

well. We hope to publish the experience of others on this subject. 1. Yes. 2. Yes. 3. They have not long been introduced into this country, but in some of the American States they are quite commonly used and much liked. Doubtless they will be more largely introduced as they become known.]

Pumpkins for Cows and Hogs — Turnips Flavoring Milk—Capacity of a Cistern.

SUBSCRIBER, Lanark Co., Ont.:—"I have much pleasure in thanking you for the prompt reply to my last questions, and I now submit several more, hoping they will receive the same attention: (1) Would you advise growing pumpkins for feeding dairy cows in fall? (2) Would you approve of feeding them to pigs? (3) Whether does turnips fed to dairy cows taint milk by passing through cow's system or from their breath while milking, as I have heard both points discussed? (4) Whether you would advise having a well bored for watering stock, about forty feet deep, or putting in a cistern? How many pails of water would a cistern 24x15x7 ft. hold, and would it be a reliable source throughout the winter, or would a larger one be necessary for watering thirty head of cattle?"

(1) We consider pumpkins good food for milking cows, especially when the pastures are dry and parched. It is well, however, to remove the bulk of the seeds before feeding the pumpkins, as they have a too stimulating action upon the kidneys. (2) They make capital food for hogs when boiled and mixed with crushed grain or shorts. They are much relished and serve a good purpose during the early stages of fattening. While it is the practice to grow pumpkins in the cornfield, where this is objected to because of their vines becoming troublesome in cultivating it will pay well to set apart a portion of ground exclusively for pumpkins, when a tremendous yield may be expected. (3) Milk does not absorb odors while warm. This was conclusively proven by Prof. Dean, principal of Guelph Dairy School, last spring by placing pails of warm new milk in the root cellar, when no turnip flavor was taken into it until the temperature of the milk was reduced to that of the cellar. When milk becomes cold, however, it absorbs flavors very quickly, as has often been proven. Prof. Dean also decided from a series of experiments that cows fed on turnips gave turnip-flavored milk regardless of the precaution taken to have it removed from the stable at once. We must conclude, then, that the turnip flavor comes from the milk through the gland and not from her breath. The turnip flavor can, however, be eliminated by pasteurizing the milk as described in the FARMER'S ADVOCATE, Nov. 1st issue, page 477. (4) Owing to an element of uncertainty when depending upon a cistern for water supply for stock, we would say that a 40-foot well, if a strong spring could be depended on at that depth, would be preferable. A cistern, however, has the advantage of not having to be pumped when a basement barn is used. Where a well is properly protected the water should be good the year round, whereas cistern water may become foul when not regularly used. A cistern having the above dimensions would hold when full 157,500 pounds of water. This would last thirty cattle about sixty-five and a half days, allowing each animal eighty pounds daily. It is estimated that a herd of milking cows will drink a daily average of ninety pounds of water along with a winter ration made up partly of ensilage. It would depend upon the condition of the weather and the amount of roof surface to catch the rain whether or not a larger cistern would be necessary. We would ask our numerous kind friends who are frequently helping us out with these practical problems to give our readers the benefit of their experience along the lines suggested by "Subscriber."

Shipping Young Animals.

STONEDIKE, Ontario Co., Ont.:—"I have the chance of two good calves and two pigs. The expressage on the former will be \$1.75 per 100 pounds. I know from experience that a sleigh shipped as a sleigh is charged for at not less than 2,000 pounds, even if it only weighs 500 pounds, and that the words "hailed down" make all the difference if put on shipping bill. Now, as I am only a beginner, I would like to know if there are any such quirks in shipping stock? Do the railway companies charge for net weight or otherwise? And I would also like to know the best way to prepare calves and pigs for shipment, in one crate or a crate for each animal in the case of calves, and how for pigs? The calves would probably be three weeks old, and the pigs maybe six weeks. An answer in the columns of the ADVOCATE will much oblige."

[The rates either by freight or express for crated animals are charged on actual weight, including crate. To keep down expense of shipping, crates should be made as light as possible, consistent with sufficient strength to be safe. Half-inch basswood or pine, four to six inches, are sufficient for side-bars, but if length of crate is more than three feet six inches, a center upright standard should be added to give strength. Sills need not be more than one inch by four inches; the bottom boards laid crossways, on the sills may be half-inch for animals not over 100 pounds, and one-inch for heavier. Standards need not be more than one inch by three inches, and side bars should be inside standards. We prefer to board up closely both ends, for safety and cleanliness, especially by express. Calf crate need not be more than two feet six inches high and eighteen or twenty inches wide

if calf is tied to both sides of front of crate. For pigs six weeks old a handy box is made from a ten or twelve inch board; say length of bottom two feet four inches, height eighteen inches, bottom and ends cut from same board, then one-half inch by four-inch side bars, except lower side bar, which had better be six inches wide. For pigssix months the width should be eighteen to twenty inches, and length four feet to four feet six inches.]

Winter Buttermaking.

F. H. RANSOM, Norfolk Co., Ont.:—"I would like to ask a few questions in regard to winter buttermaking from cows that have been milked since first of April. 1. What temperature should milk room be where milk is set in shallow pans? 2. How long should it be set before skimming? 3. How long should cream be kept before churning? 4. At what temperature should cream be kept? 5. At what temperature should cream be when put in churn? I hope to see answers in your valuable paper, which I would not like to be without."

[In very many instances long churnings, when not caused by too low temperature or want of ripening, are due to cows having milked too long since last calving. With this in view, the introduction of one or two fresh cows into the herd should serve to avoid trouble in this line. 1. From 60 to 65 degrees, so that the milk shall be sour but not thickened, except at the bottom of the pans, when it is to be skimmed. 2. Thirty-six hours at the above temperature gives fairly thorough creaming. 3, 4, 5 The cream from shallow pan setting when the milk was sour at the time of skimming may be churned as soon as convenient, as it has ripened on the milk and is in good condition to churn. There is no objection, however, to hold it two or three days at a temperature of 40 to 45 degrees, and cream may be added from each succeeding skimming and thoroughly mixed with the cream already in the can. The cream can should be large enough to hold a churning, that the cream may be of uniform ripeness, or fat will be lost in the buttermilk. No new cream should be added for twelve hours before churning. The temperature of the cream may be raised to 60 or 64 degrees for churning by standing the can in a deep vessel of warm water, keeping the cream continually stirred.]

A Bank Barn for Sheep.

W. H., Bruce Co., Ont.:—"How would a small bank barn (50x34) do for sheep? What height should the stone wall be? I would like to fatten sheep and lambs. Could I do it without hay? If my peas were well cured and cut, instead of threshing, would it make good feed? Are roots necessary, or would bran do mixed with peas instead? Would it be a mistake to have barn facing north-east? I could put a veranda on of six or eight feet wide to make more shelter. How would a cistern do on level of basement floor, behind wall, and have a tap for water to trough? Please answer in the ADVOCATE."

[A barn of this size with basement would answer the purpose well and would make two good roomy pens if divided in the center and racks were placed around the walls. We would enclose front of basement and have double doors ten feet wide, to close in stormy weather. Basement should be eight or ten feet high; stone wall need not be more than two feet above ground at ends and front, and will be drier and healthier for sheep if of frame, boarded inside and outside. Back wall, if in a bank, would need to be full height of basement. It would be a mistake to have barn face north-east. It should face south if possible, and have roomy, dry yards for sheep to get sunshine and exercise. A concrete cistern, on level of basement floor, behind wall, would be all right with overflow pipe to a drain with good opening, and a tap could be arranged to draw water into a trough. Peas harvested before too ripe and well cured, and fed unthreshed in racks, or cut instead of threshing, make excellent feed for fattening sheep or lambs, without hay, but must be given in moderation. Roots are most desirable for young sheep in winter, especially for such as are to be kept for breeding, but are not really essential in fattening lambs. We would prefer feeding oats and bran in addition to the unthreshed peas, or instead of the peas, if cut, as being safer, peas being liable to scour lambs if fed alone.]

Galloway Cattle.

A YOUNG FARMER, Huron Co., Ont.:—"I am thinking of starting a herd of Galloways, and would like your opinion of them through your paper as compared with Durhams, which we have always kept. How do they compare for weight, for milk, and general profit? Also the names of some of the best breeders from whom good stock could be obtained? Please answer in your next issue, if possible."

[Galloways are smoothly turned, thick fleshed, short legged, thrifty cattle, hardy, good rustlers, and fair milkers. As compared with the modern Shorthorn, there is not much difference in their weight on an average at same age and under similar conditions. There are no public claims made for more than average dairy qualities in the Galloway; in fact, we believe little attention has been paid to their development along this line, while Shorthorns frequently, in public open tests, compare favorably with the best of the special purpose dairy breeds. A Galloway cow will, however, raise her calf well if given fair treatment. As to comparative profit, much depends upon the demand

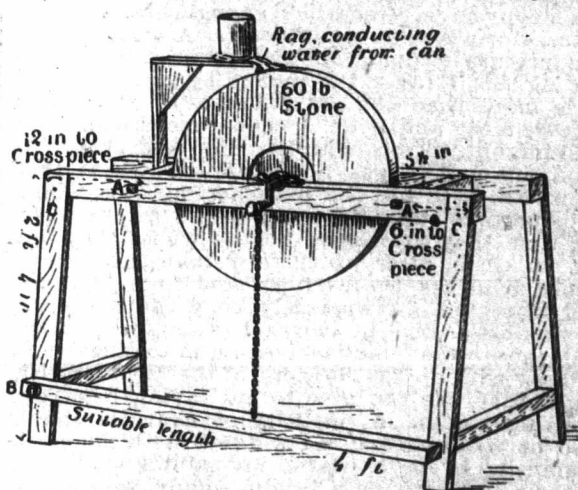
for breeding purposes, which, we judge, for Galloways is limited, as there are very few herds in the Dominion, while the demand for Shorthorn bulls is very active and sales are numerous, which, no doubt, is partly due to the fact that so many of the breeders advertise in the FARMER'S ADVOCATE, from which breeders of Galloways may do well to take a hint. Average Galloways will, we believe, take on flesh as cheaply as average Shorthorns, and it is of perhaps superior quality.]

THE HELPING HAND.

One-Man Self-Watering Grindstone.

W. M. SHIELDS, Ontario Co., Ont.:—"I send you a sketch and the following description of my own grindstone. I have used it all summer, and so am in a position to say that it works satisfactorily, and is a great saver of time, for one man may do his own turning and grind an axe or a bread-knife with equal satisfaction."

"The stone I have is a 60-pound one, and cost 60 cents. The handle, bearings, etc., cost 60 cents. I had on hand two 12-inch bolts and one 6-inch bolt; I do not know cost of these. The 12-inch bolts are used at AA, the 6-inch bolt at B; 6-inch or longer spikes do for CC. At each side of pedal at B, against the leg and against the head of the bolt, there is a washer, to allow easy play. Two by four



inch scantling may be used throughout, except for water-can bracket. We used round stuff from the bush, having no team and no time to go for lumber when we came here.

"The end for working at should not be over six inches from the stone, or to crosspiece. The pedal is at the left-hand side. The chain from pedal is attached to knob end of axle crank. The legs are braced together by crosspieces, as in letter A, and by a piece lengthwise, as in a well-made table. The bracket for water-can may be nailed to crosspiece, and on top of bracket, where can rests, a piece of wooden hoop should be tacked round to keep can from shifting by vibration while stone is in use. Punch a hole in the can and pull in piece of rag, and allow one end of rag to rest on stone. The rag will carry the water to stone in sufficient quantity and continuously."

POULTRY.

Winter Eggs.

To the Editor FARMER'S ADVOCATE:

SIR,—In order to realize a profit from poultry in a district where eggs sell from 7½ to 20 cents per dozen through the year, one can see at a glance that it is highly essential to have our fowls laying when their product is commanding the higher prices, and to attain these results there are four requirements, namely: Good, commodious, and comfortable quarters; proper, wholesome food; careful attendance; the services of early-hatched pullets, etc. As to quarters, it is not necessary to provide artificial heat even for our large-comb birds. A house can be constructed so as to protect the comb of a Leghorn from frost in our most severe weather, and that is all that is required. As to ventilation, I allow plenty of fresh air to come into my house from the double windows and door, even when mercury is lingering near zero, thus keeping the air pure and dry. I avoid crowding as much as possible, from the fact that it has an ill effect on the production of winter eggs. Eight square feet per hen, including roosting and scratching room, is the amount of space my poultry have when in their winter quarters.

Special attention should be given the hens through the moulting season. Those of them that are in that nude condition should be closed in for a while by themselves and looked after with care, so that they may speedily manufacture their winter garb.

In arranging poultry for the winter, the pullets should be separated from the older hens, and if they are about to commence work in laying those breakfast eggs, they may be given all the feed they may eat; yes, and without scratching for it, too. However, a little work in hunting for kernels of wheat among the litter of chaff and straw will do them no harm and will sometimes help to keep them out of mischief. We can not expect good results from our poultry if we do not provide proper grinding material for them. In the fall of the