



CAPTAIN MAYFLY -28858-, IMP.
Four-year-old Shorthorn bull. Winner of first prize at Toronto and London Exhibitions, 1902.
OWNED BY J. C. BRICKER, ELMIRA, ONT.

A Steam Plow.

A. & G. Mutch, of Lumsden, have lately purchased a new Canton Scotch Clipper steam plow. It is a colossal gang, turning six furrows of fourteen inches each at every sweep, the power supplied by their threshing engine. The regulating levers, being long and conveniently placed, makes it as light and handy, in this particular, as the two-furrow gang. With this new plow more work can be accomplished during the time best suited to give surest results, whither it be in the form of killing weeds through summer fallowing at the right time or owing to the possibility of getting more stubble turned when the soil is in the most favorable condition for the largest returns. Another advantage is that the acreage plowed per man is increased, and this is worth taking note of, where help is so high priced and difficult to get. This large farm contains three sections, the crop acreage, for the present year being as follows: Wheat, 390 acres; oats, 160; brome grass, 150 (nearly all cut for seed), and barley, 25. During the present summer 100 acres were broken and 320 summer-fallowed. The fallowed portion was plowed in June, after which it received surface cultivation, which answers the double purpose of killing weeds and packing the lower part of the plowed portion, thus forming conditions favorable for holding moisture for the following crop. Mutch Bros. are well known as extensive Clyde breeders, and their present stallion, Prince Stanley, is proving a useful sire, having left some fine growthy colts this season; all their pure-bred mares are with foal by him. They also keep a large number of good grade horses, and average about sixty-five hogs the year round. The swine business, they claim to be a good-paying one, and purpose building a large piggery—would, in fact, have had it up this summer, but could not get building material, the demand for such being greater than the shipping facilities could supply.

Insects and Weeds.

In reply to your invitation, regarding insects and weeds, would say that the horn fly comes, by all means, first. Few of us realize what it costs us to feed those troublesome pests on our stock during the summer. About the best remedy we have tried is tar and tallow applied to the animals occasionally. Next I think would come the pea bug. The only thing tried here is to stop growing them. Grass peas have been tried as a substitute, but have not many friends here this year, as some of them are green yet. I think, in weeds, ragweed is fast gaining ground, though it is well watched and pulled or the stubble plowed immediately after harvest, yet it seems to be gradually creeping in. Some claim that it forms seeds between the branch and main stem, though I have never been able to find them. Is this so? Wild carrot and swine thistle are also quite a nuisance. The old remedy has been to summer-fallow and seed down, but growing roots and corn is taking the place of that to a great extent. I think growing corn for silage is one of the best methods of getting rid of the weeds I have seen tried. Where it is taken care of, the weeds are destroyed, the land brought into a better state of cultivation, and a lot of valuable feed grown. J. W. C.
Huron Co., Ont.

Snap-shots at British Agriculture.

FASHIONS IN FARM CROPS AND THEIR INFLUENCE ON LIVE STOCK.

One of the practices of the British agriculturist that draws the attention of the transatlantic visitor is the reliance placed by the island farmer on roots, either turnips, swedes, carrots and mangolds, and green crops, such as lucerne (alfalfa), cabbage, vetches and kohl-rabi.

Recent statistics of British farming show, among other things, that the number of live stock kept is decreasing in these islands. Since the previous yearly returns, a falling off of 207,918 cattle and 611,494 sheep is noted, and the significance of these figures will be more appreciated when it is known that

a lot of the arable land is being let go back into grass, which means that the number of live stock must continue to decrease, with the inevitable result that the Britisher will have to depend more and more on other nations for his foodstuffs. One thing that the statistics do is to, in a measure, confute the argument of some farmers for their lack of stock, whose excuse is "no pasture." The statistics show conclusively, and thinking farmers admit, that the arable holding has a far greater stock-carrying capacity than the grass farm of the same size. Such being the case, the longer the plow's rested in Great Britain, the better the market and the greater the demand for Canadian grain, dairy products and meats, provided those things are up to the standard called for by this lucrative and all-absorbing market. Canadians can well afford to take a leaf out of the book of their British confreres in the use of green crops and roots, by means of which young stock are grown cheaply and matured early in life. Mangolds are supplanting turnips and swedes in England, which is not altogether surprising, as the fly and the dreaded finger-and-toe disease play such havoc with these roots. The cultivation of lucerne, cabbage, kohl-rabi and vetches is increasing; one does not see much of that protégé of agricultural colleges, professors and press, the rape plant, possibly because of its well-known tendency to cause bloat unless carefully handled. As one would expect in this country of high rents, and therefore intensive agriculture, that extravagance of farming, the bare fallow, is fast disappearing. The British farmer yet grows twice as much barley and three times as many oats as he imports, so that corn-growing, as it is called, is not yet one of the lost arts, nor is it likely to become so, as on the successful continuance of grain growing depends the successful growing of live stock, and vice versa. The inference is, therefore, that grass is not, even in its realm (Great Britain), a complete and satisfactory diet on which to grow and mature a beast or a breed. We see at once the correctness of the principle of combining the two—grass and grain, or finishing the grass-grown bullock on grain—which is one of the key-notes to the success of the American bullock in the British markets, where he has beaten his Canadian confrere, hands down, and is a very strong rival to the best Aberdonians. Canadian beef-growers would do well to meditate on this fact and cudgel their

brains for new methods so that they may put on the British market cattle equal to the American 30-months-old corn-fed bullock, in place of the 4-year-old steers in fair store condition, which are now coming with such a handicap they are bound to be beaten and their Canadian grower is bound to be dissatisfied with the results of his labors. INTER PRIMOS.

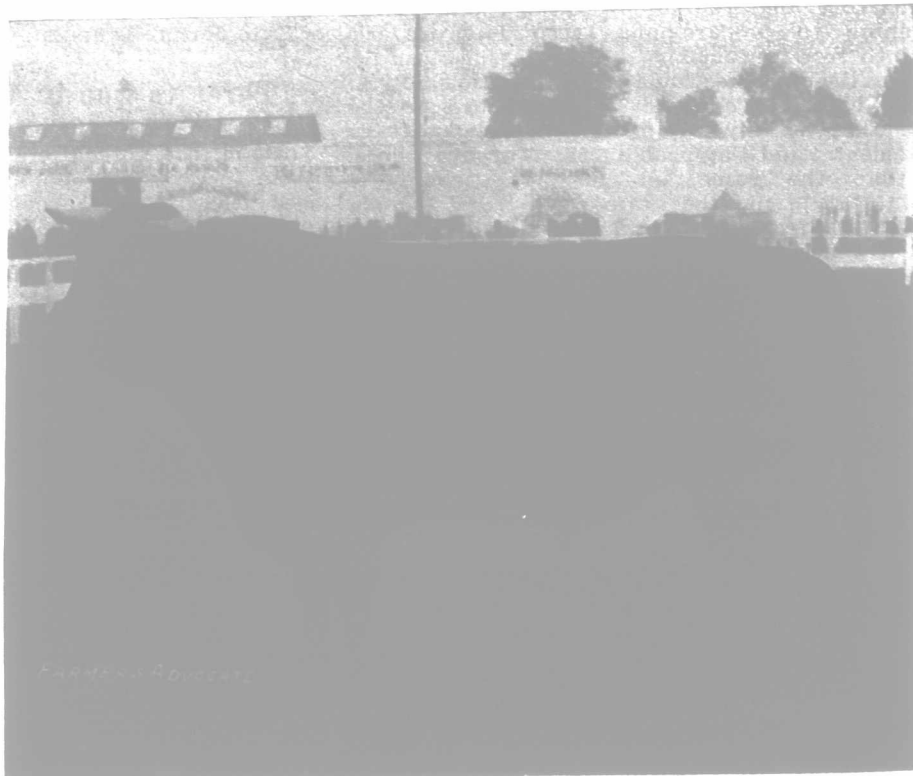
Problems in Drainage.

The unusually wet summer just closed, causing great loss in crops in many sections, has turned the attention of farmers afresh to the subject of underdraining. The same conditions are liable to be repeated in any year, and in response to a number of inquiries involving various problems in drainage, we herewith present, in part, the main principles on that subject, together with answers to questions of comparatively minor importance, but peculiar to the conditions of certain readers, among whom are Gordon L. Lamb, Prescott Co., and M. S. Arthur, Northumberland Co., Ont.

In commencing to underdrain a piece of land, it is first necessary to determine, by means of a leveller, the amount of fall which is to be found in any direction. With this information, the lowest point at which a free outlet may be obtained should be selected as the starting point. To this spot, unless there be others more convenient and equally satisfactory, all the main drains should lead. The number of drains will depend altogether upon the consistency of the soil and the amount of superfluous water contained therein. On a tenacious clay having a hard bottom, from 50 to 75 feet apart may be found about right, but where it is more loamy and open 100 feet may be found none too great. However, in this as in other problems of drainage, no hard-and-fast rule can be laid down, the circumstances in each case determining the course of procedure. The particular kind of drain to be used is not worthy of much discussion. It is now pretty generally admitted that in every case, except where the bottom is too soft to allow the formation of a level pipe, tile is the most economical. Even under such circumstances the difficulty is overcome by placing an inch board in the bottom, or by leaving the drain open for a season until the floor has had a chance to become firm.

The size of tile to be used also depends upon conditions, but in no case is it advisable to use anything smaller than 2½ inch bore. These may be bought at any place where manufactured, for about \$10.00 per thousand. For a main drain with several laterals, a larger size is required. The depth to which they should be laid must be sufficient to insure against danger from frost. Three feet is the usual distance below the surface, but it must be borne in mind that the greater the depth the slower the action after a heavy rain and the greater the area drawn from. In land devoted to fruit trees drains should be put down at least the distance mentioned, as a large feeding ground for the roots is very necessary.

To have a successful system of drainage the amount of fall or grade which it is necessary to have will depend upon the care exercised in laying the tile. Drains having only two inches to



PRINCE WILLIAM.
Imported Shorthorn bull, bred by A. Watson, Auchincloss, Aberdeenshire. Winner of third prize at Western Fair, London, 1902.
PROPERTY OF JAMES GIBB, BROOKSDALE, ONT. (SEE GOSSIP, PAGE 784.)