

cable, taking care that a cold water in watering; cold. To prevent the possibility, it is needful that washing. Not only in this necessary. As several years, sustaining his family by the sale of game and the sale of skins. In May, he owned 30,000 head of cattle, duly bred, and ranging over the plains. He had nine children, five of whom are

attention to Mr. H. Heacock has devoted money to build a house, a fine Bates bull, and a fine Kentucky horse. He will not take paper money, but is always ready to sell steers or silver. The house occupied by this family is low, built of logs, and has three rooms. The father and mother sleep in the dining-room, the girl sleeps in the bedroom, while the boys sleep in the ad-

WINTER FEEDING.

been the habit with too many to use a single in an impoverished manner. The entire winter many cattle get little dry hay, of which much is wasted in the city, if a person more per ton than hay, it is poor pol-

delivered us in the city food that is bulky, as well as un- obliged to pay higher price, but cut up finely to be used with or without wheat bran, which is still a little labor will enable any one to

at farmers, who of all the bountiful supply, often have a winter restricted to a few from the Summer in the yards entirely on-

kept in comfortable bedded, curried and brush- ed, sheep and hogs are mix all well together and box to retain the strength. Let it an important nourishment for cows giving this quantity of meal and bran- shift as best she may. Cows may be she does out grudgingly a bushel of this mixture twice daily, or one small feed of hay or corn, all keep them in better order, and more milk, than the old mode of feed-

receive, nor that will be less expense. Swamp hay or other- use in this way is eaten greedily, shine that responds to better than the best dry hay.

in exact proportion to the Farm.

struction and the care

parts. If warmly hous-

plenty of rich food,

rich, succulent vegetables,

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rich milk in winter.

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EROUS TEXAN.

Texas, there is a cattle

there twenty years. On

up a dozen cows, and

had no land, but was the

two or three children, and

or three horses. He kept

small or at most a medium breed, that can be fed up to two or three hundred pounds at nine months old, and then be ready to put into the pork barrel.

The Yorkshires exhibited by Capt. John B. Moore at the Concord cattle show, were among the finest specimens of the pig family that we ever saw—*Mass. Ploughman*.

WINTER CARE OF DAIRY STOCK.

To illustrate the economy of comfort in the winter care of stock, I will state what a long and close observation in wintering dairy cows has developed. A half century or more ago the farmers of New York were less careful of their animals than they are now. It was no uncommon occurrence then for farmers to let their cattle run all winter with no other protection than a board fence or an open shed at the side of the yard, and when they did so, it cost according to size, 2½ to 3½ tons of hay to winter a cow, averaging for 26 weeks 27 to 30 lbs. of hay per day. When they built barns and sided them up with green lumber, so that when the boards shrunk the cracks between them were half an inch or more in width, and the stables were so arranged that the wind that whistled through these cracks swept all the heat radiating from the bodies of the stanchioned cows up into the loft and out at the cracks above, the case was not much improved. Some saving in waste was effected, and that was about all. But when these open barns were succeeded by tight ones, boarded with matched stuff well seasoned, and the stables so arranged as to utilize the heat radiating from the cows' bodies, there was a great diminution in the cost of keeping. A saving of one third of the keep formally used was effected. Eighteen to twenty pounds of hay a day kept the cows in better condition in the comfortable stables than twenty-seven to thirty could in the old ones or in the open yard. When tight barns for cows began to be built in central New York, dairymen were perfectly surprised at the saving it effected in fodder. I have, time and again, heard them declare from estimating, what I found to be true by actual weighing, that a tight and warm stable saved fully one third of the fodder formerly used in the open ones for a long time so generally in use. I would suggest, if they have not already done it, that the dairymen and stock-keepers who have suffered from drought cannot in any way cheapen the cost of wintering their stock so much as by providing for them the most comfortable quarters they possibly can.

But there is one consideration which should not be overlooked in arranging for a tight barn, and that is proper ventilation. The owner of a tight barn, unless he makes proper arrangements of this kind, will soon have what is fitly described as a "foul, reeking stable." Cold air is not necessarily bad air, nor is warm air necessarily bad air, although the chances are that air made warm by animal radiation of heat will become vitiated. The safeguard is effective and properly arranged ventilation. This ventilation is essential to comfort which Professor Arnold so wisely advocates, and every man who takes measures to profit by the above suggestions this winter should study his plans carefully to gain good air without having a chilling current strike his stanchioned animals.

COWS—THOSE THAT PAY.

A good cow costs but a trifle, if any more to feed and keep than a poor one. The difference in the value of their product should be credited to her as so much interest on her estimated valuation. To illustrate:—If a cow simply yielded enough to pay her way and nothing more, she is worth only what she would bring of the butcher. If another yields a net profit of \$20 a year more than her keeping, she is as good as \$200 at interest. Still, farmers are sometimes so negligent of their own interest as to sell their best cows for a mere trifle more than one that is nearly worthless. This is not as it should be; and so long as the practice is continued the stock of the country will deteriorate. A good sentiment is expressed in the couplet "Beef a poor cow ever, sell a good one never."

One cow of a herd may be dear at \$200. Different cows in same herd, with the same feed and treatment every day, often vary 100 per cent. in their profits. Weed out the poor, perpetuate the good. The stalk of the wild apple may be made to bear the russet, the greening or the golden pippin.

Imported cattle, or cattle taken into an entirely different climate from that in which they were bred, seldom show the same degree of excellence as they possess at home, unless given special care. Old cattle frequently die before getting acclimated. This is strikingly illustrated by shipping them south, especially in the spring of the year, if the animal is fat. The arterial system first takes cognizance of the change; the

pulsation increases to twice its normal rate, fever engendered and death ensues.

No animal should be required to drink water which the owner himself would refuse, and especially so if that animal is the cow from which you hope to make good butter. It is sufficient on this point to say that the pure water is an indispensable article to the success of the dairymen, for good butter or cheese can not be made where good water cannot be obtained.

ROOTS FOR STOCK FEEDING.

In Brittany the parsnip is becoming the favorite root for stock feed. And its culture is extending. In the Channel Islands this root forms a large portion of the fodder of the Jersey Guernsey and Alderney cows, and much of their value as rich milkers is undoubtedly due to the use of this root for a long series of years. It is well known to physiologists, says the *N. Y. Tribune*, how great an effect upon the condition of a breed of animals is caused by a long period of careful feeding, and this is a conspicuous instance of it. This root in many parts of France is substituted as oats for horses, 16 pounds being given a day with the best effect. For pigs it is also largely used, 9 pounds of cooked roots being fed four times a day. One great advantage of this root is its hardness; the supply for spring may be left in the ground all winter, and in the best condition to harvest at any time when needed.

HOW TO FEED PIGS.

I used to keep them in my younger days, to furnish meat for my family and to sell to get a little spare cash. The kind with small bones, small ears and short nose, that with good keeping, at a year old would make about three hundred and twenty-five pounds of pork, was my favorite (the first I ever fattened weighed 260 pounds at eight months old.) Milk and potatoes are the best food for pigs after they are weaned, to make them thrive; they also relish a few grains of corn as well as a squirrel does a few nuts, as they grow along. In the season for it, they should be supplied daily with fresh green weeds or clover; a few green corn stalks are also good to feed them in their season and the slops and refuse of the kitchen with a little meal are also good. With this food they should be fed liberally, but not to surfeiting, and keep growing right along in a thrifty condition till about two months before killing time, during which they should be fed liberally with more concentrated and fattening food. Boiled pumpkins, thickened while hot with corn meal, are excellent for them, so also is sliced sweet apples, thickened with meal, and so is scalded meal alone; and some people think that, for some days previous to slaughtering time, they should be fed with dry corn and pure cold water, as these make the meat harder and sweeter.—*R. Smith, in Germantown Telegraph*.

CARBON FOR PIGS.

Turf, Field and Farm says: No observant farmer has failed to notice the avidity with which hogs, whether in confinement or at large, will devour quantities of rotten wood. This decayed wood is but a form of carbon; and carbon being an antiseptic, the instinct of the animals leads them to eat it, as the instinct of dogs urge them at times to eat grass because of its sanitary effect. On one occasion the writer had a pig which weighed about forty pounds, put into a pen and carefully tended in every way. The allowance of food was, with the chance offal from a small kitchen, sixteen ears of large southern corn per diem, given twice a day. Having a kiln of charcoal in the woods close by, I determined to try how much of this charcoal could be converted, by aid of the digestive organs of the pig, into fat, which is but another form of carbon. By degrees the supply of corn was diminished and carbon substituted for it, until finally the corn was reduced to eight ears. At the end of nine months a pig was butchered and weighed, net, two hundred and five pounds, and the lard and meat were of exceptional fine quality.

EXPERIMENTS IN FEEDING CATTLE.

The following experiments were made, suggestion of Mr. Flagg, Lawrence, commencing November 17, 1873, continuing seventeen weeks, and ending March 17, 1874.

The steers, fifteen in number, were short-horn grades of medium quality, bought from farmers of the neighborhood the previous summer, and were, with the exception of No. 13 and two calves, past two years old.

Lot No. 1.—Steers Nos. 1, 2, 3, 4, 5, and 6, were fed in the lot with thirty others, without shelter of any kind, 24 pounds of husked corn in the ear in boxes, and timothy and clover hay in racks *ad libitum*, they also had ready access to water at all times. No. 1 weighed in November 17th, 1,120 pounds, gained 169, and weighed out, March 14, 1,290. No. 2 weighed in 1,100, gained 230, weighed out 1,330. No. 3 weighed in 1,200, gained 160, and weighed out 1,360. No. 4 weighed in 1,500, gained 210, and weighed out 1,760.

No. 5 weighed in 1,290, gained 260, and weighed out 1,550. No. 6 weighed in 1,110, gained 240, and weighed out 1,360. Total gain of six steers fed 17 weeks, 1,260, an average gain of 210 pounds.

Lot No. 2 consisted of four steers, each fed in a roomy box stall, in a warm but well-ventilated barn. They were turned out to water daily at ten o'clock; their stalls were then cleaned and littered, and they were returned at eleven o'clock. No. 7 was fed six pounds of dry corn-meal morning and evening, and in addition five pounds of chopped clover hay of superior quality, and at noon fifteen pounds of sugar beets. This steer having gained but thirty pounds in eleven weeks, his feed was changed to twenty-four pounds of corn in the ear, and hay the same as before. In the remaining six weeks he gained one hundred pounds. The same gain as attributed to the fact that the steer refused to eat the meal with heartiness and neglected, after some weeks, the beets altogether. No. 8 was fed eight pounds of corn in the ear, morning, noon and evening, and clover hay same as above. He weighed in 1,130, gained 210, and weighed out 1,340. No. 9 was fed eight pounds of corn in the ear, morning and evening, fifteen pounds of sugar beets noon, and hay as Nos. 7 and 8. He weighed in 1,090, gained 180, and weighed out 1,270. No. 10 had six pounds of corn meal morning, noon and evening, and hay as above. He weighed in 1,100, and gained 190, and weighed out 1,290. The average gain for this lot was 177½ pounds.

Lot No. 3 consisted of two steers, fed under an open but warm shed, eight pounds of corn in the ear, morning, noon and evening, and clover hay as lot No. 2. Steer No. 11 weighed in 1,050, gained 210, and weighed out 1,260. Steer No. 12 weighed in 1,180, gained 230, and weighed out 1,410; an average gain of 220 pounds.

One of the conclusions to be drawn from the above experiments in feeding—and they were previously enforced and illustrated by like results obtained from similar trials made the previous year—is that the common wild steers do not become used to confinement in so short a time as one hundred and nineteen says, and therefore the gain that might be expected from more comfortable quarters is not realized; a fact to be noticed by Eastern buyers, who purchase Western steers for fall-feeding. This may be seen by comparing those fed in the sheds without restraint, with those fed in the boxes, as well as those fed out of doors—the best average gain having been made on corn fed in the ear in an open shed. In regard to beets, the fact seems to be, so far as observed by Mr. Lawrence, that they are very valuable for milch cows and calves, but they do not appear to fill the place of corn in fattening steers. Thus, steer No. 9, fed on corn and beets, gained 180 pounds, while steer No. 8 fed on corn alone, gained 210 pounds.

The meal fed was from sound old corn of the crop of 1871, and the corn was of the crop of 1873, and was soft and chaffy. Comparing the gains made with those made the previous winter, the conclusion is, that when a steer is full fed on soft corn, like that of the crop of 1873, he will eat more pounds and make more flesh, than on hard corn of such crops as of 1872. When ground into meal, the hard corn, however, is altogether preferable—the difference being simply a matter of mastication and digestion. The twelve steers made an average gain of 1-69 pounds of each day for 119 days.

Lot No. 4 was composed of two grade calves, weaned at six months (February 1st, 1874). It required 4-58 pounds of meal to make pound of growth, while with the twelve steers reducing the corn eaten to meal, 10-56 pounds were necessary to make the same weight. The inference is, that the time to feed cattle is when they are young, for with ordinary keeping the calves would have shrunk in weight instead of gaining immediately after weaning.

As an exceptional instance of what good pasture and corn will do for a thin steer, No. 13 was bought April 23, 1873, and weighed 620 pounds. He was immediately turned on pasture, and, September 13, weighed 1,120; was put on corn November 17th, with the bunch of thirteen others referred to, kept their till May 10, turned off at 1,559 pounds, having gained 969 pounds in 13½ months.—*B. F. JOHNSTON*.

A NICE PUDDING SAUCE.

Mix one cup sugar, four teaspoonsful of corn starch and just cold water enough to dissolve thoroughly, then pour on a cup of boiling water and let it boil twenty minutes or a half an hour. Then add two teaspoonsful of good cream. Flavor with currant, strawberry or raspberry juice. In making sauce if the flour is just as good as corn starch. Use a little more water than the recipe, so as to allow for boiling away.

Many Canadian laborers have left the farms and workshops of Vermont lately on account of reduction in wages. They find more encouragement at home.

T I G H T

B I N D I N G