

FACTORS IN

STEER FEEDING.

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Outline

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Factors in Steer Feeding

The subject of steer feeding is one of the most important in Kansas agriculture; and judging from the way it is frequently carried on, a study of a few factors in steer feeding will be no waste of time. We will say here, however, that this is not all original; we have obtained some of this material from a study of Henry's "Feeds and Feeding", and from the Eleventh Biennial Report of the Kansas State Board of Agriculture.

Animal.

I. Advantages of the beef over other breeds for feeding. At this time, there is no doubt that for feeding we should have one of the beef breeds, Hereford, Short-horn or Polled Angus; little preference being shown to either of these three.

1. In the beef breeds we have a higher percentage

of dressed weight. The percent of dressed weight depends on, -

(a) The age of the animal. Three-year-olds dressing 7% over yearlings.

(b) The degree to which the animal has been fattened. This also determines the percentage of valuable parts. Bone, hide, hoofs, head, etc. are not increased much in weight as the animal is fattened.

(c) The breed or beef character

2. Beef in those parts of the carcass which sell on the block for the most money per pound.

3. Buyers, recognising the above fact, pay a higher price on the market for the beef breeds, other things being equal. Buyers pay from \$1⁵⁰ to \$2⁰⁰ more per hundredweight for Herefords and Shorthorns than for Holsteins and Jerseys; a difference of 32% in one case.

4. The milk breeds have from 5% to 6% more tallow compared with the dressed weight, than do the beef breeds. The beef steer places the fat where it serves the highest purpose as human food, - among the muscular tissues and fibres - while the milk breeds place the most of it about the viscera.

5. We desire the typical beef form, so far as possible - low, broad, deep, smooth and even; broad

back, well sprung ribs, etc.

6. We wish a good quality, style, character, and finish. Some of the indications are found in,

(A) The skin and coat - handling; should have a clear, prominent, placid eye; fine bone, fine cut features.

(B) It is necessary to have a strong, vigorous constitution.

7. The right kind of cattle to lay on fat and make money. Those that will make the most gain out of a certain number of pounds of food fed. This is mostly a breed characteristic. The 'scrub' or wild rangy steer has not the power of assimilation that is possessed by the beef steer. We must also consider the economy of production of these different kinds of cattle.

8. The finished product, what the market wants, and are willing to pay for. This depends on breed, the shape the animals are in, the finish, etc. Buyers have been known to pay \$2¹² below the top quotations for good Jerseys; and \$0¹⁰ above the top quotations for good Herefords.

II. Home-raised or bought away from home

This is a very important factor, meaning, sometimes, two or three weeks, or even a month's feed before we begin to get any gain. The place

is strange, the animals feel timid and 'scary', and for a few days may even lose flesh. Furthermore, they are often fretted on being driven from place to place, and sometimes are treated cruelly.

With home-raised cattle, they are accustomed to the place. They feel at home. They are acquainted; and when put into the feed lot, go to making gains immediately.

We can usually raise our own cattle cheaper than we can buy equally good cattle elsewhere. We can breed for certain points which are desirable, and can thus have the kind of cattle we wish.

If we buy our cattle, we can usually do better away from home, where we are not known, than among our immediate neighbors, from the fact that they are more or less jealous of us; but this brings in the problem of strange cattle again.

Many farmers go to the great stock yards, and buy 'feeders', as they call them, and in so doing they very often get 'soaked'. Many feeders ship in mixed bunches of cattle; they find it profitable to divide the bunch, and sell the 'tops' for slaughter, and the others as 'feeders'. Now these 'feeders' have probably had as good a chance as those in the same bunch with them to make good

gains. They have been tried, and do no good, and are sold back to innocent farmers as as 'feeders', and every bit of grain that is thereafter put into them is wasted. If the buyer of cattle to feed has a reliable commission merchant do his buying for him, he is not so likely to be sold

III. Age. This is an important factor in the rate of gain of an animal. A three-year-old steer makes about .35 to .4 pounds less daily gain than a yearling; and about .15-.20 pounds less daily gain than a two-year-old.

It seems best to have steers not over three years old, if possible. Of course, there are other considerations

IV. Disposition. The animal that is timid and runs whenever anyone comes near is not profitable for the feed lot. The disposition depends a good deal on how animals have been previously treated.

V. Individual merit. We will always find some animals in the feed lot, no matter of what breed, what they are fed, or how they are handled, that do not 'do well'. Such animals are not profitable; so in buying cattle to feed, we must consider this;

or, if we raise cattle ourselves, dispose of such animals in some other way, than by allowing a few of them be a detriment to the whole bunch we are feeding.

VI. Size. Formerly it was the custom to have size a very important characteristic of the fat stock shows. Cattle were fed until four or five years old, and weighed from 2000 pounds to 3000 pounds. Within the last few years the taste of the people has changed. They no longer want the big steer. It is a thing of the past. People now want good, well fattened, cattle, of moderate size, from 1400 to 1500 pounds. They want cattle from two to three years old, that are of the true beef type and bring the greatest percent dressed weight.

VII. Horned or dehorned. In a bunch of even cattle that have been raised together, and fed with no strange cattle among them, there would not be much disadvantage in leaving the horns on; especially so, if the horns had not been removed until it was time to put the cattle into the feed-lot. With horns, they would need a little more lot-room, and could not be packed quite so closely in the car. What cattle we raise ourselves can be dehorned

when young, and then, when others are purchased, they are dehorned, and if possible some time before we get ready to put them into the feed lot.

In a lot of steers having no horns, there is less running around, fighting, butting, etc. True, it is seldom that much damage is done by horns, but frequently some steer may be injured, by having two or three fighting him; and his loss would more than pay for the loss all the others would receive by being dehorned.

Again, steers peaceable among themselves, frequently do damage to shots running with them.

Buyers at the yards bid usually a little higher on good looking dehorned steers, than on those having horns.

Feed

I. Getting off grass onto grain. Some people have the false idea that it is a good plan to change cattle suddenly from grass to grain, in hopes of making large gains. This is not the best plan. Any change in feed should be made gradually. There should be at least two or three weeks in making the change from grass to grain. Give bulky and rough feeds during the first part of the change, and gradually add more grain.

II. Low or high pressure feeding.

1. Length of time of feeding

(a) Markets and price of feed. Often the markets are low, while feed, grain especially, is high, so there arises the question whether it will pay to feed grain or not. In this case, we usually give ourselves the benefit of the doubt, and mature the cattle by the slower, but cheaper, process. We have roughness usually, and can use this for winter feeding and let the stock make good gains on pasture during the summer.

(b) Holding after we are ready to ship. Some feeders, after the biggest part of the bunch are in prime condition for shipment, hold back the whole bunch because of some that are not up to the standard, or because the markets are not favorable.

Now this is usually a losing game. Those already fat, do not gain, and often deteriorate. If there are some not up to the standard we ought to divide the bunch, and send those that are ready right away, and the others later on.

Holding off for the market to rise seldom does any good.

2. What to feed. This depends, to a great extent, on what we have on hand. We should

feed this and buy as little as is necessary to put in with it to bring it up as near as practicable to a

(a) Balanced Ration. We presume all know what this is, its advantages, etc. This suggests the idea of raising crops with a view to 'balancing' them in feeding.

(b) Ordinarily more grain is fed than is necessary. Many of our feeders use the 'self-feeder' and the steers one-half bushel or more of corn per day.

From what we know of feeding experiments, balanced rations, etc., this is twice as much as is needed. It is expensive. If the corn is not ground, however, the waste is partly used by the shots as we will see later; but at any rate, it is an expensive way to feed hogs.

(c) Another thing to be considered, especially in what to feed in high pressure feeding, is to have the food bulky. Often little or no roughness is fed to steers; and they stand at the feeder and eat, eat, eat shelled corn till they are full. In this state, the juices of the stomach do not penetrate, and not so much is gotten out of the corn as there might be if it was looser — had some roughness mixed in with it. Some feeders grind corn and cob into meal to give bulk. Others

feed snapped or whole ear corn. If cattle have good palatable roughness, good clean fodder, and more or less snapped corn, there is no danger of wasting so much grain.

3. When and how to feed.

(a) On full feed? In low pressure feeding we hardly ever have on full feed except just a short time to finish off on. We do not have the grain to feed, so save what we do have for the last. In forced feeding we have on full feed for a longer time but there is a limit.

(b) In 'self-feeders', or two or three times a day? Of late years, many feeders have abandoned the plan of having grain constantly before the steers, and now feed a certain amount two or three times per day. In this way they can tell how much the cattle are eating. The troughs are cleaned out before new feed is put in. Everything is clean and fresh, appetising and palatable. Cattle like this, and seem to do better when this method is used.

(c) At what times? It makes little difference whether you feed two, or three, times per day; but whichever you do, stick to it; be regular, and punctual. Have regularity not only for the time of feeding, but also for everything else. Everything should go on like clockwork.

It is the same in cattle as in men. If meals are not ready at a certain time they are disappointed, and when the meal is ready, their appetite is gone, and they do not relish it. If the feeder does not follow this, it is his own loss. When there is regularity the steers are always ready when the time for feeding comes; they eat, and then go off and lie down until time for the next meal, and do not hang round, waiting.

III. Effects of feed on digestive organs. This is one of the things considered in computing our balanced ration, if we have any; and if we do not feed balanced rations, we must consider this factor, anyway. Some feeds have a loosening, others a binding effect upon the bowels. Feeds should be combined in such proportion as to keep the excrements of the proper degree of hardness. Over-feeding, or suddenly changing the feed, or feeding mouldy hay, etc., produces scour; and we know it often takes a week or more of feeding before the animals can be again brought up to what they weighed before they had the scour.

IV. The food given and the shape in which it is given determines the value of the droppings for ^{hay}.

Take whole corn for instance, that which passes through whole, can be used by pigs; while if the corn is ground the pigs cannot pick it out of the droppings. This fact is important, especially where there is careless feeding. We will make more, in the long run, by feeding the steers their feed in such quantities and shape as will do them the most good; and then feeding the hogs what extra feed they need, after they have picked over the droppings.

Water

Water is a factor which is very often neglected. Animals are like ourselves in that they should have plenty of good, clear, cool, water, always before them; and this should be where they can get at it handily.

I Cold or warm? Neither. It should be cool, probably a little warmer than ordinary well water when freshly drawn. Warmer than this, it is rather sickening; and colder, as it often is, even freezing in winter, it is likely to produce intestinal catarrh or diarrhoea, which as we have seen is injurious.

II. Water should be in a convenient place, easy to be gotten at by the steers. In many cases, they have to wade through deep mud, or get into a river

or creek to drink.

III. How supplied? The handiest way I have seen is by tanks with float valves. These tanks being supplied with water from a main tank which is always kept full of fresh well water.

I believe there should be a tank-heater used in cold weather, although I have never seen this in practical operation.

Salt.

It goes without question that it is best to give salt to steers.

I Kind. Most feeders use barrel salt in preference to rock salt. There is just as much salt per pound, and it is very much cheaper, and animals do not make their tongues sore by long licking, as they frequently do on rock salt.

II. Quantities. - Not exactly determined. Be careful not to give too much, as it causes animals to drink more water than they should, and consequently overworks the kidneys. More salt is given toward the close of the fattening period than at the beginning. Say we give per animal

one and one-half ounces per day at first, and increase to two or three ounces towards the close of the period.

III How fed. Some feeders recommend mixing it with the feed; others say it should be given separately. This, I believe, is not very important.

Pens

I One of the first things we should plan for in building a pen is to have shelter. We should have a good shed on the north, and one part way on the West would do no harm; should have the ends of the shed boarded up. If we could have a building along the west side, it would be beneficial if there is no shed on that side. We want shelter for two reasons,

1. Profit. The feed digested goes for two purposes—
 - (a) Keeping up animal heat.
 - (b) Laying on tissue.

Now if there is no shelter, it takes a much greater percent of the digested food to keep up the animal heat. In some cases, in very severe weather, all the food digested is not sufficient to keep up the animal heat alone, and some of the tissue already formed is torn down, and the animal loses in weight instead of increasing.

Argument or discussion as to the money value of shelter is useless. One can hardly hope for success in feeding without shelter, in a country where the thermometer is so variable in winter as it is here.

2. Compassion for animals. This brings in the moral side of the question. It seems cruel to have dumb brutes standing out with their backs up, and tails to the wind, shivering with cold. This is just as cruel as many things which these Humane Societies will not countenance at all. We should not look at the money side alone of this question.

II. Size. This varies according to the character of the cattle. 'Rangers' need a larger pen proportionally than tame animals. Too close confinement for cattle that have been used to large ranges, is detrimental. They feel cramped, shut up, and do not do so well as they would if they had larger pens.

We desire pens conveniently large to get around in with the wagons in hauling in feed, and so that the cattle are moderately free. For a rough estimate say two thousand to four thousand square feet of pen-room per animal. Care should be taken not to get the pens too large or the cattle may get to running around too much, and not make good gains.

III. Racks. We want good substantial racks, placed in those parts of the pen convenient to get at in feeding, and rather protected from the wind by the shed.

If we had say twenty cows in a pen, we would need one rack for hay, seven by sixteen feet, and three feet high; if we feed grain two or three times a day, which most feeders now think is the best plan, we will need two grain boxes, about three by fourteen feet, and six inches deep, and about three and one-half feet above the ground.

All our racks should be made so they will not be rubbed down, or leak; and should be high enough that the hogs will not trouble, and the hay-rack fixed so the cattle cannot jump over into it.

Bedding

This is a factor sadly overlooked in many Kansas feed-yards. Cattle that are in muddy pens, and that have to stand up most of the time, make poor gains, no matter how much or how good feed they get. When cattle are lying down, resting, and digesting their food, is when they are laying on fat; and the more we can have them quiet, lying down, moderately warm and comfortable, the better it is for the feeder. Do not try to be 'economical' by not using bedding.

Care and Handling

Animals have feelings, they get lonesome, or tired, are timid or brave, the same as men are.

The man who feeds and cares for the steers should be gentle, quiet, peaceable, and loving toward the animals. The more the animals love you, the better. Cattle like to be shown kindness and sympathy; on bad days when cattle do not like to come out to the racks and eat, the man stays about the feed lot all day, handling over the feeds and tempting the steers out. They feel sort of cold, drowsy, and lonesome; they want his company, and come out, taste the feed, and find that they are hungry. In this way a day's or several days' profits are saved. Personal attention is a question of more importance than is supposed.

Weighing

I. Many intelligent farmers now have scales connected with their feed lot; so it is an easy matter to weigh the cattle every few days, or every week and then they always know "where they are at". Thus they can tell exactly what gains their cattle are making, and what animals are not doing well.

II. The feed is also easily weighed; so if we know

what we are feeding and what gains we are making we can tell where we stand.

III. In this, the hogs should not be left out of consideration. They can be weighed frequently, also, so we know what they are doing and whether they need more feed or not.

There is much satisfaction in having good scales; a man always knows just what he is doing. He can weigh his cattle at home, and can tell whether buyers are giving him correct weights or not.

Shipping

Some feeders, especially those who feed on a large scale, prefer to ship their cattle rather than sell at home to the shippers there.

I. Feed previous to shipping. In shipping, we want cattle to shrink as little as possible; so try to have the contents of the intestines composed of rather dry, filling feed. We feed mostly hay, or good fodder, and shut off some of the corn.

II. Water or not? We do not wish cattle to suffer with thirst; but they should not drink too much as it increases the shrinkage; let them be moderately watered.

III. We cannot successfully ship cattle 'off grass', as the shrinkage is enormous. For the last week or so we should get them onto dry feed, so they will not be so 'loose'.

IV. Holding many for a few. Especially if one is a large feeder, and can conveniently make shipments at different times, this is a poor practice. A steer when he is prime does not gain any more as the days go by; in fact, he really deteriorates some. It is poor economy to hold a bunch for one or two poor ones. If we have scales we can soon tell which ones are not good as feeders, and dispose of them in some other way, and get enough good steers to make out even car-loads, and then ship when the cattle are ready.

V. Bedding the car. This is as good an investment as a man can make, Bed the cars well with sand or hay. This keeps animals off the floor of the car, and they do not slip or get thrown down. In poorly bedded cars an animal may get down, and it will be almost impossible for him to get up again; he may be injured or killed. It pays well to bed thoroughly.

VI. We often save time and trouble by sorting our stock when we load. We should have our animals classified. Buyers always look at the poorest animal in the lot when they make their bid; so we want to have those in one lot as nearly alike as possible. It pays best to sell the poor ones in one bunch, and the good ones in another.

VII. Before the last change of paying freight by the hundredweight, there were frequently cases of overloading in the cars. Cars should be packed snugly full to ride well; but this crowding should not be carried on too far, as nothing is gained by it.

VIII. Unless for short distances some feed should be given on the road. The best way is to feed in the car; and one of the best feeds is good, sweet, prairie hay. This is palatable, filling, and has a good effect on the system. Cattle should also be watered moderately on the road.

IX. The best time to get into the yards is between five and eight, a.m.: the nearer the latter hour the better. Cattle look their best just after they have been fed and watered.

X. Especially if one is a stranger at the business it will pay to inform a reliable commission man of your intentions to ship, and get some advice from him as to the best time, and act accordingly. He meets the car and sees that the cattle are properly unloaded and cared for.

XI. Some feeders, mostly the inexperienced, watch for what seems to indicate a shortage; so they act on their reasoning, and ship in to market. Where they usually find that many other men had thought as they did; and consequently there is a glut instead of a shortage, and they get a low price. This 'hitting the market' is quite a complicated question, and mostly a game of chance.

XII. Don't try to feed for a certain time of year, especially. Cattle may be high at certain seasons of this year, but not at the same season of next year, as we cannot tell. The best way is to feed when most convenient, and ship when the cattle are ready.

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