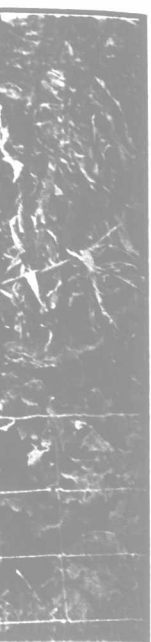


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cases are also cited of 2-year-old rye and 50-year-old showing nil; nearly all the records over 12 years old show nil. In clovers, the highest recorded is 87 per cent. from fresh seed, 12 years and over invariably showing nil. It should be stated that different ways of treating these old seeds were tried, such as moistening them with water or acid, putting them in soils, etc.

The conditions for longevity are partly inherent in the seed itself, and partly due to external conditions. Fairly cool, dry, airy conditions preserve seeds best; while, in the soil, seeds last longer in the deeper layers than in the surface ones. Seeds with impermeable coats are also naturally most likely to last longest in the soil.

In case of all ordinary seeds, the drier they are, the longer they are likely to last, and that applies more especially to the starchy seeds. The property of longevity is an hereditary peculiarity inherent in the living protoplasm. The conditions favorable to germination are, of course, water, oxygen, and a certain temperature, the proviso being added that the two former must be able to penetrate the seed in sufficient quantity. There appears to be some diversity of view as to the effect of light upon germination, though, in practice, various small seeds must be superficially sown to germinate well, and this is due directly or indirectly to their exposure to the light. In case of grain intended for seed, the general deductions to be drawn from these researches are that it should be thoroughly matured, and so harvested and housed that it will be preserved dry, and at a moderately-low temperature.

THE DAIRY.

Dairying in Eastern Ontario.

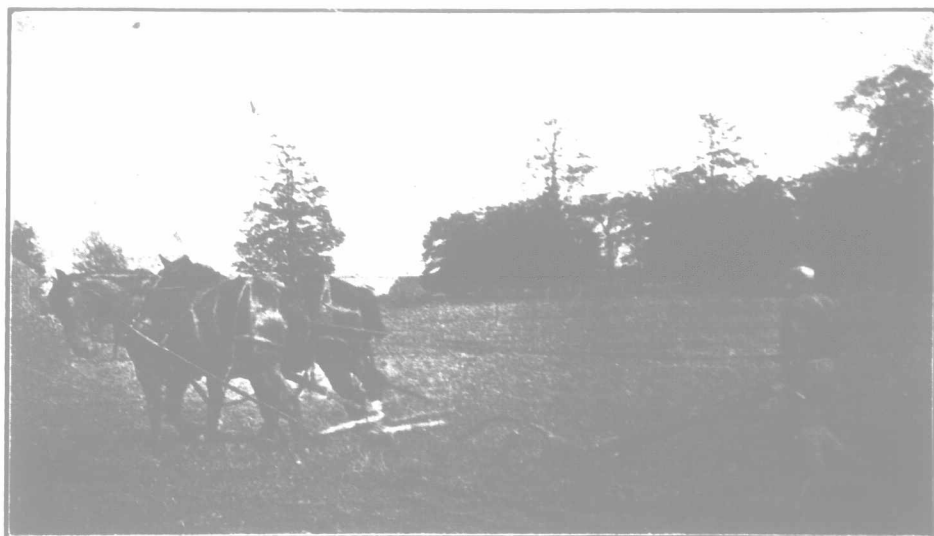
Not often does one have so favorable an opportunity to see things as was afforded the representative of "The Farmer's Advocate" last week, when he visited the Brockville cheese section, in company with G. G. Publow, Chief Instructor for Eastern Ontario. Mr. Publow has been on the road in the interests of Ontario cheese for 23 years. He knows every factory and its conditions from Toronto to Montreal; he has faced every difficulty of cheesemaking in his section, and has solved many of them. Having so intimate a knowledge of the business, his success among the makers follows naturally. Accompanying him was the district instructor, A. H. Wilson, of Athens, whose interest in the welfare of the cheesemakers and the milk producers of the district is not surpassed. Completing the party was Senator Dan Derbyshire, born in the district, once its school teacher, later its cheese manufacturer and buyer, then its representative at Ottawa, and now its Senator. He knew every farm, every man, his wife and all the children; and, besides being always entertaining, his intimate knowledge of every factory and its supplies made him a valuable source of information for the party. The Senator has always been a great encourager of factory construction.

The first part of the current season has proved ideal for cheesemaking in Eastern Ontario. The weather was cool, and grass plentiful, making the supply of milk unusually large, while the natural conditions prevented the development of harmful bacteria. Mr. Publow declared that better cheese never went on the market than in this year, and that it was difficult to find an inferior cheese from Eastern Ontario during May and June. The total quantity of cheese for this year so far is just about up to that of last year. In some sections it is considerably less, due to an export trade. In the Eastern Townships of Quebec, and along the front of Eastern Ontario, there is developing a considerable export trade in cream and casein to the United States. From the Brockville section a refrigerator car is shipped daily, going to Morristown, N. Y. The contract with the consumers varies. One factory, which had just begun shipping, is to receive, net, nineteen dollars a ton for July and August milk, and twenty dollars a ton for the remainder of the season. The buyers pay the maker or operator, and all shipping expenses. Producers are paid every week. This is somewhat better than present prices for cheese, but may not be later in the autumn.

It is difficult to tell with assurance the degree of wisdom in the development of this trade. Instructor Publow cannot understand why, if it is a desirable proposition, the American farmers do not supply the necessary milk. It seems a pity to have a factory organization demoralized for a part of a season or more for the very little advantage apparently gained in this new trade, especially when we have a cheese trade that should never be neglected, that has been the basis of prosperity for much of the country, and that should be broadened, not curtailed.

The manufacture of whey butter is on the in-

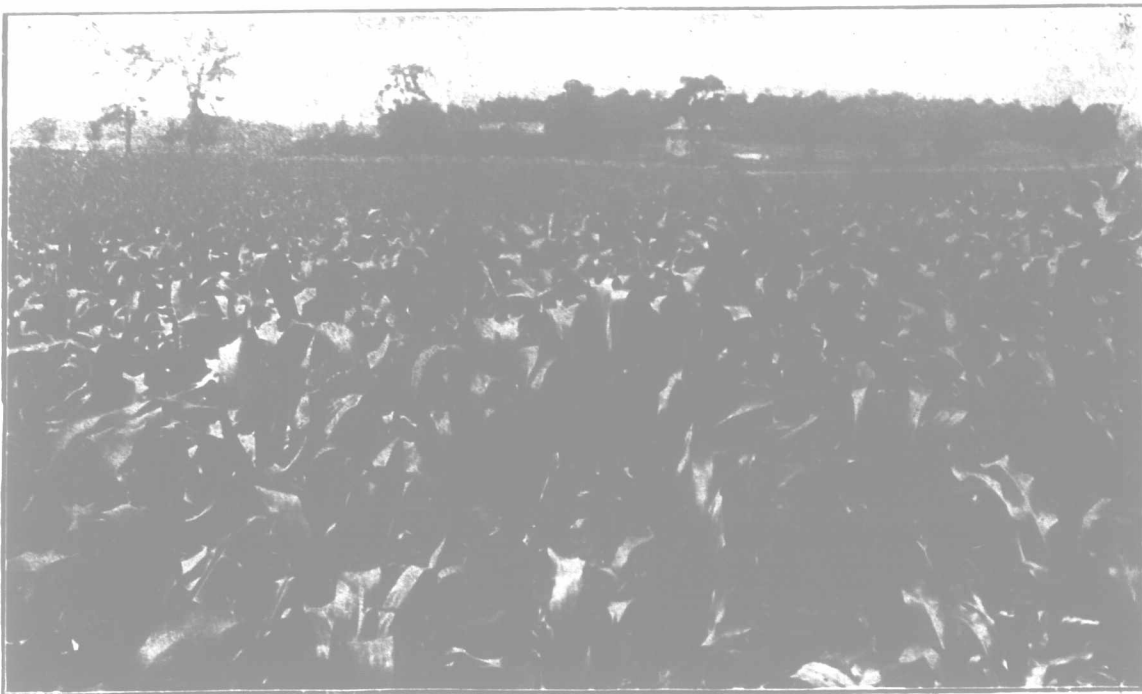
crease. "What do you think of this phase of the industry?" Mr. Publow was asked. "If I were a maker, I would like to make whey butter; if I were a patron, I would not want it made." And the answer tells the whole story. The contract between patron and maker usually gives the maker two-thirds of the returns the first year, and a half for succeeding years. One factory of about seventy patrons made about three thousand dollars' worth of such butter in its first year. The maker got fifteen hundred dollars; the seventy patrons, if each had received an average share, would have had each about twenty-two dollars more for the season, which would have meant about four dollars more on each monthly check, an amount that would scarcely be noticed, while, without doubt, the depreciation in feeding value of the whey was felt, at least, by the pigs. In some factories whey butter has been made for four or five years; some are abandoning it. The product is sold locally or in adjacent towns, and was encountered at almost every table for a week by the writer.



Plowing for Fall Wheat.

While the quality of the cheese during the first part of the season was excellent, makers have kept the Chief Instructor going almost twenty-four hours of the day of late, on account of the difficulties which have arisen. The hot, dry weather has been favorable for the development of undesirable bacteria—and they have been developing. There has been more trouble this year than for several years past with bitter-yeast ferments; gas has not been giving a great deal of trouble, but, in combating gases, the makers have freely used the acid culture, which is a suitable media for bitter-yeast growth, and, some of their cultures becoming contaminated, they have had troubles enough.

The district inspectors are kept busy assisting the makers, and suggesting to the farmers better methods of caring for milk. A. H. Wilson, instructor for the Brockville district, reports a steady improvement in the care of milk. Aeration has been abandoned, and water-cooling is being gradually installed. Much still remains to be accomplished, however, in this respect. Ninety-five per cent. of the farmers in this section have silos, and almost all the best of them are white-washing their tables, and making them as sanitary as possible. To these advancements they must add covered milk-stands, well removed from all sources of odors, and convenient to cold water; fresh, pure water for the cattle, and clean, sterilized utensils.



The Giant Up-springing Corn.

The Profitable Dairy Cow.

Some valuable hints on the care of the cow before and after calving, and the successful rearing of the calf, are given in a sensible article contributed by F. H. Scribner, a practical dairyman of Wisconsin, and appearing in a recent issue of the Jersey Bulletin, from which the following extracts are quoted:

"Never in the history of our country was there so much encouragement from a pecuniary standpoint, to do things right in all lines of farm operations as to-day. The high prices of all farm products is going to have a tendency to bring out the best there is in us, which means more thought, more study, more care, and also unquestionably means in every case increased results. The same rule applies, also, to our live stock, as there never was such a demand for good, well-bred stock as to-day, and, with prices so remunerative that it ought to get our system so inoculated with the bacteria of progress that our thinker would work

quicker, and bring us into line with the progressive, money-making dairymen.

"The old Scotch adage, 'Trut father, trut mither, or foal can na' amble,' and about the same rule applies to animal as well as human development—hereditary characteristics, strong physical bodies, education, kindness and care, and an opportunity to bring out the best there is in us. And, in treating on this subject, I want to take it up along this line.

"In considering the topic of a physical body, I should say that a cow should have from six to eight weeks' rest before freshening time, to permit the recuperation of her body, which necessarily means that when the calf is dropped it will also have more vitality. When the cow is nicely dried off, she should have plenty of succulent, nourishing and easily-digested feeds to keep her in a laxative condition. A box stall should be part of the furniture of every well-regulated cow barn, and should be about the same temperature as the stable, or a little warmer, or it would have a tendency to congestion or a stagnation of the blood, thereby causing disorder of the functions.

"The easiest time to kill a weed is just before you can see it, and the easiest time to kill disease is to prevent it. When the little fellow arrives, the first thing to think of is to disinfect the navel cord, to prevent germs of disease entering the system. A good lesson can be learned from some of our best horse-men, who are paying a lot of attention along this line.

"Nature has provided something in the first milk that is very essential in getting the calf's digestive machinery started right, and I think the youngster should be permitted to have it. We usually leave the calf with the cow a couple of days, until it is nicely straightened up. The most important time in the life of the calf is when we take upon ourselves its feed and care, and here is where we want to exercise a lot of kindness and gentleness, for if you are impatient and rough in your treatment with them, they will distrust you