

Three Bushels Where Before He Got Two

John A. Shaw, Oxford, Co., Ont.

A short time ago an article appeared in The Canadian Dairyman and Farming World on "Plowing Corn and Root Land," by John Fixter of Macdonald College, Quebec. I cannot agree with the article in full, especially in regard to the deep cultivation after corn and roots.

When I was a young man on my father's farm my work was to plow and prepare the ground. The prevailing idea at that time was, that success in a crop of roots depended on the great depth in which the plowing was done. Observation and experience has long since proved to me that the heaviest yields of roots, corn and grain can be produced from light plowing of about five inches, accompanied with surface cultivation.

For roots I do not plow any deeper, but I follow with a deep cutting cultivator throughout the hoeing season, being careful not to bring any of the subsoil to the top. The heaviest crop of roots I have ever grown has been from the surface preparation of the soil; and I am quite satisfied that I am reaping easily three bushels from shallow cultivation where from the deep I reaped but two.

Plowing Corn and Root Lands

Thos. McMillan, Huron Co., Ont.

Having noticed a discussion of the above question in some of the recent numbers of the Farm and Dairy, I am entirely in accord with the views of Mr. Brethen of Peterboro County regarding the mistake made by some in plowing our corn and root lands in the fall, after these crops have been removed.

This decision has been reached on my part after a number of years experience along this line. For three years in succession I adopted the method of plowing one-half my corn and root field in the fall, and just cultivating the other half of the field, giving the whole field a shallow cultivation in the spring, before sowing to grain crop and grass seeds. In each of the three years I had upwards of 10 bushels of mixed grain per acre more, and as well a better stand of clover on that portion which was confined to surface cultivation.

Of course, such a system of surface cultivation pre-supposes that during the growth of these crops the land has been so thoroughly cultivated, that the weeds are all destroyed, leaving the land after the crops are harvested, as clean as after a thorough summer fallow.

The various field crops usually grown in a regular rotation, may be divided under three heads. First, we have the soil enrichers, such as clovers, peas, beans, and all the other leguminous crops. Secondly, there is what may be called the soil cleaners, such as our corn and root crops, in the growing of which we are able to cultivate and clean the land, and lastly we have the soil impoverishers, or those which (if sold off the farm) tend to deplete the soil of its fertility.

FLOWING IN FALL

Such a division tends to outline a proper system of rotation which may be followed, and which may be lengthened by a year or two in pasturage if desired. With a soil which is infested with noxious weeds, I follow the practice of plowing the clover stubble directly after removing the hay crop, and cultivating during the fall months as a preparation for the corn crop use following season. If the land is clean, however, I allow the clover plants to grow on till the late fall, sometimes harvesting a second crop of hay, a crop of clover seed, or plowing down the aftermath, but I always follow the method of plowing the clover sod in the fall. I find that the land plowed in the fall will hold the moisture the following season, better than if left till spring before being plowed.

In manuring for the corn crop, as we always do, I like to keep the manure on the surface soil, where it can be worked into the surface soil,

during the process of spring cultivation and preparation of the seed-bed. In having the clover sod plowed in the fall, upon which is to be grown our corn and root crops during the following season, the manure is drawn directly from the stables in winter and spread broad-cast upon the surface of the field, when it is ready to be incorporated into the surface soil in spring. To overcome any difficulty with the long straw portion of the manure, all the straw is now cut during the process of threshing, which renders it more easily handled in every particular.

APPLYING MANURE

By applying the manure in this way, and upon the surface of the plowed land, it is placed just where it will do the most good to the growing crop, and any weed-seeds it may contain are held sufficiently near the surface, to germinate and be destroyed during the work of summer cultivation. As a result, when these crops are removed, the surface soil, to a depth of three or four inches is quite clean of noxious weed seeds, and on being loosened up is the very best portion of the soil for receiving the grain and grass-seeds the following spring and giving them a rapid start. Therefore, it is a great mistake to turn that surface soil under, and bring to the surface other material which has not been so subjected to such a weed-cleaning process. Any system of cultivation

of the committee appointed by the Ontario Fruit Growers' Association to investigate these matters and which was read by Mr. H. St. C. Fisher, of Queenston at the convention of this association held in Toronto in November. Mr. Fisher pointed out the efforts that had been made by this association towards bettering the fruit market facilities in Toronto. "In order to better the conditions that existed a year ago," said Mr. Fisher. "The Grand Trunk Railway has had the old Scott Street Fruit Market renovated in such a way that now there is probably four times the floor space that was available a year ago. Other needed improvements were made, particularly in the matter of lighting. The repairs cost the G. T. R. about \$4,000 and our thanks are due them.

country and we should not rest until we have built in Toronto, one of the finest fruit market buildings on the continent. Toronto is worthy of such a market as it is the best market for choice fruits in Canada. Fruit growers should aim to send to this market, as to all others, a high standard of perfection in their fruit, quality before quantity, and every package honestly packed. If these things are observed, the price will take care of itself.

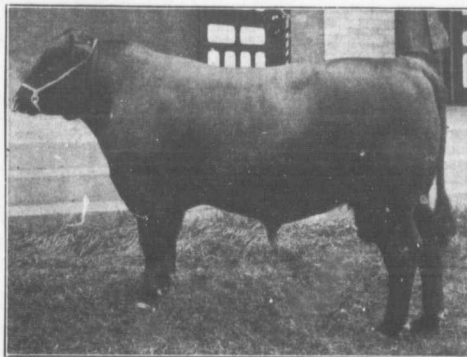
"This association should appoint a suitable committee to deal with this matter of a standing fruit market in Toronto until such is secured. It should do its best to show the City Council that if they wish to hold the fruit trade, they must, as soon as possible, build a suitable market to which all the transportation companies will have access on equal terms.

"The Canadian Express Co., working in conjunction with The Michigan Central and Grand Trunk Railways," continued Mr. Fisher, "have done much during the past season towards landing the fruit shipped from Queenston and intermediate stations in the Toronto market without delay and in good, marketable condition. We have had better facilities this year than ever before.

It is hoped that the company will do more for growers in future.

"The Dominion Express Co., working in conjunction with the Niagara Navigation Co., did their part at our end of the line, but when the fruit landed in Toronto, there was no decent place on the wharf for the commission men to handle it. It had to be loaded from the fruit trucks to wagons or drays, carted across the railway tracks to the fruit market and there unloaded again. The same is true of the fruit that is shipped from St. Catharines and vicinity to Toronto. It is well known that the oftener that fruit is handled, before the market is reached, the less it is worth. All these things go to show that the fruit market conditions in the city of Toronto can yet be greatly improved upon."

If the average farmer can get cows testing 3.5 per cent, and giving large quantities of milk, they will obtain better results than with cows testing 4 per cent, which give less milk, as they will have the extra by-products from the larger quantity of milk. Milk testing 3.5 is good enough for factory purposes as well as for city use. I like cows that give milk with a high butter fat test, but have been informed that such animals are more subject to tuberculosis. G. A. Gilroy, Holstein Breeder, Leeds Co., Ont.



Champion Angus Bull at Toronto and London, 1908

Owned by James Bowman, Wellington Co., Ont. A low-set "soggy" fellow, well headed and carrying it well down to his hocks.

given should be such as to retain the surface soil on top and thus ensure a clean seed-bed and the best condition of soil for the crops which follow.

Upon well drained land the clover plant as Mr. Brethen says is the best sub-soiler we can have, as it sends its long tap root down into the subsoil where its little fibres gather the mineral matters, the phosphoric acid and potash, storing these up in the structure of the plant where they are held and supplied to future crops. With such ability coupled with the means of being able to make use of the free nitrogen of the air (the most valuable element of plant food) and also store it up in its structure, the clover plant is the most important and most profitable crop which can be grown. It is the foundation of all successful agriculture wherever it can be grown and may well be called "the farmer's friend."

Toronto Fruit Market

Although the fruit growers of Ontario have been shipping their fruit to Toronto under very unfavorable market conditions during the past few years, considerable improvement has been made during the past season but there is yet plenty of room for further efforts in this direction. These points were brought out in the report