

private dairies. In many instances as good a quality of butter has been made in a private dairy as in a co-operative creamery; but, while this is so, it does not follow that every private dairy can or will do so. The great fault with butter gathered together from private dairies is its lack of uniformity, and in more respects than one is this true. It is because of this fact that it is not possible to gather up large quantities of butter for export except from the co-operative creameries. The success of our export butter trade, then, depends upon co-operation, and the more complete the co-operation the greater the success will be.

Stamina in Live Stock.

In a recent issue of *The Breeders' Gazette*, Professor Thomas Shaw treats this subject in a thoroughly practical way and claims that the average improved animal of to-day will not compare in stamina with the average improved animal of former centuries. The following extract gives the drift of his argument:

"In the improvement of live stock, many changes have been made, and some of them of great significance. The meat making animals of to-day stand in strange contrast to the meat-makers of two or three centuries ago, and the same is true of the average dairy cow. The new and improved breeds of American swine are a wonderful advance in comparison with the razor-backs of a hundred years ago. But there is one respect in which there has been a retrogression all along the line. We have good reasons for the belief that the average improved animal of to-day will not compare in stamina with the average animal of former centuries. While breeders have improved the form and the character of the digestion they have paid all too little attention to the improvement of the lung power and the action of the heart. There is no denying it; the average of the improved herds and flocks of to-day are delicate. In some instances they are held firmly in the grip of weakness; hence they go out into the land, not to effect improvements, but to transmit inherent weakness. Take, for instance, the average Shorthorn of to-day. In comparison with the average grade it is delicate. Take the average dairy herd of purebred cows and it is in many instances seething with tuberculosis. Take the average Poland-China and with all its excellence in feeding qualities, its breeding qualities, its bone and its all round stamina are not equal to those of its ancestors half a century ago. The bugler of the vast army of improvers of live stock, therefore, should blow a loud blast that will call a halt in some of the methods practised by breeders of purebreds the world over. Two or three leaves they must tear out of the book of past practices and they must begin again. One of these is the leaf of in-and-in breeding, a second is the leaf of selection, and a third is the leaf of environment."

There is certainly much food for thought for breeders of purebred live stock in this paragraph. If it is true that, in the great advancements in breeding methods of late years, form and performance have been gained at the expense of stamina the subject is well worth considering. Not that form and performance should not be cultivated, but that stamina in live stock has been, to a certain extent, lost sight of in the improved breeding methods of recent years. As Professor Shaw points out, the one can be developed as well as the other if only right methods are adopted, and some methods now practised discarded or modified.

In regard to the effect in-and-in breeding has in causing weakness to be perpetuated, he points out that, though it may be used as a short cut to improvement when breeds are evolved, it may be given a temporary place now and then in the practice of wise breeders, but the average breeder of purebreds has no business to tamper with it. When long continued, its effects are only baneful with both animals and men. In regard to the second leaf; selection based upon performance in the ancestry for several generations back has been given first place in the creeds of all improvers in the past. Professor Shaw claims that this should not be so unless such performance in the ancestry is accompanied by strong evidences of vigor in the animal selected. In doing so, he does not urge that performance in the ancestry should be ignored. It is of great account, but only when accompanied by undiminished vigor in the progeny. For instance, of what avail will renown in the ancestry prove in a young bull reeking with tuberculosis? As to the question of environment, it is filled with mistakes. In seeking stamina by

proper environment do not go to the extreme of undue exposure.

In concluding his article, Prof. Shaw says:

"We have reached an era in live-stock breeding. We do well to heed that it is so. For good, all-round useful males of the beef and mutton classes there will undoubtedly be a good demand for years to come. This demand is going to set men breeding them. May the work be properly begun! Let it be placed on a proper basis. Men who begin breeding cattle now have no business to begin on foundation animals that have not been tested, and those who are now breeding are not justified in bringing into the herd a bull that has not been tested for tuberculosis. Not a few of our purebred herds are so contaminated with this deceitful disease that to choose sires from them without testing them would be suicidal to the interests of the individual who made such a choice. Correct type is a grand thing in breeding animals. But if type is carried to the extreme of bringing along with it delicacy it is overdone. The sharp crops and the spare form in the dairy cow are very good in their place, but if they are sought so far as to unduly contract the chest let us have a little less of them. The compact form and easy-keeping qualities in the improved hog are certainly desirable, but, if we get these so perfected as to impair breeding qualities and weaken locomotion, let us have a hog a little longer in body, though it should take a little more food. The broad, deep and thick body in the beef animal is good, but if we secure it to the extent of general sluggishness let us call a halt in that direction."

Hired Help on the Farm.

"I want to hire a man and wife, with no children, able and willing to work on a farm. I will pay \$30 a month at present, and increase the wages if they prove trusty. I want the man to help me work my farm, and his wife to help with the housework."

Referring to this paragraph from one of its readers in the State of Washington, *The Rural New Yorker* says:

Some married couples might be inclined to turn up their noses at the idea of giving their joint services for \$30 a month; but we will warrant that not one-tenth part of the farmers, the country through, will have so much clear money at the end of the year as a couple working on these terms. Of course, board and washing are included, and these are worth at least \$20 a month more for the two, making the actual amount received not less than \$50 a month or \$600 a year. The sole outlay is for clothes and these need not be expensive. Compare this with the income of the city man receiving, perhaps, \$1,000 per year. His house rent will be anywhere from \$15 to \$30 per month, say \$250 per year. His railroad fare will be about \$75; his bill for groceries, \$125; meat \$100; milk, fruit, etc., \$100; fuel \$50, total, \$700. This leaves only \$300 to buy clothing, which must necessarily cost more than on a farm, pay doctors' bills, church and other expenses, and the numerous little incidentals that are continually arising. Carriage rides, excursions, and any little outings must be paid for in cash. The above estimate of expenses is a very modest one, and does not take into account the keeping of a servant. So it would seem that, under the proposed arrangement, the hired man and his wife would have more clear cash at the end of the year than the city man who is working for what many people consider a very fair salary."

The above shows us the "hired help on the farm" question in a new light, and, though the comparisons are made under American conditions where city living is higher than in Canada, this comparison is well worth considering by everyone working on a farm. It will be seen that the man living in a city on a fair salary hasn't sunshine all along his pathway. But if the comparison is made with the average working man of the city the advantage is much more in favor of the farm. There are many young men and married men with families who are working in our towns and cities for a mere pittance, who would have a better living and more money at the end of the year if they engaged as hired help on the farm.

But, in the face of all this, young men and the poorer country people continue to flock to the cities. We may well ask the reason why. The city has attractions, no doubt, which the country cannot give, but, when these are compared with the clear gain to be derived from working on the farm, the latter outweighs them. It may be that if shorter hours, excepting during harvest, were observed on the farm it might be easier to retain the hired help. When a young man, for example, has to work from daylight to dark every day during the year he begins to feel that farming is a kind of drudgery he wants nothing to do with, and prefers to work in the city where the hours of work are shorter, though the net gain is not so great.

The Agricultural and Dairy Commissioner's Report.

The report of the Commissioner of Agriculture and Dairying for 1897 has just been issued. To say the least it is one of the most valuable and complete reports ever issued by the Dominion Department of Agriculture. As promised a month or two ago, it contains an immense amount of practical and interesting information regarding the many lines of work which have come under Professor Robertson's charge since he assumed his present duties. These include among other things: A summary of the dairying service in the provinces; the Dominion dairy stations; the winter dairying movement; cold storage; visits to Great Britain and Ireland; trial shipments of fruit; eggs and poultry; the production of pork; dairy legislation; registration numbers of cheese factories and creameries; report of the Assistant Dairy Commissioner; reports of agents in Great Britain; and dairy bacteriology.

The portion of the report of most vital importance to the farmers just now is that referring to the cold-storage shipments of fruit, eggs and poultry and the production of pork. Reliable and specific information, with suitable illustrations, is given on these topics, which should be read by every dairyman, fruit-grower, poultryman and swine-breeder in the country. This information bears more directly upon the methods to be adopted and the practices to be followed in developing our export trade in butter, fruits, eggs, poultry and bacon. Everyone realizes the importance of definite information along these lines, and, therefore, the commissioner's report is timely and to the point. We shall, for the benefit of our readers, give suitable selections from this and other reports as the occasion demands.

Diversified Farming.

One of the chief beauties of Canada as an agricultural country is that its climate and conditions of soil admit of a diversified system of farming being carried on. Too many Canadian farmers do not fully appreciate the immense advantage this gives them over the farmer in a country where the conditions will only admit of one or two lines of farming being carried on. As a rule, countries where only one or two lines of farming can be practised are more subject to famine. For example, India, when the wheat crop is a failure, or China, when the supply of rice runs short. In North America, and more particularly in the Dominion, there is little if any danger from famine. If one crop fails, the conditions that have brought about the failure are usually conducive to the growth of another crop.

The Canadian farmer, then, should make the most out of the advantages he possesses and follow a system of diversified farming. Though wheat brings a high price, it will never pay to grow wheat and nothing else. Likewise it is not advisable to follow a system of grain farming only; nor on the other hand is it good practice to go into stock altogether, though we believe that for Ontario and the Eastern Province a system of farming in which stock-raising and dairying largely predominate is the best line for the farmer to follow. To be a grain farmer it is not necessary to sell the grain direct off the farm. It is sold just the same if it is fed to live stock, and their products taken to market.

According to *The National Stockman* the supply of young cattle is increasing in some of the states. Throughout 1896 and 1897 comparatively few calves were marketed. Pastures were generally abundant, beef cattle sold well, and there was every inducement for farmers to increase their production of beef. In the Ohio valley a good many yearlings were bought from Canada. All these influences have tended, within the past two years, to replenish the beef stock on the farms but of course it has been impossible in so short a time to overcome the losses caused by years of depression and drought.