

Success at Last—On the Mitchell Grass Downs

Dan Fulton

Editor's Note: In the interest of range management, as related to land tenure, the author takes us on a pleasant journey from the Northern Great Plains of the United States of America to the Mitchell Downs of central Queensland, Australia.

Early in 1980 while I was working on my book, *Failure on the Plains*, the February, 1980, issue of *Rangelands* arrived. In it were two articles that were of great interest to me. The one about the Berzel ranch entitled, "From Sagebrush to Alfalfa", concerns an area with which I was intimately familiar for many years. Just reading it wakened all sorts of memories and emotions.

Immediately preceding this article was another, "Production Systems on Australian Sheep Ranches". That one recalled a quote from John Clay (1924) that I had just put in my book. He said, "It is the methods which are at fault. The home-seeker has the whole west—mountains, valley, divide—to choose from. What we should have had was a steady, forward march and to have done this our arid or semi-arid lands should have been classified and opened up for settlement as required, just as they have done in Australia and New Zealand. The rangeman should have been able to lease what he wanted, and as agricultural requirements call for the land he should have been on sufficient notice to beat a retreat."

The fact that nothing of the sort was done on our plains provides the basis—more or less—for the text of my book. The ranch on O'Fallon Creek, now known as the Berzel Ranch, demonstrates well the lack of good regulations in America when the plains were being settled.

The ranch was set up on O'Fallon Creek when Kenneth McLean took over a remnant of sheep after the very hard and cold winter of 1886–87. In 1889 McLean ran sheep on shares. As time went by, others bought an interest in the McLean sheep. By 1910, some of the McLean railroad land had to be sold. At that time the local paper said, "The purchaser will hold it as an investment, as Eastern Montana land is rapidly appreciating in value." Instead, it depreciated and went to the County for taxes. The McLean ranch disappeared and part of it became part of the ranch now known as the Berzel Ranch that was put together by Matt Monroe, who had worked for my father about the time I was born in 1904. After Monroe's death the ranch went through a succession of owners. So much for the American method of regulation, or lack of it.

Both Clay (1924) and Michalk (1980) pointed out that things are different in Australia. Michalk was with an agricultural research station in New South Wales but had done graduate work at Utah State University. In his article, he said, "Compared with America's range sheep industry Australian government regulations directing the use of pastoral leases are minimal. Stocking intensities are not specified, although broad guide-lines are provided as to the potential productivity at different locations. However, the long-term nature of leases and the legal right to transfer them to beneficiaries evoke a 'land ethic' in pastoralists to use the resource conservatively . . . stocking intensity is left to the pastoralists' discretion . . ."

These thoughts of Australia brought Jeanne Kelso to my mind. When first we knew her she was a young girl living on a ranch adjoining ours in Montana. Her mother was a daughter of Duncan Mackay, once a partner involved with the McLean sheep. This made Jeanne the granddaughter of an 1889 Montana sheepman. Some years later her father, Maurice Kelso, was Dean of Agriculture at Montana State University, Bozeman. From there he went to the University of Arizona at Tucson where he is now retired.

Jeanne attended high school in Bozeman and college in Tucson. After working two years for Bank of America she grew restless and persuaded her father to accompany her via tramp steamer to Australia. She stayed and got a job as governess on an outback sheep station. She not only endeared herself to the station owner and his wife by being a super governess, but also found time to fall in love with the sheep foreman on a neighboring ranch, Hadden Mims.

Hadden's father was English and served in the British Army in World War I. He went to Australia in 1926 when he was 36 years old. There he met and married an Australian girl who became Hadden's mother. Her roots in Australia go back to very early European settlement days as her grandfather was in charge of one of the early penal colonies.

Hadden grew up in the Melbourne area and completed a course in agriculture at Gatton College. For a few years he worked on an uncle's farm. He was offered an interest in the farm but decided the *operation* was too small for further division. Instead, he chose to become a "Jackaroo," an apprentice in station management duties. Later he advanced to the station foreman duties in which he was engaged when he met Jeanne Kelso.

More or less concurrently with Hadden's and Jeanne's engagement to marry, the Queensland Minister of Lands under date of January 21, 1965 advertised that the province

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was accepting applications for leases for two specific tracts of land in the area northwest of Longreach. Hadden applied for one. Along with the application he was required to set forth his pastoral or land experience as well as financial ability or backing to provide capital to pay for improvements already on the land, and to develop and stock the land. Hadden's employer, a station operator in the area, guaranteed the necessary financial backing.

Under date of 29th March, 1965, he received, "Notice of Approval to Select a Grazing Homestead," which covered 31,325 acres for a 30-year lease, dating from the date of the payment for the improvements already on the land. Establishment of residence was required within 3 months, enclosure with fence was required within 3 years. Further, stocking of the tract, "to its reasonable carrying capacity with your own sheep or cattle, or both, within three years," was required.

Hadden Mims and Jeanne Kelso were married and live on the sheep station out in the middle of the pastoral zone in the middle of Queensland roughly indicated on the map on page 11, February, 1980, issue of *Rangelands*.

There they raise Spanish Merino sheep which the Australians had discovered to be—as had our American ranchers—producers of all that fine, long-staple, wool fiber for which Australia is the premier world source.

So, while reading that issue, I decided we must go to Australia to see how the granddaughter of Duncan Mackay, who sold out in Montana in 1890, was doing in Australia nearly a century later. Besides, I would have the opportunity to see for myself the differences in American and Australian regulations as pointed out by Clay and Michalk.

On March 25, 1981, my wife, Mary Ann, and I landed at Longreach, Queensland, some 800 miles inland from Brisbane. Jeanne met us there with the Mims' new car to transport us another 100 miles to their sheep station. All Australian ranches are called "stations," and all are named for easy identification. Since Jeanne came from Tucson, Arizona, the Mims' property was named "Tucson."

There we met Hadden who told us more of the story and showed us the rock where, on his first visit to the station after he won the drawing, he set up his overnight camp. He had a blanket or bedroll, and a billycan (which all Australians carry to boil water for tea) and a frying pan to fry mutton. His first night in possession was spent around an open fire. The rock he used for a table. The only building on the property then was a small tumble-down sheet-metal building which the former users had used as a line camp.

Not too far from the center of the property, he located a slight ridge from which he could see for miles in all directions



Tropical savannah aspect of Mitchell Grass Downs. The reservoir that furnishes rain water for domestic use is in center of this picture.



Mimses "Ranchhouse" on Tucson Station. Elevated tank at right is filled from house reservoir or from new deep well electric pump.

over the beautiful savannah grasslands. Because of the clear air common to the area, "You can see forever." There on this ridge their first home was a two-bedroom house which they moved from 30 miles away.

People like Mary Ann and me, who had never before been off the North American continent, orient ourselves by analogy. We saw on the map that the Tropic of Capricorn was close to Longreach. We know that in North America the Tropic of Cancer passed very near Mazatlan, Mexico. From Longreach we had gone in a northerly direction so we were within the Tropics as we had been when south of Mazatlan. The climate, as in Mazatlan, is not very cold and the average annual rainfall is about 16 inches. Evaporation is great because of the dry, warm climate. Average annual tank evaporation is 100 inches.

Monthly rainfall records through the years indicate great variations from year to year, as well as frequent drouths which typically cover a several-year period. The general likeness of this precipitation pattern to that of the Northern Great Plains is striking. For livestock water, some use is made of rain-filled reservoirs and there are a few natural water holes for periods after rain, but the main source of water is wells, which are called bores.

On Tucson the bores are typically 800 feet deep. Holes are drilled 6 inches in diameter then cased with 5 or 6-inch casing. Pump cylinders are inserted down the bores to whatever depth is needed to reach the water, and are suspended on 3-inch diameter pipe through which the water is carried to the surface. The water is artesian and rises up in the bore to about 350 feet below ground level from where it is pumped by 24-foot diameter windmills to the surface and piped into the "turkey nest." This is an above-ground level earthen tank from which the water flows by gravity either through an underground pipe or through a plastic pipe siphon over the top to the livestock drinking troughs. Flow is controlled by a float valve at each trough.

Their first big job on the station was to check, repair, and otherwise get the bores, with accompanying pumps, windmills, turkey nests and troughs, in good operating condition. They worked together on this and Jeanne became an expert in pulling bores and greasing windmills. At the same time, Hadden inventoried all the livestock watering improvements and fences on the property and convinced himself that the appraisal made to fix the amount payable to the previous owner was higher than justified. He appealed the appraisal and the ensuing court action resulted in some reduction in

the amount which the Mims had to pay for the previous improvements.

After getting the stock watered, the next most important thing was to get water in the house for domestic purposes. Like all Australian houses, their first home had a corrugated sheet metal roof. Eave troughs and spouts conducted rain water into a large water tank beside the house. Inside the house the rain water could be drawn from a faucet for drinking. Many of the outback Australians think that rain water is the only water fit to drink.

To make available a larger supply of rain water for domestic use Hadden purchased a dumpy level and laid out a reservoir one kilometer downslope from the house. From minor drainage channels shallow dikes and ditches were constructed to divert rain water into the reservoir. A windmill was installed along with a storage tank close to the house.

Next came a second-hand petrol engine and a 32-volt generator. From new and used parts Hadden assembled a switch-control board. By putting these together with a 32-volt storage battery electricity was provided for lighting to replace kerosene lamps. During the early years they used a kerosene refrigerator too.

By the time the Mimses got the bores in shape, the old fences cobbled up, and a new division fence on the boundary line there was fairly good forage on Tucson. Because of drouth there was a shortage of feed on many stations. Thus, Hadden was able to get ewes on shares to stock his place.

By 1970 they had the place in operator condition and fully stocked. Things were looking rosy but as always happens on Australian Downs—just as on the Northern Great Plains—there came another drouth. Wool went down to 30 cents a pound. They kept 3,000 young ewes and their lambs; the rest were sold for pet food. The remaining sheep had to be moved 200 miles to get pasture to keep them alive—just as I shipped 200 cows and calves in 1934 from Ismay to Phillipsburg to stay in the cow business.

By that time Hadden and Jeanne had three children; Michael, the youngest, was three months old. Hadden closed the station and got a job on a neighboring station to buy groceries until the drouth was over. They returned frequently to Tucson to keep the fences and watering facilities in shape. After about nine months the drouth broke with an eight-inch rain in one night.

Since then the Mimses have done well. They put in a diesel 230-volt A.C. electric generating plant which they ran continuously for refrigerators and evaporative coolers for the house.

In the early years they had no shearing shed and took their sheep to a neighbor's shed for shearing. At first they had to use their neighbor's equipment, but gradually they accumulated some. A little over a mile from the house Hadden built his own six-shearer shearing plant with corrals, shed, shearing floor, shearing machinery and hydraulic wool press to bale the wool. All this equipment required electricity to operate. They acquired another diesel generating plant which supplied electricity to the shearing shed and could serve also as a spare for use at the house.

When they could afford it they moved another house of the same general construction and placed it beside the first. With a little carpenter work this became the commodious ranch house where we visited them.

About a year before our visit Rural power arrived at Tucson. Whether on the Northern Plains or on the Mitchell Grass Downs, government or cooperative high-voltage electricity



Hadden mustering sheep for shearing, climbs on top of vehicle to scan the paddock with binoculars.

certainly makes for more comfortable living. Rural Power is now available at the ranch house and the shearing shed. Distances are so long and posts are so scarce that the power lines have very long spans and only one wire. The return electric current is carried by the ground, the same as for one-wire telephone lines. The transformer poles carry a notice, "19,000 volt earthen system carries current, no cultivation over 9 inches deep within a 20-foot radius." This gives the inference that there must be radials buried around the pole to make the ground connection to the transformer which reduces the 19,000 volts to 230 volts—standard house voltage in Australia.

Before the line came, the bore near the shearing plant had gone bad, making a new one necessary. The old bore, like many in the area, was marginal for domestic use because of heavy mineralization. The new hole went a little deeper. Hadden equipped it with a submerged electric pump and ran a pipeline to the ranch house supply tank. The new bore brought in a very adequate flow of potable quality water for domestic use. Before the power line and new bore, the house reservoir went low in drouth years and the greatest economies in domestic water use had to be practiced. Now Jeanne has ample and can even water a small garden.

At first the children were taught at home. Queensland had a course of study for station children who could not attend regular school. In addition, "School on the Air" lectures were available on radio for use by home-taught children.

Now, Michael, eleven years old, attends school in Winton. Each school morning he drives a jeep-type vehicle 15 miles to where he is picked up by a school bus and driven 20 miles to Winton. At the end of the school day the process is reversed so he can spend nights at home. Cay and David, Michael's older sister and brother, are of high school age. As is the English custom they attend boarding school in Brisbane, about 900 miles from home.

Jeanne is inclined to believe that if the local people, particularly station owners, got behind it they could get more years of school at Winton. Hadden, in the English tradition, tends to believe there is merit in the boarding school. Personally, since I experienced the limitations of a small town high school, I tend to side with Hadden—but Mary Ann sides with Jeanne.

The vegetation map of Australia shows Tucson to be on the tropical savannah grasslands. The dominant perennial grasses on the station are Mitchell grass (*Astrebla* sp.) so the general area is called "The Mitchell Grass Downs". *Astrebla lappacea*, curly Mitchell grass, is considered one of the more desirable species. The most conspicuous undesirable grass is *Aristida latifolia*, feathertop wire grass. Its seed contaminates wool and is coarse and generally undesirable. Feather top fills the roll that *Stipa comata*, needle-and-thread, plays on the Great Plains of North America as an undesirable for sheep. Valuable annual grasses are *Iseilema membranaceum*, small flinders grass and *I. vaginiflorum*, red flinders grass which are fine and very palatable to sheep. The most useful shrub for grazing sheep is *Acacia farnesiana*, mimosa bush. Also grazed is *Salsola kali*, the soft, roly poly annual related to our Great Plains tumble weed or Russian thistle. Most of the trees that give the station its savannah aspect are different species of eucalypts. The scattered trees on Tucson serve the most useful purpose in providing shade for sheep during the hot January summers.

Livestock are pastured the year around and practically no supplemental feeding is done. Hadden said, "Some experimenting was done with silage in the middle 1950's. You couldn't get it out of the pits and the sheep weren't too keen about it." Hadden uses urea as a supplement for ewes when they are suckling lambs. A patented flipflop device mounts on the water trough under the water exit end of the pipe from the turkey nest and dumps a fixed quantity of water each time it flips. Each cycle actuates a plunger that dumps a precise amount of urea. In this way an optimum amount of urea is automatically maintained in the drinking water.

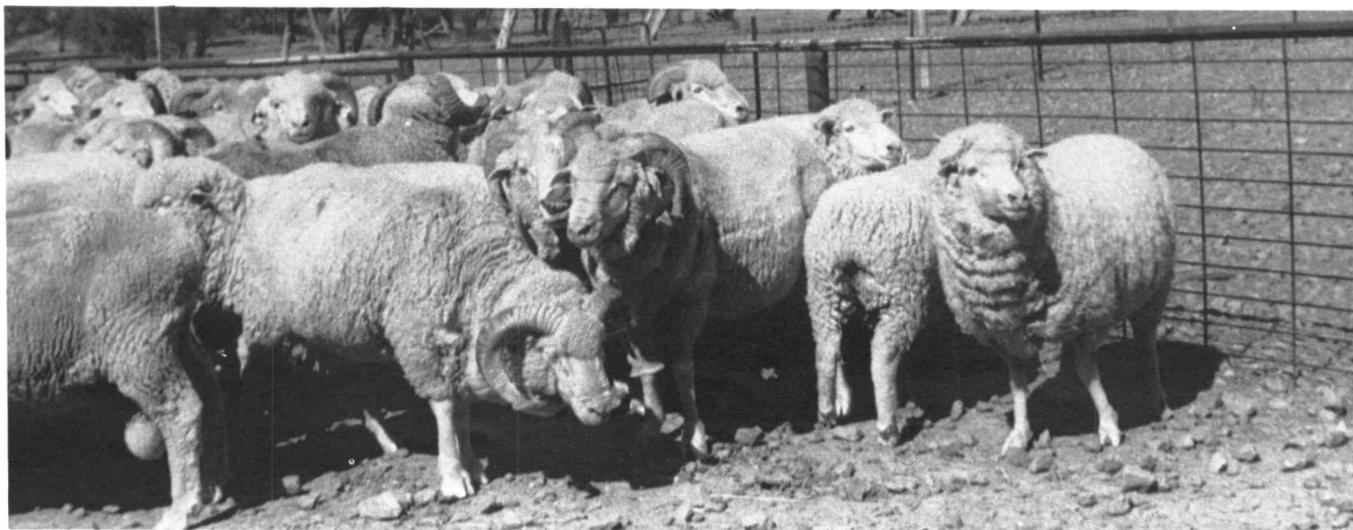
Since there is a shortage of supplemental feed and because the watering places are few, "lambing" consists of leaving them alone. The ewes are turned loose in the paddock and lamb themselves. Lamb percentages are low. Feral pigs, foxes and eagles are the predators. Captain Cook discovered the continent and purposely planted pigs as a source of food for shipwrecked sailors. The foxes were brought to chase with hounds, and the eagles are native. Ranch vehicles carry .22 caliber rifles and pigs are shot whenever possible. At times government hunters are called on to thin them out. Because eagles are quite numerous during lambing—Hadden then carries a .243 caliber target rifle with telescope sight for scaring them.

The wild dog known as the dingo was present in Australia when the Europeans arrived, but it is not considered native. It is believed to have been introduced by the aborigines a few thousand years ago. The productive sheep industry in Queensland is made possible by thousands of miles of fence which excludes the dingo. The high fence consists of woven wire, and woven wire of the same width is laid flat on the ground beside the upright wire to prevent burrowing under by the dingo.

The older fences on the station were conventional with either woven wire or several smooth wires with stays. These fences are very vulnerable to either kangaroos or emus. They have poor sight and little intelligence so they crash and break down ordinary fences. Mims' newer fences are what he calls "suspension fences." They have stretch points one mile apart and line posts one chain (66 feet) apart. A high tension steel wire is tightly stretched and can support woven wire attached to it by wire clips. Another, and perhaps preferable, alternative is to use six high-tension wires appropriately spaced. Formed wire stays are available and used at intervals between the widely-spaced line posts. To support the strain of these tightly-stretched wires the stretch points consist of three well-set and braced posts instead of the two that are commonly used on the plains of North America. When a kangaroo or emu hits a suspension fence the fence lies down, the animal falls over the fence and then the fence pops right back up into position to prevent passage of sheep.

In addition to the loss caused by primitive lambing methods and predators, there is a lamb loss from tetanus which is endemic in Australia. In some years, as in the year preceding our visit, drouth and short feed caused lambs to be in poor condition so that heavy rains increased lamb deaths. Overall, the reproductive rate is only slightly above that necessary to maintain numbers. This allows very little culling; wethers must be kept to produce wool and there is little or no lamb sale income. The wethers are run to about six years of age when they are sold for about \$25 per head. They are purchased by Iranians and others and transported live to those countries where only fresh meat can be utilized because of lack of refrigeration.

These factors make the wool crop the primary source of income. We had timed our visit to see the April shearing. In Montana we lambed in May, just before summer. In Australia Mims lambs in May, just before winter. There, as in Montana,



Merino rams used at Tucson. Open faced hornless sheep on right are cross bred sheep to be killed to provide mutton for use on the station.

there are advantages to shearing before lambing. When we left in early May, after shearing, the ewes were due to start lambing soon. The wethers would be sheared in late May.

Since we were there during shearing we had the opportunity to see the pastures, fences, and the roundup of sheep for shearing. We soon learned that in Australia you don't roundup a pasture—you "muster a paddock."

This brings us to an important characteristic of Tucson and of a large part of Australia. As in North Dakota, "You can see forever." The entire 50 square miles of Tucson are so level that it is not too difficult to do all the mustering with vehicles. All the station is drained; there are no lakes, but gradients are so modest that very little gullying occurs even on the fire breaks that Hadden maintains with a conventional road grader.

The ewes were in one paddock, the yearlings another, and the wethers in a third. We saw the mustering of the ewes and yearlings. Three vehicles were used and all had radios for intercommunication while mustering. The only communication problem was some foreign language interference which Hadden said might be Formosan fishermen on the Gulf of Carpentaria. Hadden had a dog in his vehicle. If he found three or four sheep a mile or more from the other sheep he would send the dog out to catch them one at a time. He would pick them up and put them in his vehicle, tying three legs together so they couldn't jump out. If there were a sick fly-struck sheep that couldn't keep up he would use the dog to catch it, and then load it in. Jeanne had a stock rack on her vehicle. Hadden would call her at appropriate times to come over to his vehicle and they would transfer the sheep to the stock rack for transport to the corrals.

In Australia there are no bunches, bands, or flocks or droves of sheep or other animals. There is only a "mob." There was a small holding paddock close to the shearing shed where he could keep the mob for a short time in preparation for shearing. After the mob was mustered from the paddock we had to "draft the mob through the race to separate the rams and late lambs from the ewes." In Montana we say we "put the band through the cutting chute."

Tucson, as would any sheep ranch, had quite a mob of late long-tailed lambs. We got to see Hadden dock these lambs. He used a knife on the tails and elastrater rubber rings on the males. Then we got to see the "mulesing" operation which most sheepmen perform on all lambs. The name of the operation came from a man, J.H.W. Mules, who must have developed and/or promoted the operation. It consists of removing the skin on either side and top of tail with sharp shears. The resulting scar tissue will not grow wool. This helps to keep the area clean. Michalk (1980) noted that the operation does not eliminate fly-strike, but it significantly reduces mortality.

After that the shearing started, the all important annual harvest. The heavy production of light-shrinking wool and the grading of the wool before baling were just as we had heard about before we came. I was really surprised by the method of holding the sheep and the strokes and methods of shearing. Back around 1915 I used to visit with Harry Woodruff, a shearer and manager of the shearing plant at Ismay for several years. He had sheared in Missouri before coming to Montana. When he got with a professional crew in Montana they taught him the latest technique of holding and shearing the sheep that had been developed in Australia and was called the "Australian stroke." Later we had a small shearing plant and under Harry's tutelege occasionally I would shear a



Jeanne and Mary Ann took smoko (lunch or tea) to the shearers each morning and afternoon.

sheep or two. After all those years it was a surprise to find they still do it the same way today in Australia. Apparently they figured it out right the first time so have not had to change.

A shearer first shears the belly. In Montana we left this belly wool with the fleece to be tied together and sacked, but in Australia the belly wool is thrown to one side to be picked up later by the board boy and baled separately from the other wool.

When a sheep is sheared the board boy picks up the fleece, already minus the bellies and locks, and tosses it onto the slotted sorting table so it lands more or less spread out, fleece side up. The classer and his assistant skirt the fleece, removing the stained and off-grade wool around the perimeter. The classer then throws it into the proper bin for its class. Because of those well-bred improved Spanish Merinos used at Tucson and widely throughout the range area of Australia, the big bulk of the wool goes into a top class of fine, long staple, light shrinking wool. Hadden estimated that his top line would yield 70% wool with 30% shrink—unheard of in eastern Montana for fine wool.

Coarser, shorter staple fleeces with a break, or cotted wool, was removed from the main line. Each was put into its own bin so the press man could bale each class in separate bales. He weighed each bale and marked the bale number, class, weight and the station identification on each bale.

Fencing in Tucson includes lanes so that by setting gates the sheared sheep are automatically turned back into the desired paddock. This cuts down on labor requirements as does the small airplane which Hadden has and uses to locate missed sheep after mustering. The plane also makes short work of the ever-necessary routine of checking the bores and watering places. It also helps with shopping trips to Longreach, 100 miles away.

Fires are a constant danger. Hadden has purchased a road grader which is used to construct and maintain fire breaks and the landing strip. He has built five miles of telephone line that connects him with his neighbors. When fire danger is high he and his neighbors keep watch, while keeping in touch by telephone. With maps and bearings computed to each station, spotting from two stations will locate a fire by triangulation. The year previous to our visit, Tucson lost several hundred sheep in a fire.

Besides local use, the telephone system has a toll connec-



Dr. M.M. Kelso and his daughter, Jeanne Mims.

tion so long distance calls are possible. The phones are magneto type and at the end of each call a ring-off signal is appropriate.

To summarize briefly the economics of the overall operation—Tucson now consists of nearly 33,000 acres. An unused stock driveway adjacent to the original 31,325-acre lease has been added. In 1980, the total rent plus tax on the land was roughly \$3,200. I didn't learn the details of taxation, but was told that the local tax was the same on leased land as it was on owned land.

In round numbers, the station runs 10,000 sheep which shear 100,000 pounds of wool annually. At recent prices of \$1.50 that comes to 150,000 Australian dollars gross annual income. That it is a going and viable operation is indicated by the well-kept-up appearance of the property; bores and watering places in good condition, fences well maintained, and livestock in good condition. A well-kept prosperous "ranch" is a realistic description of Tucson station. The new car with which Jeanne had met us at Longreach put it almost on the edge of affluence. The creation of this economically viable range livestock operation in a 16-year period is a credit to Hadden's and Jeanne's management ability and hard work. They do all the routine work on the station; the only hired labor is contract work. The main contract jobs each year are shearing—including classing and pressing the wool—and docking, including the mulesing operation.

At the time of the drawing in the 1965 Homestead Selection some in the neighborhood thought the Mimses would fail as

the station is smaller than most in the area, but efficient management along with a cooperative efficient working relationship made the operation a success.

Compared to the Northern Great Plains, the Mitchell Grass Downs has many less failures. Following World War I a few small homesteads were set up and failed, but even these places were of several square miles. Usually, they were soon consolidated with each other or with adjoining properties.

Selwyn Park, a neighboring abandoned property, consists of 19,510 acres and lies in a less productive area than Tucson. It proved too small; the family on it couldn't make a living and abandoned the place in 1968. It is still vacant. Contrast this with the Northern Great Plains where we had hundreds of 160-acre homesteads, thousands of 320-acre homesteads, and only slightly less than a 100 percent rate of failure. We had able, hard-working people there, too.

The striking difference is tenure. Dean Hamilton (1957) noted that there was no way a ranchman could acquire title to enough public land for a ranch. Nor was there any way to lease it. This gets us back to the Michalk (1980) article.

In Australia regulations are minimal and tenure is good. That is the difference. It is tenure that allows Hadden to operate a viable sheep station. John Merrill, 1981 SRM president, stated: "I see no reason that operators should not be able to pay for . . . range improvements . . . with permits granted long enough to . . . recover the investments." The Australian experience bears out the truth of that statement.

Mary Ann and I had a most delightful experience in visiting Hadden and Jeanne at Tucson. Compared to *Failure on the Plains* which she, my typist, and I had just finished, the opportunity to observe the success of Tucson on the Mitchell Grass Downs was like a deep breath of fresh air.

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