

The Farmer's Advocate

AND HOME MAGAZINE.

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of the Food Controllers and those at the head of affairs who know, all classes should be convinced of the necessity of doing all possible to maintain and increase food products. The slacker is no less a slacker if he lives in the country and does not do his duty. No doubt there are a few such still hiding on Canadian farms, but these are the exception not the rule, and the man who works from 100 to 250 acres with the help of his wife and possibly a boy or girl, is certainly doing his bit and should so be considered.

That Extra Sow.

In this issue is a special article which contains some ideas regarding the maintenance of the extra sow and her spring litter. We are assuming, of course, that readers in so far as it is possible are going to keep an extra sow. We are not attempting to advise anyone. We believe that the farmer himself knows his own business better than anyone else possibly can, but where it is practicable in view of the assurances now given, no doubt more sows will be kept. The article mentioned may carry a few hints which will help the owner to feed his pigs to advantage. It is information we have tried to impart, not advice. The problem facing most of those who would like to keep an extra sow is that of feed and care. The article itself is written with the purpose of giving information regarding the wintering of the sow and the care of the litter, together with the supplying of feed grown on the farm. With proper planning, little extra purchased feed is necessary on the average Ontario farm to carry the litter along until thrashing time next fall, when the fitting for market should begin.

A Feed Branch Established.

We understand that a special Feed Branch is to be established in the Dominion Department of Agriculture. This we believe to be a move in the right direction. As pointed out by most of the specialists, the farm situation here in the Dominion has been such that the farmer has been compelled to look for a rapid increase in the cost of feed. It was doubtless true that in some sections the grain from Western wheat and other grain has not been as easily available as

Canadian farmers both East and West as they might have been. Difficulties arise also from time to time regarding the composition of commercial feeding stuffs. We believe a Feed Branch is essential to the live stock industry at the present time, and with energetic men on the job many of the farmer's feed problems may be solved. The feeder asks that he be safeguarded in the purchase of commercial feeding stuffs and desires help in obtaining supplies of concentrates at as low a cost as possible. Every good feeder is willing to pay for good feed. He needs help to obtain it.

Nature's Diary.

A. P. KLUCH, M. A.

Among all our Canadian mammals there is none in which more general interest is taken than the Beaver. This is undoubtedly due to the fact that it is one of the emblems of the Dominion as well as to its interesting and unique habits.

The Beaver belongs to the order Glires, the same order to which the Hare, Squirrel, Muskrat, Porcupine, and all the other rodents belong. Its average weight is about thirty pounds and average length about forty-three inches. The hind feet are webbed and the broad, scaly, horizontally flattened tail distinguishes it from all other mammals.

The original range of the Beaver was very extensive, embracing practically the whole of North America wherever there were trees and water. The species still occurs in Canada from coast to coast but has been exterminated in well-settled districts. The favorite haunt of the Beaver is along slow-flowing streams, or small lakes, with clay banks which are covered with poplar and willow.

The Beaver is the engineer among mammals. The dams which it constructs are huge structures of sticks, stones, mud and sods laid across a stream so that the water above the dam is rendered deep enough to protect the Beaver community from their enemies in summer and to avoid the danger of its freezing to the bottom in the winter. Seton, who has made a careful study of the Beaver, thus describes the building of the dam. "The Beaver and his mate first decide on the stream they propose to make into a pond, and it is always a small one, sometimes a mere spring. Next they select a place where the bed is hard clay or gravel, neither rock nor bog being desirable, and then begin the dam by cutting and laying quantities of brushwood lengthwise in the deepest part of the stream bed, butts against the current. Each stick as it is laid is partly covered near the thick end with mud, stone, or clay to hold it down and the process carried on until the wall is raised. But very rarely is a log used and never a stake. By this time the original bed of the stream is blocked and the water flooding the shore calls for a still wider dam. Night by night the Beavers work on the dam, piling up sticks and burying them in mud or anchoring them down with stones of one to six pounds in weight. The mud is got in the handiest way, the nearest place, that is by digging to the bottom of the pond just above the dam. This has a tendency to enlarge the pond, so that in most cases it is deepest just above the dam. The longest dam on record is 700 feet in length and the highest is 12 feet in height. Some of these large dams contain from 150 to 250 tons of material and represent the work of generations of Beavers.

Not only does this engineer build dams but canals as well. These are made leading inland from the pond to standing timber, and are used for transporting the poles and brushwood that the Beavers cut. Seton came across one canal which was 651 feet long and nearly 4 feet wide, and Morgan records a canal which was 523 feet long and which had locks in it. These locks were low dams making a foot rise in water level, over which the cut wood was hauled when being transported, and while the main canal was supplied with water from the pond, the locks were fed with water gathered by another dam.

The Beaver makes several kinds of houses—a simple burrow in the bank, a bank lodge with a complete roofing of sticks, and an island lodge. As a rule a Beaver community has several burrows and a lodge. A typical lodge is a rounded mass of sticks, and sometimes stones, about 20 feet across, and 3 to 5 feet high, cemented with mud except on the outside, which is covered with sticks. It contains a single chamber, about 5 feet high and 5 feet across, the floor being about 4 inches above the water level. There are usually two entrances, one abrupt and often winding, which is the usual runway and the other quite straight, which is used for bringing in wood.

When a Beaver sets to work to cut down a tree it first cuts two grooves round the tree, one some distance above the other, then splits out intervening wood, cuts two more grooves and so on. Often a pair and sometimes three, work on one tree. Two Beavers can cut down a three-inch sapling in three minutes and a six-inch sapling in ten or twelve. Morgan gives the following description of the felling of trees: "When but two are engaged they work by turns, and alternately stand on a log. When the tree begins to crackle, they desist from cutting, while they afterwards continue with caution and it begins to fall, when they plunge into the pool and swim concealed for a time as it tumbles, the noise of the falling tree might attract some enemy. As the trunk falls they hold the limbs, and reduce them to a mass of broken sticks, which are thrown to the water. From that time on the trunk is gradually engaged with the main body of the dam, and is gradually allowed to sink after night, until the water is level with it. Trees from 3 to 8 inches in diameter are the usual size selected for cutting,

but we have records of some as thick as 30 inches having been cut down.

The main food of the Beaver consists of bark, chiefly that of the Poplar, though that of any hardwood is used. Most of the wood cut is for food purposes. The branches are cut into lengths depending upon their diameter, about a foot if 5 inches thick, about two feet if 3 inches, and so on. These lengths are transported to the vicinity of the lodge, and their ends are stuck in the mud at the bottom of the water, so as to keep them from being frozen in the ice, and are thus stored for winter. They are brought into the lodge from time to time as required, and after the bark has been eaten the bare log is added to the dam. When transporting these lengths over land the Beavers roll them with their forepaws or shoulders if they are heavy, or carry them in the mouth, with the end over their back if they are light. In this way they are brought to the pond, or one of the canals leading to it.

In summer the Beaver eats many kinds of vegetable substances as well as bark—waterlily, rhizomes, grass and berries.

Beavers mate for life. The young are born in May and number from two to five. Their eyes are open at birth. In about a month they begin to eat solid food and to follow the mother and at six weeks they are weaned, but stay with the mother for a year longer. They mate when two years old and live from twelve to fifteen years.

A Change of Mind and Heart Necessary.

BY SANDY FRASER

Last night after I had come in frae doon the chores and wis sittin' doon readin' the paper, the auld wumman says tae me, "Sandy," says she, "Did ye notice that the King has been appointin' a day for national prayer an' thanksgivin'?" Some time in January, I think it is, she said, lookin' round for the paper.

"What does he want tae gie thanks for?" I replied. "Maybe for the way the Germans are whallopin' the Dagoes over in Italy these times, d'ye think?"

"There's always somethin' tae be thankin' for," says Jem, "Na dot things might be worse than they are, though ye might not think it. But I hae an idea that thanksgivin' is not the main reason for settin' apart a day in this way. He's callin' this national prayer-meetin' because he is beginnin' tae see that a change o' mind an' heart on the part o' his people will be tae the advantage o' all concerned, an' what's mair, he has the glimmerin' o' an idea that he's not going tae win the war till this change does take place. Admiral Beatty said somethin' o' the kind about a couple o' years back, but it didna mak' muckle o' an impression, as far as ye could notice, for there's been little change in the ways o' the people, if ye can believe all the stories ye hear. Human nature doesna change vera much in the course o' a few thousand years, an' if we've read oor Bible, or some o' the ither books that gie us the history o' past generations, we'll have found out that the tribes an' nations that got rinnin' off the track an' gaein' tae the bad in one way, were not generally allowed tae rin vera far, for something always happened tae bring them up wi' a short turn, an' in the end tae start them on the straight an' narrow way again. This has happened hundreds, an' maybe thousands, o' times since man came tae live on this auld earth, but we haven't learned oor lesson yet, apparently, for there is somethin' or someone tryin' tae teach it tae us again. It seems tae me that it is a guid deal like a sickness in the case o' an individual. Nine times out o' ten it's the breakin' o' Nature's law in some way that brings on this sickness, an' the man who has to undergo it generally finds that his punishment and cure are put up in the one bottle. One isna vera apt to tak' notice o' this at the time, but later on, in the light o' the experience he has acquired, he can see it a'richt. An' sae it is wi' oor wars, I feel sure. Tak' the world as a whole, oor ain nation as well as that o' the enemy. Have we been any better than we ought to hae been? I dinna think it. Frae what I hae read an' heard I'm inclined tae think that they were all gaein' to the deil about as fast as they kenned how. There wis ony amount o' prosperity, but money an' morals dinna always go thegither, I've noticed. Whiskey drinkin', an' the ither things that gang wi' it, that are as bad if not worse, wis on the increase, an' these things had sic a hold on the people that we have no' got rid o' them yet, although everybody kens that there's everything to be gained an' naething to be lost by pittin' them out o' business, once an' for all. There are some signs that go tae show us that a change is takin' place in the minds o' the nations that are at war, in regard tae these things. Auld England and the Allied countries give some evidence that they are still in need o' some more o' the medicine they are gettin' at present. There are two or three questions that England herself will have tae settle at home before she need expect tae straighten out that little affair over in France, I'm sure o' that.

"It's funny how short-sighted humanity is, when ye come tae think about it. They'd rather hand doon money an' land an' all that sort o' thing, tae their children an' their children's children, than gie them a richtin' chance o' acquirin' a good character. They must ken better than that, I'm thinkin', but the queer thing is that they dinna do better. But if there's a Higher Power takin' a hand in ridin' the affairs o' this world, as we ken there is, I feel sure that the future generations o' mankind will hae a better chance to mak' somethin' o' themselves than a cold mix o' the individuals that hae lived through part o' what we call the century of progress. An' ye can see who ye like,