

bush., or 134 per acre, as compared with 13,918,698 and 86 in 1911. Annual average, 116.

Mangels 60,103 acres yielded 27,671,114 bush., or 460 per acre, as compared with 28,126,313 and 434 in 1911. Annual average, 458.

Carrots—2,742 acres yielded 747,207 bush., or 273 per acre, as compared with 815,129 and 254 Sugar Beets—21,054 acres yielded 7,819,066 bush., or 371 per acre, as compared with 8,941,659 and 363 in 1911. Average (6 years) 397.

Turnips—101,529 acres yielded 49,561,566 bush., or 488 per acre, as compared with 39,664,275 and 394 in 1911. Annual average, 431.

Corn for Husking—301,251 acres yielded 21,969,468 bush., (in the ear) or 72.9 per acre, as compared with 21,918,290 and 71.1 in 1911.

Corn for Silo—377,982 acres yielded 3,969,597 tons (green), or 10.50 tons per acre, as compared with 3,764,227 and 11.21 in 1911.

Hay and Clover (including Alfalfa)—3,367,369 acres yielded 5,220,713 tons, or 1.55 per acre, as against 4,238,362 tons and 1.28 in 1911. Annual average, 1.46.

#### LESS FALL WHEAT SOWN.

A smaller area of wheat has been sown this fall, owing largely to the lateness of the harvest, and the difficulty of getting on low lands owing to the frequent rains. The Georgian Bay district is the only fall-wheat section closely approaching its own normal acreage. Correspondents report a favorable seed bed, and most of the fields of new wheat look fairly promising, although there is a rather small top owing to late seeding, and the comparatively cool fall weather. Sowing ranged from the last week of August until the first week of October, most of the crop having been put in between the 9th and 15th of September. Only scattering mention was made of the Hessian fly, in the counties of Elgin, Norfolk and Grey.

#### BEANS AND POTATOES.

But for the continued rains of the early fall, beans would have done well. The wet weather, however, was hard upon the crop, many of the pods being imperfectly filled owing to uneven ripening, and the beans in some cases were discolored and rather soft. Harvesting was very late on account of the almost steady rains; in fact, some beans were yet unpulled at the end of October.

Potatoes have been the disappointment of the season. The fields promised most liberal at the time of digging, and the appearance of the tubers was first-class. Since being taken up, however, considerable of the crop has rotted in the cellars and pits; and while some correspondents report no injury from this cause, the bulk of the returns place the losses from rot at from 5 to 60 per cent. The rot has been the worst on low-lying fields and heavy soils. Correspondents found it difficult to estimate the yield of sound potatoes. Their remarks show that a record crop would have been reported but for the unusual severity of the rot, and that material deduction should still be further made from the results of these estimates, tabulated elsewhere in this bulletin; on account of the continuance of the rot. The white grub also did injury to the growing potatoes.

#### PASTURES AND LIVE STOCK.

Summer and fall pastures were never better, the frequent rains keeping the grass green and fresh. All classes of live-stock are reported to be in good condition for entering the winter; and to add to the cheerfulness of the live-stock outlook it may be said that all classes are reported to be remarkably free from disease. Cattle for beef are comparatively scarce, but those offering are of fair quality as a rule. Cows for the dairy are also in brisk demand. Sheep are not so plentiful as they ought to be, but are said to be in fine condition, notwithstanding the unusually wet season. Hogs are being continually marketed at good prices, but there were not sufficient to meet the demand, and some are said to be disposed of in a rather unfinished condition. Silos for corn are steadily increasing in number, and are strongly recommended by those who have them.

The flow of milk this fall has been larger than usual, although not in proportion to the appearance of the fields, as, owing to frequent rains the grass was more watery or "soft" than ordinarily. With high prices for cheese and butter, particularly the latter, dairymen have had a good year, and as one correspondent phrases it, "will break the record for fall supply." More cream is being shipped to towns and cities than ever before.

#### FODDER SUPPLIES.

It is several years since the outlook for fodder supplies was so generally promising in the Province.

Hay was a good crop, and while much of the grain is inferior in quality it will still have a fair feeding value. For these reasons and on account of more alfalfa being fed, less mill feeds will be purchased, which means much to farmers, with bran costing from \$22 to \$25 a ton, and shorts

from \$26 to 30. The excellent fall pastures have also contributed to lightening the task of winter-feeding in the stables. In most localities an increase in market prices would still coax out a fair supply of hay and grain, although most farmers prefer to feed all their supplies.

#### POULTRY.

Reports concerning poultry are on the whole favorable. High prices for both eggs and flesh have encouraged many farmers to give more intelligent care to this branch of the farming industry. The very wet season, however, was somewhat trying to all classes of poultry excepting ducks, turkeys being most affected. A few complaints were also made that hens fell off in their laying sooner than usual this fall. Poultry profits are estimated by correspondents to range all the way from 150 per cent. to zero.

#### STATISTICS OF LIVE STOCK.

The numbers of live-stock on hand on July 1st, 1912, were as follows:

Horses: 742,139 against 727,916 in 1911, and 724,384 in 1910. Milch cows: 1,044,177 against 1,045,610 in 1911, and 1,052,796 in 1910. Other cattle: 1,530,603 against 1,547,595 in 1911, and 1,514,332 in 1910. Sheep and lambs: 1,021,848 against 1,040,245, in 1911, and 1,065,101 in 1910. Swine: 1,702,652 against 1,744,983 in 1911, and 1,561,042 in 1910. Poultry: 13,024,983 against 12,942,293 in 1911, and 12,460,787 in 1910.

The number of live-stock sold or slaughtered in the year ending June 30, 1912, were as follows:

Horses: 101,911 against 105,741 in 1911, and 97,900 in 1910. Cattle: 849,140 against 837,544 in 1911, and 817,239 in 1910. Sheep: 531,957 against 505,015 in 1911, and 512,909 in 1910. Swine: 2,088,874 against 1,964,937 in 1911, and 1,844,405 in 1910. Poultry: 5,501,913 against 5,011,313 in 1911, and 4,164,715 in 1910. The clip of wool was 3,669,419 pounds against 3,780,798 in 1911.

#### Plowing and Subsoiling.

Editor, "The Farmer's Advocate":

From early days of bush farming, until recently, it was thought all right to plow the land no matter how wet it might be, that the frosts of winter would make it all right.

This fallacy on such clay lands as we have in Bruce County must give place to dry plowing.

No doubt, we may experience seasons like the present fall, when the ground is always wet, and an impossibility to have it reasonably dry when the plowing must be done in spite of weather.

In ordinary seasons the dry plowing is seen to produce the best crops, and quite a lot of farmers are getting sulky plows, as they will penetrate the hard soil more readily than the walking plow.

For from twenty to fifty years the same system of tillage has been employed, turning six to eight inches of the soil over, and preparing the same surface for the seed-bed year after year without any movement of the subsoil. I am not against surface culture, for it is there where the elements of plant growth are most plentiful, but the past very wet season has shown that the subsoil has gotten so compacted that even on the fairly drained land the water lay on the surface, being unable to pass to the drains.

Since the rotting roots, which formed a natural sieve to carry the water to a lower level, have been absorbed into the soil, rains and droughts have had an injurious effect on the growing crop, water lying too long on the surface, and rendering the soil a better conductor of heat, causing greater evaporation and rendering the subsoil too hard and dry to supply moisture for the surface and the growing plants.

To remedy this condition, subsoiling will be a great help in opening up the hardpan, if I may so call it, and making it fit to retain moisture for the surface and to let the deeper roots penetrate.

There is no need of bringing up the lower soil. It can be broken up comparatively easily with a subsoil plow, which only shoves the earth over a few inches and gives fairly good drainage and ventilation for a few years.

The draining and subsoiling having been done, then the surface must be attended to, and this I would work as little as possible in wet weather. The less tramping in wet weather, the better for the subsoil.

Wherever stubble is to be plowed, it should be gone over lightly as soon as the crop is off, to cover all weed seeds so they will germinate.

In regular plowing, whether stubble or sod, I recommend a skimmer plow. This plow, when properly used, will make a sod field to look like a summer fallow, with no sign of lapping of furrows, nor green edges sprouting up a few days after plowing.

Owing to the use of machinery, the practice has become general to have very few, if any, water

furrows, and to this is partly due the many failures of crop. Leave plenty of furrows to carry off quickly all excess of water—it benefits even in dry years.

Bruce Co., Ont.

WM. WELSH.

#### Improved Tobacco Culture in Ontario.

About four years ago an experimental station, covering 38 acres, was established by the Federal Government at Harrow, Ontario, to propagate among the Southern Ontario growers the most rational methods to be followed in growing tobacco, to study the respective merits of different varieties, and to test the formulas and quantities of fertilizer and manure which may give the best results. From the first year different varieties of tobacco have been tested. Some, such as White Burley, constitute the bulk of the crop of the district; the main object was to try to increase their yield, their earliness if possible, and to improve the shape of the leaves. Others, such as the Big Ohio, the Blue Pryor, the Seed Leafs, etc., to ascertain if, under the special climatic conditions of Southern Ontario, they might not give better results than they do in Quebec. As to the latter varieties experience has proven that, with the exception of the Big Ohio for which the climate conditions are more favorable in Ontario, particularly on account of the longer season, these varieties succeed better in the Province of Quebec. Therefore our attention has been more especially devoted to the attention of growing Burley. By means of proper fertilization we succeeded in spite of the comparatively exhausted condition of the soil on the farm when we took possession of it, in obtaining from the very first season heavier yields than the average. We secured from an American station some seed of an improved variety of White Burley. We compared it with the ordinary Burley grown in Ontario, and in fact it proved superior, the leaves being larger, closer together on the stalk and more numerous; consequently the yield was heavier. It was from the seed produced by selected plants of this variety that samples were supplied free for two years to the tobacco growers of Ontario who applied for same. The number of applications might have been greater, last year, however, we feared that our stock might be insufficient. Many requests are accompanied by evidence of satisfaction with the previous samples. It is easy for any tobacco grower who cares about the quality and uniformity of his crop to secure one of these samples, the free distribution of which is announced in the newspapers long in advance. He will thus be provided with good stock, which he can maintain and increase in a few years, with the advantage of being able to apply to us again should he notice any variation or deterioration of the type. In such an important tobacco-growing centre as Southern Ontario, where attention is given to the production of a single type, it is desirable to obtain this type as uniform as possible. It will therefore be obviously necessary to use seed from the same stock, obtained from selected plants after their superiority has been ascertained.

F. CHARLAN,  
Chief of the Tobacco Branch.

#### Calcium Carbide for Ground Hogs.

In our issue of Nov. 7th (page 1947) was an item submitted by a subscriber telling how to kill ground hogs with calcium carbide. The directions read thus: "Take a piece of calcium carbide about as big as a butternut, dampen it and drop in the hole, cover with an old blanket or sod for a few moments to allow gas to generate, light a match, place it under your blanket and you have an explosion that kills him at once. Five minutes at each hole is enough."

A reader, noting this recommendation, has written to enquire as to the safety of the method. Upon this point Prof. R. Harcourt, O. A. C., Guelph, writes as follows:

"I may say that I had not heard of calcium carbide being used for destroying ground hogs, but I find that one or two men in the laboratory had heard of it being used with great success. I do not think that there could be any harm done in the use of it. If it is handled as described in your issue of the 7th November, there could not be enough gas generated to cause an explosion that would affect the operator. The acetylene gas, if prevented from rising, would naturally make its way down into the hole where the ground hog was. The gas generated from a piece the size of a butternut would not be more than, say, a couple of cubic feet. When this settled down in the hole the explosion would give a shock to the ground hog and leave the hole filled with impure air. When the gas was not under pressure, as in this condition, the explosion would not be violent enough to do any harm."

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