

two feet more of yellow, and finally two feet of the striped variety; now, plant the second row, beginning with purple, then yellow, striped and white; the third commencing with yellow, and the fourth with striped crocus.—Such a bed is very handsome, indeed. Of course, other devices may be followed, such as stars, crowns, and the like, not only with crocus, but also with tulips and hyacinths.

THE BASKET WORM ON EVERGREENS.

If an elm, a maple, or most deciduous trees lose their spring leaves they will push out more before the fall, and though the tree so losing its early foliage is somewhat injured by it, the injury is not so serious as to threaten the life of the tree. In China the leaves of the tea plant are taken off three times during the growing season, and still the plant lives for many years.

Evergreen trees are not, however, so tractable. If they once lose their leaves they are done for. We have known caterpillars to eat the foliage from the Scotch pine, and the death of the tree resulted.

We have on several occasions called attention to the injury done to the arbor-vitae and some other evergreens by the ravages of the basket worm. This may be remedied by a few minutes employed in picking in the summer time. The small caterpillar commences to weave its basket at that time, increasing the size with its own growth, and feeding on the young green leaves at the same time. When about the size of peas they are readily discerned, and quite large trees may be gone over and the little pests cleared off by burning in a few moments. Evergreens attacked by them and given up to their ravages for a single season, seldom recover, and it is therefore far more important to pick them off from these than from deciduous trees.—*German Town Telegraph.*

STOCK & DAIRY

GOOD FOOD FOR FATTENING HOGS.

At the present price of corn, fine middlings and pork, there is more profit in feeding pigs in this section than we have enjoyed for some years. Furthermore, lard is in good demand, and packers discriminate in favor of fine-boned, well-fed hogs. In Chicago, "grassers" are quoted at 5 cents per pound, and dull of sale, while an extra, choice, well-bred and well fattened pig, would bring 9 cents, live weight. This is as it should be. The latter, even at this greater difference in the price, is far cheaper to the customer than the former. And it makes quite a difference to a farmer whether he has fifty "grassers" weighing 175 lbs. each, to sell at 5c. per pound, or fifty choice, well bred and well fed pigs, at the same age, that will average 300 lbs. at 9c. The former lot will bring \$437.50, and the latter \$1,200.00.

We ought to produce the best pork, lard, and hams in the world, and secure the highest prices in the English market. Instead of this, Irish hams are quoted in London at 22 to 24 cents per lb., and American hams at 13 to 15 cents. And there is a corresponding difference in the price of pork. I asked Mr. DeVoe, our largest pork packer, what was the reason American pork sold so low in Europe.

"Vot is the reason," he exclaimed, "I vill tell you vhy. Ve think they are vools over there. Ve think anything is good enough for them. Pork that ve would not eat here, ve ship to Europe. I sent several barrels of pork as a present to my friends in Germany, and they said it vas most excellent, but that most of the American pork they got vas vile stuff. The Captain of a steamer running from Hamburg to New York vonce gave his crew American pork on their return voyage. Great vas the grumbling. And venthey got to Hamburg they refused to continue on the ship until the Captain had given them a written agreement to never again give them American pork!"

A large grocer and provision dealer in Staffordshire once told me that he bought a quantity of Ohio bacon and retailed it out at a good profit, and with much satisfaction to his customers. The next lot he bought was so poor that he could not dispose of it. "Since then," he said, "I have been afraid to deal in the article. If it was always as good as that first lot I could sell large quantities."

For many years we had the same state of things in regard to American cheese. Our cheese factories, however, are now making so good an article, and there is so much greater uniformity in the quality, that Am-

erican cheese, I believe, commands as high a price as the best Cheshire. It will in time be so with American pork, bacon, hams and lard.

As a rule, the price of agricultural products in Europe determines the price in America. Hitherto the cost of labor here has been double and treble what it was in Europe. Our products had to compete with the products of this cheap labor, and pay freights over long distances into the bargain. We have been able to compete because we lived economically and worked hard, and because our land was cheap and comparatively rich in what I have called "natural manure." We have grown cheap wheat and corn on our new land, because we have to pay no rent, and because every bushel of wheat we have grown has found an amount of manure in the soil which would have cost the English farmer at least 50 cents. We are now getting less and less of this natural manure. We find an increasing necessity for furnishing manure to our land. We should now find it a hard matter to compete with the English and European farmers, if they could get labor at the old rates. But fortunately for us, and fortunately, as I think, for them and all concerned, labor is now nearly or quite as high there as here.—This places American farmers on a far better footing than ever before. Owning instead of renting our land, with a favorable climate, a rapidly increasing population, improved implements, and comparatively intelligent and skilled labor, we have good reason to take courage and push ahead with our improvements.—*Walks and Talks on the Farm, in American Agriculturist.*

The boxes or stalls in which the animals are kept should be of ample size, and as I said above, well ventilated, and above all, cleanliness should be most rigidly observed, not only in the stalls where the animals stand, but in the animals themselves. The change in their food should be moderate at first, for nothing is more conducive of systematic derangement as a sudden change of food and temperature. From the very commencement the hours of feeding should be most carefully attended to, taking care that the animals are kept comfortably clean and thoroughly comfortable. Some active farmers curvy them twice a day (morning and evening), and this extra labor pays remarkably, for be it understood that in the currying process the blood is aided in its circulation through the body of the animal, and the skin assumes a healthy tone. The house, as already noticed, should always be of a moderate warm temperature, but on no account should its temperature be allowed to rise too high, so as to cause perspiration, which is very injurious. Very great attention should in all cases be paid to the animal droppings, which should never, if possible, be allowed to get too watery nor too hard.

When the cattle are first put up to fatten they may be fed on rape, cabbages and the softer kinds of turnips, such as the Aberdeen, Norfolk and White Globe, always keeping the harder turnip, such as the Swedes, till the others are consumed, and when changing from one green crop to another it is always better to mix the different species together and give the mixture to the beasts for some days, so that the change may be brought about without causing a purgation on the part of the animal system.

I may here remark that when beasts are first put up to fatten, the soft turnips and cabbages invariably scour them; but if not per-

mitted to go too far, this mild purgation brings round a healthier action of the entire animal system, and by using some dry fodder, such as hay or straw, the excrements are soon changed to their proper consistency. When cattle are fed four times a day, the division of the time may be as follows:—In the morning as early as between the hours of five and six o'clock each beast should get a little hay in its trough, and this should be given while the stock managers or attendants are cleaning out the stalls and byre, and preparing the morning feed of roots. The kind and quantity of food each animal gets should be in accordance with the size of the beast and the views of the farmer. Let us say that each beast will average seven hundred weight when finished, and that they are fed on roots, such as mangolds, turnips and potatoes, and also on hay or straw; they may get each about one hundred and fifty weight of roots and twenty-eight pounds of hay daily. This will give forty-two pounds of roots for each of the four meals. Some farmers give the roots whole on the grounds that the animal is less liable to be choked while eating, and also that the exercise the animal gets while eating whole food warms the system and causes a thorough circulation of the blood through the entire body. With all due deference to the upholders of this system I feel justified in saying that the better and more economical way would be to cut the roots in slices not more than half an inch thick, and in such slices of this thickness let the farmer entertain no fear of his animals being liable to be choked, while if cut of a greater thickness there is.

After the animals have consumed the roots, and their hunger appeased, the trough of each respective animal should be instantly cleansed by the hand, and the refuse, if any,

sent back to the cooking shed. A wisp of clean, sweet hay should next be given to each beast, their beds made down, and the attendants may then retire, leaving the animals to repose in quietness until the next hour for feeding arrives, which may be at eleven o'clock; again at three, next at half-past five or six, and finally at nine o'clock at night, when they may be left to themselves for the remaining part of the night.

Cattle fatten pretty well on roots and hay alone, and, according to the condition they present when first put up, they may be finished off for sale to the butcher in five or six months; but by using grain and other feeding stuffs, such as crushed corn and linseed cake in various proportions for a portion of the roots, more cattle can be fattened with the same amount of roots in considerably less time and more manure made, and of a richer quality.

The cereals generally used in feeding store cattle are wheat, Indian corn, oats and barley. Wheat is seldom used as a feeding material, because of its price being too high, a circumstance which precludes any chance of using it with profit. Indian corn is thoroughly valuable in producing fat; beans and peas act contrary, because of giving strength and development to the muscle and adding to the flesh of the animal. Bean meal, when mixed with other feeding stuffs, is productive of very great results in stall fed cattle.

The straw of cereals, and indeed, of leguminous crops such as peas and beans, is of great advantage to the farmer who has not a sufficient quantity of roots for his beasts; straw, when chaffed and used in conjunction with other food, such as pulped mangolds, produces good results, provided it be used with good judgment.

When pulped mangolds and chaffed straw are given to animals, mixed with three or four pounds of bean meal or crushed oil cake per day, the beasts may be fattened very economically and with good results.

In the British kingdom, turnips and mangolds form the staple food for stall fed cattle.

Turnips depend very much for their value on the soil in which they are raised, and also on the way in which they are cultivated.—Some farmers are of opinion that the larger the bulb the higher is its feeding value; others, however, are of opinion that the opposite of this is the case. Without venturing an opinion on the matter, I should like to see medium sized bulbs produced in preference to very large ones or small ones. Chemists tell us that turnips (especially soft turnips) contain a large percentage of water, and that the larger the bulb the more water it contains. Now, if a farmer wants to increase the amount of water in his feeding stuffs, I am sure that the most economical and paying way for him would be to give the water in a pail or some such vessel, to the animal, than to try and give it in the shape of large, spongy, watery bulbs. Of all the varieties of turnips grown, Swedes are the most nutritious; they keep longer in good condition than any other kind, of which the yellow is ranked next in value and durability to the Swede, and the white least of all.

IMPROVING DAIRY STOCK.

Every succeeding year finds farmers increasing their stock, laying out their land so as to best suit its successful management, each year developing great interest in the subject of the best breeds of cattle and the most profitable modes of managing them. With dairy stock it would almost appear as if there was no such thing as standing still. Unless improvement is aimed at constantly by weeding out those members of the herd which are getting past a useful age, or, after sufficient trial, are found to be inferior milkers, and by occasionally introducing fresh and, if possible superior blood, through the agency of a sire there is great danger of retrogression. A herd on the retrograde is neither profitable or creditable to the owner; yet, care in breeding and selection, the farmer will find his stock decreasing in stamina, and consequently less productive. No bad milkers should have a permanent place in a herd kept principally for the produce of the dairy. To keep such a cow is simply to lose money wilfully, her keep costing quite as much as the best milker in the herd, and the trouble she occasions just as much as that given by the animal which gives double the amount of produce. It may be difficult for some years to have a very cow in the yard first-rate, yet the herd may be so improved by judicious selection as to have good cows.

In a stock of a dozen cows we will suppose there are a few indifferent milkers. By testing the milk of the cows carefully, and a certain amount of butter or cheese they produce to be under the average of what might fairly be expected from the care bestowed on each, it is certainly economy for the owner to keep such farrow, and at the end of the season dry them off, and with some feeding get them in shape for the butcher, and get rid of them without any further loss. To fill their place, let half a dozen heifers come into the dairy,



FOX HUNTING.

FATTENING AND MANAGEMENT OF CATTLE.

By T. O'SULLIVAN, Assistant Agriculturist of the Kilkenny Model Farm, Ireland, and a Graduate of the Albert Agricultural Institution, Glasnevin, Dublin.

Article Number II.

Cattle fatten rapidly when fed on the soiling system, giving them a full supply of rye, grass, rape or clover, and with eighteen or twenty pounds of cut hay, and three or four pounds of bran or oat meal, or five or six lbs. of oil cake broken up and mixed with the cut feed given to the animals.

Some farmers who manage large farms of land, and who grow root crops in large quantities, fatten a number of cattle in stalls during the months of winter and spring. This system is called stall feeding. The beasts to be fattened are taken from the pastoral grass and placed in a house at the approach of the first winter's breeze. The house or houses in which the fattening process is to be carried out should be moderately warm, and never too close; there should be thorough ventilation, but no drafts of cold air. The beasts should be kept as quiet as possible in their respective stalls, "because every movement of the animal, as well as every excitement or irritation, causes a waste of animal tissue which is equivalent to a waste of food." An over amount of light sometimes causes the fattening animals to become restless and checks the development of the fattening process in accordance with the amount of irritation produced in the system. It is advisable, therefore, to have the stalls darker than lightsome.

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