

small towns that are kept afloat by oil.

The Sierra Club states that "these areas have the least oil and gas potential and would have been drilled years ago if there was significant oil located there." This is true, but across the world readily available sources of oil are being depleted. We need alternative sources and Western North Dakota is one.

Along with these controls is the introduction of non-native plant species to the rangeland. The proposal blames improper managing of livestock grazing for these introductions. Truth be told, the invasion of many non-native plant species can occur at any time. Two of these in North Dakota are crested wheatgrass and leafy spurge.

The Highway Department plants crested wheatgrass in the road ditches. It then spreads to surrounding lands. Leafy spurge is a nasty little monster, classified as a noxious weed. It takes a few plants and you have a spurge forest. There would be no chemical treatments allowed, which is the only sure way to control spurge. In time these two introduced plants, can choke out any native grasses or endangered plant species. There is nothing natural about them.

What are the reductions on grazing going to be? Who decides the reasonability? What would North Dakota do without the tax monies from oil drilling? How can lands overrun with non-native plants or covered with the yellowish tint of spurge be considered "land retaining its primeval character" as is required by the Act?

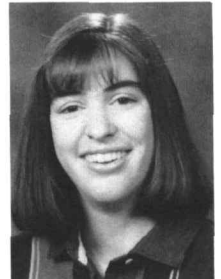
These are a few questions North Dakota must have answered but most importantly is: "Do these lands meet the purity requirements established in the **Wilderness Act of 1964?**"

Lowell Ridgeway, director of the North Dakota Petroleum Council, states in his editorial to the Fargo forum on February 6, 1994, "Of the 191,000 acres being studied none of the lands, except for the Twin Buttes unit, qualify for designation as defined in the Act of 1964."

Wilderness designation is a good idea but if the North Dakota proposal is passed as it is now and the questions are not answered, I can foresee a fall in our state's economy and the extinction of America's most endangered species-the small town.

## "Brush Management: One Families Solution."

Lindi Clayton  
Bryson, Texas



North Central Texas is a great place to live. If you are in the ranching business in this area, you are also probably in the brush business, too. Fifty six million acres of Texas rangelands are infested with brush.

My family is in the cow-calf business. We operate three ranches northwest of Fort Worth. The ranch that I will be focusing on was purchased by my great grandfather in 1935 and has been in our family for three generations. Various types of brush management have been carried out over the years ranging from oiling mesquite with kerosene, cutting and piling prickly pear, to mechanical grubbing of mesquite.

My cousin, Tom Howorth, now owns the ranch. With help from my Dad and Uncle, who operate the ranch, it was decided the time had come to wage war on the brush. With help from the local Soil Conservation Service, a conservation plan to manage the brush was developed.

The brush that needed to be managed were prickly pear, mesquite, lotebush, and tasajillo, sometimes called jumping cactus or scatter cactus because its leaves break off easily and fly everywhere when ran into. In several areas of the ranch the brush was so thick cattle would not graze even if there was fresh grass. In other areas prickly pear almost completely covered the ground. The competition between the grass and the brush was being won by the brush. My Dad said he was tired of not being able to ride horseback through the pastures, because the brush was so thick. He also said he was tired of cattle eating prickly pear, getting sore mouths, and drying up to nothing but skin and bones. We knew that it was time to do something.

My family felt they had four alternatives to help manage the brush.

1). We could do nothing. Just sit back and let the brush take over. This was not acceptable. We felt the brush canopy had to be reduced to operate the ranch the way we wanted.

2). Mechanical grubbing would be very effective on the mesquite, but it would only spread the prickly pear, and On

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tasajillo. Our goal would only be partly accomplished.

3). Hand removal would also be very effective, but not practical because of the large number of trees, bushes, and acres involved. Hand removal would just be too slow.

4). Chemical management was our only feasible alternative. We felt it would be our best option to get the results we wanted, in the time frame needed.

With the decision made to use chemicals, we need to decide how to apply the chemicals. In our area the only solution was aerial spraying. Dave Coleman with Midwest Aero, who did the spraying said if he had a place to land within six miles he could spray 300 acres an hour under optimum conditions. The spraying began in 1986, and in four years we sprayed one 600 acre pasture each year.

We will look more closely at the results from one pasture. In June 1985 the SCS estimated the brush canopy in this pasture to be at 65%. (25% mesquite, 30% prickly pear, 7% tasajillo, and 3% lotebush.) In some areas overlapping may occur when one brush plant grew under and around another plant.

July 14, 1986 this pasture was sprayed with one half pound of picloram and one quarter pound of 2,4,5-T per acre. Picloram manages most cactus species, so it attacks the prickly pear and tasajillo. It also affects mesquite when used with 2,4,5-T. The 2,4,5-T attacks the mesquite and lotebush. It takes time to see the results of the treatments. The mesquite and lotebush defoliate quickly, but you do not know the degree of root kill until the following year. The prickly pear and tasajillo are another matter. It takes from two to four years to get complete management. The plants show stress and discoloration the first year, gradually die over a period of time, and eventually disappear.

All plants compete for moisture and sunlight. The moisture that was being used by the brush, is now going to grass.

In November 1993, the SCS estimated the brush canopy in this pasture to be at 7%. (5% mesquite, 0% prickly pear, 1% tasajillo, and 1% lotebush.) With these results we believe our goal for brush management was a big success.

My Uncle said all the spraying was definitely expensive, but dividends are already being received. We have more grass and are running more cattle with less labor.

The results of the spraying are looking good. But, how do we keep on winning this battle? One of the best ways to help hold back brush invasion is to maintain a better grass cover. To accomplish this, we built 15,000 feet of cross fencing. We rest on pasture each year for at least three months during the growing season. We believe the pasture rest is improving the grass cover.

What about wildlife? We did consider wild life when putting this plan together. The wildlife was important to my family, because some of us enjoy hunting. Hunting leases also supplement ranch income when needed.

There is an escarpment running from west to east across the ranch. The escarpment areas were not sprayed. In addition to the escarpments there are several drainage areas that run from north to south, where many elm trees and other brush plants grow. These areas were not in the treatment sites. These areas provide excellent cover for deer, quail, turkey and other wildlife.

In conclusion, the mesquite was reduced by 75 to 80%. The prickly pear was completely eliminated which my Dad says, "Was definitely worth all the time, planning and expense." The tasajillo was reduced by 85% and the lotebush by 65%. With the brush canopy reduced and with a grazing plan in place, the brush will be easier to manage in the future.

We realize that chemical use in agriculture has been criticized by many environmental groups. We believe that to "make ends meet" we need these chemicals as long as researchers and regulatory agencies declare them safe for us and our environment and we use them according to label directions.

We realize that chemical management of brush is not for everyone, but on the Howorth Ranch in Jack County, Texas aerial spraying of brush meets this family's needs.