

Pasturing Steers.

Results made at the Ontario Experimental Farm from pasturing steers during the summer, less than six months:

Fifteen steers were bought May 2nd, total weight 16,790 lbs., at \$4 per 100 lbs.—\$671.60. Sold Oct. 27th, to A. P. Scott, Brampton, weighing 20,800 lbs., at \$1.90 per 100 lbs.—\$1,019.20; leaving a balance of \$347.60.

In addition to the pasture, they received at the commencement four pounds each per day of chopped grain and bran, mixed two-thirds grain to one-third bran, which was increased to eight pounds per day. During October the steers were kept in loose boxes and fed cut corn and clover hay. Total cost of grain and bran, \$132. They were dehorned in the spring and pastured during the summer with the cows.

Last week twenty-four two-year-olds were bought for winter feeding, which will be sold in the early spring and another lot put in.

By feeding off two lots in the year instead of one a double profit is gained, and young growing animals will increase in weight more rapidly and at less cost than mature animals.

O. A. C., Guelph.

WM. RENNIE.

Feeding Sheep in Winter.

Any farmer who has a good flock of sheep to winter, and has a liberal supply of clover hay, well-saved pea straw, oats and peas, corn ensilage and roots, is well fixed for winter feeding.

To my breeding ewes, which are all Shropshire, I feed the following: In the morning, first thing, a bushel of cut turnips (for ten or twelve) and as much pea straw as they will pick the leaves and pods out of clean, which is afterwards used for bedding; this is all I feed in the morning. At noon their feed consists of a bushel of corn ensilage (for ten or twelve), or more if they will eat it. At night they get roots, the same as in the morning, and clover hay instead of pea straw. This I feed until about three weeks before lambing, when I commence to feed clover hay instead of pea straw, but always feed pea straw in their yard for them to pick at, as it gives them exercise, which I consider is very necessary for breeding ewes. About a month before lambing they get a gallon of oats and peas (for eight) mixed in the proportion of three parts oats and one part peas. After lambing, their feed in the morning consists of a bushel of roots (for eight or ten), clover hay all they will eat up clean, oats and peas (a gallon for five or six), and as much warm slop as they will drink, made of oat chop and bran. At noon I feed roots, the same as in the morning, and as much corn ensilage as they will eat up clean mixed with cut clover hay, equal parts. At night they get the same kind of feed as in the morning, but no slop. By feeding this way I find my ewes milk well and the lambs thrive and grow fast.

My young sheep rising one year old get a bushel of cut turnips (for ten) and as much clover hay as they will eat up clean, and a gallon of oats, peas and bran (for eight or ten). At noon they get roots and corn ensilage mixed with cut clover hay, and at night I feed as in the morning.

I have never had much experience in fattening sheep for market, as I have always bred registered Shropshires, which I always sell for breeding purposes. I would recommend the following: In the morning feed a bushel of cut roots (for ten), cut clover hay and corn ensilage, equal parts, as much as they will eat up clean, and a quart (for two) of the following mixture: Oats three parts, peas one part, and one part each of bran and nutted oil cake.

At noon, feed cut roots and a little clover hay, and at night I would feed the same as in the morning, and an occasional feed of pea straw, which can afterwards be used for bedding.

Ontario Co.

ROBT. SPENCER.

Ensilage Approved.

With regard to feeding ensilage, I have had but four years' experience, and I can say I never fed anything that gives me so much satisfaction. I prefer feeding cut straw and roots with it. I mix layer about—ensilage, roots, and straw—and tramp it down solid and let it stand twenty-four hours before using. (Of course, it must be kept from freezing.) Then I feed about one bushel per head, with about four to six quarts of pea- and oat-meal, and a little bran, if you wish, for milk cows, three times per day, and as much good clover hay as they will eat up clean between meals. This ration is for fattening cattle and milking cows. Of course, store stock do not require any meal. We find the cows milk well and the butter is of better quality, better color, and firmer. As for horses, I only give just a little, once a day. Some think cattle have no need of roots when they have ensilage, but it is a mistake. I think the roots make the ensilage more valuable.

I think the FARMER'S ADVOCATE about right as a farmer's friend.

Middlesex Co., Ont.

B. W. ROSSER.

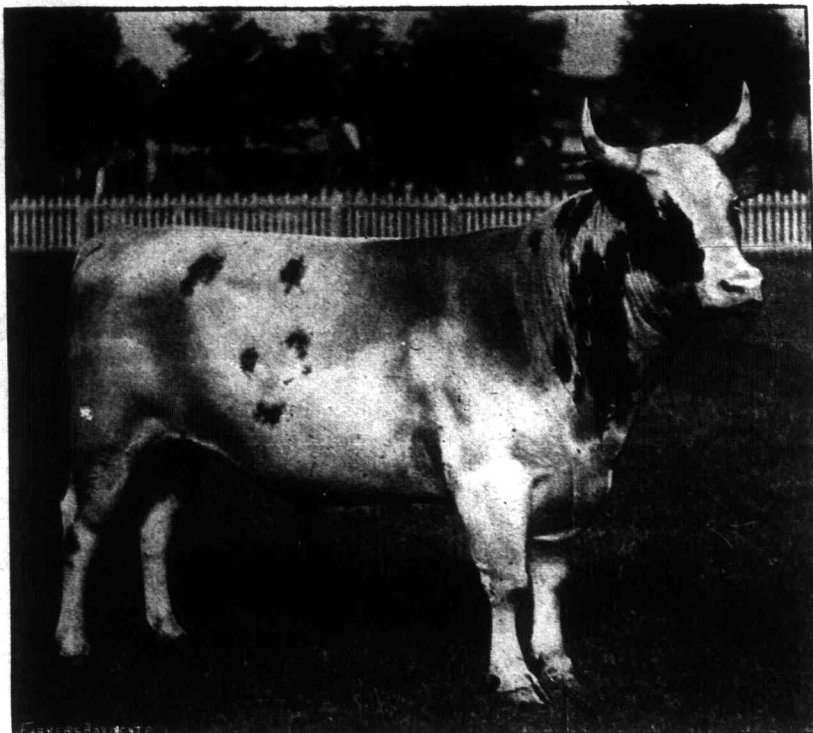
FARM.

Preserving Information.

One test of the merit of a periodical for the farmer is that it is not only carefully read, but preserved for future reference. Judged by this standard, the FARMER'S ADVOCATE has long held an enduring place in the esteem of those well qualified to judge of what is reliable and helpful. Issue after issue as they arrive, many of our readers carefully preserve them for permanent binding at the end of the year, and thus have formed a library on practical agriculture in all its departments, the equal of which it would be almost impossible to obtain in any other way, and it could not be done for so small an outlay. Its contents record the steady and remarkable advancement of farming and stock-rearing on this continent. Not only the everyday agriculturist, but public men, officials, and investigators commend it upon this score. For instance, on Nov. 9th, Mr. Hy. Wade, Parliament Buildings, Toronto, Ont., Registrar for the Dominion Live Stock Record Associations, wrote us that he was getting back numbers of the ADVOCATE bound, and found the following missing: No. 388, August, 1895; No. 421, Dec. 7th, 1896; and No. 422, Dec. 14th, 1896, for copies of which he asked.

Under date of October 21st, 1898, Mr. W. P. Cutler, Librarian in the U. S. Department of Agriculture, Washington, D. C., wrote: "I thank you very much for sending the three numbers to complete the year 1891. We have complete volumes for 1883, 1891, 1892, 1897, with numbers of 1898 up to date. We also have incomplete volumes for all the years since 1880. We should be glad to obtain a complete set of the paper."

Prof. Chas. E. Thorne, Director Ohio Agricultural Experiment Station, wrote, on Nov. 2nd,



IMPORTED AYRSHIRE BULL, OLIVER TWIST OF BARCHESKIE, 1ST PRIZE AT LONDON AND 2ND AT TORONTO EXHIBITIONS, 1898; THE PROPERTY OF ROBT. DAVIES, THORN-CLIFFE STOCK FARM, TORONTO, ONT.

1898, that they value the ADVOCATE so much that they wish to preserve it permanently. In arranging their files for binding, however, they found several numbers missing, for which request was made. "If you can supply these numbers," he added, "it will be a great boon, and we shall be glad to pay for them if you will send bill."

Since the introduction of our new binder at the beginning of the present year large numbers of readers, who had not done so before, have begun to preserve their copies as they are received, a practice which for many reasons is to be commended from the reader's standpoint, particularly in preserving for convenient reference specific answers to questions and articles on technical and seasonable subjects.

To Destroy Twitch Grass.

SIR,—The question is asked in a former issue, how to kill twitch grass? I have been trying every way for seven years, but the two last years have proved a sure cure. Don't cut or pasture, but let everything grow till the 15th of June, then put a chain on the plow and cover all the grass, and sow one bushel per acre of buckwheat and harrow it well and it will kill all the grass.

Simcoe Co., Ont.

B. TRACY.

The Armour Packing Co. dresses from 3,000 to 6,000 chickens a day. They say that pure-bred are far superior to common chickens in plumpness, fullness of breast, smooth skin and yellow legs. And they pay three cents a pound more for the pure-bred than for common stock. They advise farmers who raise chickens for the market to keep only pure-bred males of the best varieties, such as Plymouth Rocks, Wyandottes, or Indian Game. The farmer who keeps the pure-bred males in two ways: they are larger and weigh more and they get several cents a pound more for them.

Disposal of Town Sewage for Fertilizing.

The disposal of sewage is one of the most vital, vexatious and costly with which city and town corporations have to deal. It has its relation to farming because vast quantities of matter, valuable for fertilizing purposes, are literally wasted every year. In that respect we are behind Japan, for example, where all such material is carefully utilized in agriculture. Obviously, any plan whereby sewage can be effectually and profitably disposed of must be a boon of the very greatest importance. In this connection we have read with much interest letters published in the *Montreal Herald* some time ago by Dr. Arthur Fisher (father of the Dominion Minister of Agriculture) on what is called the Liernur or pneumatic sewage system extensively used in France and Holland. Dr. Fisher, we believe, visited the latter country a couple of times to investigate the plan, which he describes below:—

"Under the pneumatic system the sewage is transported to its destination by atmospheric pressure, the air performing the part which the water does in the present mode of carriage, delivering it concentrated and in small volume, while the dilution and increased bulk under the water-carriage system renders its utilization in agriculture almost prohibitory. The system in Amsterdam, the longest in use and perhaps the most perfect, was to establish a main pumping station outside of the city, in the most convenient situation for all purposes. At this point there are powerful steam engines which pump the air out of a receiver, the vacuum of which exercises a constant and even suction on the sewage in the pipes. It is here subjected to desiccation by evaporation and treatment with sulphuric acid, by which it is converted into merchantable guano, which is considered little inferior in value to the Peruvian. In addition to the great vacuum at the pumping station, there are cast-iron reservoirs distributed all over the drained portions of the city, generally placed at the crossings of the streets, by which arrangement they command the sewage from the greatest number of houses. Each one has ingress openings communicating with a network of house drains, and an egress one by which it delivers its contents to the main station. These openings are all supplied with valves, by the opening and closing of which the workmen convert the reservoirs into vacuum receivers, which suck the sewage from the houses. Then by closing the ingress and opening the egress valves it is rapidly drawn away to the main station." Separate provision is made by a cheap system of drainage for carrying off storm and waste water. Dr. Fisher sums up as follows the advantages of the pneumatic system:

1. The pneumatic engineer, in the selection of a pumping station and the placing of the reservoirs and pipes, will not have to consider the level, as the atmospheric pressure will drive the sewage either up or down.
2. There will be little or no expenditure of water, as in the closets of the water-carriage system.
3. Agricultural production of the country largely increased with easy application of manure.
4. No pollution of rivers, streams, lakes, and the sea.
5. No offence of the senses by sewer gases.
6. The sanitary condition rendered nearly perfect.
7. The most economical, sanitary and effective method of municipal drainage ever devised.

Market Legislation.

Every man has a natural right to produce goods and to dispose of the same, so long as such goods are not harmful to the health or the morals of the people.

If any goods are entitled to be freely sold, the food produced by the farmer from the soil should be so entitled. Farms are taxed without fail. The produce of such farms is especially and properly exempted from taxation in the farmer's own municipality.

When, however, the farmer wanders to places where people do congregate, the towns and cities tax his produce. He benefits the towns in two ways. He sells to them the food they need and must have; he buys from them the goods that they wish to sell. But the townsman is not satisfied with this double advantage. He demands a third advantage. He must have a market fee for the half-rod of space that the farmer occupies while selling to him the food that is needed to keep his body above ground.

If farmers were a compact community, this abuse would have been swept away long since.

In all private as well as public business, room is reserved for customers. The shopkeeper, the doctor and the lawyer are glad to see such spaces fully occupied. When they cannot make enough to pay for the spaces occupied by their customers they quit. This is what the townsman should do. They should give way to men who can comprehend modern civilization. When a man has paid his taxes where his