

as he is half of the herd. He stamps his qualities on all of the calves, not simply on one calf a year as does the cow. Be sure and get a registered bull of the breed you want, even if you have only grade cows, as then you are sure you are getting a heifer or dairy bred from beef or dairy ancestors. Select a bull that is of good size, with a proud masculine bearing, a good intelligent head, broad and full between the eyes, a short face and a strong, clear eye, yet with a quiet expression, as a nervous, excitable animal is not desirable.

**BUYING CATTLE**

In buying cattle see that each one appears to be in a strong, healthy vigorous condition, with a bright eye, glossy coat and of good spirit; free from any enlargements on the jaw or any part of the body. See that the udder is in perfect condition possessing developed quarters, perfect teats of good size and shape, free from bunches or sores. If the animal is in the period of lactation you should see that each teat is in milking condition. Avoid hard milkers unless you intend to overcome this trouble after you have bought the animal.

**TUBERCULOSIS**

All cows, heifers, bulls and calves should be submitted to the tuberculin test and pass same without a suspicion so that you may know that they are free from tuberculosis. The introduction of one tubercular cow into a herd will sooner or later contaminate the entire herd, thus bringing about a heavy financial loss to the owner.

**CONTAGIOUS ABORTION**

Another disease that goes hand in hand with tuberculosis is contagious abortion, which should never be overlooked in buying cattle. Each cow, heifer and bull should be thoroughly examined as to their freedom from contagious abortion as this disease is bringing about greater financial losses to the stock industry to-day than any other disease known. A herd afflicted with contagious abortion is damaged to the extent of from \$12 to \$25 a head per annum. The loss brought about is not only in the actual loss of the calf and the shortage of milk, but also the ruination of the cow.

**DIFFERENT FORMS OF CONTAGIOUS ABORTION.**

Contagious abortion may appear in a herd in many different forms such as the actual loss of calves, or in other words, calves being expelled too young to live outside of the mother's womb, or by living abortions; or by calves being expelled before their actual time, but having vitality enough to survive this exposure and live. Such calves are noticed to be undersized and if they follow they make a pitiful noise, oftentimes spending most of their time sleeping until time for them to be born. Then they will awaken and undergo a great change. Or, abortion might appear in a herd when calves are carried full time but die of diarrhoea or scours at any time between the time of birth and a month old; the scours being due to the germs of abortion; or a herd may carry their calves full time and still be afflicted with the germs of abortion. Perhaps the only noticeable sign of the disease is that the calves do not do well and oftentimes the glands of the throat are swollen.

Another noticeable sign of the disease is a shortage of milk even in cows that have carried their calves full time. Perhaps the only noticeable symptom in contagious abortion in cows that have carried their calves full time is that they are liable to come in heat at irregular periods, oftentimes a few days after calving.

**BARRENNESS A SIGN OF ABORTION.**

Following all of these symptoms of contagious abortion comes another indisputable symptom in the form of barrenness. Barrenness may be due to one of two causes. Either to the germs of abortion which set up a catarrhal inflammation of the mouth of the womb, or an acid secretion which prevents conception. All of these ailments may be traced back to contagious abortion in cows which is the ruination of many valuable herds.

**Waste Land Planting in Ontario\***

E. J. Zavits, M.S.F., Guelph, Ont.

The Department of Agriculture of Ontario is concerned with two forestry problems, namely: It aims to assist farmers and other landowners in properly handling their woodlands and reforesting waste portions of the farm. It has also inaugurated a policy of segregating and placing under forest management the large areas of waste lands throughout older Ontario.

The farmer's woodlot represents in the aggregate, about 8500 square miles of woodland. Waste land in the form of sand, gravel or rock formations and steep hillsides would probably represent another 8,000 square miles. It is safe to state that there is in old, agricultural Ontario at least 8,000,000 acres of private land which should be managed eventually for forest crops.

The potential value of eight million acres of woodland to Ontario is worthy of notice. Estimating an annual acreage increment of half a cord of wood at stumpage value of \$2.00, this land would represent an annual resource of \$8,000,000.

History has proven that proper management of private woodlands is not easily attained. Government assistance, in a problem of this nature,



Reforestation and the Fire Peril

Young forest growth should be jealously guarded from fire—every tree of it, as though it were a dollar bill. If so guarded, it will soon be worth many millions of dollars. The illustration shows pine land burned over 14 years ago, and again five years ago.

is necessary and advisable. To meet this need the Department of Agriculture has undertaken to furnish forest trees for waste land planting, and also to assist owners in the better management of their woodlands. At present, planting material is sent out free of charge with certain provisions for care and protection. (The conditions of this distribution are given in a circular which may be had upon application to the "Forestry Department," Guelph.) This last season's distribution amounted to about 400,000 trees composed of the following species: White Pine, Scotch Pine, Jack Pine, Norway Pine, White Ash, Black Locust and a small amount of Catalpa, White Wood, Walnut, Butternut and Cedar. The larger proportion of this material was planted on waste lands on the farm, although a number of applicants used the material for planting in worn-out woodlots. The Department especially urges farmers to plant Pine and Spruce about the borders of woodlots in order to give more protection to the soil, this lack of soil protection being one of the chief faults in the average woodland of small acreage.

\*Extract from an address delivered at the recent Forestry Convention in Toronto. In a subsequent issue, a part of this address, showing that reforestation can be accomplished at a profit, will be published.

A second forest problem confronting the Department of Agriculture is the reclamation of the large contiguous areas of non-agricultural soils which exist in many parts of the Province. In the more settled parts of Ontario the waste areas are sand formations. On these lands Pine was the most valuable growth and it was cut off in the early days. In many cases agricultural settlement followed, and where the land was cleared for farming purposes, it gave, at first, in many cases, good returns. As soon as the vegetable mould or old, forest soil disappeared from the sand, it became a difficult matter to keep up the fertility and gradually sand wastes developed.

Some of the more important sand formations are as follows: Norfolk, 10,000 acres, Lambton, 40,000, Bruce, 30,000, Simcoe, 60,000, Northumberland and Durham, 15,000.

It is generally admitted, that these waste lands can be made permanently productive only by being managed for forest crops. The only solution of the problem is in a policy which has as its aim the gradual segregation of these lands, to be managed as Provincial forests.

Large portions in the waste districts were not entirely cleared but at present are covered with a scrubby, second growth. In the Norfolk County area Scrub Oak with scattering, second growth White Pine forms the soil cover. In the Simcoe area a small amount of Scrub Oak, Poplar, etc., with scrubby Red Pine is the type. Continual ground fires sweep over and kill out the young Pine. With fire protection, there is much of this so-called waste land, which would soon fill with Pine, through natural seeding.

On the land, which has been cleared for farming, it will soon have to be done to obtain new growth of desirable species.

**Obstructions in Cows' Teats**

Dr. H. G. Reed, V.S., Halton Co., Ont.

Obstructions in the milk duct have been a source of great trouble and considerable loss to dairymen. This trouble usually develops while the cow is "dry." The teats may have been all right when the cow was dried off the previous season, but when she freshens again one or more of them are found to be almost or altogether "blind." A growth has taken place in the duct and it usually is the result of an inflammatory action which was set up during the period when the animal was not milked.

This inflammation is often so slight as not to attract the attention of the owner, and as a consequence develops to a growth that almost or entirely obliterates the duct. Cases of this kind are difficult to treat successfully, the judicious use of a teat syphon or milking tube will assist, but the results are often unsatisfactory. Preventive measures are always the best and it is a good practice for the dairymen to try at least once a week the teats of his dry cows. If he should find one that was milking tough he may conclude there is an inflammation in the duct and he should proceed by fermentation and hand rubbing to arrest the development of the inflammatory action and thus prevent a growth from taking place, which is most likely to occur if no precautionary measures are adopted.

It may be said that as a general rule trouble with the udder and teats of a dairy cow can (to a large extent at least) be prevented by the exercise of good judgment and care, but if once established they are sure to entail considerable trouble and sometimes serious loss.

When turnips are sown it is best to sow early maturing varieties so that a rapid growth may be secured. Where rape is grown and stock are turned in it is best to fence off portions of the field so that the balance may be kept in good growing condition for the stock to eat when they are ready for it.

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