

cow, for the moment she ceases to produce she may be advantageously fitted for the shambles. The greatest risk is incurred with the special-purpose beef-bred cow, for if she fails to produce a live calf she has been maintained twelve months for nothing, hence the propriety of the four-dollar contingency item included above.

Assume that the dairy cow requires twenty minutes a day for milking. In 300 days, this would mean 100 hours, worth, at 15 cents an hour, \$15.00. The rather shorter milking period of the dual-purpose cow permits us to estimate the cost of hand-milking her at, say, \$14. This leaves us a net annual return of \$16 in the case of the dual-purpose cow, and \$19 in the case of the special-purpose dairy cow, as contrasted with a paltry \$10 in the case of the beef-bred matron. While none of these figures are princely, it is easy to see how the all-beef cow falls down in attempting to earn profit under usual farm conditions.

Moreover, by intelligent, systematic effort, the annual production of the hand-milked cow may be increased to double or treble the mediocre basis of our calculation, whereas the yield of the other is practically fixed by the appetite of her calf. It all resolves itself into this principle, that, for the economical raising of beef, a class of cows is required that will be capable of squaring their own maintenance accounts at the pail, allowing the youngsters to start in the feed-lot without the handicap of paying for their mothers' board bills. The best means of accomplishing this is the dual-purpose cow. The only difficulty nowadays is in securing a strain of really dual-purpose stock. The old-time dual-purpose breed has run almost entirely to beef. An alternative plan is to use a first-class beef sire on the less-valuable cows of a dairy herd, the best ones being, of course, bred to a first-class bull of their own breed, in order to furnish an annual quota of heifers from which to select replenishment for the herd. It goes without saying that all the produce of the cross should be vealed or reared for beef. None of the heifers should, on any account, be retained in the herd for dairy purposes, or disappointment will surely follow. For this purpose of crossing on a dairy herd, the Aberdeen-Angus bull has given splendid results, getting, it is said, a large proportion of black polled bullocks of really high-class beef type, out of Jersey cows, though Holstein and Ayrshire dams are better for the purpose. Prof. W. J. Kennedy, of Iowa Agricultural College, reports splendid results witnessed by him in Scotland, where Angus bulls were crossed on Ayrshire cows for the production of feeding cattle, the dairy herd being, of course, kept free from the product of the cross. He visited farms in Perthshire and Midlothians, where land rents of \$12.50 per acre were being paid, with these methods in vogue.

The hen lays eggs by the dozen and the hundred. The sow rears and suckles two litters a year of eight or ten pigs each on an average, and her progeny may be marketed six to nine months after birth. The sheep commonly produces twins, and, besides suckling them, yields a crop of wool, which goes a long way to pay for her keep. She requires little attention, and almost pays her way as a weed destroyer. The cow and the mare usually bear only one fetus a year, and it must be kept from one to four years ere it may be marketed. Hence, to rear beef cattle or colts economically, the cow must milk liberally, and the mare must be worked. A system of beef-raising under which the dam is expected merely to produce and suckle a calf a year, is not adapted to high-priced land. It is too expensive. DON.

THE FARM.

FARM NOTES FOR JUNE.

By John Fixter, Farm Supt. Macdonald College.

1. Keep down all weeds in the fields, along ditches, and especially the roadside.
2. Do your statute labor this month, and do a decent day's work. One day extra will do good.
3. Use the hand wheel hoe on the roots as soon as they appear.
4. If mangels or carrots have missed, resow with turnips.
5. Thin carrots, mangels and turnips before haying, and cultivate often.
6. Thin corn plants 6 to 8 inches apart in the rows, and cultivate often; close at first, further away as the plants grow.
7. Spray potatoes with Paris green and Bordeaux mixture, and cultivate often.
8. Prepare for the clover harvest; have horse fork, rope and track in perfect order.
9. Keep the mower knives sharp; also the sides and points of the guards.
10. As to clover—common red, cut it when well in bloom. Use the tedder freely before coiling.
11. Save part of the clover field for seed.
12. In drawing hay, have end pieces on your rack for convenience in loading.
13. Draining may be done this month in pasture fields that are to be in good crop next year.
14. Bees—Give plenty of room for surplus honey, and prevent swarming as far as possible.

Have hives in readiness in case they swarm. Do not extract any honey this month; allow it to ripen.

15. Renew all queens over two years old.

16. Have some mares served this month to the very best sires procurable. Every farmer should raise two or more good colts each year.

CLOVER SEED A PROFITABLE CROP.

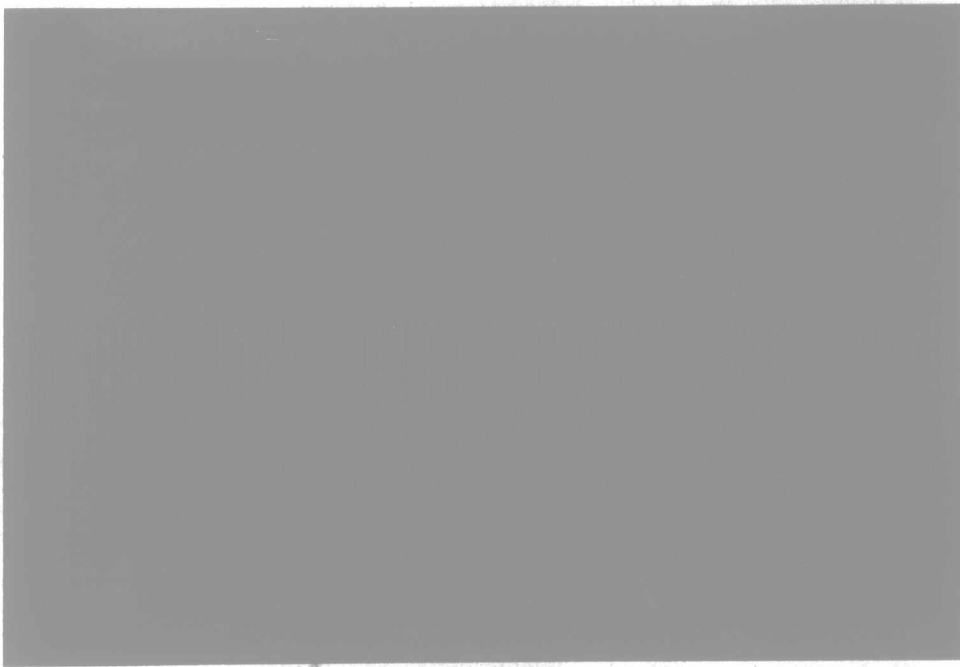
(Press Bulletin.)

As was predicted a year ago, there has been a decided shortage of clover seed this spring. A light crop in Europe, the United States and Canada caused the stocks for this spring's trade to be abnormally low, and this resulted in unusually high prices for good seed.

At present, the indications are that the foreign exporting countries will not produce more than an average crop of clover seed, and the Ontario supply is likely to be short. In some sections of Ontario, the clover crop was seriously affected by drought last season, and the amount available this year for seed production may be limited. Much the same conditions prevail over a considerable portion of the clover-seed-producing area of the United States; so that unless the yield from the areas which were not seriously affected by the adverse weather conditions last season is exceptionally heavy, a shortage of seed for next spring's trade is more than probable.

In view of the conditions cited, the advisability of utilizing every available clean field, or part of field, for clover-seed purposes is urged.

In growing clover and grass seed for the market, it is important to bear in mind that the standard of purity demanded in the Canadian trade is higher than it was a few years ago. The demand for seed of first quality has substantially increased. The result of this demand for seed of good quality has been that the seed-grower finds impure seed an almost unmarketable commodity, while the production of good clean seed has grown to be a remunerative industry. Hence, the



Chiddingstone Malcolm.

Shorthorn bull. First and champion at the Oxfordshire County and Bath & West of England Shows, 1908. Exhibited by Sir Richard Cooper.

necessity of taking every possible precaution against the presence of noxious weed seeds.

The first step in the production of good clover and grass seed is to procure the cleanest possible seed. If this is used on clean land, and is followed by a thorough system of weeding in the field, the product will be clean. The field weeding is of prime importance, although it is often overlooked. When we remember that every growing weed, if allowed to mature, will produce from 10,000 to 50,000 seeds, it will be readily understood that the removal of these plants must make a great difference in the market value of the seed.

With red clover, the best results are obtained by pasturing, or cutting the first crop early. This allows a stronger second growth for the seed crop, and also lessens the danger of damage from the clover-seed being mowed. If the clover is pastured, the field mowed, in order to cut down the weeds and produce an even second growth.

Alsike and red clover may be harvested with a reaper or a mower, with or without a table attachment. If no table attachment is used, and the clover is well ripened, it should be cut and raked when the dew is on, in order to prevent shelling.

The clover huller is the best machine for threshing alsike and red clover, but the ordinary grain separator will do the work fairly well if properly regulated. The grain separator will not hull the seed as thoroughly, and in consequence there is more waste of good seed, unless the straw be threshed a second time. But the fact that there is no clover huller available should not deter farmers from saving at least sufficient seed for their own use.

G. H. CLARK,
Seed Commissioner.
Ottawa.

RE LIGHTNING LOSSES AND PREVENTION.

Reports to this office for 1907 show that losses caused by electric storms in Manitoba amounted to about \$50,000.00.

Of this sum, about \$40,000.00 has been lost on buildings, and \$10,000.00 on stock killed.

The lightning losses have been increasing from year to year, one of the companies writing mostly rural business having an increase of something like \$2,000.00 over 1906.

A great many of these losses could undoubtedly be avoided by proper precautions; the increase, for instance, in the loss of stock or cattle is to a great extent due to the increased use of wire fences. A bunch of cattle will drift with a storm until they fetch up either under the shelter of some trees or bushes, or are stopped by a wire fence. The electrified cloud induces the electricity from the earth, and all things on earth become more or less electrified by induction; hence, during an electric storm, the strands on a wire fence get charged with electricity, and unless proper provision is made to ground the current, it will jump from the wire to the animal nearby or coming in contact with it. The grounding wire must connect with every strand of wire in the fence, and reach down to the moist earth, in order to be effective; but one grounding is sufficient for each 300 feet.

As to buildings, a lightning-rod should form a circuit from the ground along the comb of the building to the ground again. If on a dwelling, it must be placed that the chimney from the cook stove is protected.

On a two-story house having a one-story kitchen, the danger is less from the high chimneys, for, during the thunderstorm season, they rarely have issuing from their throats the column of hot air that will draw lightning, while the cook stove, like death, has all seasons for itself.

A rod should not run over a porch, because of the liability of the human body to draw a stroke from it.

The holdfast should be of material that cannot rust, and should keep the rod at a distance of an inch or two from the roof or wall.

The lower five feet of a barn rod should be boxed to protect it from wagons and from animals which might use it for a scratching-post.

When a lightning-flash jumps an open joint in a rod, it makes a heat like that of an electric arc.

This is more likely to result in damage to the rod than to the building, but is reason for holding the rod from the building.

The two ends of the rod must go near enough to the underground water-beds to be in earth that is always moist, and should be supported on the copper plate or lodged in a bed of charcoal. A rod should be grounded on the upper side of a bank barn, because of the difficulty in reaching permanently moist earth.

I would finally suggest that, if the farm insurance companies would make a special classification for "rodged" buildings, and have their inspectors inspect rods each spring, there would be a material reduction in lightning losses, and an inducement for farmers to "rod" their buildings.

A. LINDBACK,
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Winnipeg, Man.

Hay is cured principally by evaporation of sap through its leaves. If these become brittle and drop off, as they largely do when the upper side of a swath is exposed too long to the scorching rays of the mid-day sun, the curing process is arrested, and the thick stalks will contain an excess of moisture, though casual inspection would pronounce the hay quite dry. The curing process is prolonged, and the hay suffers heavy depreciation of feeding value through the loss of the leaves, which are by far the best part. Hay should be AIR-CURED, not SUN-BURNED. Keep the swath tossed up loose by early and repeated tending.