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ends of the pan a vertical sheet of canvas or sail cloth, about two feet in length, is fastened. This, with the addition of two short beams at each end, to which a whiffletree is attached, completes the hopper dozer. It is preferable to have the hauling attachment attached at each end and use two horses, than to use a single horse attached to the middle of the hopper dozer, as more grasshoppers will be caught. In the case of rough ground it may be preferable to have a shorter pan of eight or ten feet in length, or, what is better, to have the 16-foot hopper dozer divided in the middle, making two eight-foot pans, which should be loosely attached to each other. To prepare for use, water is placed in the pan, and the canvas back is also wetted. Kerosene or crude oil is then poured on top of the water in the pan, and the canvas is also drenched with it. The hopper dozer is now dragged over the infested field, and the grasshoppers jumping up in front of it are caught in the pans or against the canvas back, and killed by contact with the kerosene.

A simple though less effective hopper dozer may be made out of sheet iron. A piece eight feet long is turned up one or two inches at the front, and, allowing a width of a foot, is turned up about eighteen inches at the back; two ends are provided, and one or two partitions made to prevent the water and oil slopping out. One or several attached end to end may be pulled along by boys by means of cords attached to the ends of the hopper dozers.

Information will be given concerning insect pests and their control, if inquiries are addressed to the Dominion Entomologist, Central Experimental Farm, Ottawa. Such inquiries should, in all cases, if possible, be accompanied by specimens of the insects and their injuries, and all letters and packages under five pounds in weight may be mailed free, if so addressed.

Dr. Hewitt believes Criddle mixture to be the most effective and most widely-used remedy for grasshoppers.

THE DAIRY.

Printed Butter Papers.

The pound print is the form in which most retailers like to get their butter for the trade. It is a convenient package for the maker in the farm dairy to put up. It is easily handled on the market, is what the dealer wants, and it pays to sell in the form which the market demands. Print butter always has the best appearance, provided it is printed and wrapped in butter or parchment papers. It is in a good condition to be used on the table, but its attractiveness is made or marred by the kind of wrapper used. First, the dairy should be named, and the name, with that of the maker, should be neatly printed on every wrapper. Some design, appropriate to accompany the dairy name, such as one of the best cows, or a "brand" mark, adds to the attractiveness. There is no better way of pleasing customers than by putting up good goods in attractive parcels. It is possible with butter, and never should it be neglected. Butter should be known by the dairy name, and the way to establish the trade is to keep the name on the wrapper before the consumers.

Keep Cool.

No branch of agriculture requires the operator to "keep cool" more than dairy farming. No hot-headed individual should be allowed to attend the cows. The attendants, to get the largest possible flow, must "keep cool"—that is, must never lose their heads, use loud talk, or be rough. The milk must be kept at a low temperature to be wholesome. Cream must be kept cool. To do this, ice or very cold water is necessary. Butter or cheese—in fact, all dairy products—must be kept away from the heat. "Keep cool" is always seasonable in dairy work. From the stable to the consumer, everything in connection with the dairy business gives best results when it is kept scrupulously clean and at a low temperature.

It has been said that no business but farming would stand the enormous loss which results on many farms from defective skimming of milk. Our best dairy farms waste but little, but the majority do not compare favorably with the best.

In running a separator, do the work as soon after milking as practicable. The milk, just as it comes from the cow, is in the best possible condition for separating.

Performance the Only True Test.

Time was when the only method of choosing a dairy cow was on form. In those days no records were kept, and the buyer had no means of knowing whether or not the cow in milking proclivities lived up to her appearance or not. Even the seller had only a vague idea of what the cow was worth, and, while he may have had some indications as to her value from a rough guess at the amount of milk given, he never weighed it, neither was it ever tested, so the buyer and the seller were influenced more by form than by performance. Gradually the best dairy farmers began to see that they could not always rely upon form alone, and milk-weighing was commenced. Weighing was all right as far as it went, but was found to be wanting, so testing was commenced. Neither weighing nor testing alone is sufficient proof of the value of the cow. Even one of these, combined with the best dairy form, is not enough, but approved dairy form, with heavy milking qualities and a high test, these three combined in one individual make a safe and sure basis upon which to buy or sell. A cow may, as far as size and shape are concerned, give every indication of being able to fill the pail with rich milk, and still she may be nothing but a "boarder." True, good dairy form has its value in selecting cows, for such cows are far more likely to be profitable than those which do not possess it, but the point is that the best of form, and that alone, is not enough to warrant that the cow is a profitable dairy animal. Performance is the dairymen's best guide.

so that, to fill the cow, it is necessary to supply something a little more palatable, a little more appetizing, and at the same time a little more nutritious. Pasturing alfalfa, clover or oats involves too much waste, and is consequently rather extravagant. Cutting and feeding, while entailing a little more labor, saves the feed, and a smaller area is required to reap the same results. A partial soiling system appears to be the most logical and efficient method to keep up the milk flow this summer. If possible, try it and be convinced.

POULTRY.

Utility Poultry.

Editor "The Farmer's Advocate":

A good deal is being said and written regarding the importance of the poultry industry, and figures are quoted to show the value of eggs and poultry, as compared with other products of the farm. In poultry papers, too, wonderful accounts are given of the amounts being made out of the poultry business. This leads one to ask the question as to whether farmers are giving this part of their business the attention it deserves, and finding out for themselves just what there is in it of profit for them. The fancy side of it we will leave to one side, as that is practically a business by itself. What we have to consider is the profit to be made out of selling eggs and fattened poultry. We are told on all hands that the farmer

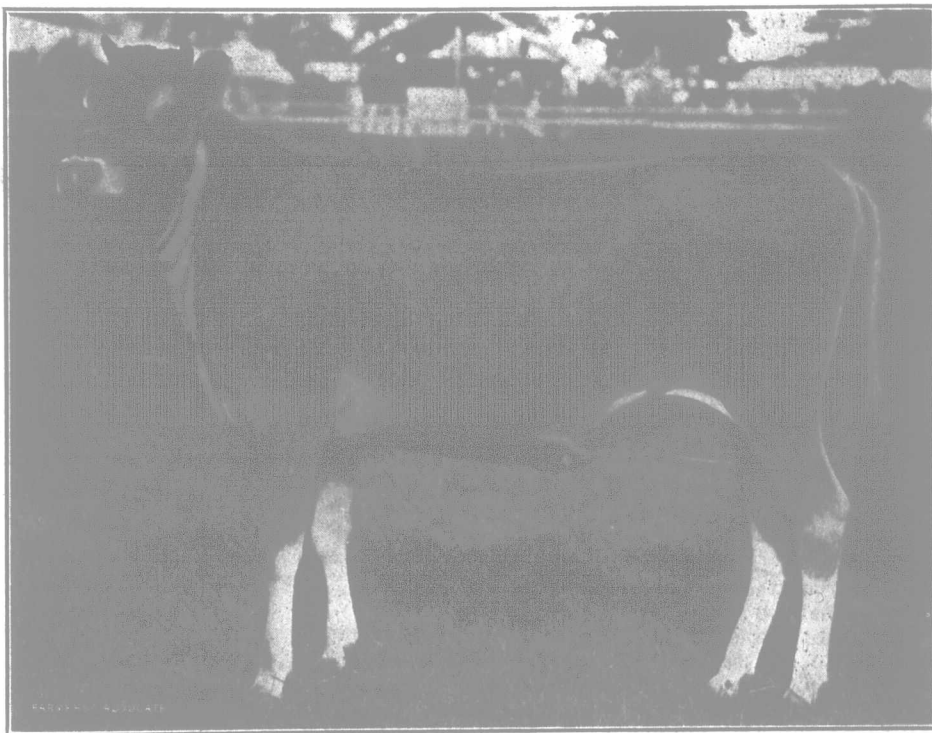
fails to make poultry pay because he keeps such a mongrel lot, and it is no doubt true that mongrel poultry, like scrub cattle, do not do as well as pure-bred stock. On the other hand, there are so many varieties of poultry, with the breeder of each variety claiming his breed as the best, that choosing a variety is not altogether easy, and it becomes a question whether the farmer should not do some experimenting on his own account, and not depend so much on the fancier.

I know what is to be said to the credit of the fancier for the perfecting and even originating of several varieties; but, on the other hand, fancy is being carried to such an extent that it becomes a question whether some of the more important qualities are not sacrificed to appearance. I keep a flock of White Wyandottes, and when I see how much fluff is called for, and know that some breeders have used the White Cochins to obtain it, I cannot but fear that egg-producing quality is giving place to fluff. When I see line-breeding (which is just in-breeding) advocated and practiced so much, I think it helps to account for the difficulty in getting fertile eggs from good breeders.

Now, what we farmers want is not so many fancy points, but hens that will lay well, eggs that will hatch well, and chicks that will mature quickly into good fat roasters. And so I say it is worth while to do some experimenting ourselves. I am not sure but a cross between two pure breeds would suit us best. I know fanciers try to frighten us by calling this a mongrel, but if it is, so are the Barred Rock, the Wyandotte and several other breeds, and so is the Anglo-Saxon race, and it seems to hold its own among the nations pretty well. Several years ago I crossed the Barred Rock hen with Brown Leghorn cock, with good results, and I have heard of other first crosses that have done well. They mature quickly and lay well. I would like to hear from others through "The Farmer's Advocate" who have tried anything of this kind, so that we may benefit from each other's experience, or, if there is any variety that answers our purpose better than any other, let us find it out.

Lincoln Co., Ont. PETER BERTRAM.

Notwithstanding the handicaps of hot weather, moulting and the death of birds in some of the competing pens, there was a substantial gain in the 34th week of the North American egg-laying competition at the Storrs Experiment Station,



Chief Lady.

Jersey heifer. First at Royal Counties, and Bath and West Shows, 1912.

Now is the time for Soiling.

July brings hot weather, and hot weather means dry pastures, unless an abundance of rain falls at short intervals. This is not often the case, and from this time on to the end of the summer season some form of roughage is necessary to maintain the milk flow. The greater number of milk cows never receive any feed other than that which they are able to pick in the pasture, so production during the hot months falls off considerably, and prices hold up well. What a glorious opportunity for the dairymen to make handsome returns by a little extra feed. A feed of clover twice per day means much to the cow on short pasture, and, where properly managed, this gives little trouble. The first cutting should have been made some time ago, and if done, the second will soon be ready. A plot of alfalfa or red clover near the barn is a great boost for summer milk. After the second cutting of clover, why not cut a few green oats, or, better still, oats and peas? A small plot will go a long distance. When this is done, corn should soon be ready for use as a soilage crop, and, if on hand, a few pumpkins will be found useful. It is this special feeding that makes dairying a success. The cow must have an abundance of roughage, and this is supplied to best advantage, where summer silage is not on hand, by soiling crops. Silage fills the bill nicely, but, after a winter of feed shortage like last season, there is very little of it left on most farms for summer use, so pasture and green feed must form the summer ration. Pasture has been good during the early part of the season, but it cannot be expected to retain its sweetness and freshness through July and August. The blue grass, of which most pastures are largely composed, heads out and gets hard, and the leaf-growth practically ceases;