

DISCUSSION.

Mr. Gillingham — Professor Henry, we want to know how the growth of those calves was made.

Question — Give us the best ration for milk after the milk has begun to go to the cheese factory instead of to the calf?

Prof. Henry — It is hard work getting blood out of a turnip. I don't think a calf can be profitably reared in hard times without some milk to start with. People may do it. You can do lots of things in an experimental way, because you have said you can do it. The main thing is attention. The usual care of the calf is to leave it to the care of the most shiftless person on the farm, that is, to the boy or the hired man. The younger the calf, the more care he needs, and he must get it if he succeeds in growth. If the calf has been taken from the mother, say when it is two or three days old, we have found that for a time we better give more or less full milk from the mother, teaching the calf to drink the naturally warm milk. Then after the calf is one or more weeks old we put in skim-milk. I took full-blooded Jerseys when they were two weeks old. I had them drink nothing but skim-milk. Their mother's milk was so rich I saw the calf was going to suffer, so I changed to skim-milk. The sixteen calves that now stand in our barn (and you will receive a report of them before very long) weighed on the 22d of last June, 1,920 pounds. Now they weigh 7,000 pounds. They have been fed 16 lbs. of sweet skimmed milk per day. They have been fed that for about fourteen weeks. The average of the fourteen weeks will make less than fourteen pounds a day. Each calf is fed three times. The milk is heated each time about a hundred degrees. The thermometer is always put into the milk until the man becomes so expert he can tell without it. When I take a new man I make him use the thermometer until he becomes expert. Have your milk a hundred degrees warm divided into three feeds. Give each calf his own portion and have him tied up by himself. Do not let the calves run, because the strongest will get two feeds. We have a strap around their necks

and a post, and ring that runs up and down the post. Keep each calf by itself where it cannot suck the other calf.

Begin skimming the milk as soon as you possibly can. If butter is very valuable you hurry the calf off on to sweet skim milk. When the calf is two weeks old have a box of oats near by. You set the pail of milk in front of the calf. As soon as the calf gets through he is anxious for something to suck. Pick up a handful of oats and shove them into his mouth. He tries to spit them out. He shakes his head. It will not be many days before he will begin to crack these oats. In two or three weeks the average calf will be chewing the oats. I feed whole oats. If we have a calf that will not eat whole oats we grind them. The calf will take care of the oats better than the cow or steer. Put a wisp of hay in front of him. Coax him to eat all you can. You can't hurt a calf. You can hurt the calf by giving him sour milk. Keep the milk ration down. There have none of those calves been off this feed. I keep them right up to the surfeiting point. We are making more than eight dollars a ton on hay and a margin for labor. As we weigh every calf we get correct results. There is no use of letting the calf run with the cow if you want the butter product. You can make two hundred pounds of butter from the cow and raise the calf.

Mr. Gillingham — What blood were those?

Prof. Henry — I don't know.

Mr. Gillett — How long would you feed warm milk?

Prof. Henry — Up to the last. The milk is set cold. You get a calf off feed first by cold milk and upset his stomach, next by feeding too seldom. It gulps the milk down, it goes on an empty stomach, third by feeding too much skim milk.

Mr. Gillett — Have you ever tried feeding sour milk?

Prof. Henry — No, sir. I want to learn to feed a calf on food.

Mr. Huntley — Do you feed oats unground?

Prof. Henry — We are feeding them first one thing and then another. Most of our oats now are ground. We watch the manure. If we find any kind is not satisfactory as shown by the manure, then we change it.

Mr. Huntley — You made the statement that the milk was too rich to feed the calf.

Prof. Henry — The Jersey milk was.

Mr. Huntley — Mr. Sturtdevant says it is not too rich in butter product or fatty matter.

Prof. Henry — This cow's milk takes 13 or 14 pounds of milk to a pound of butter. Those two Jersey calves gained two pounds a day during last winter upon skim milk and such grain as we could get down.

Mr. Thompson — Will it do to feed roots; turnips?

Prof. Henry — After they are several weeks old, yes sir.

Mr. Gillingham — What effect will it have on steers that are fattening to feed them on such as ruta bagas and mangel-wurzels.

Prof. Henry — The only trouble is a man must consult his pocket book. It costs a good deal of money to raise roots. Steers are very cheap. We are experimenting in growing corn and grain. We have reduced it to the minimum. Root growing is pretty expensive; there is the cheapness about it.

Mr. Gillingham — Do you keep your calves confined through the day all the time?

Prof. Henry — Yes, sir. Of those sixteen we are saving their manure to see what it is worth. We let them out this weather. Each calf has its place. We put it back. Our calves have never sucked each other's ears. We have two calves that have never been loose except to be led to the scales and weighed.

Mr. Gillingham — When you feed them milk do they run to pasture?

Prof. Henry — No, sir. That is one of the facilities to take a poor little thin-skinned calf and tie him on the hot side of a fence and let him be blistered over with flies and then think a kind Providence is going to bless your labors and help you pay your taxes.

Mr. Randall — A substitute for roots is ensilage.

Prof. Henry — Let Mr. Randall talk on that subject.

Mr. Randall — I should have to talk about the farms in England, where they use a ration of mangel-wurzels with clover hay. I want to discuss corn ensilage with mangels.

The digestive organs of the animal all through the winter is kept up. We are bothered to keep the mangels from freezing. With a temperature as low as 70 degrees you can't bring your mangels from the cellar and cut them with any better effect. I have been disappointed this winter in feeding horses. I commenced feeding a small ration to my horse because I had an excess of ensilage. After I began to feed ensilage they would whinney and paw and call for that until I fed them. They will leave the cut feed invariably and take the ensilage. My horses are peculiar. They seem to alternate. I give them half a cow ration, one bushel basket between a pair of horses. The ensilage is pure corn. Last year it was half clover and half corn put in in alternate loads. I am proud of the silo. I think it will take the place of root culture.

Prof. Henry — There is one point I wish to straighten, that is the care of calves. I should keep every calf tied up, I should not allow a young calf out to grass at all. If you want a good veal calf keep him tied up in a dark room. If you want to make him comfortable give him more light but keep him confined. A calf cannot do anything in a pasture. The flies will take more off him than the grass will put on him. Skim milk will do better than the little grass he will get.

Mr. Thompson — Do you give your calves cold water.

Prof. Henry — Of course with that amount of milk they do not want any cold water. They do not care for it. I believe it will pay to warm the water. A ton of hay will give us more heat in the cow than it will in the stove. Where you give cold water at thirty-two it is cheaper to warm the water with wood than with the cow. That is the reason people have such success with bran mash by giving warm water instead of cold. They get a better result.

Mr. Thompson — You keep the calves confined during the whole fall?

Prof. Henry — No. I should let them out as soon as the question of the flies bothering them was got over. I should turn them out nights earlier. When the flies did not bother them I should let them out. I would use my judgment.

Judgment tells a man cold milk is not the thing for the stomach. With a calf tied in a fence corner with its legs all covered with flies common sense shows that it does not pay. You cannot cheat nature or the Almighty. When the flies bother, put them in. Use calf sense in raising them.

Mr. Gillett—Of course your opinion is to keep them in when the flies bother them and let them out when the flies are not troubling them.

Prof. Henry—The statement was made in Baraboo last week, by a Short Horn grower, that Wisconsin cattle stood lower in the Chicago market than Texas steers. If that is true, I believe it is time we begun to study how to take care of cattle.

A paper was then read by C. M. Bright of Oshkosh, entitled:

TAXATION.

By C. M. BRIGHT, Oshkosh.

There is an ancient and familiar story about an honest farmer who had been for years in the habit of sending his boy on horseback to mill, with a bushel of wheat in one end of a bag and sixty pounds of rock in the other to balance it. The horse had thus to carry sixty pounds of wheat, sixty pounds of rock, and the boy. One day an ingenious neighbor showed the farmer how he might divide the grist and leave the rock out. This story is something of a joke on the farmer, but considered as an illustration, such as suits the purpose of its present use, it is not much of a joke after all.

The human race progresses, but by the slowest and costliest methods. History has been defined as the record of human progress. It has been made by the efforts the race has been engaged in, through oppression and bloodshed and suffering, to better its condition by enlarging its liberties, and relieving itself of unjust and unnecessary burdens. Some burdens must be borne. It was necessary for the