

sickle sections should come to rest in the centre of the guards when the sickle is said to "register".

Two common causes for this trouble are: attempts to align the cutter bar by lengthening or shortening the drag bar will throw the sickle off centre and conversely, it can be centered by this adjustment. By replacing the pitman by one of a different length. Some pitmans are easily adjustable.

Undue wear on the outside clips and the centre wearing plates is caused by the cutter bar arching in the centre due to the lifting spring being too tight. These are some common mower troubles.

## THE DAIRY.

### The Dairy Cow and Greater Production.

EDITOR "THE FARMER'S ADVOCATE":

War times emphasize the importance of food production—how many people can we feed from an acre of land? Looking at the problem from this angle many are apt to become panicky and think only of food in terms of wheat, potatoes, beans, etc. True there is a certain degree of efficiency in such a course if only followed for a year or two, but any farmer knows there is a limit to it. If he is to preserve a proper balance as to labor, fertility and permanency of production it is essential that at least, a part of the crops grown be animal food products. For instance, there is no better avenue for this purpose than the dairy cow. Three-fourths of the feeds consumed is returned to the land in the form of fertilizing materials, while she produces many times her weight in highly nutritious and easily digested food products. Milk is nature's most perfect food. In food value, one quart is equal to eight eggs, three quarters of a pound of beef and four fifths of a pound of pork. Moreover if the consumer takes the trouble to compare the cost of these commodities he will find the milk he uses is by far the most economical material that comes to his table. The same principle holds good in regard to other dairy products such as butter, cheese, ice cream, etc. A dairy cow giving 8,000 pounds of four per cent. milk in a year, produces as much food as will four 1,250-pound steers in two years plus a heifer calf to replace herself. This meritorious performance she stands ready to repeat for a decade or more. In what better way can the patriotic farmer answer the call of more production than by building up and giving careful attention to a herd of high-class dairy cows?

The quality of the animals will, however, avail but little if close attention in not paid to the many little details. At this time the rich luxuriant pastures that have kept up a heavy milk-flow may be getting tough and unpalatable. If a drought occurs, which may reasonably be expected, the trouble will become more pronounced. I doubt, if farmers generally, realize what a strenuous time the cows have trying to exist in the brown, bare fields during late July and August. It is claimed that to get her fill, a cow will consume upwards of a hundred weight of grass. Suppose the owner tried pushing a lawn mower until he had accumulated that amount. It would be an eye opener that ought to induce him to make some sort of provision to help the cows out if more production is what he is after. The man who has been long-headed enough to have reserved a few feet of silage for the occasion will reap the returns of his forethought. There is no supplementary feed to which the cows will respond more readily. Last summer was the first time that I was fortunate enough to have a generous supply on hand, and the appreciation of the cows was certainly reflected in the milk cheques. Previous to this we had tried pretty nearly every kind of soiling crop, including

clover, alfalfa, peas and oats, millet and corn. All were good but required an immense amount of labor. With recruiting as the order of the day, the hired man is more interested in getting the Kaiser's goat than in getting feed to the cows. Lacking the left-over silage, a very good one-man system is the annual pasture of oats and sugar-cane, provided, of course, one has such a crop coming on. Personally, I found this the best milk-producing combination of the whole lot. It is surprising how many head of stock such a field will carry and how long it will last.

The fly nuisance is another plague. No matter how effectually the drouth has been checkmated, these two evils go together and each requires its own remedy. You may feed a cow to the limit, but if something is not done to chase away the flies she will fall below par in her milk yield. If you want apples you must spray your trees; if you want all the milk a cow is capable of producing she must be similarly treated. The trouble is an effective spray material is too expensive. The cheap brands are no good. A smearing of tar and grease, while more troublesome to apply, gives good results. Fish oils answer the purpose very well and may be substituted, if desired. Tar used alone is a little too hot in summer, and is disposed to scald when the sun is on it, but one part of tar and two of thick oil or one of a thinner kind is all right. This mixture will keep the flies at a respectful distance, and they will soon be glad to pass on to a more savory victim.

One of the best methods of increasing cow comfort during the hot, dry days of late summer is to put them into a cool, darkened stable during the day and turn them into the pasture at night. By thus escaping the flies and the heat the milk is maintained to a much greater extent than would otherwise be possible.

Free access to water and salt is also essential for the best results.

Of course all this means some trouble, especially with the existing scarcity of labor. It is however, a "win the war" necessity and a patriotism that stands for economic betterment.

J. H. McKENNEY.

Elgin Co. Ont.

### Cream Tests Vary.

Everyone familiar with the farm separator must acknowledge that it is one of the most highly perfected pieces of farm machinery in use. But it is expecting too much from even such a perfect machine to think that the same tests will result week after week and season after season, when there are so many variable conditions which will cause differences in richness of cream.

Aside from any differences that will be caused by change in cream screw or skim-milk outlet, from wear or mechanical adjustment, any one of the following factors will influence the resulting test from a comparatively low to high percentage:

Variation of the temperature of the milk when separated.

Variation in the test of milk.

Changing speed of bowl.

Rate of inflow of milk into bowl.

Amount of skim-milk or warm water used in flushing the bowl.

Neglect to keep separator bowl and working parts thoroughly clean.

With these many influences continually changing to a greater or less degree, constant tests are more to be feared as results of inaccurate work than are varying tests.—R. McCann, Colorado Agricultural College.

### New Chief Inspector of R. O. P.

The Minister of Agriculture, Hon. Martin Burrell, has promoted C. S. Wood to the position of Chief Inspector in the Canadian Record of Performance to suc-

ceed the late Dan. Drummond. Mr. Wood has been an Inspector on the staff of the Canadian Record of Performance since 1911. He is a veteran of the South African War, having served with Brabant's Horse, a Colonial Corps. He returned to Canada in 1901, and has occupied the position of dairy herdsman for three years on the farm of Robt. Reid & Co., Hintonburg, for four years at the Ontario Agricultural College, Guelph, Ont., and for six months at the Central Experimental Farm, Ottawa, Ont. He took the Short Course in Dairying at the Ontario Agricultural College, and for three and a half years was permanent Official Tester in the Dairy Department of the College, during which time he acted as Inspector on the Record of Merit work for the Holstein-Friesian Association. Mr. Wood is a thoroughly practical dairyman, and in connection with his public work has gained a recognized reputation as an expert judge and feeder of dairy cattle, and as a specialist in matters pertaining to milk testing. The qualifications he has exhibited in these and other directions since his employment in the Federal Service have commended him to the Minister in connection with the appointment to his present position.

## POULTRY.

### Cull the Flock.

The urgent need of conservation demands that all poultry not paying its way in either eggs or growth be killed for eating. The present high prices of feed also make the keeping of such classes of poultry decidedly unprofitable as well as unpatriotic. Therefore, for your own good and for the good of the country, kill them. There are in every poultry yard birds that have outlived their usefulness and others that will never pay their way, these might profitably be finished and marketed, not necessarily all at once but as soon as practicable, taking into account the market, etc.

In these classes might be mentioned, in the order in which they should be disposed of, the following:

1. MALE BIRDS.—The breeding season being over, all males should be culled and killed. It will cost \$2.00 or over to keep each male until next breeding season, therefore, get rid of them, it will also be better for the layers, the eggs and the growing chicks.

2. TURKEYS AND WATERFOWL.—Toms and turkey hens, geese and ducks, not absolutely needed for next year's breeding should be disposed of.

3. HENS.—All hens of the heavier classes that are 2 years old and over might better be marketed now. In even the light classes many of this age ought to go. Others that are laying but that are not worth keeping for another year should be kept until the egg yield does not pay for the feed. Better still keep culling out those that show signs of early moulting as you go along.

The best of the one and two-year-olds of the lightest breeds might pay to keep all summer but only the year-olds should be kept over winter and even these will stand culling fairly closely.

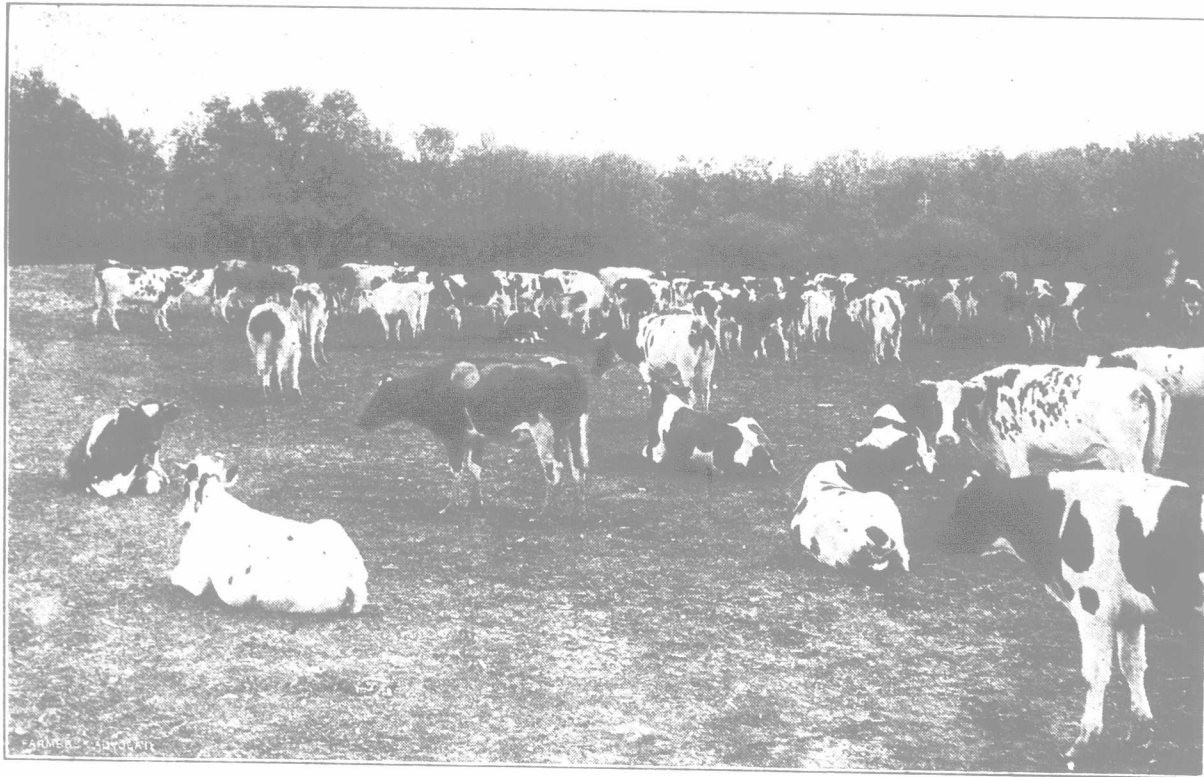
4. BROILERS.—If broilers are early it pays best to sell the cockerels when two or three pounds in weight rather than to keep till heavier. This is especially so when the sexes cannot be separated and where the runs are small, the pullets will soon require all the room and green feed available.

Light-breed cockerels should be sold early; it seldom pays to feed them to maturity.

5. ROASTERS.—Don't leave the marketing of all roasters till late in the fall. Distribute this sale over as long a period as possible. Never market without finishing.—Experimental Farms Note.

### Take the Chicks to the Corn Field.

In farm poultry work too little attention is very often given to the young stock. While they have plenty of free range in most instances the best use is not made of the farm for raising chicks. No better place is available than the farm for raising young chicks but too often they are placed on the same ground year after year, while better land more suitable for their rapid growth is left unused. Every farm should have a few colony houses which would make it far easier to obtain rapid growth in the chicks. These houses which have been described many times in this paper, cost little and can be drawn from place to place, and at this season of the year should be found at the edge of the corn field. Many farms could grow several times the number of chicks now produced if a colony-house system were followed in the summer. Hatch the chickens either by incubator or with hens and put them with a hen in the colony house, fastening the hen in and leaving the chickens have free range. When the corn is large enough move the hen and her brood to the edge of the field. The youngsters will pick no inconsiderable part of their living for the remainder of the season from the freshly cultivated soil and the corn will produce shade necessary to rapid growth in hot weather. To facilitate feeding, hoppers such as that recently described in this paper can be used. These filled from time to time with the regular grain used for growing chicks on the farm permit of the chickens very largely feeding themselves, the whole making for rapid growth and cheap returns. The colony houses can be pulled up to the buildings in the fall and used for feeding cockerels, special matings in breeding stock and even for wintering over some of the pullets or year-old hens if necessary. They do not need to be expensive, may be built of matched lumber, or of rough lumber covered with a building paper. If used for winter some glass or



It Costs No More to Pasture Pure-breds than Scrubs.