Sheep Ranchers Adjust to Change[1]

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The raising of sheep is one of the oldest professions known. In some parts of the world, sheep are still tended as they were many centuries ago. Some may feel that our domestic sheep industry is not as progressive and not as alert to make changes as it should be. Nevertheless, the history of the sheep industry of the United States over the past 100 years shows that considerable strides have been made and that our sheepmen do adjust to change.

Range Improvement

Perhaps the two most important areas of activity in range improvement are in brush removal and range reseeding. Increased carrying capacity per acre is a "must" in view of high and increasing costs of operation. Although considerable progress is being made in brush removal and control, much work lies ahead.

Many sheepmen are working on their brush problems and are seeking information on brush removal and control from local, state and federal sources. They are seeking the cheapest and most effective combinations of chemicals and mechanical measures to solve the particular brush problem in their area. Brush removal methods presently involve chemical spraying, chaining down of stumps and root-plowing.

Certainly, sheep ranchers need continued help of researchers, as well as assistance from equipment and agricultural chemical companies, to find less costly and more effective methods of controlling unwanted plants while at the same time safeguarding useful vegetation on croplands, grazing lands, forests, wildlife areas, recreational areas, rights-of-way, parks, urban developments, canals, and industrial areas.

The range improvement work of George Skeete of Water Valley, Texas, is a good example of a sheep rancher who is adjusting to change (see his article on page 258 of this issue). Mr. Skeete operates a ranch carrying 5,200 sheep, all native range. With the assistance of the Great Plains Conservation Program, he has cleared his entire ranch of mesquite, other brush and pricklypear. During the past ten years, he has substantially reduced the need for feeding his sheep during the winter season. He has reduced death losses and labor costs. He has controlled runoff from rain. Through brush control and maximum utilization of water in 1960, he was able to start a spring flowing that had been dry for over 20 years. Best of all, he has a good program of range management follow-up. George firmly believes in sound range management and proper use of the grass.

Livestock producers generally report that forage production has been increased by 30 to 100% as a result of the application of brush control treatments. Reseeding following brush removal is also a common practice and one that is increasing the carrying capacity per acre. In some areas, the increase in carrying capacity has been spectacular. There is also increased interest in fertilizing of rangelands by airplane and of pasture lands by conventional methods as a vital means of increasing the carrying capacity. Such practices often extend seasonal grazing and permit better management of all forage resources.

Progressive sheepmen also realize the importance of full utilization of their resources without damaging over-use or nonproductive use. This means distribution of the sheep over the range so that the forage is harvested uniformly. Ranchers are realizing that one of the ideal methods of obtaining complete distribution of sheep over the ranch is to have permanent watering locations distributed so as to require a minimum of travel by the grazing animals. Sheepmen in fenced areas are finding that if there are several watering locations in each pasture, the ewes will distribute themselves in groups at each watering trough, reducing congestion and overgrazing. Lambing percentages have been found to be best in pastures with several places to water. Drilling wells to obtain additional watering spots is costly. The advent of plastic pipe has solved this problem in some areas and here again sheepmen are adjusting to change. For example, over 1500 miles of plastic pipe have been laid on sheep and cattle ranches in New Mexico, to distribute water evenly around pastures. One of our progressive eastern New Mexico sheepmen increased from 58 to 80% the area of his ranch within one mile of water. By installing six more miles of plastic pipe he will bring 87% within one mile of water.

Another very progressive sheep outfit in New Mexico, the Floyd Lee ranch and the Fernandez Company, located west of Albuquerque at an elevation of 7100 ft, had a real problem with watering troughs freezing over in the winter. They solved this problem by using the sun to warm water; that is, by installa-

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tion of solar water heaters in a manner similar to solar heating of homes in Florida. This system was described at the National Wool Growers Association convention in January 1965 and we have had many inquiries from sheepmen since that time asking for plans of this water heating system.

Fencing of both private allotments and Federal grazing allotments is on the increase. Every year we see less herding of sheep on the open range and more grazing of sheep under fence. Fencing is a means of reducing labor costs and also a solution to the problem of the growing shortage of qualified herding labor. One sheep rancher in Oregon who has fenced his entire year-around operation, including his National Forest allotment, told me that for every herder he could do without for a year, he could build 12 miles of fence. The Forest Service has cooperated on this project and I feel sure that this agency is pleased with the fenced, herderless type of operation and the good, even utilization of the range that results. I went over a good cross-section of this man's allotment on the Fremont National Forest in Oregon and out of 2,000 head of sheep on this particular section, we saw only about ten head. This is indicative of the fact that sheep are spread out and do make good utilization of the range. Again, sheepmen are adjusting to change.

Lamb Improvement

Sheep producers are also seeking to develop even better lamb carcasses than they now produce. This is evidenced by the fact that through the National Wool Growers Association an Industry-wide Lamb Planning Committee has been established. The main objective of this committee is to work for production of lambs which more nearly meet changing demands of the consumer. Another objective is orderly marketing, insuring a more constant supply. A goal has been established with specifications for desirable carcasses, and growers, through careful selection of breeding animals, can bring their production closer, at least, to these specifications.

One of the new tools being developed to measure the internal characteristics of live sheep, especially the loin-eye area, is an ultrasonic device known as the Sonoray machine. The purpose of making such measurements is to aid in selection of progeny that will produce carcasses yielding cuts most preferred by consumers. For example, one of the needs is for meatier lamb chops, those with a larger loin eye. The Sonoray, while still not perfected, holds promise in this field.

Research is also under way to determine whether it is possible to raise two lamb crops a year, or three lamb crops in two years. Sheepmen are following this research closely because if it proves to be practical and feasible, it could help to solve the problem of how to raise production per unit in order to decrease costs. I stress that this is still in the research stage, but a development which sheepmen are watching in the interest of greater production efficiency.

In fact, the need for further increases in unit efficiency has also inspired research now under way to determine the feasibility of bunching the lamb crop. One of the advantages to having more lambs born in a shorter period of time would be a decrease in the cost of production. Labor costs have increased to the point where some growers are no longer shed lambing. An increasing number of growers, even as far north as Montana, are lambing in pastures. This has not been done previously in northern areas because of the cold, wet spring storms. If a grower could bunch the lambing of 1200 ewes into three groups of about 400 each, for example, he could probably take better advantage of his sheltered lambing facilities and available labor. In this

FIG. 1. Type of ewe and fleece that Wyoming sheepman George LeBar is selecting for in his wool improvement program.

case, bunching of the lamb crop might give good returns. Again, this is in the experimental stage looking toward future gains in production efficiency.

Wool Improvement

There is no question about the production of clean wool per head being one of the more important factors in determining profit or loss in the sheep enterprise. While sheep producers have for some years now carried on sound selection and breeding programs to increase their yields of clean wool, I'm happy to say that this improvement work is still under way to gain further yields per head. A flock in Hyattville, Wyoming for example, which yielded only 3.04 lb. of clean wool per head in 1938, yielded 4.9 lb. in 1964, a 61% increase in that 26-year period. This rancher, like many others, is continuing his selection work to obtain even higher yields (Fig. 1).

Growers, through our organization, have also established an Industry-wide Wool Planning Committee. Objectives of the committee are to work for better preparation for market of the domestic wool clip. This involves elimination of jute and other extraneous contaminations, elimination of unscourable branding fluid, black fibers, tar and chemical stain; separate packaging of tags, crutchings, face and hock wools, improvement in shearing techniques, tying procedures and improvement of the individual wool package. Again, sheepmen are adjusting to change.

Conclusion

In the 20 years that I have worked with sheepmen, I have found them to be a somewhat conservative group. Many of them will try new methods of doing things only if they can see that these new methods are feasible and profitable. Some, who have ventured forth into new methods, have found that change is not always profitable. For example, some years back, several sheep ranchers decided to adopt the Australian method of preparing their wool clips for market. They sorted, graded and skirted the wool at the shearing corral and did all of the other things involved in superior preparation and packaging of wool for market. However, they discovered that the premium offered by the mills for this better preparation was not sufficient to compensate for the increased labor costs and other expenses involved. Here, then, was a practice that was not profitable, or at least one which at that particular time did not prove profitable.

There are a number of research projects being conducted by laboratories, universities, the federal government, and ranchers themselves, which may never produce anything practical. And yet out of the multitude of research projects, if we can come forth with a few practical and profitable ideas for the sheep industry, then I know that sheepmen will adopt these new ideas and adjust to change. I base this assumption on the present-day changes that are under way. I base it also on past history which shows that:

1. Lamb and mutton marketed per stock sheep has doubled in the last 50 years.
2. Lambs saved per 100 ewes increased from 85 to 89 in the 1920's to a five-year average of 96 from 1956 to 1960.
3. Fleece weights increased from an average of 3.25 lb. at the time the National Wool Growers Association was organized in 1865 to an 8.5 lb. average today.
4. The average live weight of sheep and lambs at slaughter has increased from 90 lb and less before 1945 to 97 and 98 lb since 1958.

Yes, sheepmen do adjust to change.

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NOTICE

Spanish summaries of 1965 Journal articles have been translated by Dr. Martin Gonzalez and published at Texas Technological College for the Society. Copies have been mailed to all Society members in Spanish-speaking countries. Other Spanish-speaking scientists and ranchers may obtain a copy by writing Dr. Thad Box, Range Management, Texas Technological College, P.O. Box 4169, Lubbock, Texas 79409.