

## Raising Animals for Meat

By PROFESSOR THOMAS SHAW.

**T**HE PRACTICE of growing meat-making animals quickly is of comparatively recent date. Years ago the aim was rather to winter the animals cheaply without much regard to any growth made, and to depend upon the season for vegetative growth to make increase in the growth of the animal. Under such conditions maturity was deferred and development was hindered in proportion to the length and frequency of the period when the animals were on short rations or on rations not well suited to make growth.

The rule is now, or at least it ought to be, to keep meat-making animals pushing along quickly when grown on the arable farm until they reach maturity. The aim should be to have no periods of stagnation in growth. But to this method there may be some exceptions. Some of these will be duly noted.

The reasons why growth should be continuous and reasonably rapid include the following:

(1) Gains are less rapidly made as the birth period is receded from, notwithstanding the greater relative amounts of food called for to make the gains. (2) The longer that an animal takes to reach maturity or to attain to a given weight the greater will be the amount of food consumed that is designated food maintenance. (3) The more frequent and prolonged and the more severe the periods of stagnation in growth are the more is the capacity of the animal lessened to make growth.

### Gains Lapid Near Birth Period.

That gains, especially in bovines and sheep, when the young animals are suitably fed, will be most rapid near the birth period, and that they will grow less and less as the birth period is receded from, has been so completely demonstrated by actual test that it can not be gainsaid; no one disputes such a claim any more. The singular feature is that more and more food is called for to make gains as the birth period is receded from, notwithstanding that the gains are made less. Two reasons at least may be assigned for this: One is that the assimilative powers lose something in their activity as the birth period is receded from. That it is so is evidenced in the fact that aged persons gradually shrink in flesh, notwithstanding the considerable quantity of food that is eaten.

That the longer the term called for to bring an animal to maturity the greater will be the cost of the food of maintenance is self evident. But this greater cost does not arise simply from the longer period during which the animal must be maintained. It arises in part also from the greater cost relatively of the food of maintenance as age advances. Thus an animal at 36 months

will cost more relatively for food of maintenance than one at 18 months. It follows then that the cost of the food of maintenance in the former will be more than twice as much as in the latter.

### Stagnation in Growth.

Periods of stagnation in growth, especially when they occur at an early period in the life of the animal, hinder future development in that they take away the capacity of the animal to make gains subsequently as it otherwise would. This is evidenced in calves that are stunted in growth during the milk period from a lack of nutrition resulting from ill feeding. Thus the loss from stagnation in growth becomes a double loss. It is first a loss in the food of maintenance, and second, more or less of a loss of capacity to make increase.

From what has been said, the wisdom of pushing on animals quickly from birth to maturity will be apparent, or at least from birth to the period of disposal. This, however, applies more to the arable farm than to conditions that are more extensive. Where cattle and sheep are grown entirely on rough grazing lands or on lands that produce but little food in the concentrated form, as for instance in the form of grain, it may be more profitable to keep them for a longer period than to buy concentrates and feed to them in the hope of shortening the period called for when preparing them for the market.

### Maturing Too Slowly.

But even on pasture lands it would be easily possible to mature them too slowly, and to maintain them too long before putting them on the market. Take for instance the range which calls for four years to mature the animals that are reared upon it. When it is called to mind that during the fourth year the animal will make less increase than during the second year, notwithstanding the greater consumption of food, it would seem advisable to sell at three rather than four years to those who purchase such animals in order to finish them on the arable farm. Again, the ranchmen who maintain wethers on Western ranges after maturity that they may simply supply them with wool for the market, will certainly make more money by the method that will give them lambs instead of mature wethers, as the lambs will be making increase in flesh while they are growing wool.

On the arable farm the wiser plan is to feed more or less of concentrates to animals that are growing during the winter season. This may not be practicable with live stock that are grown under what may be termed extensive conditions. All these things and many more should be carefully weighed by those who grow livestock.

## Bloating of Cattle and Sheep

### FOR CATTLE.

**T**AP at once in severe cases. Make a small incision through the skin on the left side between hip point and last rib, about four inches below the spine. A canula and trocar (a trocar is a sharply pointed instrument inclosed in a hollow tube, the canula) is the best instrument for puncturing the stomach. Insert this through the incision in the skin, press downwards and inward till the stomach is punctured. Withdraw the trocar and leave the canula in the wound until all the gas has escaped through it, which will be an hour or more. Then withdraw the canula, wash wound with an antiseptic solution and allow it to heal naturally. If there is no trocar and canula at hand, a pocket knife may be used, but is not nearly as satisfactory.

In less severe cases, pass a piece of rope, soaked in tar or dip, between the jaws and tie it around the horns. This will cause the animal to work his jaws and gullet and so tend to open up the passageway for the gas to escape. Pour cold water over the animal's kidneys and blanket it.

Two ounces of turpentine, diluted with milk, ounce doses of aromatic spirits of ammonia diluted with water, four ounces of Jamaica ginger well diluted in hot water, and two tablespoonful doses of common baking soda in

water are all remedies to be given as drink. Give gentle walking exercise and for a few days feed mashies and give lukewarm water to drink. As an ounce of prevention is worth a pound of cure, never feed moldy or frozen feed and do not pasture on heavy clover, alfalfa and similar crops after a heavy dew or frost, or a light rain.

### FOR SHEEP.

Tap the same as for cattle, except tap three inches below spinal column, instead of four. Be sure to clip off all wool within a few inches of incision.

A remedy, not commonly known but that has been successfully used by the writer, is freshly drawn milk. When the sheep is first noticed, run to the nearest fresh cow and draw a quart of milk. (Go to the nearest cow, whether the owner's or a neighbor's, as a moment's time may mean the life of the sheep). Drench the sheep with this fresh warm milk and in all but the severest cases the animal will be up and moving in an hour. Other remedies are: Epsom salts, ½ pound; sweet spirits of nitre, 2 dessert spoonfuls; bicarbonate of soda, 1 teaspoonful; ginger, 1 teaspoonful. Dissolve in a pint of lukewarm water and give as a drench. If this does not give relief in an hour try: Raw linseed oil, 1 teacupful; spirits of turpentine, 1 dessert spoonful. Give as a drench; if there is no relief in two hours, try: Sweet

spirits of nitre, 2 dessert spoonfuls; bicarbonate of soda, 1 teaspoonful, ginger, 1 teaspoonful. Mix in a half pint of lukewarm water and drench animal every two hours till relieved.

## Stable Rules

1. The best order in feed is: Water, hay, water again, grain.
2. Never give grain to a tired horse. Let him rest and nibble hay for an hour or two first. Grain in the manger before the horse comes in looks bad.
3. Water the horses as often as possible; but let the horse that comes in hot drink a few swallows only, until he is cool.
4. Always water the horse after he has eaten his hay at night. Do not go to bed leaving him thirsty all night.
5. Do not forget to salt the horse once a week; or, better yet, keep salt always before him. He knows best how much he needs.
6. Give a bran mash Saturday night or Sunday noon; and on Wednesday night also, if work is slack. After a long day in very cold or wet weather, a hot mash, half bran and half oats, with a tablespoonful of ginger, will do the horse good. Put very little salt, if any, in the mash.
7. If the horse does not eat well, or slobbers, examine his teeth.
8. Keep a good, deep, dry bed under the horse while he is in the stable, day or night, on Sundays especially. The more he lies down, the longer his legs and feet will last.
9. In order to do well, the horse must be kept warm. Give him a blanket on cool nights in late summer or early fall, and an extra blanket on an extra cold night in winter.
10. In cold rains do not tie up the horse's tail. The long tail prevents the water from running down the inside of his legs, and keeps off a current of air from his belly.
11. Take off the harness, collar and all, when the horse comes in to feed. He will rest better without it.
12. Never put a horse up dirty or muddy for the night. At least brush his legs and belly, and straighten his hair.
13. In hot weather, and in all weathers if the horse is hot, sponge his eyes, nose, dock, the harness marks, and the inside of his hindquarters when he first comes in.
14. When the horse comes in wet with rain, first scrape him, then blanket him, and rub his head, neck, loins and legs. If the weather is cold put on an extra blanket in twenty minutes. Change the wet blanket when the horse dries. Do not wash the legs. Rub them dry, or bandage loosely with thick bandages. It is far more important to have the legs warm and dry than clean.
15. To prevent scratches, dry the horse's fetlocks and heels when he comes in, especially in winter; and rub on a little glycerine or vaseline before he goes out in snow or mud.
16. Examine the horse's feet when he comes in, and wash them if he does not wear pads. If a horse in the city is not shod in front with pads, tar and oakum, which is the best way, it is absolutely necessary to keep his feet soft by packing them, or by wrapping a wet piece of old blanket or carpet around the foot, or by applying some hoof dressing or axle oil, inside and out, at least three times a week.
17. Let the horse have a chance to roll as often as possible; it will rest and refresh him. Give him a little clean earth or a piece of sod to eat now and then; he craves it, and it is good for his stomach and blood.

### FEED THAT MAKES CHEAP BEEF.

**H**ERBERT QUICK, editor of Farm and Fireside, tells the following story in the current issue of his publication apropos of the value of alfalfa:

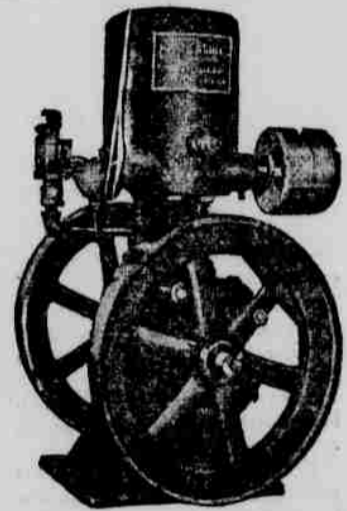
"Three years ago a stockman, who farms about 1,100 acres of the finest land in Ohio, was not much in favor of alfalfa. He is a very progressive farmer, but, like most of us, he was running along in the old corn-wheat-clover fashion. He had two men feeding for him—one an old colored man who had been with him a long time, and the other an agricultural-college man. He also had a few acres of alfalfa. There was a contest on between the colored man and the expert as to which could put more weight per head per month on their respective herds. The first month's weighing showed the expert in the lead.

The next weighing put the colored man far ahead that the expert wondered how it could be. Both herds had good, running water. Both had plenty of good timothy and clover hay. Both had all the good corn they could manage. Was the old negro a better feeder than the college man?

"It seemed so; but the expert, being scientifically educated, began looking for the reason in a scientific way. He found that the only difference was to be found in the fact that the crafty old colored man had been systematically mixing alfalfa hay with the ration! The protein in the alfalfa had been going into the muscles and bones of the cattle he fed.

"A good stockman needed no further proof as to the value of alfalfa over timothy and clover. Acting on this proof, he began working into alfalfa. He plans to build more silos, and as soon as he can will make his feeding ration one of corn-silage, ear-corn and alfalfa-hay. This ration is shown by the tests at Lincoln, Nebraska, to be the feed that will make beef cheapest."

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