

# Range Education for the Texas Rancher

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## USE ALL KEYS FOR SUCCESSFUL RANGE MANAGEMENT

**T**EXAS ranchmen not only have the will, but the *want* to carry out range management practices.

The layman might ask why range management? There are a number of reasons, but essentially to increase production of meat per acre for *better* living. Numerous range management specialists lose sight of this main purpose. For posterity, yes, and for soil conservation, yes, but increased returns here and now are what intrigue the ranchman. And a good return must be realized while the range improvements are being made. Good range management is basically education with five main factors involved.

### *Know Range Plants*

In range management, knowing range plants is the basic fundamental. It has the same importance as the alphabet to the first grader. The crop that a ranchman is growing for his livestock is forage—the cheapest and most neglected commodity in the nation—and yet he probably knows the least about it. This is a day of billion figures and few understand what

a billion is so let's just say this crop of nature's forage is worth *twice* the value of all the feed grown each year. Whether an operator has a little or a lot of good forage present on his pasture depends largely on the management, which he has given it. It may be that he is producing only 200 to 300 pounds of poor grass per acre, or he may be growing a mixture of tall and mid-grasses at 5,000 to 6,000 pounds per acre. A cow needs about 3.5 tons of dry forage per year. Taking half and leaving half, 2.5 acres will supply a cow on a good range, while it requires as much as 70 acres on a very poor range. Management is in most cases able to bring back the better plants. But first, we have got to know what they are in any given area. Normally, there are only ten to fifteen plants of fundamental importance on any given ranch. Are the "key" species increasing? Are there new seedlings? Are they hiding in the brush, dying in the center or almost gone entirely? Knowing forage plants, like recognizing the qualities of a good beef animal, is fundamental in the range livestock business.

### *Proper Stocking*

What is proper stocking? Essentially, it is balancing the livestock numbers with the forage produced. Experience has shown that taking half of the current year's forage production through grazing and leaving half for plant maintenance, reproduction, and litter is proper. Many operators run a certain number of head of livestock on a given pasture through force of habit. To some of them it is becoming evident that present stocking is too great and gradual range deterioration is taking place. This is so gradual as not to be noticed. Stocking records of 70-80 years ago show rates of 2 to 4 acres per grown cow. Through the years with continued overgrazing, drought, and brush invasion the acres per animal unit is going up and up. Taxes, operating expenses, land and feed costs are rising. Livestock prices have been favorable or we would have reached the point of no return. We've got to increase our production capacity of range lands or be forced out of the business. How can we do this? Deferred or rotation grazing will help. These practices give range plants an opportunity to gain in vigor and make seed for reproduction. In many cases, it is the cheapest and most efficient and effective way. Securing better livestock distribution through more waterings, cross-fences, and salting away from water are definite aids.

More and more ranchmen are grazing only about three-fourths of the breeding stock they think their ranges will carry. This gives them more leeway during drought periods, which are certain to come. Then in good years they can carry over calves or lambs through the winter and in bad years all can be marketed during summer or fall. Such an operation shows less risk, less investment, less feeding with higher and heavier calf or lamb crops, more pounds of livestock production

per acre, range improvement and more profit in the long run.

### *Brush Control*

To some brush control apparently is the only problem. That it is huge is well known because over half of Texas range lands are infested with brush of one kind or another. Overgrazing and drought have increased infestations through the years, making even the handling of livestock very difficult in some areas. Rainfall is the limiting factor on most Texas range lands. For most species of brush it requires three to four times as much water to produce a pound of leaves as it does to produce a pound of good grass. Bare ground invites brush invasion as well as poor moisture penetration and absorption. On many ranges we are losing a high percentage of our moisture through runoff. There is not sufficient litter, organic matter, and plant roots to make this water penetrate the soil where it is needed. This means in many cases ranchmen are only using 4-6 inches of their top soil for grass production. Close grazing retards plant roots from going much deeper. Consequently, operators say, "It is drier than it used to be." The facts are we are not conserving our moisture, and established brush with deep and wide root systems have top moisture priority.

Brush control unaccompanied by proper stocking will not result in permanent range improvement. In many cases, the only desirable vegetation left on a range is being protected by the brush. Once this brush is controlled and the forage becomes available to grazing livestock, extreme caution must be exercised. Otherwise, the only source of good native plants will be destroyed. Proper management of brush-controlled range is of more importance in future returns than the chemical or mechanical method used for control. Deferment following brush control is

recommended. Brush control as a means to continue to overgraze is folly.

### *Range Reseeding*

In Texas, for the most part, range reseedling is a last resort and a major operation. Generally, there are three classes of reseeding—on old fields, on barren range land, and following brush control.

Most old fields need organic matter and soil fertility before any attempt at reseeding should be made. A soil test will determine the plant nutrients which are lacking. These should be added in the form of fertilizer. Annual grasses and legumes usually will make more growth and production than perennial plants. Grow them, build up the soil and secure some returns from grazing, hay, or seed in the process. After conditioning the soil and building it up, then we can plant these good perennial grasses and legumes—these 100 percent plants—on at least 80 to 90 percent soil, where they can be expected to grow. In many cases, if the fertility were there, these climax plants would be present. Nature in her own ecological way will build up the soil in time, but from a financial standpoint we cannot afford to wait that long.

Seedlings on barren range land have given fair to poor success. Some land preparation is desirable if terrain permits. Native species adapted to the soil and climate have given the best results under Texas range conditions. Severe drought and cold damage have recently made questionable the place of a number of introduced plants. Native plants are adapted to these conditions and generally should be recommended. Seedling plants should not be grazed until they are well established. This may mean six months to one year deferment depending on rainfall, species, and growth.

Reseeding following brush control is a good practice and especially will it pay

if the operator defers the area treated during the growing season following seedling. What actually happens is that the native species are given a chance to reproduce themselves and most of the improvement is due to this rest rather than the artificial reseeding. But, the ranchman thinks these new grasses are those he planted and *believes* in reseeding. When good native plants can be found almost every step on a range area, deferment and controlled grazing should be followed rather than reseeding. Of course, some areas do need to be reseeded when less than 15 percent of the "key" plants remain. Scattering adapted grass seed on brush controlled areas has been fairly successful. A mulch of dead brush and twigs on the ground aids in providing organic matter and gives protection to the seedling plants. There is nothing magical about reseeding. Even more than other practices reseeding needs "know how" management and luck to be successful.

### *Range Fire Protection*

No person who has twice been burned out of house and home and once nearly cremated in an airplane could favor range fires. Old range men advise that fire had a place in management and it did in those days when there was sufficient fuel (grass) to carry the fire without harming the grass crowns. Also it killed or tended to control a lot of invading brush plants. Fire does have a place in certain areas at the present time, but usually there are too many "ifs" involved. The ground should be moist. There should be plenty of fuel. It must be a controlled fire. Fire does destroy litter, organic matter, plant residue and soil micro-organisms as well as reducing the total forage production for several years. Still, fire can be used wisely in controlling undesirable hardwoods in

timber areas, but all the "ifs" should be adhered to.

It will require several years of good range management to undo the damage done by an uncontrolled range fire in a few minutes.

#### SUMMARY

Range management involves the combination of five main factors and their

ramifications to be successful. Basically, the goal is increasing meat production per acre and providing for range improvement in the process. Recognition of range plants, proper stocking, brush control, range reseeding, and range fire protection are the five key points being stressed under Texas range education programs.



#### PERSEVERANCE

The journey of a thousand miles begins with one step.—*Lao-Tsze.*

To climb steep hills requires slow pace at first.—*Shakespeare.*

Industry, perseverance, and frugality make fortune yield.—*Benjamin Franklin.*

There is nothing difficult in the world; the only fear is that men will lack perseverance.—*Confucius.*

All human power is a compound of time and patience.—*Balzac.*

The secret of success is constancy to purpose.—*Disraeli.*