

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

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AGENTS FOR THE FARMER'S ADVOCATE AND HOME JOURNAL,
WINNIPEG, MAN.

LONDON (ENGLAND) OFFICE:
W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,
London, W. C., England.

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the factory system was introduced in the year 1864. The first cheese factory was established in Oxford County, Ontario, by one Harvey Farrington, who came to New York State for the purpose. Another factory was started in Hastings County, in 1866, and from that time forward the industry forged rapidly ahead in Ontario. In Quebec, the first cheese factory was established in Mis-sisquoi County about the same time as the first ones in Ontario, but there was very little development of the industry until the year 1880. To-day the dairy industry is well established in every Province of the Dominion. The total number of cheese factories and creameries is 4,355, of which 1,281 are in Ontario and 2,806 in Quebec, leaving 265 fairly evenly distributed among the other seven Provinces. The factories in Ontario average much larger than those in the remaining Provinces.

The first cheese was exported from Canada to Great Britain in 1864. The shipments grew yearly, reaching the maximum in 1903, when the total value of butter and cheese exports amounted to \$31,667,561. The slight falling off since then is due to the large growth in our population and the increased purchasing power of our people generally.

The dairy industry should be largely extended in every Province. I have visited every important dairy country in the world, except Siberia, and none is better fitted by nature for successful dairying than Canada. With a climate which produces healthy, vigorous animals, notably free from epizootic diseases; with a fertile soil for the growing of fodder crops and pasture; with abundance of pure water and a plentiful supply of ice for all purposes of the dairy, we have almost ideal conditions and advantages, which should be of great assistance in holding a fair share of the world's trade in dairy products.

Great Britain is our chief market for butter and cheese, although we send comparatively small quantities to Newfoundland, Bermuda, the West Indies, British Guiana, Mexico, and South Africa. We also sell some butter in the Orient, and of late years a small quantity has gone to Germany.

Great Britain annually imports over \$100,000,000 worth of butter, of which Denmark supplies nearly one-half. Siberia comes next with over \$15,000,000 worth. British cheese imports aggregate over \$33,000,000 worth annually, of which Canada furnishes 72 per cent., or 84 per cent. of the kind we make (Cheddar). Canadian Cheddars easily rank first in quality among Britain's imports.

As appreciation grows, milk and cheese products will enter more largely into our daily dietary. A quart of good milk is said to be equal in food value to a pound of the best beefsteak; therefore, milk at 12 cents a quart, and cheese at 20 cents a pound, are among the cheapest of foods, considering present prices of other articles of diet.

All the Provincial Departments of Agriculture, except Nova Scotia, have regularly organized dairy divisions. Dairy schools are maintained in Ontario, Quebec, New Brunswick and Manitoba. Canada was the first country in the world to adopt the system of factory instruction, and there are now nearly 100 experts employed at this work by the different Provincial Governments. In addition, the Dominion Department supervises and promotes the commercial side of the industry. A large staff of men are employed under the Dairy and Cold-storage Commissioner, who watch and report on the handling of butter and cheese from the time it leaves the factory until it reaches the British consumer. The information obtained is utilized, to the constant improvement not only in quality of butter and cheese, but in appearance and style of packages, and also in the betterment of service provided by the transportation companies. Over all, from his watch-tower at the Capital, presides the Dairy and Cold-storage commissioner, ever ready to assist those engaged in the industry with advice, suggestions and practical aid.

TAKE UP THE WHITE MAN'S MUSKET.

Take up the white man's musket,
The deadliest ones ye make;
Go drill your sons to use it,
And then, for Jesus' sake,
Send them with ammunition
To hunt these heathen wild,
Your new-caught, sullen people
On whom God never smiled.

Take up the white man's cannon,
The largest that ye cast,
Go put it on your warships,
The strongest ones and fast—
Speed them to heathen countries,
Seek out each farthest spot,
And save these sullen people
With Bibles and with shot.

—David B. Page, in *Humanity*.

HORSES.

WHY GROWTH MUST BE OBTAINED IN YOUTH.

A stunted foal makes a dwarfed horse or mare, no matter how good the after care and feed. This is not to say that extra favorable conditions in the second and third years will not increase the youngster's scale and development over what they would be if the neglect were continued; but the ground lost in foalhood cannot be wholly regained. Every foal born into the world has wrapped up within its individuality the possibility of a certain maximum development, to attain which it must be abundantly nourished, exercised and cared for from birth to maturity; and to this end the first month is the most important month, the first year the most important year in its whole life. Youth is the time for growth. The bones then are of cartilaginous nature, and capable of extension in proportion to the growth-producing quality and quantity of the food. Ossification, or conversion into bone, proceeds from certain fixed centers called ossific centres, and gradually spreads from these. In long bones there are three ossific centers, one in the center called

the diaphysis, and one in each end called an epiphysis. As ossification commences in the shaft, there are for some time after birth, intervening portions of unossified cartilage, marked by the deep ring in the long bones of young animals; they disappear at variable periods, the portions of bone hitherto imperfectly united becoming consolidated into one firm mass. The bone increases in length by the growth of the unossified ring, uniting the shaft and epiphysis, until the ring fills up, when growth is completed. Ossification is completed in some bones much earlier than in others, and at birth, those which are required for support and progression are farthest advanced.

From the foregoing, it is clear why growth should be promoted in every normal way in youth before the cartilaginous tissue shall have been converted into inextensible bone. Give the baby colt every possible chance. Feed it liberally, using skim milk, if necessary, and always bran, oats, good clover hay or grass. Then, by providing abundance of exercise, insure the transmutation of this feed into bone and muscle, rather than superfluous adipose tissue. This is especially important in the case of the light breeds of horses. With these, care may require to be exercised not to feed too heavily, and the wisdom of supplementing the dam's secretion with skim milk may be open to question. In general, however, it is safe to say that a small quantity of skim milk will be of distinct advantage to a weanling. The owner must exercise his judgment, but the importance of liberal feeding, free (though not exhausting) exercise and watchful care, can scarcely be over-emphasized. Twenty colts are underfed for one that is too abundantly supplied.

SENSIBLE TEST FOR BLINDNESS.

Mr. Lucas, a famous English veterinary surgeon, was once called in to decide a question of blindness in a horse, concerning which two London vets. differed. He came up to London, to the dealer's yard, where the horse stood, and, without examining the animal's eyes, ordered a halter to be put on him and an empty bucket to be placed in the middle of the yard; then, taking the halter, he led the horse in a direct line for the bucket. The horse went forwards and blundered over it with his forelegs. "Blind, without doubt," was the verdict.—[Horse World.]

LIVE STOCK.

PROTECTION FROM FLIES.

The season is fast approaching when the plague of flies worrying cattle may be looked for, and should be provided against, as the loss from this cause in the product of milking cows is estimated to be equal to about five dollars per cow for the season, while a corresponding loss is probably sustained in the case of cattle intended for beef. In view of this, it will surely pay to expend some labor and money in fighting the pest if a fairly reliable and efficient specific can be found, the expense of which is not too great. Numerous preparations are advertised for this purpose, some of which are doubtless as effective and may be more readily prepared and applied than any of the homemade compounds. A preparation used with fair satisfaction at the Ontario Agricultural College consists of one part of Zenoleum, four parts of either linseed oil or fish oil, and forty parts water, mixed, thoroughly stirred, and applied by means of a spray pump daily. The greatest objection to this in the case of milking cows is the possibility of the milk being tainted by the odor in the stable.

The expense of this preparation is estimated at from 35c. to 45c. per cow per month.

The specific found most satisfactory at the Central Experiment Station at Ottawa is a mixture of 10 parts of lard and one of pine tar, stirred thoroughly together and applied with a brush or piece of cloth to the parts most attacked by flies about twice a week. At the Virginia State Experiment Station, the favorite prescription is a diluted kerosene emulsion, prepared from 6 ounces of soap dissolved in a gallon of rain-water by boiling; take from the fire, and while hot turn in 1½ gallons of kerosene oil, and churn briskly for five minutes. For use, dilute with nine parts of water, and apply by means of a spray pump as often as necessary. Calves should be kept in and fed in darkened sheds or stables in the day time in hot weather, and may go out to pasture at night. It is cruelty to leave them out to help flies in the summer days.

There are two letters in the alphabet that are rarely found apart, q and u. There are two factors in live stock growing that must always go together, food and feed.—[Dorcan Anderson.]