

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

TWO DISTINCT PUBLICATIONS—EASTERN AND WESTERN.

EASTERN OFFICE:
CARLING STREET, LONDON, ONT.

WESTERN OFFICE:
IMPERIAL BANK BLOCK, CORNER BANNATYNE AVE. AND MAIN ST.,
WINNIPEG, MANITOBA.

BRANCH OFFICE: CALGARY, ALBERTA, N.-W. T.

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

JOHN WELD, MANAGER.

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sustained, and when upon the foundation of the sound education laid in rural, public and the high schools is added the splendid courses given at the agricultural college, we can look with assurance for the necessary "judgment," "mental maturity," practical knowledge and administrative vigor requisite for the forestry service. Hon. Mr. Dryden, the Provincial Minister of Agriculture, has wisely laid the foundation for an aggressive policy in tree culture and forestry, by setting apart on the college farm at Guelph an extensive area, which has been devoted to plantations of forest trees from seeds and seedlings. Valuable knowledge will thus be acquired in cultivation, and the trees when grown sufficiently large will be distributed throughout the Province for planting. We trust that the Government will lose no time in locating the proposed school of forestry at the agricultural college, where it properly belongs, and where it will serve as an additional incentive to the young men of the farms to patronize the great Provincial farmers' school, rather than moving away to the "professional" surroundings, which would be the case were it centralized in Toronto as a sort of annex to the University. At Guelph we will turn out a better and more efficient class of foresters, and the rank and file of students returning to the farms will have derived very great advantages of special instruction on this important subject, while taking their regular courses in practical agriculture, which will tend to mould the farm practice of the future in the Province in the right direction.

Dairy Inspector's Report.

In his report to the Department, the Chief Dairy Inspector of Eastern Ontario, Mr. G. G. Publow, says ninety-nine meetings between inspectors and farmers were held this season, and the average attendance at each meeting was forty. A great deal of good has resulted from the meetings. The inspector also reports that less than twenty per cent. of the complaints about the quality of cheese come from the factories which comply with the Government regulations.

HORSES.

Dietetic Diseases of Horses.

(Continued.)

PULMONARY EMPHYSEMA—BROKEN WIND—HEAVES.—This disease might be classified as one of the respiratory organs, as the lungs are the organs principally involved, but as it is usually caused by errors in feeding, we will discuss it as a dietetic disease. When we know that the same pair of nerves (the pneumogastric) supplies, to a great extent, both the lungs and the stomach, we recognize how a more or less constant irritation to the latter, by overloading with food, or the introduction of food of poor quality, may, through nervous sympathy, produce disease of the former. This disease may be defined as a non-inflammatory disease, characterized by difficult and peculiar breathing; the inspiratory movement is performed with ease, the expiratory with two apparent efforts. The difficulty in breathing is liable to remissions, occasionally being hard to detect; a peculiar, hollow cough, called "the broken-winded cough," is a more or less constant symptom; indigestion and flatulence aggravate the symptoms.

The causes of broken-wind given by various authors are numerous and complicated, but there is little doubt that it is generally due to improper food, more particularly to bad, musty or coarse hay, containing a large quantity of woody fiber, from being too ripe when cut; to the habitual overloading of the stomach with hay of any kind, but especially with a quality that is more or less indigestible. Horses that are very heavy feeders, if allowed large quantities of coarse food are more liable to the disease than those with moderate appetites. Horses with very round chests, not capable of the ordinary degree of expansion, are also more easily affected. In a year following a season in which the weather has been wet during hay harvest, and as a consequence a great percentage of hay has been more or less damaged, as was the case in various parts of Ontario in 1902, broken-wind will be more frequently seen than in ordinary years. The disease is at first purely a nervous affection, dependent upon the condition of the digestive system, the pneumogastric nerve being especially involved, and the organic lesions are the effect of the nervous disorder. There is at first an abnormal condition of the bronchial tubes and air cells, which is quickly followed by structural change. The air cells become inflated; this prevents the free circulation of the blood in the capillaries, hence nutrition to the bronchial muscle and mucous membrane is weakened; degeneration succeeds, the walls of the air cells become stretched, disorganized, perforated or ruptured, two or more being converted into one, hence the air escapes and infiltrates into the lung tissue, causing that condition known as emphysema.

SYMPTOMS.—Inspiration is performed with ease, but the expiratory movement requires two apparent efforts, at the conclusion of which the muscles relax, and the flanks fall with a peculiar force. There is usually a peculiar cough, which seems to be ejaculated with a sort of a grunt, and this is often accompanied by the passage of flatus per anus. The cough, while peculiar, is hard to describe, but is readily recognized by those who have paid particular attention to its characteristics, and its peculiarity will be noticed whether the horse coughs voluntarily or is forced to cough by pressure on the larynx (the throat). In some cases there is an irregular, thick discharge from the nostrils during fits of coughing, but in many cases this symptom is not well marked. By placing the ear against the ribs the respiratory murmur will be noticed to be abnormal, but in order to be able to detect this it is necessary to be familiar with the normal sounds, hence we will not enlarge on this point. The symptoms are much more severe after the animal has been fed, and after the stomach has become comparatively empty the breathing may be tolerably easy until he has been fed again. Severe exercise also aggravates the symptoms. The digestive organs are often weak and easily disordered, but this is not a constant symptom.

TREATMENT.—Preventive treatment is always to be observed. Care should be taken to not give food of poor quality, especially musty or over-ripe hay. Greedy horses should be fed only a limited amount of bulky food, and, if possible, should not be worked or exercised soon after a hearty meal. When the first symptoms of the disease are noticed, before structural change has taken place, it is possible the development of the disease may be arrested, by the removal of the cause. In this case a purgative is indicated, followed by giving food of first-class quality in small quantities. When the walls of the air cells have become ruptured, of course a complete cure cannot be effected, but the symptoms can be palliated by attention to diet. Bulky food must be of first quality, and given in limited quantities. It is good practice to dampen all food consumed with lime water, and some claim to observe benefit from adding a couple of ounces of raw linseed oil. Care should be taken to not allow the ani-

mal to overload the stomach. Small quantities of bulky food and larger rations of grain than is usually given give good results, where the digestive organs are tolerably active. All methods that improve the digestion tend to relieve the symptoms, hence gentian, ginger and nuxvomica, in dram doses of each, are serviceable.

Unscrupulous horse-dealers resort to various methods to relieve the symptoms of broken-wind, for the purposes of sale or trade. They know that the animal breathes tolerably well when the stomach is empty; therefore, when a deal is probable, they keep him short of food and water, and give him a sharp drive to unload the bowels before showing him to the probable victim. Large doses of the various sedative medicines, as opium, arsenic, etc., are also known to have a palliative effect, and are often given. A heavy horse can be treated and dosed in such a manner as to practically remove the evident symptoms of the disease for a few hours, and the unwary purchaser finds out when too late how cleverly he has been "done." At the same time, an affected horse cannot be fixed so that he will not show the characteristic motion of the flanks during expiration, if he is subjected to a smart gallop for quarter of a mile or further, neither can the peculiar character of the cough be removed, hence it is wise for the prospective purchaser to subject the animal to these tests if he has any reason to suspect the honesty of the vendor. "WHIP."

Breeding Young Shires.

Apropos the article appearing in the "Farmer's Advocate" a few weeks ago, a writer in the Live-Stock Journal (British) says:

"That a two-year-old filly is not likely to breed a colt of the high quality of that produced by a mature mare is, no doubt, theoretically, excellent advice, but in actual practice it is very often disregarded, with surprisingly excellent results, and with Shires.

Two instances stand out conspicuously, viz.: that of the late Lord Wantage's Lady Victoria, winner of first prize at the Shire Horse Show of 1889, and numerous other prizes. She was considered to be about the best three-year-old of that season, and developed into a remarkably wide and weighty brood mare, although she was born when her sire—the London and Royal champion—Prince William 3956, and her dam, Glow (by Spark 2197, also a London and Royal winner), were both only three years old, thus being the produce of two-year-old parents on both sides.

The other is that of the thrice champion stallion, Buscot Harold 161576, he being sired by Markeaton Royal Harold 15225, as a two-year-old, although it must be admitted his dam, Aurea, was five years old at the time he was foaled. The trio were all class winners at the Shire Horse Show in 1898, and the two-year-old colt took the champion prize away from his sire, while his dam championed the female section.

Other instances could be given with time and space, but it is evident from the foregoing that good animals are bred from colts and fillies, and the writer has never seen disastrous or even bad results from mating well-grown Shire fillies, and the practice is a very common one among breeders of high-class Shires.

Unquestionably, then, the system of breeding from young stock has become much more fashionable during the last ten or fifteen years than ever before, but can anybody prove that the stature or health of any British breed of horses has suffered in consequence? With Shires, my own impression is that neither has."

Good Prices for Drafters.

Recently, a horse dealer in Toronto, while on a short visit to a near-lying village, saw a three-year-old draft gelding that seemed to be what the market wanted, and bought him, although it took two hundred and seventy-five dollars to do so. The object lesson in this transaction is obvious. When a three-year-old will bring over two hundred, it should indicate that horses of a certain type are badly needed, and that for the producers of such horses there is ample remuneration. Dealers report that with the industrial development going on in Canada the market demand for heavy working horses shows every probability of keeping up indefinitely. Such being the case, there should be a lot of careful breeders tumbling over each other in their efforts to secure as many good draft brood mares as find their way into the open market.

Horses at the National.

From all indications, admirers of horses may anticipate a real treat at the Toronto Exhibition this year. Several of the big Clydesdale importers have landed their challengers, and others are on the way from the different fountain heads of the horse industry. Light horses, both running and trotting, will attend the fair in large numbers, and the fancy actors will also parade in force. Ponies, also, are to be given special prominence. So, all things combined, the horse display should be a little better than has been.