

CATTLE FEEDING TALKS BY O. A. C. EXPERTS CONTAIN INFORMATION FOR LOCAL LIVESTOCK GROWERS

H. A. Lindgren, extension specialist in animal husbandry, and E. L. Potter, professor of animal husbandry, both of the Oregon Agricultural college staff, who are on a tour of eastern Oregon, in the interests of better farming methods, spoke to farmers' meetings at Ft. Klamath and Merrill last Saturday. The Ft. Klamath meeting was in the forenoon, the Merrill meeting in the evening.

Following is the complete text of Professor Potter's address on "Newer Methods of Fattening Steers": At the eastern Oregon branch experiment station, located at Union, in Union county, we have been investigating newer methods of fattening steers for some eight years. Our experiment station at Union is in a real hay and cattle country very similar to this, and consequently we were working under conditions as nearly as possible like your own.

At the time this work was first planned the general practice of fattening cattle during the winter months throughout the northwest was on hay alone. Very few farms were equipped with scales, and hence the breeders had but a very hazy idea of the gains actually made or as to the cost of gains. Our first step, therefore, was to determine what could be done with hay alone. As a result of several years' work in fattening two-year-old steers, we found that the alfalfa hay alone produced a daily gain of .88 pounds. These steers were given all the hay they would eat. The average amount offered was 37.7 pounds per day, of which amount 4.9 pounds was refused and had to be cleaned out of the racks and fed to stock cattle. Many feeders claim to obtain a much bigger gain than this, but in most cases they do not have scales and consequently cannot be absolutely sure. These gains are too small, and a steer can be fed on hay alone all winter without being so very much fatter in the spring than he was in the fall, all of which tends to make feeding on hay alone largely a proposition of simply holding for a higher market. We therefore wished to find some method of fattening which would give better gains without adding too much to the cost. We knew that to feed a full ration of grain would be entirely too expensive for cattle for our western markets.

Chopped Hay Tried
Our next step was to try chopping the hay with a big hay cutter. We found that chopping the hay saved some waste, made the hay go further, and produced a little bigger gain; so that on the whole when the hay was fed alone, to fattening steers the chopping increased its value 28 per cent. When fed with grain, however, the improvement from chopping was less, and it increased the value of the hay only 14 per cent; and when fed with silage, only seven per cent. The chopping seemed to be profitable when the hay was fed alone, but not enough to pay expenses when fed with grain and silage. The gains with the chopped hay were still too low to produce the finish that we were trying to get.

Our next step was to try a small ration of rolled barley added to the alfalfa. It was fed in two ways. In one case five pounds per day was fed throughout the feeding period. In the other case it was fed at the rate of ten pounds per day during only the last half of the feeding period. It made but little difference which way the grain was fed, and it was found that one pound of rolled barley replaced three pounds of alfalfa hay. Since the grain is usually more than three times as high priced as the hay, this method of feeding did not prove very profitable, although it did produce a little more finish.

Alfalfa and Silage
We next tried alfalfa hay supplemented with silage. The first year we fed the silage we got such good gains that we could hardly believe our figures, and so said nothing about it until we had worked at it for three years. We are still feeding the hay and silage and still getting the same splendid results. We found that by the use of good silage in connection with the alfalfa hay we got a daily average gain of about a pound and three-quarters as an average of five years' work. In other words, we got practically twice as much as we got

out of the hay alone; yet it cost us little, if any more, to feed the steers on hay and silage than it did on the hay alone. It may be suggested that the silage-fed cattle took on a heavy fill which made their gains appear larger, but the fact is, they had all been fed silage several days before they were weighed the first time, so that the fill did not count. The silage-fed cattle shrink perhaps a little more than those fed entirely on dry feeds, but the difference is slight, and there is no question whatever but that the silage-fed cattle carried a much higher finish than those which fed hay alone. They were also better finished cattle than those that had hay and five pounds of grain.

Hay Alone Poor Business.
We fed various kinds of silage, but the most of it was either peas and bald barley sown together, or corn. In case it was corn, the corn was practically always rather immature and frosted before being put in the silo, since our station is located in a district where it is very difficult to mature corn. Both the peas and bald barley and the frosted corn gave us very satisfactory results. We have done only one year's work with sunflower silage, and cannot therefore be quite sure as to its real value. It does not seem to be as good as peas and barley or corn, and we are not yet recommending it for fattening steers, although we do recommend it for stock cattle. The results which we have obtained in fattening steers on alfalfa hay and peas and barley or corn silage have been so good that we believe that fattening on hay alone is soon going to be a thing of the past and we therefore urge the steer feeders to put in silos and fill them with corn if possible and if not possible with peas and bald barley.

These statements apply to fattening steers rather than to wintering stock cattle. Silage is good for stock cattle and in many places silos for stock cattle are a good investment but the difference in results with stock cattle are not nearly as marked as with fattening steers. A slight difference in the quality of the feed makes a big difference in fattening steers especially when they are not getting grain, while on the other hand, a pretty low grade feed will winter stock cattle very well.

Details of these experiments are published in Bulletin No. 174, which may be had for the asking.

Makes \$ a Ton.
We are often asked concerning the probable profit in feeding steers. That cannot be answered exactly but if a man buys a good feeder steer for 6 cents and sells him at the end of 120 days fed for 7 cents and the steer makes normal gains, he would return about \$8.00 a ton for hay, which would be equivalent to \$6.00 in the stack when labor of feeding, interest and risk are considered. If fed with silage and hay under similar conditions, the steer would return about \$11 a ton for the hay and about \$6 for the silage, from which would have to be deducted the cost of feeding, etc. Of course this all depends upon whether the feeder actually obtains this spread of a cent a pound between the buying and selling price. On a normal steady market, that is about what we would expect to get, at least on silage fed cattle, but whether cattle will go up or down and remain the same for the coming winter, no one knows, and I would certainly not risk a guess.

Lindgren Talks Silage.
Mr. Lindgren's talk on Sunflowers as Ensilage, is especially interesting to Klamath county farmers. He said:

"The Giant Russian Sunflower that we have been hearing so much about in recent years, in connection with silage crops, is said by some botanists to be native to America. It was transported to Russia in the early days of our country, where it was developed by careful seed selection and returned to us in its present form. It was found especially adapted to the higher altitudes of the country, where corn does not grow or where the season is short. In fact, sunflowers have been found capable of resisting cold to a temperature of 26 degrees Fahrenheit without ill results.

The Experiment Stations and stockmen of the western country have been growing sunflowers and putting

them up in form of silage for some years past. We have learned enough about them that we can now at least draw a few conclusions as to their adaptability to our needs.

Stands Cold Climate.
First it can be safely said that sunflowers will do well in climates that are too cold for corn and other silage crops. At the same ground with corn the yield will range from 25 to 100 per cent higher tonnage. However, the moisture content of sunflowers runs higher than corn by about 8 per cent, which accounts for a part of the difference in yield. They have been found a very satisfactory silage crop for the dry farm regions where they also outyield corn.

How To Plant Them.
There has been much discussion as to when the plant sunflowers. In the colder climates it has been found best to wait until the soil warms up well in the spring. The Montana Station in some trials on the manner of planting, found that planting in drills 36 inches apart made the heaviest yield.

It is important that the sunflower be cut at the proper stage, otherwise the silage is of low quality. The more recent investigations show that the proper time to cut sunflowers is when the yellow rays or petals have dried up and are falling off. When cut at that time the resulting silage proved most satisfactory.

Corn Stronger Feed.
Sunflower silage when fed to cattle and sheep has a feeding value of about 75 per cent that of corn silage. It is a little less palatable than corn and takes a little more time before the stock becomes accustomed to it. The Montana Experiment Station found that 2.5 pounds of sunflower silage replaced one pound of alfalfa for breeding ewes. They found that it made a very satisfactory feed for breeding ewes when fed at the rate of 2 1/2 to 3 pounds per day together with alfalfa.

The Washington Station in a digestion trial found that sunflower silage was 66 per cent as valuable as corn silage. Although all trials have shown a different comparative value, all have shown that sunflowers are less palatable and have a lower feeding value than corn silage pound for pound.

Harvesting A Problem.
Probably the greatest disadvantage from growing sunflowers for silage is the great difficulty experienced in harvesting them. They have large heads which are heavy and tangle easily. All growers report that it requires a third more men to handle the crop in harvesting than for corn. As a final statement let it be said that so far as can be determined, sunflowers can be considered the best silage crop in the higher altitudes or where the growing season is short.

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Where corn can be successfully grown it is the general opinion that it gives most satisfaction. However, it is suggested that those who want to try the sunflowers in preference to corn in those localities, that a quarter of the acreage the first year be planted to sunflowers and the balance to corn. This will be the best test for any man to apply.

Good Winter Feed.
Before leaving this subject about sunflowers, there is one more thing that should be said and that is that they are better for wintering stock than for fattening. At the branch Experiment Station at Union, Oregon, it has been found that peas and bald barley silage is proving more valuable for fattening than sunflower silage. Peas and bald barley can be grown most anywhere that sunflowers will grow. They will not yield so heavily but will make a better fattening feed with alfalfa and are easier to harvest.

Where quality is desired in the silage rather than quantity, peas and bald barley are recommended, on the other hand, where an abundance of rough feed is desired for wintering, sunflowers are to be chosen.

LOOK FOR MARKET FOR U. S. IN FAR EAST

SAN FRANCISCO, Sept. 7—Asiatic markets for American goods are to be investigated by Frank Eldridge, Jr., chief of the Far East Division of the Bureau of Foreign and Domestic Commerce at Washington. Mr. Eldridge, who is the author of "Trading With Asia," will sail from San Francisco about September 22, and will visit Japan, China, the Philippines and the Dutch East Indies before proceeding to India where he will establish a new field office.

TWO SEA-FIGHTERS SCRAPPED.
SAN FRANCISCO, Sept. 7—The American gunboats Marblehead and Minneapolis, their fighting days at an end, are being dismantled. They were recently sold to Barde and Son, and towed here from Mare Island.

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