

Growing Wheat and Its Consumption

Recently Secretary Wilson of the Department of Agriculture called attention to the fact that in most of the older states wheat production per acre has fallen off, and points to this fact as conclusive evidence that the soil elements in wheat production are becoming exhausted. No doubt there is much truth in this. But it is very well known by good farmers, who methodically pursue a crop rotation which includes red clover and other leguminous plants followed by wheat, that the latter crop is grown in as large production as it ever was, and so there is nothing to become alarmed at, lest the country should permanently fall below the demand for this great cereal. Soil humus and nitrogen are the great and essential elements in wheat growing. Red clover, cowpeas and other legumes supply both of these. In Southern Illinois where wheat soils became greatly exhausted farmers resorted to cowpea crops in the rotation, and the result on the following crop of wheat was very marked. The chief reliance in most sections has thus far been red clover. We call to mind numerous instances in the past twenty years where wheat following clover gave wheat yields far above the average, and no exception to this rule has been reported. The figures comparing wheat production per acre in twenty years in the older states, quoted by Secretary Wilson, show a falling off on the average acreage, but they do not reveal the results with farmers who by legume rotations keep up their wheat yields. These things are indeed important and should awaken those who do not pursue proper rotations to keep up fertility.

Secretary Wilson also quotes the largely increasing consumption of wheat in this country. He says: "The American people consume more wheat than any other nation, because of our ability to buy it. This year's crop,

which is in the neighborhood of 550,000,000 bushels, is less than seven bushels per capita, and that is the smallest per capita we have had for ten years. In India they raise about half a bushel per capita. Sixty years ago we used to raise about five bushels per capita. In 1869 it ran up to seven and a half bushels; in 1879, to nine and a quarter bushels; in 1889 it fell back to about eight bushels, but this year it has fallen off again. We will consequently need the most of this year's crop for seed and bread. We need about 50,000,000 bushels for seed and nearly 450,000,000 bushels for bread every year; hence the exports during the current fiscal year will be much smaller than usual. In 1902 we exported about 203,000,000 bushels, and in 1901, when there was a very large crop, 234,000,000 bushels, but the exports this year will be the smallest for many a year."

Potatoes, Sprayed and Unsprayed

The Vermont Experiment Station furnishes some interesting data upon this subject. Last August it sprayed a portion of a potato field located beside one of the most traveled roads leading into Burlington. The soil was a well-drained, sandy loam sod, well-manured, plowed in the spring and planted late in May. Two-thirds of the piece was sprayed on August 9 and September 5 with standard Bordeaux-Paris green mixture (6 pounds copper sulfate, 4 pounds stone lime, one-half pound Paris green, 40 gallons of water); one-third was sprayed solely with Paris green.

The late blight (which directly or indirectly causes most of the loss from the rot of the tubers) was first seen on the unsprayed rows on August 21. It spread very slowly, but, when the tops were killed by frost on September 23, fully 90 per cent of the foliage on the unsprayed rows was dead. No late blight could be found at this time on the sprayed rows where fully 90

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per cent of the leaves were alive.

The crop was dug on October 3. The sprayed rows yielded at the rate of 344 bushels per acre, and the unsprayed rows at the rate of 301 bushels per acre, a gain in total yield of only 43 bushels. But when the rotten tubers were sorted out the sprayed area produced at the rate of 317 bushels per acre of sound, marketable potatoes, and the unsprayed area at the rate of 56 bushels per acre of sound and marketable potatoes. Eight per cent of the crop on the sprayed area was rotten, while 80 per cent of that grown in the unsprayed area was lost by rot. The net gain was 261 bushels per acre as a result of spraying with Bordeaux mixture. Potatoes sold in Burlington for 60 cents per bushel. The gain amounted therefore to \$156. It cost about \$6 per acre to spray, leaving a net gain of \$150.

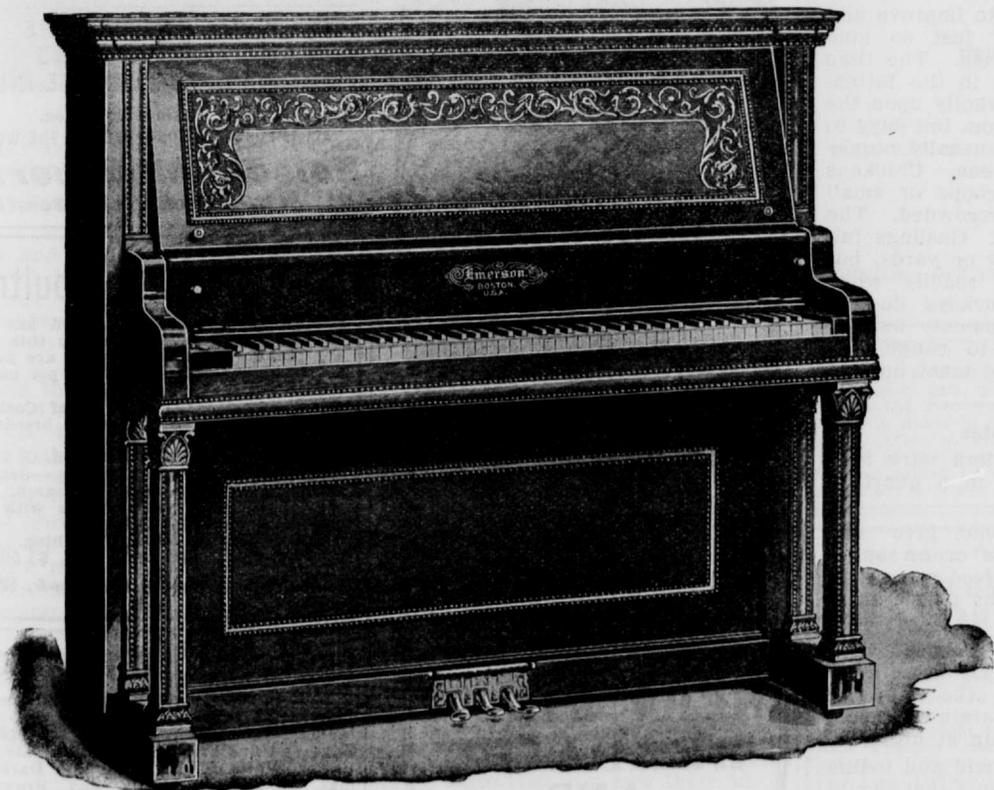
These results are exceptional; but there were many fields this fall, especially in Northern Vermont, where

there was as great or even greater loss from rot. Some were hardly worth digging. Are you planning to harvest 56 or 317 bushels of potatoes per acre next year? Do you expect to leave 80 or only 8 per cent of your crop in the field? Why not plant less land and still raise as many bushels? It is one way to solve the help problem. Bordeaux mixture ought not to cost over \$3 per acre for each application; in practice it usually costs much less than that. Is it not better to buy copper sulfate than copper stock?

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