Maintaining Balance and Sustainability on the Johnson Mountain Ranch

By Tate Goble, Utah Section

Maintaining- to cause or enable to continue. Maintaining our current rangelands and improving them is important now more than ever as there is more of a demand for natural resources. 2014 Leopold Conservation Award winners Jared and Ginger Johnson have done just that. Jared and Ginger, along with Stuart and Carma Johnson, own and operate the Johnson Mountain Ranch. Johnson Mountain Ranch is a beautiful 7,675 acre ranch located 17 miles east of Salina, Utah along Interstate I-70. Operating a ranch comes with many management practices to be performed. The water, soil, plants, livestock, and elk are all commodities the Johnsons work to maintain and balance. Maintaining balance and sustainability of all of these commodities is a monumental task.

Thousands of elk call the ranch home. Because of a lack of hunting pressure and an abundance of feed, elk are drawn in. Due to the high number of elk, increased complications arise. As the elk travel, they often tend to encounter fences. Their large bodies allow them to push over and ruin the man-made barriers. To combat the elk, the Johnsons have put in elk crossings in corners and along the fence lines to prevent the elk from tearing them up. The largest problem the elk create is diminishing the feed supply. In the spring the elk eat the grass just as it is coming up. This decelerates the growing rate for the rest of the year. When the cows come back onto the ranch, the elk often follow right behind them and eat what they don't. The Johnsons partnered with the Utah Division of Wildlife Resources and created an agreement for the ranch to become a CWMU (Cooperative Wildlife Management Unit) where hunters are able to come in

and take trophy bulls. However, the number of elk hunters are allowed to take is not sufficient enough to make an impact in the elk herd. Elk hunting brings income, but it can cause more complications than advantages with increased outside traffic.

Elk are the hardest commodity to balance because it is hard to forecast their location at any given time. Without the expense of building and maintaining a designated elk fence, the elk cannot be contained in one area. Trying to scare them out of an area is useless because they will either go to a different area and gorge on the forage there, or they will come right back to the same place.

September is the time when elk mate. Elk can become very aggressive during this time. On at least two occasions, bull elk have gotten into the Johnson's horse pasture and chased the horses into the barn. Fortunately during this event, none of the horses were harmed. Bull elk have also been found harassing the cattle.

Originally, sheep were run on the ranch. Due to an increase presence of predators, cows have been more profitable. Cows are the reason the Johnsons still have the ranch. The ranch is able to support more than 1,150 cows along with the elk and other wildlife. From many generations of breeding, the Johnsons have found the best breed of cattle for their operation. Their cattle consist of a cross between a herford, black or red angus, and simmental. This combination has proven beneficial for many reasons. Transportation efficiency, a hearty and more resilient cattle herd, less forage consumption, and the cows enjoy a healthier life with less sickness are a few of the many benefits. If the Johnsons sold all their cows in an extreme drought year, such as 2018, and tried to rebuild, there would be more loss than gain. Besides a spike in taxes,

trying to build a herd diverse enough for their many locations would be extremely difficult. Cattle prices would be very high when trying to replenish the herd. The best option would to be to lower the number of cows rather than sell them all. Foot rot is a concern with new cows as the ground in the meadows has lots of moisture. 67% of the cows on the ranch are owned by Johnsons. The other 33% are customer cattle. By having customer cattle, all the AUMs are used and there is a profit made.

Major roadways run alongside or through the ranch and desert permits. When cows get out onto the road, cars usually do not see them until it is too late. This issue was resolved by putting reflective tags in the cows' ears. Custom tags are made so cars can see cows on the road long before it would cause a problem. The tags are also used for identification when cows are mixed on the ranch or other grazing areas. When most of the calves are born, the Johnsons gather all the cows and brand them. Branding is a source of identification if a tag falls off. A proper brand will never wear away.

The cow herd does not experience a lot of predator issues. Predator numbers are on the uprise however. Mountain lions and black bears are becoming more numerous. If wolves migrated into the area,it would be detrimental. Wolves would attack, injure, and kill many cows. The ranch is potentially on the border of two different types of wolves. Mexican grey wolves from the south as well as grey wolves from the north could, in the future, inhabit the area.

Rodents, raccoons, and badgers are a nuisance. These small mammals dig large holes for their home. An unsuspecting cow, calf, or horse may step in these holes and break a leg. A little rodent can cause hundreds if not thousands of dollars in damage.

The cows are on a rotational grazing system. The meadows are a management intensive system. Native range is on a deferred rotation. There are 26 available pastures the cows can graze on. Only one or two of these pastures are in use at one time. The pastures are also grazed at varying times year to year. One pasture could be grazed in the spring, and then grazed in the fall of the following year. High elevation pastures are typically grazed later in the year because larkspur dies late in the summer.

Native plants are rebounding due to seeding, chaining, and controlling noxious weeds. Pinyon Juniper encroachment is evident on the ranch. The Johnsons have had 1,000 acres chained to help reduce the number of junipers on the ranch. A study was done to show how many pounds per acre the area with the junipers was producing. Before the chaining, the average production was 100 pounds per acre of grass. After the chaining the average pounds per acre was 1,100. By removing the trees, grasses were able to get more ground water. Each tree had the capacity to hold up to 600 gallons of water. The chaining was a two way chain. Large bulldozers chained one way, an airplane dropped seed, and then the area was chained the opposite way. The seed mix consisted of crested wheatgrass, intermediate wheatgrass, indian rice grass, forest kosha, and sainfoin flower. Introducing grasses has helped production on the ranch because the introduced grasses add more feed to the land. Adding grasses makes the same amount of land more productive. The most productive part of the ranch is the irrigated meadows. Water is diverted from a stream, goes down a ditch, and is spread out over the meadows by flood irrigation and sprinklers. The meadows are especially useful in the spring when the cows are brought to the ranch, and in the fall when the

cows are gathered to come off the mountain. The meadows produce an average of 4,000 pounds per acre. Native and introduced species of plants thrive in the meadows' climate.

Noxious and toxic weeds can be found in small bunches throughout the meadows. From June 1st to July 31st, continuous weed spraying is a necessity. Weeds on the ranch include thistles, wild iris, and wild snapdragon. The meadows used to be covered in wild snapdragon. At this time Colorado was having a similar issue. Studies were done to find a spray to kill these weeds but not the adjacent plants. A solution was created and applied to the meadows. One year later G.I.P., grazing improvement program, tested the forage for an increase in production. Because the wild snapdragon was gone, there was a 30% increase in production. Thistles are especially present in the chained areas. Wild iris could be easily identified along the stream banks in the meadows. The purple and yellow colors do these flowers aid in identification. Open Site, esport, and milestone all are chemicals used to prevent the weeds from growing. Spike has been applied to reduce sagebrush growing on the ranch. This application has been very successful. After the sagebrush was gone, new grasses grew providing cattle with more forage to consume. Seed at least forty years old came out of dormancy, planted roots, and matured. Previously I mentioned cows do not go onto the higher pastures until fall. This is because the larkspur is harmless to the cows this time of year. Earlier in the year, larkspur is toxic to cows. When cows eat this plant, a chemical increases their desire for more. After cows have eaten a large amount, the toxins become lethal.

A good rule of thumb is to take some, leave some. In other words, graze at least half of the available forage and leave some to help with regrowth the following year. The elk eat grass until it is barely sticking out of the ground. This action is similar to mowing your lawn too early at the start of the year. The plants have a hard time growing back continuously. Before the cattle are introduced into a new pasture, the Johnsons measure how tall the grass is. They do the same action again after the cattle are moved. This is beneficial for the future and to accurately measure utilization. The Johnsons are able to know if the number of cattle should rise or lower, or if the current number of cattle should spend more time or less time on the range.

In order to have healthy plants, there needs to be healthy soil to support it. The soil is high in nutrients. Plants are able to use and replenish lost nutrients. Clover can be found throughout the meadows. Clover puts nitrogen back into the soil. Many plants need nitrogen in order to stay healthy. As I previously mentioned, the Johnsons take some and leave some. The plant material left behind eventually goes back into the soil providing nutrients to other plants. Multiple years ago the Johnsons land sprayed the ranch with nitrogen. The nitrogen did not have an effect as the clover provides enough nitrogen. The color of the soil is a rich dark brown. The soil is naturally high in nutrients. Money can be saved by preserving the natural nutrient sources. Natural salt deposits provide cattle with enough salt to nourish their body.

Drought was a major concern in 2018. Fortunately, the ranch is in an area that could be considered “drought-proof.” Because the Johnsons knew it was a drought year, they reduced grazing by 10%. The Johnsons also have permits for range in the

desert. The desert, however only had 30% of normal production due to the drought. Summer rain and winter snow are vital to the desert forage. Very little grows without water. The desert is a fantastic option for the cattle herd when the ranch becomes unusable during the winter. While the summers are too hot to have cows on the desert, winter is the perfect time because snow makes the plants softer. Often, hay fed cattle first appear healthier than cows coming off the desert. Within two weeks to a month of grazing on new green grass, Johnson's cows soon surpass hay fed customer cattle in appearance. Their calves grow better and the cows are able to breed back with more efficiency.

Every living organism needs water to survive. The ranch sits in a natural drainage. At least two creeks flow through it providing animals and plants with the water they depend on. Plants are able to flourish from irrigation, springs, rain, snowstorms, and creeks found on the ranch. The creeks hold native cutthroat trout species. An enjoyable family activity is spending an afternoon attempting to outsmart the fish.

The NRCS (Natural Resources Conservation Service), Department of Wildlife Resources, GIP, and local extension offices have helped the Johnsons improve their ranch. The NRCS assisted the Johnsons when they chained junipers. The Department of Wildlife Resources also helped with chaining, and as also aided in wildlife management. They gave seed to the Johnsons that would benefit the wildlife. GIP has been very beneficial because the program has helped finance improvement efforts, figure out the best seed to plant, volunteer services, and help survey. GIP also sent in

an application for a water line project. Local extension offices and aided the Johnsons when spraying weeds.

With all these changes in the past, it is time to look to the future. The Johnsons have thought about, and planned, future improvements to make their operation more efficient and successful. The grasses in the meadows are starting to age. Planting new grass would help replace the old grass as it dies. Fencing is always in need of being repaired or replaced. The ranch is a perfect place for family reunions. Lots of recreational activities are available and more can be available if the family decides to peruse this opportunity. Natural deposits of oil may be underground. Oil brings in a large cash flow. There is an abundance of wind in a few particular canyons. The Johnsons have discussed erecting windmills and renewable energy plants because a major power line runs right through their property. Fishing has the potential to become a resource for income as native fish are plentiful.

The Johnsons have worked incredibly hard to improve the place they call home. For many generations cattle have been in the family. Because the Johnsons have been successful in maintaining balance and sustainability, their tradition of ranching will be carried out for many generations to come.

Works Cited:

Johnson, Jared and Ginger. Personal Interview. 14 Jan. 2019

2014 Leopold Conservation Award. Sand County Foundation, 2014.