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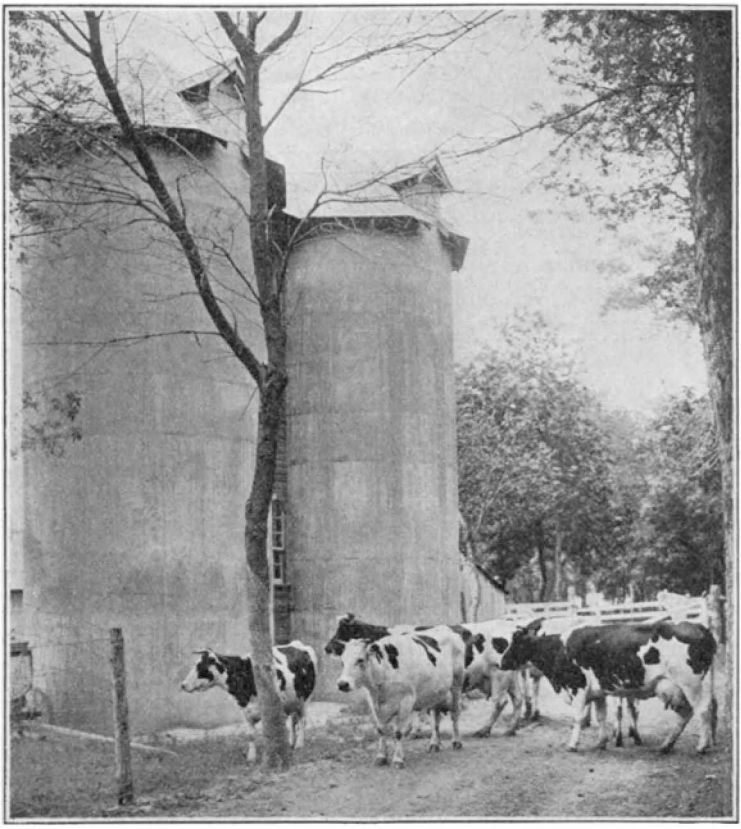
BY R. W. CLARK



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THE RELATION OF LIVE STOCK AND THE SILO TO FARM PROFITS

BY R. W. CLARK

In every state there are thousands of farms that do not pay their owners a wage income. In fact, a few years ago two-thirds of the farmers of the United States paid about $70 a year in order to be their own boss. In other words, they received $70 a year less than wages. Many Colorado farms pay little or no interest on the money invested in them and in the equipment necessary to their operation.

The reasons for this condition often lie in the management of the farm. There is too little live stock, or the live stock is not fed sufficiently well to produce satisfactory profit. There is little or no manure for the land, crop yields are low, and the distribution of labor through the year is such as to be most costly.

MORE LIVE STOCK

A survey of Kit Carson County farms shows that live stock is the largest factor in determining satisfactory farm incomes. Among the things that count for success on Kit Carson County farms are:

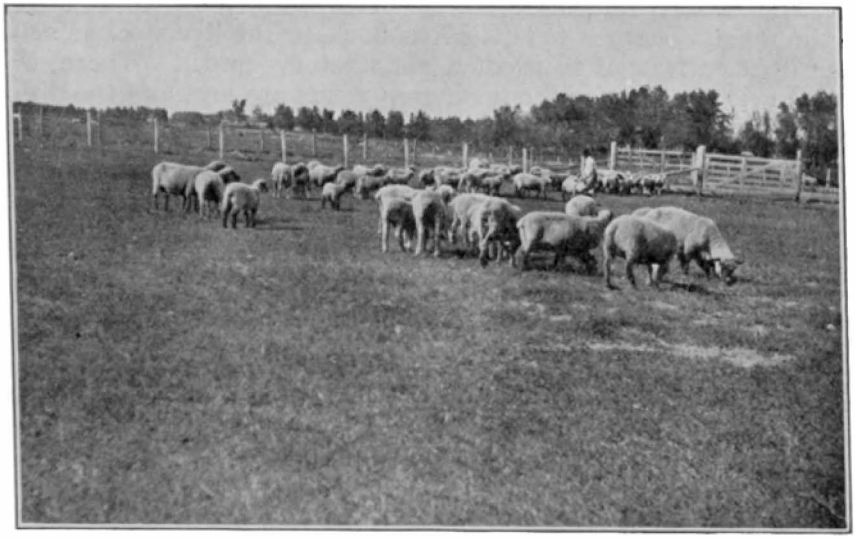
1. Good sized capital ($6,000 or more).
2. 160 acres or more in crops. (The farm should contain not less than 320 acres.)
3. Some cash crops.
4. Plenty of cattle (beef or dairy).
5. Hogs.
6. High-grade live stock.
7. Balanced ration and good care of live stock.
8. Farm to produce all rough feed necessary for the live stock.
9. A silo.
10. Diversified farming.
11. Three or more important sources of income.
12. Good crop yields.
13. Efficient use of labor, man, horse and machinery.

The twelve most profitable farms studied in Kit Carson County showed live stock as their most important source of income. These farms had more than the average farm by

110 percent more live stock,
20 percent larger crop yield,
35 percent larger returns from feed,
100 percent better diversity,
250 percent larger labor income.

A survey of dry-land farms shows that for most profit there should be one animal unit for every eight acres. While no survey has been made of the irrigated farms, a study of conditions seems to indicate that there should be one animal unit for every four acres under cultivation.

In the dry-land sections, 15 to 30 acres are required to run an animal for six months. Two acres put to silage crops, at a minimum yield of 4 tons per acre, and feeding 50 pounds a day will run an animal for 320 days, or nearly a year. This means more feed and more live stock for the farm and consequently a larger yearly income.



Sheep and silage will increase the profits of the farm

BETTER FEEDING

It is customary for many farmers to allow their live stock to rustle for themselves. Part of the time they have enough to eat and part of the time they haven't. Very often the feed is not only deficient in quantity but also lacking in quality. It is a common sight to see stock in over-grazed pastures, alkali sloughs or feeding along bare highways. During the winter months the stock is often compelled to gather its living from barren pastures,

corn stalk fields or straw stacks. The results are that the stock gets poor, little or no growth is made, and milk, wool and meat production amounts to little or nothing. This condition means that the return from the live stock is bound to be low, unsatisfactory, and the income from the farm very small. Investigations show that with well fed animals about 60 percent of the food is used for maintenance. This food of maintenance is necessary before any production or profit can be secured and if the farmer provides only a maintenance ration he can expect no return for the labor or food used.

The question is not only one of liberal feeding, but also one of intelligent feeding. The animal must be fed according to the work it does. Young and growing animals require food that will produce sufficient bone and muscle. Corn makes fat but not much muscle, while skim milk makes both bone and muscle but not much fat. The farmer who tries to grow hogs entirely on corn or feed his cattle entirely on dry feed will have low production and the income from his farm will be unsatisfactory. Silage to supplement the pastures during the summer and to replace them during the winter will always turn losses into profits.

LOW FERTILITY AND YIELDS

The soil is the farmer's bank. If he adds fertility to it, he can draw from it in the form of crops, and the more he adds within reasonable limits the more he can draw, or the larger will be his crops. The most profitable farms are those that have had their soil fertility maintained. The biggest crop yields in Colorado are invariably found upon the best soil. It is not uncommon to find failures and big yields side by side, the former due to worn-out land and the latter to enriched soil. Soil-building, renovating crops are composed mostly of plants that should be consumed by animals. To secure the most profit from these crops they must be fed on the farm. They improve the land in the growing, they give a profit when fed and the manure made by feeding them enriches the soil so that larger crop yields are secured. Every farmer knows that to plow under any kind of crop improves the soil, but he does not know that the manure made from it, if taken care of, has a fertilizing value equal to 85 percent of that crop. An advantage enjoyed by the stock grower aside from the value manure has, is the conversion of roughage and waste into a concentrated finished product. In the past, hay has been very cheap and will be again, in time.

In the raising of live stock a certain amount of pasturage is required. The land is thus cleaned of weeds, rested, and plant

food made available, and enriched by the droppings of the animals. This means larger yields and more profit. Profitable cropping year after year can be secured only in conjunction with live stock growing. Straight grain production year after year can result only in losses or a low labor income.

LABOR SITUATION

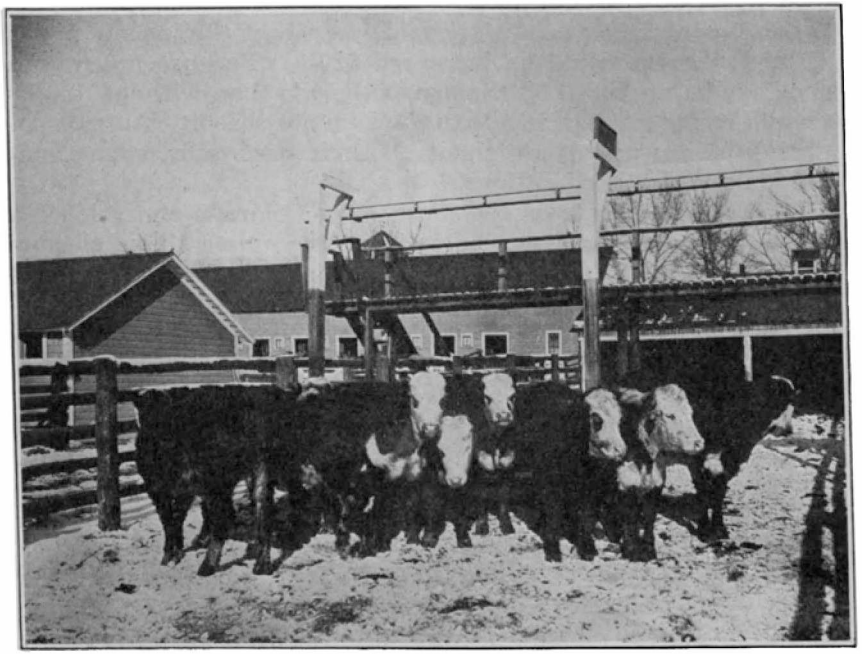
The farmer who depends upon grain growing is handicapped in the labor market. He employs most labor when it is scarce and high in price, namely, during the harvesting and threshing period. Because of this condition he pays the highest prices and receives the lowest grade of labor. The farmer who runs live stock along with grain growing can plan to keep labor employed the whole year and can secure a better grade of it and at lower prices. Feed is getting so high in price that one of the big items of the farm is to keep the horses busy. The grain grower has nothing for horses or men to do during the winter months and bad weather spells, but during the sowing and harvesting seasons he may be so short of them as to cause his crops to suffer. The stock grower has less field work for his horses and is therefore less affected by bad weather and has more for his horses to do in the winter in caring for his stock, hauling manure and marketing his products. The plan should be to keep both horse and man labor employed at all seasons and under all conditions and this can be done only when live stock growing is a part of the farm operation.

Live stock should be looked upon as a labor saving device. It not only picks up lots of feed that would otherwise go to waste, but it actually becomes a harvester of crops. All animals in grazing combine the operations of harvesting and feeding and thereby save labor. This idea when used in the most effective way is a most important factor in increasing the profits of the farm.

IMPORTANCE OF THE SILO

More live stock can be kept with the silo than without it because more feed can be saved. When corn goes into the silo it is practically all saved, the loss amounting to not more than 8 or 10 percent. If only the grain is saved, about 65 percent of the crop is lost, but if it is put into shocks much less is lost. The Colorado Experiment Station has found that when corn is put in large shocks 73 percent of the total weight and 31 percent of the dry matter is lost, when put in small shocks 78 percent of the total weight and 43 percent of the dry matter is lost, and when

laid on the ground 82 percent of the total weight and 55 percent of the dry matter is lost. The Indiana Experiment Station has found that in feeding a carload of steers, 38¾ acres were required to grow the feed needed for 150 days when corn, oil meal, oat straw and stover were fed. When corn and clover hay were fed, it required 35 acres and when corn, cottonseed meal, clover hay and silage were fed, only 24 acres were required.



The silo will enable the farmer to feed out his own stock and thereby increase his profits

It is customary in Colorado for the farmers to sell rather than feed out a few head of cattle every winter. They don't know that under good methods of feeding there is more profit in feeding than in selling. The Indiana Experiment Station has found that the average profit per bushel of corn fed to 2-year-old steers, when silage was used in the ration was 38 cents. When the silage was dropped out of the ration, the profit was reduced 22 cents per bushel. The profit per steer for eight years where silage was fed, was $15.24; where no silage has been fed, the profit per steer was $8.85. The difference of $6.39 in profit shows what a silo will do in feeding a steer 150 days. The small farmer, to be more successful, should with the help of the silo, feed out a few cattle or sheep every winter.

Dairying is necessary in Colorado and the silo is indispensable. The business is often not profitable because the cows are fed too much dry ration, especially during the winter months. The average of nine different experiments conducted in the United States, shows that for 100 pounds of feed consumed, the silage ration produces about four more quarts of milk than the dry corn-fodder ration. If milk is selling at 12½ cents a quart, as it is in many places, it would mean that silage has a value per cow per day of at least 25 cents. It would mean that the income per day from ten cows would be increased $2.50. Because much more feed can be produced by the use of the silo than without it, silage should be fed more or less thru the summer season. Animals that shrink or are underfed cannot do their best later, even though put up and fed good rations.

Sheep raising is on the increase in Colorado and aside from the fertility they add to the soil and the waste they consume, they give a profit of several dollars a head per year. Silage will greatly reduce the amount of fencing to be done and increase the profits in other ways. It should be fed in many if not all cases, the whole year.

Brood sows can use a certain amount of silage. It contains a high percentage of water and overcomes constipation so common in hogs. In the early stages of fattening it can be used in a limited way, but it is too bulky to form much of the ration.

Silage is considered too bulky and dangerous for horses, but good silage, fed in limited quantities, will be as safe and valuable food for horses as grass. Good silage must be used or losses will occur. Colic and general troubles among horses are due mostly to too much dry, coarse forage and a succulent food is needed to overcome its irritating, constipating effects.

On every farm there is lots of roughage of an inferior character, that if fed alone or with other dry feed has little value, but if fed with silage or other succulent food, it has considerable value. Everything produced on the farm should be utilized and this can be done only when a certain amount of live stock is kept. The farm is a factory and the methods of using labor and raw materials, and keeping it operating the whole year, and preventing waste are as applicable as in any other industry.

From the foregoing statements it is very apparent that the relation between live stock growing and farm profits is very close. It has been shown that more live stock can be kept when a silo is used. In six counties in Indiana, the farmers that used silos had a net annual income of $577 while the farmers that did not use silos had a net income of $259, a difference of $278 in favor of the silo.