fresh and green, constituting a better quality feed. Frosty Tipton's philosophy is: "Let the cow do it. If she can graze better than you can hay, let her do it. You should never do anything for the cow that she can do better." The ranchers prefer to let the cattle do as much as possible on their own, but assist when necessary. For example, a recent seeding program was designed to enhance meadow forage quality and ultimately benefit cattle production.

As summer progresses, the nutrient quality of range decreases. By moving cows and calves off native range to green meadows in midsummer, this provides an increased nutritional level. This practice has resulted in a steady increase in calf weaning weights over the past several years for the T Quarter Circle. Additionally, in 1980, the ranchers introduced Beefmaster bulls to a Hereford-based herd. This breed does well on the open desert, has efficient weight gain and calf production qualities, and is resistant to disease. The T Quarter Circle has also improved herd production by selecting quality replace-

ment heifers, providing sufficient bull: cows ratios, and pregnancy testing. Three year old replacement heifers are culled if they have not calved and mature cows that fail to produce a calf are culled. The number of range AUMs can not be increased, thus the quality, production, and performance of the cattle must be improved.

Ranch and Range Management

The T Quarter Circle ranchers apply an efficient management approach, use current technology, are aware of consumer demand and political trends, and are willing to change procedures to maintain a profitable operation. They are conscious of attitudes taken by conservation and environmental groups and concerned about properly assessing rangeland conditions and applying effective range management. There was a need for a monitoring program on the public lands used by the ranch. Due to budget constraints and allotment priorities, a delay of several years was anticipated by the Bureau of Land Management. Due to the delay, the owners decided to initiate a range monitoring plan. A private consulting firm was retained to develop and implement a grazing management and monitoring plan for the range.

As a result, monitoring information has suggested changes in grazing strategy. The ranchers incorporated extra riding and additional water developments to improve cattle distribution. This current monitoring and management program has provided the landowners with a better understanding of the effects of livestock grazing on the range. The T Quarter Circle ranchers believe that professional consultation and careful range monitoring are important range management tools. According to Jane Angus: "If you want to stay in business, you have to learn to work with modern things. It's kind of like any business, if you don't keep up with the times, you are soon out of business." Monitoring provides a basis to improve grazing management and a credible record to defend T Quarter Circle use of public lands. The family is concerned about outside influences affecting rancher use of public lands, yet also they have a sincere desire to insure the rangeland is properly used, not only for their cattle, but also for native wildlife. The native range is the basis of the ranch's livelihood and business; to ruin the range would be to ruin the ranch. The monitoring plan is a sign of progressive changes and attitudes that keep the ranch and its land flourishing.

Summary

This study, evaluating the T Quarter Circle Ranch, documents a family ranch which has remained in operation throughout the 20th century. This ranch has been family-owned and operated through four generations. The ranchers strive to stay clear of debt and mortgage, and work towards continually upgrading and improving cattle production. Proper management is the rule; the ranchers are aware of current trends and are willing to compromise and accept change. Many possibilities will shape the

ranch's future direction, yet for now the Angus' and Tip-ton's are concerned with keeping their cattle ranch a viable operation to support family members currently there, and for future generations to operate and enjoy.

Other ranches, especially those which are family-owned, need to be aware of beneficial changes to alter their operations. It has been those ranches choosing to

make sensible, efficient management changes which have succeeded. With future turns and twists placed upon the ranching industry, there are no clear-cut defined paths, but the characteristics of successful ranchers today are the qualities necessary for ranching in the future.

Solving Environmentalist/Range User Conflicts

Heather Smith Thomas

"Cattle Free by '93". "Showdown in the West". "The New Range Wars". Similar headlines and slogans bombard us today. The battle lines seem rigidly drawn between the so called "environmental" interests and the ranchers who use public land for grazing. Quite a few shots have already been fired. The war is on. Yet no matter who "wins" this war, the land will suffer.

It is a foolish fight, a political power struggle. The ideals and goals of those who truly care about the land and its future are not dissimilar, be they environmentalist or rancher. There should be no fight at all among people who have a true concern. The war is mainly in the minds of those who want control of the land, power over people or public opinion, a cause (and hence more donations and membership) for their organizations, those who refuse to look at compromise in any form—and the news media who keep things stirred up, since controversy makes good copy.

Controversy is perhaps the greatest enemy of proper land management, since it makes for choosing sides or catering to the loudest voices. Controversy makes it hard for us to see a broad picture; it narrows our focus.

There is probably no such thing as total objectivity. We all see and interpret "truth" from our own point of view, from where we stand. This changes our perspective. The person standing on a plain has a different view of the horizon than someone partway up the mountain. Your view is shaped by where you are. The rancher raising cattle in the West has a different view of the land than the Eastern city dweller who thinks of the West as a romantic place straight out of the movies or a Louis L'Amour novel, and a different view than the conservationist or preservationist who thinks of mountains and rangeland as something to be "saved" for future generations.

The rancher who lives on the land, works on the land, invests it with his sweat and tears, aspirations and fears, the energies of his youth and the conditioned endurance of his maturity and old age, has a different view from that of most other people and some strong feelings about his

views. He knows the land, loves it and respects it, knowing what it can do for him and to him. He works with Nature and against her, bound by her seasons and dependent on them for his survival and continuity, yet ever struggling to perfect his own meager devices to defeat her worst

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whims. He creates irrigation systems to bring water to his fields even in drought, tilling his marginal fields and making ditches to try to prevent devastating erosion when Nature's excesses turn the desert into flood. He works to make shelters for his newborn lambs or calves against the killing late spring blizzards or cold spells. He puts in water developments so his stock can utilize certain areas of range even in drought or dry seasons, and manages his grass so there will always be feed for his animals.

The rancher wrests a living from land that no one else would use. He took up lands too marginal for crop farming, and raises his stock on native pasture—on land too steep, too dry, too high for ordinary agriculture. Through all the homesteading and pioneering era, which encompassed more than 300 years on this continent, agricultural use of the land was considered the highest use to which land could be put. The rancher is part of that agriculture, raising food this country. Because he does it in a somewhat unconventional way (on lands that for many years were considered worthless for anything but grazing), he was often overlooked and never understood. The homesteaders coveted his lands in the days of the open