

SHEEP.

— "Are there no sheep in Canada? and would like to importers."

re advertised in the M. H. Cochran, imported a number a very fine show of Exhibitions.]

BERKSHIRES.

— "Can Berkshire stock be registered a to be registered in ease advise, as I am

the American Berk- the Secretary, John It is not necessary Canada. Write to of application for

EGAR.

in the FARMER'S g cider vinegar."

r add one gallon of y hot. Also toast a thoroughly in good barrel. Then add a

vinegar"; the more the kitchen stove or ure is warm. Keep

eece of cheese cloth s, dust, etc. Don't n five or six months,

time, I would advise od brown sugar, or more body. A cheap

without cider, as fol- sh soft water add 6 mixture into a clean,

oasted bread soaked warm place, and in her of vinegar." If

to the barrel a sheet ared with molasses you will have good

SHEEP.

stings Co., Ont.:— subscribers tell me, aaper: 1. Are the to wet and rough

and also the weight e nearest place they

or any class of sheep, oscommon, Lincoln, ch, low, productive and, where smaller

gain a good liveli- they appear in their uch like our Leices- ved by infusions of

century. They will ground, but hilly, to lighter sheep.

an exceedingly well- teristic white face, Leicester.

Roscommon sheep the Atlantic. Our Chapman, Fitzalan ngland, will, if com- ation regarding this

EYES IN CATTLE. I send the enclosed Gather your seed

our corn is in the rip the shuck back, cold weather, then

have the strongest l. Do you endorse at or oats or peas.

ut it. wrong with one of water was observed o keep a wet streak

hiten, which white- ate, and now there lly coming from it.

rt it in the pasture, mptoms, and I hear a kind of a ranch a

istance in kernels of solid material, the cter from the stalks of hard material, so

alk before that has erefore not in best

re doubtless suffer- a disease prevalent the last two or more know of was given

August 15th issue, he affected animals quarters and given a mature beast-

twice a day, of the inc, 12 grains; fluid distilled water to s with warm water

SOW THISTLE

(*Sonchus arvensis*).

W. J. McCa., Northumberland Co., Ont.:—"I enclose you a weed for identification and method of eradication. Can you recommend the growing of buckwheat as an aid in destroying this pest?"

[The weed enclosed is a species of sow thistle, known as corn sow thistle (*Sonchus arvensis*). It is a creeping perennial, a bad one to get rid of when once established in good soil. It grows from one to three feet high, and when in flower bears a yellow blossom much like that of a dandelion. The plant sometimes branches towards the top, and its stems are rather hairy or bristly. When the green leaves or stems are cut or broken they exude a milky fluid. Its roots much resemble those of common Canadian thistle (*Cirsium arvense*), which form a sort of network running through the soil a few inches below the surface, and throwing up fresh plants at frequent intervals. It propagates itself in this way as well as by its numerous seeds. The writer cleaned a badly-infested field in the following manner: Immediately after harvest the land was shallowly plowed and harrowed, and repeatedly cultivated before winter set in. In the following spring the field was again plowed lightly and harrowed, and cultivated once in two weeks until about July 1st. It was then sown to buckwheat, five pecks per acre, and when in blossom the crop was turned under, harrowed and rolled. When the buckwheat had rotted, the field was plowed a fair depth and left till spring. It was then manured, worked up and sown to turnips. Very few sow thistles appeared in the turnip crop, and these were destroyed by cultivation. The next year wheat was grown and the field seeded down, and heavy, clean crops were produced for years afterwards. When dealing with this weed the ground should not be plowed or cultivated deeply enough to disturb the main creeping roots, usually five or six inches below the surface. If only the plants are cut off above this, and no opportunity is given them to produce green leaves, the roots will soon die and decay in the soil.]

BINDWEED

(*Convolvulus arvensis*).

D. McD., Perth Co., Ont.:—"Some of us in this section are troubled with what threatens to be the worst weed we ever had to deal with. It is generally known here by the name of Morning-glory, from the fact of it having a blossom similar to that plant. It seems impossible to kill it, at least by the ordinary method of killing weeds, for the more the land is cultivated the better it thrives. If you have any knowledge of it, or can make known through your valuable paper any method of dealing with it in order to exterminate it, you will confer a boon upon the farmers of this section."

[Bindweed is without doubt one of the worst weeds to get out of the land that has yet found place in Ontario. It is a creeping perennial that usually grows to the length of two or more feet long. It bears a close resemblance to the Morning-glory in form of leaves and flowers. Its roots are larger than its vines, and form a network in the soil, going down deeply into it. It commences to grow early in the spring, and continues till fall. It infests various crops, but gives most trouble in grain, which it climbs and binds together. It is propagated both by seeds and its numerous root-stalks. An infested field should not be sown to grain until it has been subjected to a cleaning process. Plow infested fields immediately after harvest, and cultivate or plow sufficiently often thereafter to keep the plants from showing above ground until the period of growth ceases. The plowing or cultivating should be shallow, but thorough. In the spring proceed in the same way as in the autumn cultivation—that is, keep the surface frequently stirred until time to plant a hoed crop, such as corn, roots, or rape. Then give this crop thorough culture throughout the season. If the fall and spring have been moist, so as to make it difficult to kill the weed, it would be wise, instead of growing a hoed crop, to sow buckwheat about July 1st, which will tend to smother the bindweed remaining. The buckwheat may be harvested or plowed down as desired. If any of our readers can tell us an easier, cheaper, or surer method of cleaning land of bindweed, we will gladly publish what they have to say.]

PASTURING STEERS.

D. T. C., Glengarry Co., Ont.:—"I understand one of your editors has had some experience in pasturing steers. What is the nature of his land? How much land does he require for each head of cattle, and what does he realize per head? Are those cattle in good order going out? What do they gain in weight?"

[This year 46 steers two and three years old had the run of 30 acres of old grass and 30 acres of clover and timothy of last year's seeding. Besides this, they have eaten 14 acres of millet, and 10 acres of rape is coming on for September and October feed. The cattle were divided into two equal groups and changed occasionally into fresh fields. We believe they would have done better had they not been changed, as the fresh new clover proved too laxative. The land is clay loam of good quality, water by running springs. We think it well to secure nearly half the number of a class heavy enough to ship towards the end of July. This gets them away during the flush of the grass, before the fly season, and provides against a possible shortage

of feed. The remainder of the herd will then have abundance of feed and will finish well on the rape.

By allowing the land to meet the winter well covered with old grass, it enables one to get very early pasture which is likely to keep up well throughout the season. The most serious drawback to this class of farming this year is the horn-fly pest. We are convinced many of the cattle actually failed in weight during the last few weeks while on good pasture and some of them getting grain. We find many of them are sore inside the flanks and down each side of the dewlap. We believe it would pay to apply a spray of kerosene emulsion once a day as the cattle are driven through a narrow gap. In addition to this the raw spots should be touched with pine tar and grease. These cattle, bought in Toronto, cost, laid down thirty miles away, about \$4.15 per cwt. They will probably realize \$4.50, and will gain perhaps 200 pounds each. The cattle should be well bred and in good order when turned out. Those to ship in July should be half fat and weigh 1,100 to 1,200 pounds each, and those held till October, about 1,000 pounds each when purchased in the spring.]

CATTLE POISONING.

O. A., Clanwilliam, Man.:—"I shall be glad if you will inform me, through the medium of your widely circulating ADVOCATE, if grass grown where poisoned animals have putrefied 2 or 3 years previous will kill cattle or horses eating it? Some of my neighbors have lost several head of cattle from poisoning, and that is the only way they can account for it. If such is the case, it should be a warning to all farmers, not only to cease putting out poison, but to try and enforce the law prohibiting it by informing against any party detected in doing so."



American water hemlock (*Cicuta maculata*.)

[In reply to Mr. A., I beg to say that the poisoning of cattle in the way he suggests is impossible. This is clear from the way in which plant life is sustained. Grasses, and most other forms of plants, draw their sustenance partly from the air, through their leaves, partly through their roots, drawing up in a state of solution such elements as the earth can furnish for their maintenance and growth. From the air are derived carbonic acid and water, out of which come, by a wonderful process, the organic compounds—chiefly starch, sugar, albumen. These together form what are known as albuminoids. From the soil come nitrogen and various mineral or inorganic elements, such as calcium, iron, phosphorus, potash, lime, etc. These are drawn up by root action either in a state of solution or decomposition. They form from one-tenth to three per cent. of the weight of fresh plant tissue. Except in this way, no solids can be drawn up or absorbed by such plants as grass or others consumed by cattle. It is therefore impossible that plants growing where poisoned animals may have putrefied should poison animals eating them. From what I have seen of the aversion cattle have to such spots, where air and soil are tainted, I do not think they would be very likely to feed there. If they did they could take no hurt from the grass, rank as it might be, any more than we are injured by feeding upon raw fruits and vegetables grown where foul—even poisonous—substances have been thrown as manure or otherwise. It is stated that the dead animals in question were poisoned two or three years ago. I presume the usual drug—strychnine—was used. Now, this drug, which is an alkaloid of nuxvomica, is soluble in water (1 in 5760 parts of water), and it kills by its action on the heart through the blood. In two or three years, then, the small quantity held in the blood of a dead animal would not only thus be distributed over a greater or less surface, but under the action of rain and melting snow it would surely have been dissolved most effectually and dissipated in the soil. There, as I have shown, it could not injure or taint any plants that might grow. Nor do I think there could be any possible

danger of harm from the licking of the soil by cattle; for not only is the chance of any right-minded cattle touching soil so badly tainted with decaying animal matter extremely unlikely, but even if it were done, the quantity of poison, supposing any to remain undissolved, would be so extremely small that it could never do any harm. Strychnine is given to people as a medicine in doses of one-thirtieth to one-twelfth of a grain; a much larger quantity could be taken safely by cattle. Thus the "licking" theory can hardly be upheld.

It is most probable that the cause of the poisoning of cattle referred to is to be found in the "cowbane," or water hemlock, which is an exceedingly common plant. The following is a description of the plant, which should be known to every person keeping cattle: "A smooth, erect perennial, 3 to 8 feet high, with a rigid hollow stem, numerous branches, finely dissected leaves, white flowers in a flattish cluster; the roots fleshy and tapering, and in a cluster from 1½ to 3 in. long. It abounds in swamps and wet meadows. Cattle eat this in the spring; occasionally, no doubt, pull up and eat the roots, and also are possibly poisoned at times by drinking water from little pools in which the root has been tramped. The symptoms of poisoning are colicky pains, staggering, unconsciousness, and convulsions, soon proving fatal." It will be interesting to learn if the symptoms in the cases of the cattle referred to corresponded to the above.

W. A. BORMAN,
St. John's College, Winnipeg.

So plentiful has this water hemlock become in North Dakota that the Agricultural College of the State has issued a special bulletin relating to this poisonous plant, and in referring to it say:

"The season has been so unusually dry that stock are grazing the 'sloughs' much closer than usual, and already we have reports of many cases of poisoning, probably in many instances due to eating water hemlock, one of the most poisonous plants found in this country. Water hemlock is found growing in the 'sloughs' and wet lands of this State.

"Meadows will be cut for hay closer than ever this summer, and many animals will, judging from past experiences, be poisoned from eating, in the fall, the hay containing this plant. See that no water hemlock gets into the hay if you would save your animals. Horses, cattle and sheep alike may be poisoned by eating the hay, the green plant, or from drinking the water where the roots are being tramped upon. It resembles, in general appearance, wild parsnip, but grows in wet land, and not in high, dry lands, as does the wild parsnip."

THE THOROUGHBRED HORSE—FALL TREE PLANTING.

SUBSCRIBER, Grey Co.:—"1. What is the difference between a buggy horse and a carriage horse? Explain their breed and stamp.

"2. Of what use are Thoroughbred horses to a farmer if he breed to the Thoroughbred from two, three or four generations? They are not adapted to harness. Could they be broken to the harness so as to drive?"

"3. Will maple trees grow if planted in the fall, also the apple and cherry tree?"

"4. Will you please give me a list of men's names who keep first-class Thoroughbred horses."

[1. The name "buggy horse" is not an established term. We suppose, however, "roadster" is meant. It is to be regretted that men who are really anxious to learn the distinctions between the various classes of stock do not take the trouble to visit one or more of the many good fairs that occur every fall. More can be learned by watching these classes judged than we have time or space to teach here. We would advise subscriber to read carefully the reports of several large shows, published in this and last issues of the FARMER'S ADVOCATE. See the judging of stock at the fairs in preference to the circus performances. A roadster horse is one weighing anywhere from 950 to 1200 pounds, 15 to 15½ hands high, with clean legs, smooth, robust conformation, and able to go along easily at an eight to ten mile an hour gait with an ordinary buggy on a good road. As a rule such horses possess Standard-bred blood, although a dash of Thoroughbred or Hackney may not be out of place. The Thoroughbred gives spirit and endurance, and the Hackney, style and attractive action. As a rule, the Standard-bred of desirable form, weight and action, is the superior roadster, or buggy horse, if that name is preferred. Carriage horses of merit require to stand well up to 16 hands, have abundance of style, high, forceful action, and sound, clean limbs. Among the winners at the fairs we find the gets of Cleveland Bay, Yorkshire Coach, German Coach, Thoroughbred, Standard-bred, and Hackney. As a rule, the blood of the Hackney is preferred, and when warmed up with a little Thoroughbred, the results are generally satisfactory, so far as breeding is concerned.

2. The special place for the Thoroughbred is under the saddle, but grades of this breed are finding favor at the shows in the roadster and carriage classes. As a rule, a three or four cross Thoroughbred is not a desirable harness horse. Many of them are too high-spirited and nervous to become comfortable road horses. Another common trouble is that most of them lack substance to do heavy roading satisfactorily. Horses of this breed are broken to harness, but it has to be wisely done, as they are easily spoiled on account of their characteristic high mettle.

3. Although fall planting of trees, when carefully done in suitable soil, generally succeeds in a favor-