extra good, with the majority of good points slightly in favor of Bronze.

P. S.—Will be pleased at any time to give you any information that I can to make your excellent paper interesting.

OXFORD, S. R.

A. & G. Rice.—Fall wheat is thin and short in the straw caused by ice lying too long in winter and the drought. Prospects are half to three-quarters of a crop.

Fall wheat mostly follows barley, peas or sod, ploughed in July, with barnyard manure. There seems to be but little differenc between early and late sowing, all has alike suffered from ice in winter. Early sowing generally is the best other years.

Surprise and Red Clawson are doing probably as well as any variety.

There have been few new varieties grown around here the last two years. No doubt so little attention has been paid to new varieties on account of the low price. Most of our farmers have fed their wheat the past two years.

OXFORD, N. R.

H. BOLLERT.—Fall wheat in this section is a fair crop; stands well in most fields, but is unusually short in the straw. The heads are of good size, and well filled with large plump grains. Some fields suffered through the ice laying on too long, which caused the wheat to rot.

The preparation of soil, or the soil itself (which, of course, is very similar in this section), does not seem to have made any material difference, excepting the bare fallow, which does not give as good results as pea ground or clover sod ploughed down and well-cultivated. Early sowing, such as the latter days of August or the first days of September, proves best, and, unless the land is well-manured, it is useless to sow wheat at all, for it will fail nine times out of ten.

Numerous varieties are grown, as Golden Cross, Early Red Clawson, Democrat, American Bronze, Mediterranean, Velvet Chaff, etc., but all are so alike that scarcely any difference can be noticed this season.

Introduced the Gennesee Giant and Dawson's Golden Chaff last fall; the G. Giant stands well with very plump, thick, medium-sized heads, which contain six rows of grain, and I expect it to yield well. Dawson's G. Chaff I think will stand lighter soil than most other sorts; in the same fields, with the same preparation of soil, it made much ranker growth in the fall, which was also noticeable in the spring, but on account of this it suffered somewhat more from the severe May frosts, but it rapidly recovered, and now looks well, and will be ready to cut on July 23rd.

WELLINGTON, S. R.

James Bowman.—The crop in this vicinity is rather light in yield, quality and straw. It made a very good start, but the frost checked it so badly that when the extremely dry weather set in, it never seemed to recover fully. In Eramosa, in some places, it is a full crop but rather light sample. In Puslinch, reports are mostly gloomy, although some have good wheat, but not enough of it. For my part I have not seen a really good crop, but have heard that in Puslinch, where summer-fallow and pea stubble were tried side by side, the pea stubble has done best this season; in fact, the crop in this neighborhood is mostly sown on pea stubble, manured and ploughed, then a good seed bed prepared by harrowing. Some plough up sod and sow after one ploughing, others plough early, then, after sod is rotted, cross-plough and work up before sowing. The summer-fallow has left this neighborhood. I have not seen one in five years. Second-crop clover, ploughed in, makes a good mould for the wheat crop, but is not often used in that way here. Sowing is mostly done in the first half of Septemper.

Dawson's Golden Chaff is used to some extent with good results, but it is nothing extra this year. Surprise is also grown; also Clawson, Garfield, Velvet Chaff, and Democrat.

WENTWORTH, N. R.

James McCormack.—The wheat will not be an average crop; I might say that it is more likely to be under a half crop in this county, though I think the sample will be good. It came through the winter all right, but the May frosts, followed by the continuous drouth, was very injurious to the crops generally. Those on light, gravelly soil suffered the most. On thin land one farmer reports having 40 acres and will not have his seed; others report a second growth, which will be cut for feed.

Summer-fallowing generally gave the best results, but is not much practiced now. Wheat after barley or peas does well, and farmers now plough up sod when in good heart and well-handled, which gives good results when early sown; but I think that fairly deep land has done the best this year.

The varieties have not changed much this last year or two; our Golden Cross stands with most of them. This year we tried a little Dawson, which looks well, but cannot tell the result till after threshing; but I think the Manchester is about the heaviest cropper, though some favor the Red Clawson and some hold to the old White Clawson. The Harvest Queen was much spoken of a year or two past, but I think that has blown over.

W. A. Cowie.—Fall wheat has been in places a failure, owing chiefly to early spring frosts, and in part to excessive hot and dry weather during the season. Crops of fall wheat in this locality that promised 40 bush. per acre will yield 18 or 20, and that of an inferior quality.

The wheat crop has done better on well-prepared fallow, and by late sowing, early sowing seeming more liable to frost of spring.

The varieties are numerous, Dawson and Early Red Clawson being the most extensively grown, Dawson proving the most successful. As to sorts of wheat, nearly all the late varieties have at some time or other been grown in this neighborhood, including Dawson, Early Red Clawson, Surprise, American Bronze, Genessee Giant; the principal drawback in the majority of these varieties being the great liability to rust, especially American Bronze.

PETERBOROUGH, E. R.

F. Birdsall.—Winter wheat has suffered in common with all crops by the drouth and frost, but not to the same extent. The sample is not extra good, and will weight light.

Wheat sown on summer-fallow, where well-manured, seems to have done best, closely followed by pea ground that had been manured. It seems to have stood the drouth on clay loam soils better than on other land. Early sowing in the latter end August seems to have succeeded the best.

The Surprise wheat taken all round this part of of the county has stood drouth and frost, and will yield better than any other variety. Velvet Chaff and several of the old varieties have been tried, but the Surprise has proved itself superior to them all.

NORTHUMBERLAND, E. R.

Alex. Hume.—There are some fields good, some fair and others poor, partly as it was generally sown on stubble, exposure and late sowing.

On summer-fallowing, or pea stubble, low, rich ground; early sown.

Surprise, Red and White Clawson and Velvet Chaff, quantities in order named. Surprise is not good, as a rule. Old Clawson is thought by many farmers to be as good as any. White Canadian Velvet Chaff I have seen is fairly good. American Bronze is sown west of us, but I cannot tell how it has done.

PRINCE EDWARD.

W. C. Huff.—The winter wheat crop is from fair to extra. Had it not been for the drought, wheat would have been an excellent crop generally, for it wintered well.

The largest yields were grown on summer-fallows ploughed three or more times, which also received an application of farm-yard manure, although some good crops were produced from pea and barley stubble ploughed twice and sown. Early sowing is decidedly the best, and as to soil, loam is superior.

The varieties are White Peare, Red Clawson, Manchester and Velvet Chaff, the first two are extra, the others fair: some of the difference may be attributed to the soil, locality or preparation.

Autumn Cultivation.

Every stubble field that is not seeded should be shallowly ploughed and harrowed as soon after being cleared as possible. While the single plow does best work, the gang or twin plow, if kept furnished with sharp shares, will do the work about as well and much more quickly. After showers, or while heavy dew is on the grain, the time cannot be better spent than at this work. At this time the ground has not become baked, which, if left a few weeks with stock running over it, will be almost unploughable in heavy clay if rain does not fall copiously. This is one of the most productive ways of exterminating weeds. It not only starts myriads of seeds to sprout and grow, but it cuts off Canadian, Sow thistles and other bad perennial weeds at a time that gives them the greatest set-back. Run the cultivator over the land a few times during the next six weeks, and then give it a good, deep and careful ploughing before winter, when the field will be ready for spring seeding.

DAIRY.

Pure Cultures in the Dairy.

The experimental dairy at the Dominion Farm, Ottawa, have made practical tests with several Cultures of bacteria used in ripening cream. The Cultures put under test were: (1) Zoffmann's pure Culture of lactic ferment; (2) Chr. Hanson's pure Culture of lactic ferment; (3) Central Experimental Farm Culture, and (4) ordinary buttermilk. No. 1 was manufactured in Denmark; its action upon milk and cream was to give it a flavor of sour whey. When the starter prepared from it was left standing for a short time the whey or water appeared on the surface. No. 2 was also prepared in Denmark. The starter prepared from it had a pleasant, clean, though somewhat weak flavor. No. 3 was prepared at the Dominion Experimental Dairy. A small quantity about two quarts of skimmed milk was heated to 205 Fahr. The temperature was maintained at that point for ten minutes, after which, and while exposed to the atmosphere of the butter-making room, it was cooled to 80 Fahr; it was left in a close glass-stoppered bottle at the ordinary temperature of the dairy room, from 60 to 70 Fahr., for five days. It was then found to be coagulated and to possess a mild pure lactic acid flavor, which became more distinct after it had been kept in cold water at a temperature of 40 for three days. This was the Culture. As the flavor was such as was characteristic of cream from which fine-flavored butter had always been obtained, it was decided to prepare from it a fermentation starter for the ripening of cream. The starter was prepared by heating a quantity of skim milk (equal to about ten per cent. of the quantity of cream to be ripened) to 150° Fahr. The temperature was maintained at that point for ten minutes, after which it was cooled to 80° Fahr. A portion of the Culture at the rate of ten per cent. of the quantity of skim milk was then added to it. This became the fermentation starter. It was left to ripen at a temperature not exceeding 80° Fahr. for twenty hours. When the flavor and odor were distinctly acid it was placed in cold water at a temperature of 40° Fahr., and kept cold in order to arrest further development of the ferment. The flavor was somewhat sharp and quite pure. The butter made from the cream which was ripened with it had a richer flavor and better keeping quality than that made from the others.

The conclusions arrived at by Prof. J. W. Robertson from the comparative tests are:—

(1) The flavor of butter is largely determined by the ferments (or bacteria) which develop in the milk or cream.

(2) The ferments which cause milk or cream to ripen are ordinarily introduced into them from the atmosphere, from the milk vessels, from the bodies of the cows, or from the clothing and persons of the milkers.

(3) Where no disease exists, and where no offensive odor is prevalent, the ferments which get into the milk and cream produce only odors and flavors which are agreeable in the butter.

(4) The atmosphere of a thoroughly clean dairy building contains ferments which get into all milk and cream exposed to it, and which are capable of imparting to the butter a flavor of high market value.

(5) The Culture of ferments obtained from that source—the Central Experimental Farm Culture—imparted a more valuable flavor to the butter than the pure Culture of lactic ferment from the Danish laboratories.

(6) The home-made Culture produced slightly more butter per pound of butter-fat, in slightly less time than when the other Cultures were used.

(7) Every buttermaker may make a Culture of ferments for the making of a fermentation starter of excellent quality, in his or her own butter-making room, if everything in and about it be kept scrupulously clean.

(8) The use of a fermentation starter of fine flavor imparts to the butter made from stable-fed cows, and from cows which have been milking for periods of more than six months, a flavor of high market value, which is not usually obtained otherwise.

The "Thistle" Milking-Machine.

The new "Thistle" milking-machine was shown at the recent English Royal. The one in operation was for milking ten cows at one time. A pipe ran along the shed over the stalls, and from this branches were conveyed between each pair of cows to which the apparatus was attached. The power was provided by a 2½-horse power engine standing at one end of the shed. Each milker consists of four india-rubber cups, which fit over the teats and are joined to a tube leading into the pail which stands beside the cow. The milk is received into a glass chamber at the top of the pail, and the suction-pipe also runs into this chamber. The action is described as "pulsating,"—imitating the act of a calf in sucking. The machine, to all appearance, did its work well and effectively, the cows being milked in about ten minutes without any sign of their being inconvenienced by the process. So says the Agricultural Gazette.

The agricultural correspondent of the Western Daily Press, Bristol, who is a practical farmer, in his notes on the Royal Show says of this milking-machine: "There seems to be only one draw-back, and that was that the cows were not stripped absolutely clean. This, I need scarcely add, has to be remedied by hand. Although considerable ingenuity is displayed, I don't think machinery will altogether take away the milkers' trade for some time to come."

APIARY.

Bee-Escapes.

BY JOHN MYERS.

As the time is approaching when the surplus honey will have to be removed from the hives, and as the profit to be derived from it is determined, in a great measure, by the amount of labor bestowed thereon, we should see to it that we have the most improved implements made, in order to lessen the labor as much as possible. The bee-escape, I think, is one of the greatest labor-savers, when taking off surplus honey, that has ever been invented.

There are a great many kinds of escapes made, but I think the Porter is the best and most complete, and I have tried nearly all of them. The Porter Escape, being very simple, is made of tin, and contains a pair of very sensitive springs, through which the bees can pass very easily one way, but when they try to return or go through the other way the spring closes, and the harder the bee tries to go through the more difficult it is for her to do so. I think one of the features that makes the Porter Escape more complete in its workings than any of the others is because it more nearly closes the connection between the bees in the super and those in the brood nest. The bees in the super have to con-