



FARM WIND-BREAKS.

Why Every Country Place Should Have a Natural Fence of Willows.

Every farm needs wind-breaks, some more than others, for protection in winter and summer, for what breaks the force of the wind in the winter will not only serve the same purpose in summer, but if the right kind will also supply shade, and shade on a farm is as necessary as some other things.

Anywhere, under any circumstances, a wind-break saves—saves fuel in winter whether put into the stove or fed to the stock, and in the summer saves the life or prolongs the life of man and beast. A tight board fence costs, but it is economy to build if no other kind is available; but a board fence in the summer may be in the way and is always a radiator of heat. If it runs in the right direction it may furnish shade, but other wind-breaks are better.

Better than wood, more picturesque and more useful in summer is the natural fence of willows—the common willow that grows wild in great abundance. Nothing requires less care. A farmer went into a meadow and cut an armful of willows in the spring, thrust the scions into the earth where he wanted his wind-break, making two rows, eighteen inches apart, and the work was done.

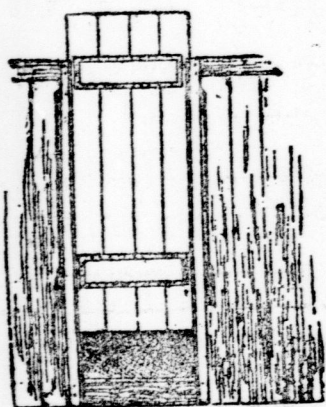
The willows grow with surprising rapidity if there be sufficient moisture, and moisture they should have in abundance at the start. After they are rooted they will grow if the soil is not moist, but they grow faster with moisture.

In two seasons they may be an appreciable wind-break, and in another the hedge will turn a cow. In the summer the hedge of willows is ornamental; it gives the yard, the buildings and the surroundings generally a bright setting; and more, it provides through the hot months shade for all small stock on the farm.

The ducks, geese, hens, chickens and the turkeys delight in the shady retreat; the turkey may make her nest there instead of going to the woods or roadside bush. In providing a living wind-break, several purposes are accomplished, every one important and useful.—George Appleton, in Farm and Fireside.

Hanging a Stable Door.

In windy climates some other way of hanging the stable door than swinging it on hinges is greatly desired. A de-



A SECURELY HUNG STABLE DOOR.

vice to do this is shown in this engraving, and can be made from the following description. For a doorway three by eight feet, make a batten door in the usual manner, weigh it, and procure two square sash weights that together will just balance the door, or make the door to balance the weights. Purchase about eight yards of sash cord and two large sash pulleys. Place in position a frame made of two by eight inch plank having the pulleys near the top, and fit the door so that it will slide up and down without wearing the cord. Fasten the sash cords to the bottom of the door near the batten. On each side of the door fasten to the frame strips of inch square pieces to hold the door in position. The weights may slide up and down on the sides of the frame, which may project out far enough for the purpose, or be boxed in to protect them and the cord from the weather. This method costs less than the common overhead hangers, is very durable, can be used for doors or shutters, and any farmer who is handy with tools can easily put it into practice.

Sunlight for Horses.

The proper nursing of sick horses requires only slightly less delicate attention than the nursing of sick men. Not to speak of diet and medicine, frequent change of bedding and clothing are as indispensable in one case as in the other. Perfect attention, abundant light, and pure atmosphere should always be prime considerations in treating the stable patient as well as the human subject. The influence of light on the animal frame, and even on the rudest form of organism, or death, as the case may be. The horse is by nature one of the children of light, and not of darkness—of the open air, not of the confined stuffy stall. In his wild state he seeks the sunlight of the plains, and avoids the darkness of forest glens; and if we would fortify him against the destructive effects of protracted illness, we should ensure him the free light of day and full enjoyment of the pure circumambient air. He should, when ailing, not be tied up to rack or manger, but have the comparative freedom of a roomy box. It is strange that most stable architects think any odd space in a dark corner, that cannot be well utilized to form stalls, is quite good enough a situation for a loose box or for an infirmary for a horse "told off" as too ill to work and requiring veterinary treatment. There is much room for improvement in the architecture and sanitation of the stable for both sick and healthy horses.—London Live Stock Journal.

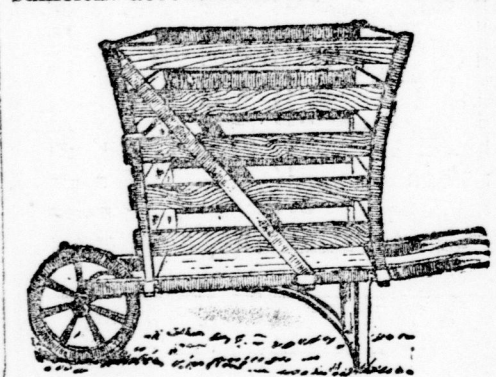
EXPERIMENTAL FARM WORK.

The Distribution of Grain and the Influence of United Action.

The importance of the distribution of grain can best be indicated by giving an idea of what has been done in the different departments and the effect of the experimental work of the Central Experimental Farm at Ottawa upon the quality and production of Canadian farm products. In order to induce the farmers to observe and study the productive elements of their land and ascertain by actual experiment what varieties of grain are best suited to the soil and climatic conditions of the districts in which they live over 22,000 three-pound bags of various kinds of seed grain were distributed last year to farmers in the different provinces. Owing to the early frosts in the northern districts of the northwest there is considerable danger of crops being damaged. Experiments in crossing different varieties of grain, such, for instance, as Ladoga wheat, noted for its early ripening qualities, and Red Fife wheat, celebrated for its productiveness, have resulted in obtaining new varieties possessing a blending of both qualities of early ripening and productiveness. Experiments are also made in early and late seeding, and the effect upon different varieties of grain and the results made known by monthly bulletins giving the results. In the other provinces the tendency toward mixed and dairy farming is accentuated at the market end by an ever increasing demand for the products of the dairy and stockyards, while at the other end the rest given the land from continual seeding of grain and other cereals preserves the utility of the soil. One of the greatest inducements offered to the farmer in turning his attention to stock raising and dairy farming is the success of experiments made in obtaining scientific mixtures of fodders, which give a complete ration to animals in the shape of ensilage. The adoption of this cheap and productive means of feeding cattle throughout Canada during the past few years has worked a marvelous change. In 1886 there were not more than a dozen silos in the entire Dominion, while now, as a result of the work done on the experimental farms, over 5,000 are in use in the province of Ontario alone. As a result the growth of corn as fodder purposes has more than doubled each succeeding year. Last year experiments proved that an ensilage mixture containing sunflower seeds produced most satisfactory results. It was found that the 729 pounds of fat contained in an acre of sunflower seeds grown at a cost of 3 cents per pound yielded from cattle fed on the mixture in the form of butter fat at least 18 cents per pound.

Not only has corn fodder been found cheaper and more productive as a food for cattle in the production of dairy products, but stock raisers and feeders of fat cattle are adapting the ensilage system with beneficial results. The feeding of swine on damaged grain has shown very satisfactory results. Experiments show that it produces an increase of from eleven to fourteen pounds in live weight per bushel of wheat consumed, or a realization on unmarketable wheat thus used of from 45 to 75 cents per bushel at the selling price of pork. The satisfactory result of this experiment is important to the Canadian farmer, for every year large quantities of wheat grown in the Northwest are damaged by early frosts and rendered comparatively useless for sale in the grain market.—William Smith.

Enlarging a Wheelbarrow's Usefulness. It is often desirable to wheel away from a lawn or garden, light rubbish, straw, hay, or vines, for which purpose the ordinary wheelbarrow does not give sufficient accommodation. So often is



WHEELBARROW WITH RACK FRAME.

it desired to wheel away light but bulky loads of this sort, that such an arrangement as is shown in the illustration will be found very serviceable. It is simply a light rack frame that can be attached to the barrow in the same way that the ordinary sides are attached, the addition of a couple of sockets near the handles being the only necessary addition to the barrow in order to accommodate the rack. The construction is so plainly shown in the sketch that added explanation is not needed.—American Agriculturist.

Feeding Wheat.

A press despatch from Toledo, O., says that a grain firm there has received replies from 3,057 dealers and millers in seven States raising nearly one-half the entire wheat crop of the country, in regard to the amount of wheat likely to be fed to animals this season. The reports vary from three per cent. to one-half the crop, with an average of 15 per cent. Kansas will feed the most, Michigan nearly as much, Missouri next, then Ohio, Kentucky, Indiana and Illinois. Nearly all say farmers have sold more freely than usual; one-half will hold remainder of crop; 836 say about half continue selling, and 808 say they are still selling freely. Indiana and Illinois are disposed to sell; Michigan holds firmly. A report on clover seed is also given, showing that the crop will be smaller than last year. Acreage is much less, though some sections report a larger yield per acre. Mammoth clover will be very short; medium, a trifle below average. Michigan reports poorest prospect for both; Indiana the best, but not over average.—Country Gentleman.

THE SOY BEAN.

The Japanese Plant That Is Suggested as a Substitute for Coffee.

While no substitute will satisfy the lover of high-grade coffee, the peculiar properties of coffee as a drink render it unsuited to a few people in every community. These few persons frequently make use of a substitute, which, while lacking the alkaloid of true coffee, in a measure imparts to that of coffee. Such a drink may be palatable, nourishing, and well adapted to the person using it. A desirable and easily available substitute for coffee, which can be grown upon the farm in this latitude, is the Soy or Soja bean.

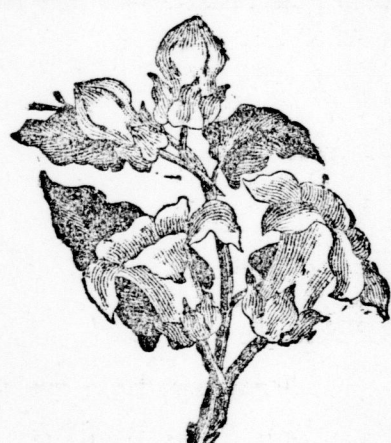
The Soy bean (Soja hispida) is a Japanese plant that has been but little grown in America. It has an upright, stiff, bushy form, under favorable circumstances attaining a height of three feet. There are three large leaves on a leaf stem. Short flower shoots come from the axils of the leaves, which with maturity produce pods in clusters of two or three. Each pod contains from two to four seeds, a little longer than broad, being about three-eighths of an inch in length. One plant may produce a large number of pods and leaves. The plant sends a vigorous root down into the soil. The leaves, stems and pods are as a rule very hairy.

The writer's attention was first directed to the peculiar merits of the roasted Soy bean, as a substitute for coffee, by Mr. L. D. Brown early in 1892, who was then a farmer in this county. In a letter, Mr. Brown says: "We have used it almost exclusively of other coffee, for coffee, for many years—seven or eight, I believe. I have raised 782 beans on one stalk from one bean planted, and had 16 bushels on one acre in Tippecanoe county."

The seed should be planted about 30 inches apart, in rows, with a bean every 6 to 9 inches in the row. The ground should be prepared as for any other beans. The seed should not be planted until the ground is well warmed, about the latter half of May, though a satisfactory crop has been gathered at this station from seed planted about the middle of June. Yet the season may be too short if planting is delayed much beyond June 1st. After the beans are ripe enough, the plants should be moved off or pulled up, and dried in the field in small piles or stacks, after which they may be taken to the barn and threshed out. Care should be taken not to harvest when the pods are too ripe, or they will shell in handling. A flail is a satisfactory instrument for threshing them out with, for they must be broken as little as possible in shelling.

Of the Soy coffee, 17.07 per cent. became soluble when boiled in water for drinking. The one main and essential difference between the seeds of the Soy and coffee is that one contains an alkaloid—caffeine—to which is due its peculiar flavor, which the other lacks. Both contain considerable fat, fibre and albuminoids, but the amount of available nutriment in either case would be inappreciable in a cup of coffee. That there should be so close a relationship in the amount of fat in each is of special interest. It is important to note that the Soy bean roasted is more nutritious than the artificial coffee or barley coffee sold in the market, and that the two latter contain but little fat and a great deal of carbohydrates (starch and sugar mainly).

As tried in the family of the writer, the drink made from the Soy bean was agreeable, and enjoyed more than some of the so-called coffee served in some hotels and restaurants. I have



PHYSLANTHUS ALPENS.

no hesitation in recommending farmers to make a drink from roasted Soy beans, rather than buy the cheap grades of coffee sold on the market, that in so many cases are adulterated with burnt pastry beans, peas, chicory, etc. Drink made by a number of persons in this community from the roasted Soy bean was much relished.

A tablespoonful of the ground beans makes a cupful of coffee. Mr. Brown recommends using one-fourth cupful of Soy to begin with, and one will thus more readily become accustomed to it. If too strong, it has an unpleasant odor, and may be diluted with boiling water. Special care should be taken in roasting. The hull of the bean should be brown, and not black, when properly roasted, and the berry should grind easily in the mill.—Charles S. Plumb, in Country Gentleman.

Washing the Bark of Trees.

In spite of the many professional theories about the nature of bark and the injury to it from being coated with outside material, the German farmers of Pennsylvania have extremely healthy apple trees by washing the bark with lime. No cleaner or healthier bark may be seen on apple trees anywhere than those German trees present. The white color of the lime is of course objectionable, but this may be readily obviated by putting a little yellow clay or even coal ashes in.

For Winter Egg-Laying.

A few quarts of millet seed may be useful to induce the hens to exercise when confined to the house in the winter. Scattered among the leaves and litter on the floor the hens will hunt all day for them and do a great deal of scratching for a little food, not enough to fatten them much.

POVERTY OF THE BLOOD

Condition That Gives Rise to Neuralgia, Severe Headaches, Heart Palpitation and Other Distressing Troubles

Poverty of the blood is the plain English for what medical men term anæmia, and it is a condition that destroys the happiness of thousands and hurries many to an untimely grave. "Going into a decline," is an expression frequently heard in reference to those suffering from languor, heart palpitation, headache, loss of appetite, etc., and it is but another method of saying that the trouble is poverty of the blood. To those then suffering, the following statement of Mr. Chisholm, of North Tyron, P. E. I., in reference to his daughter Lizzie, will point the way to renewed health: "About a year ago," says Mr. Chisholm, "my daughter took sick and wasted away, until she was a mere skeleton. We tried the ordinary remedies at first but no help was had from them, and the family physician was called in. He treated her for about six months but without any apparent benefit. At this time she was confined to bed most of the time, her appetite was almost gone, and she was so weak that death seemed not far distant. To add to our sorrow and discouragement the doctor said he could do no more. We had often read of the cures following the use of Dr. Williams' Pink Pills, but up to this time had not thought of trying them. The doctor's opinion was asked and he said by all means give the Pink Pills a trial; there is everything to gain and nothing to lose by doing so. We then began the use of the pills and by the time the second box was gone we noticed a slight improvement, and slight as it was it renewed our hopes and encouraged us to continue the use of Pink Pills. From that time the improvement was constant and rapid. Lizzie is now the picture of health and no one looking at her would think she had ever been sick a day, to say nothing of having been almost at the brink of the grave. There is no doubt in our minds that had our daughter not taken Pink Pills she would not be alive today, and it is with feelings of gratitude that we recommend them to others." If your dealer does not keep Dr. Williams' Pink Pills they will be sent by mail on receipt of 50 cents a box or six boxes for \$2.50 by addressing the company at Brockville, Ont., or Schenectady, N. Y. Remember that Dr. Williams' Pink Pills cure when other medicines fail, and do not be persuaded to take either a substitute or an imitation.

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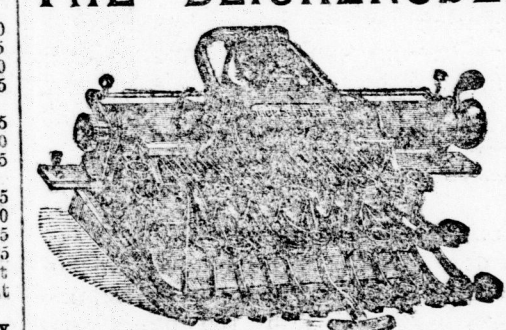
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