

noticed that they will eat snow sometimes instead. When I mentioned size of pen I forgot to state that there were nineteen in flock, grade Shropshire, served by thoroughbred ram 15th of October. Do you think it would be heredity, or would a change of ram that is of another breed be beneficial?"

[Your lambs are affected with goitre or enlargement of the thyroid glands, the supposed cause of which is the excessive quantity of lime salts in the drinking water; or, in other words, your land may be largely impregnated with limestone, as it has always been more prevalent in limestone sections. The treatment in adult cases is the application of iodine and its salts, both externally and internally, but this is not applicable in your case. I see no way out of the trouble for this season, and look upon the present outbreak as due in some peculiarity in last season which may not occur again to such an extent. We know of a limestone section where the calves are coming in the same condition as your lambs. We can recommend no specific preventive treatment. If any of the readers of the FARMER'S ADVOCATE can we will be pleased to hear from them. But in a mature animal the following is nearly always followed by good results: For a sheep give potassium iodide in ten grain doses once a day for two or three weeks, and apply the following to the enlargement once daily, rubbing in well: potassium iodide, 4 drams; iodine crystals, 2 drams; alcohol, 4 ounces; water, 4 ounces; and add strong ammonia, 3 drams; and expose to bright light until the solution becomes clear.]

Bog Spavin.

P. C., Kent Co., Ont.:—"I have a two-year-old colt that sprung a bog spavin about a month ago; can it be cured; if so, what is the cure?"

[Young horses frequently happen with this accident; unless it is large and feverish, and the animal is lame, we would advise leaving it alone. If lameness is present, and the swelling hot and painful, pack it with ice for two or three hours at a time twice a day until all fever is gone, and then apply the following blister, rubbing in well, and oil on third day: Hyd. biniodide and iodine crystals, of each one dram; lard, one ounce; well mixed.]

Miscellaneous.

Trout Raising.

A. B. S., York Co., Ont.:—"Would like to ask a few questions through your valuable ADVOCATE. 1. How old are trout before they spawn? 2. How long does it take the eggs to hatch? 3. What is the weight of a trout at three years? 4. What is best food for trout? 5. Can fresh water shrimp be transplanted in trout ponds for food successfully? Where can they be obtained, and how much per thousand?"

[1. Fully 50 per cent. of one year and nine months old female trout spawn. The eggs laid by them are small and delicate, and only a very few of them hatch. A breeder who understands the business of fish culture would not waste time by spawning these young females, but only those that were two years and nine months old and older—90 per cent. of which can be impregnated under favorable circumstances.

2. This depends wholly on the temperature of the water. Eggs that were deposited at the head of a spring where the water was say 48 degrees to 50 degrees would hatch in 60 or 70 days, while eggs laid several miles further down stream (under the influence of the intense cold air in winter) the temperature of the water would be close to freezing point, say 33° to 34°. Here the eggs would take from 100 to 120 days to hatch. It is well not to hatch trout ova in water that stands above 38° in winter, as the fry when breaking the shell will be prematurely born and therefore not so strong and vigorous as they otherwise would be.

3. Everything depends on the feeding-grounds. Trout will at three years old vary from $\frac{1}{2}$ to 1½ lbs. in weight. I have seen 10,000 three-year-old fish liberated from a pond where they had been well cared for and all fed alike, some of which were 7 and 8, others 9 and 10, and the larger ones 12 inches in length. It is, however, considered very gratifying to the breeder whose three-year-old crop averages half pound.

4. When more trout are confined in a pond or stream than nature will supply with food, such as water insects, snails, flies, etc., additional food must be provided. By no means use livers. This animal food ruins the general appearance and flavor of the fish, and makes the offspring weak and delicate. Mr. Chas. Wilmot, who was formerly Inspector of Fisheries and Fish Culture for Canada under the Dominion Government, and now breeding the "Speckled Beauties" on a very extensive scale at Credit Forks, Ontario, appears to have solved the problem of food for hungry trout. He annually collects from the Great Lakes upwards of 20 tons of salmon trout spawn which he freezes and feeds to his young trout while in the nursery ponds. After they are two years old and liberated into the larger sheets of water where angling is allowed the trout have to depend upon fresh water shrimp and other insect life for their sustenance.

5. Yes. The gentleman referred to above has imported the shrimp from Wisconsin, and can not only stock your pond with them, but also send you fish eggs for food. You had better write him for particulars.

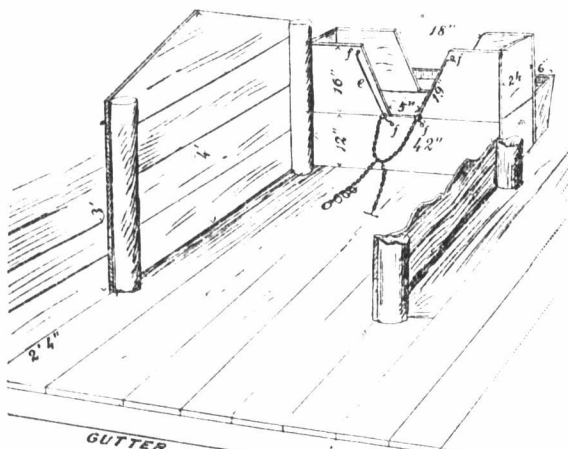
Basement for Poultry—Wire Fencing.

W. E. PROSSER, Muskoka Dist., Ont.:—"I. My neighbor on a sandy farm has a barn 60 x 40 feet on 7-foot stone walls. On the south side it has two doors, 6 feet square, 15 feet apart. It has also two windows in the east and one in the west wall about two feet square. Would it do to divide this basement into two or three apartments and in each of which keep about 300 fowls. They would also have a good outdoor range. 2. I propose to do some wire fencing this summer, and am thinking of framing the bottoms of ash posts into timbers to lie on the ground so as not to be heaved out by frost. What is your opinion of my plan? What is the best and cheapest style of wire fence?"

[1. Such a building as has been described would be very unsuitable for fowls. The stone walls would render the building damp, inducing disease. It would also be far too dark without more windows; in fact, about one-third of the south wall should be of glass (double in winter), and windows in the ends and back would also be of advantage. Fowls never do well in large flocks; in fact, successful poultry-keepers claim that from 30 to 40 is quite enough together, and these should have from 180 to 200 square feet of floor surface, or from 5 to 6 square feet for each fowl. 2. See letters in this issue on farm fencing. Corner posts at least should be well set into the ground, and if held down as recommended by some of our correspondents they could never heave. Ash posts would answer if thoroughly treated at the lower end, also the tops, with hot coal tar.]

Yuill Cow Stall—Feeding Ensilage in Hoard's Stall.

T. J. POLLEY, Lennox Co., Ont.:—"1. You give in the ADVOCATE a plan of the stall and manger used in the cow house of Jos. Yuill, of Carleton Place. 2. How could anyone feed ensilage in the Hoard stall?"



YUILL'S COW STALL, SHOWING ARRANGEMENT OF TIE.

To the Editor FARMER'S ADVOCATE:

SIR,—Inclosed find a description of our stalls and cow ties: Each cow stands in her own stall. The floor of stall and manger is 7 feet, and as the manger is movable, it can be placed any length from the gutter to suit the length of the cow, but for ordinary cows 5 feet for the stall and 2 feet for the manger suits the purpose nicely. The stall for large size dairy cows requires to be 3½ feet wide; for small cows, 3 ft. 3 inches is wide enough; and for young cattle, 3 feet is enough. When making the manger, have a 12-inch board in the bottom, and make it 28 inches high, saw a V-shape piece out of the center of the manger, 18 inches wide on top, and 5 inches wide at the upper side of the 12-inch board. Bolt a rod on each side of this space. On these rods are the ends of a small chain 18 inches long, having flat rings. At the center of the loop is welded a common cow chain, having the large ring removed. The rods are 19 inches long, with a shoulder on each end about an inch high to hold the rods out from the boards so the rings will slide up and down easily. Some of the advantages of this tie are: The cow has great liberty, can lick herself all over, cannot waste her feed, get her feet into the manger, nor annoy her mate. She can reach the water easily in the six-inch trough in front.

J. YUILL & SONS.

"Meadowside Farm," Lanark Co., Ont.

2. In the FARMER'S ADVOCATE of March 15th, 1898, issue, page 129, a cut of Hoard's stall was given, showing box for ensilage, roots, grain, etc.

Raising Calves.

S. C. NUTTER, Sherbrooke Co., Que.:—"Can you name a desirable and profitable ration in which large proportion of fresh brewer's grains, oil meal, etc., could be used for feeding calves from commencement to eighteen months? Am anxious to feed as little milk and hay as possible. At what age will calves commence to eat the brewer's grains? Also please give ration for feeding six months old calves taken from pasture. What is the probable gain in weight on these calves, if fed all they will eat? Would two-year-olds be more profitable to feed?"

[I am afraid I cannot give a satisfactory answer to your correspondent, since the plan outlined is new to me, nor can I find any literature bearing directly upon the subject. I do not think that

satisfactory results would be obtained from feeding calves largely upon brewer's grains. Calves will eat the grains about as soon as they will eat anything, but it is my opinion that they should be used sparingly for such young animals, though I am not prepared to state any definite quantity. Oats, ground flaxseed, and clover hay should combine well with the grains. For my part, I should make the latter fodders the main part of the ration, and use the grains very sparingly, increasing gradually if the condition of the calves warranted it. I am afraid that it will be very difficult to raise the calves satisfactorily without milk, and that it would require a great deal of skill and care in feeding.

A mature animal will take about two bushels of brewer's grains per day, in addition to 4 or 5 lbs. of meal, and 8 or 10 lbs. of hay. As for meal, I would say, use whatever can be bought for the lowest price per pound. Corn, or corn and barley should be good. The greater the mixture of grain, the better. It is my opinion that two-year-old cattle would make a much more profitable use of the brewer's grains than calves, as well as giving much less trouble. Even for mature animals, it is better to restrict the quantity of brewer's grains, and feed meal and hay.

O. A. COLLEGE, GUELPH.

P. S.—Will not someone of wider experience with brewer's grains give advice in this matter?—G. E. D.]

Millet Seed as Feed.

SUBSCRIBER, Bruce Co., Ont.:—"I have some forty bushels of millet seed, and hardly know what to do with it. Is it good feed; if so, how does it compare with other grain?"

[Millet seed bears a close resemblance to barley in its composition, except that it contains more fat and albuminoids. Their percentage compositions of digestible nutrients are as follows: Barley—Albuminoids 8, carbohydrates 58, fat 1.7; nutritive ratio 1 to 7.9. Millet seed contains albuminoids 9.5, carbohydrates 45, fat 2.6; nutritive ratio 1 to 5.4. We would suggest that the seed be ground or boiled, and fed sparingly at first to either cattle, horses or swine.]

Overfed Stallion.

READER, Durham Co., Ont.:—"I like the ADVOCATE very much, and think it is improving all the time. It is a grand improvement coming every two weeks. Your Scottish letters are worth a great deal to those of us who are interested in horse-breeding, and I hope you will continue them. I have a stallion that is a good feeder in the winter, but has a very poor appetite in the spring of the year; has had colic, and bloated a little, probably once a year or so. How should he be fed when fitting him for season? What could I feed him to give him an appetite? Should he have anything?"

[An experienced but modest horseman replies to the above, as follows: "In my experience I never had a horse that bloated, but I have had some that did not have much of an appetite, and I used the following condition powder: Gentian root pu., 2 ozs.; saltpeter, 2 ozs.; sulphate iron, 1 oz.; hypsulph. soda, 2 ozs. Give teaspoonful three times a day in feed. This has always toned up the stomach, and gives them a good appetite. I would judge this horse has been overfed, which will always defeat its own purpose. Feed regular just what he will eat up clean.]

Canadian and Advanced Holstein Record.

ROBT. FRASER, Dundas Co., Ont.:—"Would you please explain through your paper the difference between Canadian Register of Holsteins and the Advance Register of Holsteins?"

[The Canadian Holstein-Friesian Herd Book, like the majority of such registers, is concerned solely with the pedigrees of animals, while the Advanced Registry, which is part of the machinery of the Holstein-Friesian Association of America, was instituted for the purpose of registering authenticated records of milk and butter production. A heifer calving at just two years old is required to produce 6,500 pounds of milk in ten months, or nine pounds of butter in a week, while a mature cow (five years old) must reach 10,700 pounds of milk, or fifteen pounds of butter. Proportionate amounts are required of animals of intermediate ages. To be eligible for this registry a bull must be the offspring of an Advanced Registry cow, the full brother of two or the half-brother of four such cows, and must be examined by an inspector of the Association and found worthy. If your correspondent has a particular interest in the question of advanced registry he should write to Mr. S. Hoxie, Yorkville, N. Y., Supt. of A. R., for a pamphlet giving all the details of the subject. G. W. CLEMONS, Sec. Can. Holstein-Friesian Association.]

Cattle Loose or Tied—Mammoth Clover—Position of Root House and Silo.

ENQUIRER, Simcoe Co., Ont.:—"1. Do you think cattle would not thrive better dehorned and loose than tied up in stall. I would like to hear the opinion of your readers as to experiments in that line? 2. Does Mammoth clover only live one season; is it better for plowing down than red clover? 3. Would root house do as well under gangways into barn as under barn? 4. Would silo not be handier at center of barn than at corner; would it not do between gangways at side of barn?"

[1. According to the experience of Thomas McMillan, Hon. Wm. Mulock, and others, whose

opinions are in the FARMER'S ADVOCATE, months of more economical loose than in men who have passed. (2) clover, lives more luxuriously crop to plow could be given house were objection to True, it would but the plan (4) It always to put a silo handier in ordinary circumstances gangways for purpose. T. neath one of walls, where feeding.]

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