

peat-making enterprise is projected, the bog should be carefully tested by experts, such as the Department of Mines have engaged, in order that its value and the character of the plant required may be determined. The results of the demonstrations at Caledonia Springs and in Ottawa should prove of inestimable value to the Canadian public, either from the standpoint of producers or consumers of fuel.

Simple Directions for Spraying.

Spraying instructions in compact form, very convenient for reference, are contained in the Spraying Calendar published on another page of this issue. This calendar differs in some of its suggestions, both as to material and time of application, from those published in previous years, but may be followed with confidence, having been prepared by an expert in fungous diseases and insects. Mr. Caesar, the expert in question, has not only read widely and studied well, but has demonstrated his ideas conclusively in practice. Last year, in the apple orchard of a man who had become discouraged in attempting to combat codling moth, he succeeded by two thorough sprayings of arsenate of lead, two pounds to the barrel of water, in producing apples 90 per cent. of which were free from worms, while in neighboring orchards 50 to 95 per cent. were wormy. In ordinary districts, Mr. Caesar considers that one thorough spraying with arsenate of lead should suffice for the codling moth, but, with a view to combating other pests as well, such as scab, he recommends, for general practice, three sprayings of apple and pear orchards:

1. Just before the leaf-buds burst, lime-sulphur mixture, preferably the home-boiled.
2. Just before the blossoms open, either Bordeaux mixture or commercial lime-sulphur, one gallon to thirty of water. Two pounds arsenate of lead should be used to every forty gallons of whichever fungicide is used for this application.
3. Immediately after the blossoms have fallen, use the same fungicide and poison as in No. 2, but the fungicide should be somewhat weaker, as this has to be a heavier application to control the codling moth. Thoroughness is emphasized as of the greatest importance.

By following these instructions faithfully, the veriest tyro, if he be of fair intelligence, and painstaking, can go to work and spray with satisfactory results. Of course, he will not do the best work the first year, because the amateur sprayer can rarely or never be made to understand what thoroughness means, but he will learn as he goes on. Both lime-sulphur and arsenate of lead may be purchased ready to dilute and use, the former coming as a liquid, and the latter as a sort of paste. The cost is not great, the work is interesting, and the results gratifying. Every man who owns an acre of orchard should buy or secure the use of a spray pump. It will also come in handy for spraying plum and cherry trees, and potatoes, as well as for whitewashing buildings. Spray, and grow clean fruit.

World's Wheat Market.

The Economist, a British review of high repute, has a capital resume of the world's wheat market. When the season opened, in August last, most predictions were that the high prices, which had lasted over two years, would come to an end. This has not happened so far, owing partly to the bad condition in which most of the European crop was harvested, and the unexpected demand for wheat in Hungary. The world's wheat crop was estimated at 40,000,000 quarters over the average production of the two previous seasons, and though Russia, especially, poured enormous quantities of surplus wheat on the market, western Europe easily absorbed it, owing to the absence of reserves of old wheat, and the wet condition of the new crop.

Although prices have been high so far, the probabilities are believed to be for lower prices in the near future. Russia and Canada have a large proportion of their crop still to market, and England and western Europe will have a large quantity of the wheat, which was too wet to market in the autumn, to sell.

German Agricultural Development

Herr Zelter, the German farmer, whose recent strictures on English agriculture have been much discussed, has an article in an English morning paper, defending his position. Referring to Germany, he says the development has been largely due to four forces, namely: A suitable division of ownership; intensive, instead of extensive methods of culture; the combination of agriculture, with industry for the production of sugar, alcohol and starch; and finally, protective tariff legislation.

Two-thirds of the land used for agriculture in Germany is owned by the peasants, and one-third by great land-owners, and most of the land is worked by the owners. German agriculture has now almost reached its goal. Last year Germany exported more breadstuffs than she imported, and imports of meat have been reduced to a minimum.

Herr Zelter omits to explain that Germany's imports of meat have been reduced by a tariff that has made horse flesh almost a luxury to the poor. Agricultural development thus secured is purchased at too high a price.

Approximate Cost of Spraying.

Five dollars per acre, or about ten cents a tree, was the cost of material in our demonstration apple orchard last season, for what have usually been regarded as the three most important sprayings. For material and labor combined, the total cost was \$16.33 per acre, or 33 1-3 cents a tree, allowing liberal wages to men totally inexperienced in the work. The trees in this orchard were twenty-two years old, fairly well-grown, and planted fifty to the acre. These three sprayings alone, if very thoroughly done, will insure the production of fruit, ninety per cent. of which will be free from codling moth and serious defacement by scab. The trees will also be, to a large extent, protected from the attacks of other orchard pests, such as oyster-shell bark-louse and bud-moth. In the average orchard, the benefit from such spraying would represent a net gain ranging anywhere from five to fifty dollars per acre over and above wages and cost of material.

Economy in Human Diet.

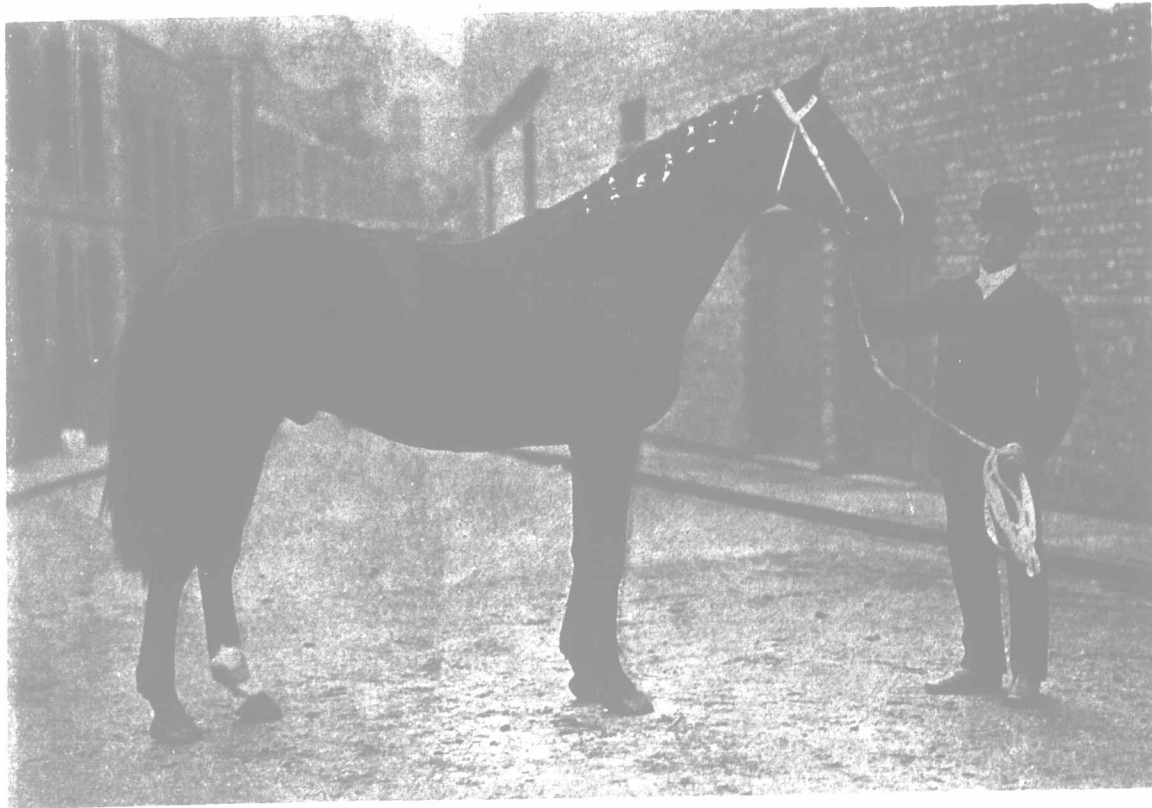
Editor "The Farmer's Advocate":

From time to time discussion centers around certain fashionable topics, and nowadays we hear a good deal about the "increased cost of living," with special, tacit reference to meat products. I often wonder why it is not more popular to apply the same study and reasoning to the question of human food as is applied to that of stock foods. "Feeds and Feeding" has been a topic of perennial interest in agricultural journals and Farmers' Institute meetings. Why not turn our attention for a little to the question of human "feeds" and

feeding," especially now that the public interest seems centered upon the increasing cost of living?

On March 26th I happened to be in a butcher shop, and saw a couple of spring lambs whose hindquarters were priced at 35 cents a pound. Meanwhile, potatoes can hardly be got rid of at any price, though some few sales have been made at 40 cents a bag; and most cereal foods have not advanced in price to any very remarkable degree. The intelligent farmer provides suitable food for his cattle at a minimum cost, but the same man, or his fellow man, will cry out in dismay when the prices of certain human-food products begin to soar beyond reach. Everywhere we find that alfalfa is recommended as a cheap source of protein for dairy cows and young stock of various kinds, and the farmer is being taught to grow and feed alfalfa, rather than bran or other relatively expensive concentrates. But skim milk, usually estimated at 15 cents per 100 pounds, is a most valuable source of protein for humans, and yet goes practically unused. Whole milk, to be sure, is fairly popular, but skim milk, obtained as a by-product in the manufacture of butter, is rarely used as human food. Why? In some European cities, particularly in Copenhagen, which has, perhaps, the best milk supply of any city in the world, milk with varying degrees of butter-fat is sold regularly to the inhabitants. But in Canada, skim milk is only rarely used, when the supply of whole milk fails. What sort of a diet could be constructed from skim milk and potatoes as a foundation, and what would be its cost, in comparison with other diets? Suppose we allow 25 cents per 100 pounds for the skim milk, and 60 cents per bag for potatoes. The 100 pounds skim milk will contain about 3 pounds protein and 5 pounds sugar, and the 90 pounds potatoes will contain, say, 20 pounds solids, mostly starch, which, from the standpoint of nutrition, is identical with sugar. We have, then, in the 100 pounds of skim milk and bag of potatoes, about 30 pounds digestible dry matter, at a cost of 85 cents, or, say, 3 cents per pound. Add to this oatmeal, containing a splendidly-balanced ration, for a little over 3 cents per pound; rolled wheat and wheat products adapted for human food, at about the same price; beans, containing an unusually high percentage of protein, and, when properly cooked, both palatable and digestible, at a little over 3 cents a pound; sugar, if you will, at 5 cents a pound; and, for flavoring and extras, the many cheap fruits and vegetables. There are, therefore, many suitable sources of human food at approximately 3 cents per pound, for digestible nutrients.

Now, compare with these the cost of nutrients purchased in certain other food products: Beef-steak, at 15 cents per pound, containing 25 per cent. protein; cost of protein, 60 cents per pound. Cheese, containing 70 per cent. dry matter, at 17 cents per pound; cost of nutrients (proteids and fat), 25 cents per pound. Butter, worth 2½ times as much as starch or sugar as an energy producer, at 30 cents per pound, 30 cents' worth being equal to 8 cents' worth of starch or 13 cents' worth of sugar. Ham and pork products (containing protein and fat), with nutrients at about 40 or 50 cents per pound; and so on. If people will choose as staple articles of food those sources which supply nutrients at 30



Carrington.

Thoroughbred stallion, chestnut, five years old. King's Premium winner in Class A, London, England, Hunter Show, 1910. Sire Sainfoin.