THE FARMER'S ADVOCATE
AND HOME MAGAZINE.

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Seed Time: the Season of Hope.

"The time of the singing of the birds is come," and come exceptionally early. March closed in the vicinity of London, after weeks of sunshine, with a temperature like that of May. Seeding operations commenced in many sections of Western Ontario, as well as the prairie West before the usually blustering old March smiled his genial adieu.

The silent, mysterious forces of nature, which have as their field of activity the surface soil of the earth, have, after a few months of torpor, again begun to work. Tender shoots of grass are appearing, and garden and forest bulbs, fearless of frost, are making rapid headway. In the soil itself, which is in truth a vast chemical and bacteriological laboratory, these potent forces are changing inert matter into forms suitable for plants to feed upon, and bringing life out of death.

Is it because of these vital changes that the fresh upturned soil in spring has that pleasant aroma so well known to everyone who has worked in it with plow or harrow? What delight again to smell the rich, moist earth after the somewhat stuffy experiences of the winter's feeding work. Who would not now be a farmer? In the Old Country, about a century ago, a favorite medical prescription for a weakly child was to order it to follow a plowman in his furrow. And certainly, if one may judge from the average plowman's heartiness at the table, the old doctors' belief in the virtue of the smell of fresh-stirred soil had a substantial basis in fact. Let not the press of work hold our eyes from seeing the wonders among which we labor, or the wholesome delights which surround us. The speculator's interest in the state of the country's crops, which is solely that of personal profit, of how he can buy and sell, and make the greatest gain, is not a high, but a sordid one at best. The farmer, whose chief interest lies in production, that he may earn an honest living and something over, is himself not wholly free from the temptation to look only at the cash to be made by his work, and so make that work a mere grind for money. There ought to be, and there may be, a genuine delight in seeing things grow, in reflecting on the marvellous processes by which this increase comes to us, and on the wondrous beauty with which all vegetation clothes itself, aside from the profit of it all.

But, after all, how little a part Man plays in the process of crop production! Germination, growth, weather, even soil itself, are all beyond him. He sows the seed, but the springing thereof is of life that he cannot impart. He can, by manipulation, produce conditions favorable to growth, but the growth itself is not his doing. With cultivating implements he puts in a few days' work, at most, on a field of spring grain, sows the seed, and his part is done. But the work goes on. As the months pass, those wonderful processes, so utterly beyond his control, or even his complete understanding, by which development proceeds from the seed through various intermediate stages, to the ripened grain, go on unceasing by day and by night, week after week, until maturity is attained.

Spring is the season of hope. The balmy days make the good housewife think of having a fine garden. Flower and vegetable seeds are planted, and in imagination she sees full-ranked masses of lovely flowers, and inhales their fragrance, and has full supplies of crisp lettuce and other tender growth with which to vary the farmhouse dinner. For the time she recks not of the fowls that scratch, the storms that beat, the drouth that withers, or the numerous family of grubs and bugs and worms that rejoice in devouring her greenery. But she is right. Her hopes have partial fulfilment, at least, while those who have no hope have nothing. How beautiful a newly-brairded field of grain. Every blade is a prophecy. Each one may become a perfect specimen of its kind. The inequalities which develop later are not then seen. But though some may be crowded out, or perish from other causes, though some are weaklings while others are strong, though never is there fullness and equality all through, yet the bountiful harvest by which all are gladdened comes only after the seed-time of promise.

Peat Fuel for Canada.

Nature, in her beneficence, endows the northern countries, where it is most needed, with vast supplies of fuel for lighting, heat and power. When we grow apprehensive over the waste of forest resources, or the tying up of coal mines, "white power" is evolved in the form of electrical energy, from the giant streams of Canada, and Dr. Eugene Haanel, Director of Mines, at Ottawa, reminds us that the Dominion possesses an area of approximately 40,000 square miles of peat bogs, formed by the slow decay of vegetable matter, varying in depth from 5 feet to 30 feet, suitable for making fuel and other purposes, as yet practically undeveloped. Last year, only one small peat plant was in operation, a very limited quantity being produced for local use. Many such enterprises have been projected, but were not successful, because the properties of peat were not sufficiently understood, the machinery or methods employed were impracticable, or the bogs worked were unsuitable. The aim has been, by artificial drying and pressure, to make condensed fuel in the form of briquettes (small blocks) that could be handled and shipped like coal. These have been made, and burned fairly well in domestic use, but the process was so costly that the product did not pay. As Dr. Haanel observed recently to a representative of "The Farmer's Advocate," it resolved itself into spending $200 to make $100 worth of fuel; in other words, more fuel is required in the artificial process to evaporate the water from the bog material than it will yield in dry-peat substance. The present solution of the problem is in an air-drying process. Nature must be harnessed in a simple way. For a couple of years, the Mines Branch of the Dominion Dept. of Mines has addressed itself to this task of learning, first, how peat fuel is successfully and profitably made, and used in Sweden, Norway, Denmark, Finland, Russia, Germany, Austria, Holland, and Ireland; second, the condition of the industry in Canada; third, the character of the Canadian peat bogs; and, fourth, making an actual demonstration in peat production near Caledonia Springs, Ont., at the Alfred bog, in the Townships of Alfred and Caledonia, on the C. P. R., about 40 miles from Ottawa. The total area of this bog is about 6,800 acres, and capable of yielding approximately 9,369,000 tons of peat fuel. A bog with an average depth of six feet after drainage, contains about 1,210 tons air-dried peat to the acre, and 1.8 tons air-dried peat is equal to about one ton of coal. The bogs should be fairly free from roots and stumps, and well humified. The Government has purchased about 300 acres of this bog, and did a large amount of preparatory work last year. A modern European peat-fuel plant, Anrep system, is being installed, and operations will be commenced during May next. The Department has also established a fuel-testing plant at Ottawa, where this manufactured peat will be tried as a gas-producer and generator of power. In Sweden, several power plants, with peat gas producers, are successfully in operation. In the researches thus far conducted, Dr. Haanel has had the valuable assistance of Erik Nystrom, M. E., who investigated the European industry, and A. Anrep, peat expert, with Mr. Nystrom, in reporting upon the Canadian bogs. As a general conclusion, it has been clearly demonstrated that the manufacture of air-dried peat fuel is a sound business proposition. Canadian conditions in the interior Provinces are quite as favorable as those in Europe; in fact, the drying conditions are more favorable, the summer being longer and warmer. In case of most bogs, the employment of machines for mixing, pulping and shaping the peat in blocks for drying, without extra addition of water in the process, which occupies from 16 to 30 days, is recommended. The blocks vary in size, 4 x 5 x 9 inches being perhaps an average. They can be readily handled, but are not intended for shipping long distances. Adding water is a method advised where suitable drying fields can be secured, or where small production is required. Though the manufacture of peat croquettes has not proved lucrative, the production of lignite briquettes in Germany has reached large proportions. Another promising fuel is peat powder, which might be advantageous in such industries as cement-making. The manufacture of peat cake is also reported feasible, where the by-products can be disposed of to advantage. Moss litter from the bogs, and peat mull are used for bedding and packing purposes (fruit and eggs, etc.), but the staple output of European bogs is air-dried fuel. The governments there have expended large sums in its development, in order that they might be independent of foreign countries for fuel. Russia has the largest peat industry in the world, with some 1,300 Anrep peat machines, and other plants are in operation, some of which are owned and conducted by the Government. Over 4,000,000 tons of peat fuel per year have been produced. Holland stores immense quantities of peat fuel for military purposes in case of war. In some cases the plants are run by private companies, and in others on a simple co-operative plan, perhaps a dozen or twenty persons uniting to make their own fuel. Machinery for such purposes could probably be set up for $5,000, capable of turning out from 20 to 30 tons per day, at an approximate cost of from $1.75 to $2.00 per ton. The raw material is dug, and pulped and formed on the bog's surface into bricks or blocks, which are placed to dry in the air. Air-dried peat may contain from 25 to 30 per cent. moisture, and is used either for domestic or industrial purposes. Incidentally, it is learned that the bogs, as they are worked out for fuel purposes, are converted into use as farming land. Being already drained, they prove highly valuable for crop production. The rapidly-growing population and industrial activity of Canada, and the increasing demand and cost of fuel, coupled with the fact that we are importing between 7,000,000 and 8,000,000 tons of coal annually, demonstrate the immediate and practical value of the Canadian peat-fuel industry. The work undertaken by the Government towards its development is certainly to be commended. One point stands out clearly, viz., that, before any