the crab-apples being almost a failure. British Columbia will harvest a very large crop. The samples in some cases are small, and much of the fruit is deficient in color. All the commercial orchards show a medium or a full crop.

The principal commercial pear orchards of Eastern Canada report a medium to full crop. In Southern Ontario the Bartlett maintains its pre-eminence as a crop-producer. The Clapp's Favorite and the Anjou also show good crops. The Kieffer has turned out better than was expected. The Duchess, however, is very light. The British Columbia crop is good, the yield in all varieties being satisfactory. It is noticeable that, with the increased efficiency in spraying, the Flemish Beauty is reaching the market free of scab.

The plum crop has not been large. The Bradshaw and Lombard have a light to medium crop. The Reine Claude and Gueii show, perhaps, as well as any of the varieties. Some rot is reported from British Columbia, where the crop is very large.

In Eastern Canada the peach crop has been very irregular, and quite conflicting reports have been received. As the crop approached maturity, and is being harvested, the general estimation would be that there is a medium to full crop, but light in certain varieties. The late peaches are even better than the earlier varieties. The Early Crawfords were better than usual. The Smock will be a medium crop. The Elbertas, however, are light. British Columbia reports a full crop of both early and late peaches.

FOREIGN FRUIT-CROP CONDITIONS.

Great Britain.—The anticipation of a short crop has been confirmed in Great Britain. Ireland has a small surplus of apples that will not seriously affect the market. The pear and plum crop is also light in Great Britain, so that market calculations can be made on the assumption of the local fruit crop being much below the average.

On the Continent, Germany, Holland, Belgium and France have suffered from very unfavorable weather. The fruit crop generally is poor.

United States.—The prospects in the United States are about the same as last month, and not very different from the same period last year. Of apples likely to compete with Canadian-grown fruit, there will be a crop somewhat under the average. No large surplus of winter-keeping apples are at present in sight, but, on the other hand, all winter producing sections have some apples, and in most cases a crop only a little below medium. The New England States will, perhaps, furnish more apples than last year. New York will have about the same quantity, or somewhat less. Ohio and Michigan have very light crops. The Pacific Coast States have a very large crop per tree, of excellent quality, which will go forward in boxes.

Great Britain is in a receptive mood for apples. The same may be said of Germany and the Continent generally. A correspondent familiar with Canadian conditions, and with ample opportunities to investigate in Belgium, reports that the openings in Antwerp are excellent, barring, of course, the want of direct transportation facilities. Several shipments went to Norway and Sweden last year, and gave general satisfaction. South African buyers are already collecting a cargo. Dealers from the United States have already made some purchases. The large cities of the Northwest are receiving this year large quantities of fruit from British Columbia, and for the first time possibly the fruit of Ontario and British Columbia have come into serious competition. In addition, there have been large consignments of fruit from Oregon and Washington. Up to the present time the markets are absorbing all that is offered. The excellent commercial conditions that exist in Canada as a whole warrant the assumption of good local market conditions.

The above is a digest of the Dominion Fruit-crop Report for September.

Protecting Grapevines and Berry Canes.

The questions presented below are so timely, and of interest to so many of our readers that we are presenting them here, that all may get the benefit of the answers given:

1. How should grapevines be pruned that were set out this spring; vines have grown to about five feet in length; also, how should they be covered to protect from winter weather?

2. How should blackberry and raspberry bushes that were put out this spring be pruned and covered. Blackberry-bush canes are lying on the ground. Should they be tied up to a stake?

Glengarry Co., Ont. G. E. J.

1. For your section of the country, where the vines should be laid down for winter protection, it would be best to train them according to what is known as the renewal or Fuller system. By this method, the vines the first year should be cut off within 8 or 10 inches of the ground at the time of transplanting, and during the summer two of the main canes should be trained along the ground, one each side of the vine, and these should be cut back at the end of the season to four or five feet. If the vines do not make this much growth the first season, they should be cut back close to the main vine, and induced to grow such canes the following season. The laterals from these main canes should be trained upward upon the trellis, which should be at least five feet in height. After the vines have reached full size, in the course of three or four years, the annual pruning consists mainly in cutting out each alternate lateral, and shortening any that are left to five or six buds, so as to leave about fifty new buds to the whole vines.

For winter protection, the vines are cut loose from the trellis and laid flat upon the ground. If this is done shortly after the ground freezes a little bit, a few frozen clods of soil would be sufficient to keep them flat on the ground, and usually the snow gives all the protection required. In a section where snow is liable to go off during winter, and more covering is needed, the vines should be fairly well covered with earth.

2. Amateurs are very apt to confuse blackberry or thimbleberry with black-cap or black raspberry. The blackberry would not likely be hardy in your section, although the hardier varieties of black raspberries should succeed. The main pruning which these require is to cut out all the old canes at the end of the season, and shorten any new ones to about four feet. If it is necessary to give them covering in your section, the roots may be loosened somewhat with a digging fork, and the canes bent over as close to the ground as possible without breaking them, where they can be covered with clods of frozen earth.

H. L. HUTT.

The Cider Industry.

Only sound apples are salable in the regular way. For that reason, one third of the crop, and sometimes one-half remains every year in the orchard unpurchased. Canadian growers in this way lose millions of barrels. It has been proposed to utilize them in the following manner:

First—Feed for cattle.
Second—Drying.
Third—Canning.
Fourth—Cider-making.
Examine and compare the methods:

First, Feed for Cattle.—Sixty pounds of apples are needed to make one pound of flesh. If you estimate it at 12 cents a pound, ten pounds of fruit give 2 cents.

[And, except in small quantities, apples are poor cattle feed, at that.—Editor.]

Second, Drying.—More than 10 pounds of green fruit is necessary to make 2 pounds of evaporated apples, for which one can obtain 5 cents a pound. The cost of evaporation is (for a farmer's industry), 5 cents for 10 pounds of green fruit. Consequently, in this way, these 10 pounds give about 5 cents.

Third, Canning.—Well-preserved apples in cans may be sold at 2½ cents a pound. At this rate, all being paid, we can make very little more profit than a cent a pound of green fruit. Unfortunately, that applies only to manufacturing on a large scale, and it cannot turn to good account worm-eaten, scabby, or slightly rotten fruit.

Fourth, Cider-making.—Apples of any description suit this industry. With 16 pounds of fruit one can make one gallon of pure cider, the price of which, being 18 cents, at least, and the cost about 6 cents, it gives 12 cents a gallon: that is, 7½ cents for 10 pounds of green fruit. And the pressed apples can fatten nearly as many hogs as the apples themselves, the greatest part of the nitrogen remaining in the pomace (pressed apples). Thus, cider-making gives at least 8½ cents for 10 pounds of green fruit.

Therefore, 10 pounds of fruit make, by feeding cattle, 2 cents; drying, 5 cents; canning, 10 cents; cider-making, 8 cents.

More cider would certainly be made in Canada if it were generally known how simple the process is. One needs only a cider mill to crush the apples, a cider press to extract the juice, and casks in which to pour it, and also some knowledge of the rules of fermentation.

Conclusions: Can only your sound apples which are too ripe for shipping.

With the remainder make cider. From these apples, as good (some claim better) cider can be made as that from perfectly sound apples.

Fatten hogs with the pomace.

Thus doing, you will certainly increase your returns by one-half, and often more.

PROF. L. MEUNIER,
Ingenieur agronome (France).

[Note.—The above article is the digest of an address given at the meeting of the Quebec Pomological and Fruit-growing Society, held at Sherbrooke, Que., August 31st last, and, while representing the attitude of many cider-makers, will scarcely receive full Canadian sanction for the use of all kinds of apples.—Editor.]

THE FARM BULLETIN.

Notes on the Plot Work of C. S. G. A. Members.

During this season the writer has been able to inspect all the plots of fall wheat, barley, oats, corn and potatoes of the members of the Canadian Seed-growers' Association, with one or two exceptions, in which case they were rather far away to visit at the proper time.

So far as the fall-wheat plots were concerned, they were up to the usual standard. There was some smut this year where members had failed to treat their seed with a spore-killing solution. It was generally a good year for fall wheat, and there wasn't as much difference as usual between the appearance of the hand-selected seed plots and the improved seed-plots.

The barley plots this year were an improvement on last year's plots, in being a better stand, and, on the whole, larger-headed. Some of them were rather weedy, however, and contained some oats in the plots. Duncan Carmichael, of West Lorne, had an exceptionally nice piece. It was the talk of the passers-by, it was so stout and well headed. There was marked evidence of improvement from selection in his strain of Mandscheuri.

The oat crop, on the whole, was good. There were a few plots below the average. There were some exceptionally promising plots. There were two or three cases where improved seed oats had been purchased by farmers to start plots of their own. In these cases the results were very gratifying. However, complaint was made in one or two cases, where pedigreed seed had been bought for $1.00 per bushel, that the oats contained quite a lot of barley. This was rather unfortunate, as it casts a reflection on the growers of pedigreed seed generally.

The potato plots were showing up well this year, more especially those in the northern part of the Province. It was very interesting to note the effect of superphosphate on one operator's soil in connection with all his hoe crops, except mangels. Alf. Hutchinson, Mt. Forest, was trying a large number of fertilizers on potatoes, but, judging from the appearance above ground, those treated with superphosphate were decidedly the most promising.

There were some very intersting features connected with the corn plots this year. Most of the operators are located in Essex County, where the rainfall was exceptionally light this summer. The effect of good cultivation was very noticeable both in strength of stalks and production of ear. Only a small proportion of the ears were covered well to the tips this year, due, no doubt, to the dry weather. Outside of Essex County, where there was a heavier rainfall, bunt was very common. Even in Essex there was quite a lot.

Two of the corn men have originated a variety of corn by crossing with Reid's Yellow Dent. In this way they have produced hybrids which are earlier-maturing than Reid's, and partake of some of the good qualities of Reid's.

With regard to the work of the Association in general, it may be said that the majority of the men are doing effective work. Some few, owing to a lack of efficient help, have been a little careless, and improvement in their crops is not so manifest as in others. Some soils used are most too weedy to get the best results. If this work is made the success it should be, great care must be taken in all the details, such as treating the seed for smut, keeping free from weed-seed impurities, and from getting mixed with other kinds of grain. Improved seed is in demand, provided the buyer can be assured he is getting the right kind of pure seed.

T. G. RAYNOR.

Another Poultry-feeding Station.

As has been shown by more than one article in our recent issues, it pays, and pays handsomely, to put poultry into market condition before selling, and to present them in attractive form when placing them on the market. Gunn & Langlois, Montreal, who have been carrying on an aggressive educational campaign, whereby they aim to raise the standard of the poultry business by demonstrating that it pays to do a thing right, and who have established egg-circles and feeding stations at several points, have just opened another feeding station at Thamesville, Ont., under the management of N. K. Cornwell, with J. G. Carswell, as expert, in charge. This plant has about a 3,000-bird capacity. It will be specially open to the public for one half day every week, when killing, bleeding, picking, packing and sorting methods will be demonstrated. This is an excellent opportunity for farmers in that community to learn what the market wants, how to meet those wants, and, incidentally, discover that excellent profits may be made by handling their flocks on a practical basis.