

Filling the Drug Store from American Fields

Medicinal Plants of the World Now Being Grown in this Country.

IMPORTING health—or what was intended to, preserve health—from other countries, just about spoiled a \$25,000,000 note for Uncle Sam last year. The value of chemicals, drugs, dyes and medicines which he bought in a twelve-month was \$74,452,664, and, while much of this material was used for industrial purposes, it is probable that one-third was used in the interest of health.

And this immense importation while we possess the climate, the land—everything, apparently, but the determination—to grow practically any drug or medicinal plant in use!

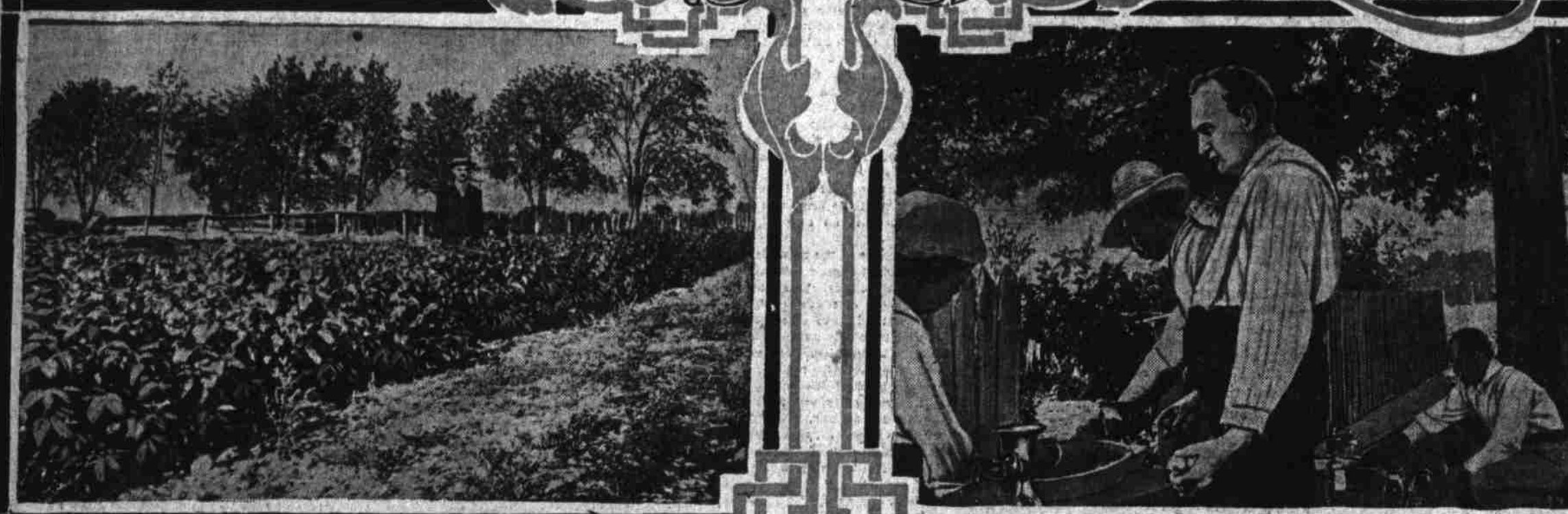
This isn't a new thought—it occurred to the Department of Agriculture of the United States a few years ago, and with it



Gathering Irish Sea Moss on Massachusetts Coast.



Camphor Trees at Quincy, Fla.



Belladonna at Washington, D.C.

came the logical question: Why can't we be doctor to our own people in every sense of the term?

So the cultivation of drug plants has been given a good boost in various parts of the United States. Imports are growing less. Such things as opium, cascara, camphor, belladonna—these and many other drugs which we have become used to considering entirely foreign—are being raised right at home in constantly growing quantities.

And now we are informed that a large proportion of those drugs which are bought at fancy figures from abroad have been all along growing in this country—but they have been considered weeds!

THAT in the much-despised weeds of the field there is a source of profit far and away exceeding the damage they may do to other plants is one of the developments of the government's drug investigation.

"If the products concerned are not to entirely disappear from the materia medica," said Dr. Rodney H. True, physiologist in charge of this branch of the Department of Agriculture work, not long ago, "it is necessary now to cultivate, to domesticate many wild plants which are in danger of extermination from several sources."

As a result of apathy, until recently, in the United States concerning this phase of plant industry, Dr. True found at the beginning of his work that many of the most valuable of native drug plants had been almost exterminated by drug collectors; certain noxious weeds, instead of being profitably utilized, had remained to impoverish the soil, and millions of dollars were being needlessly sent abroad every year.

But now all this is changed. Not yet free from the foreign drug dealers' yoke, we have at least proved that we can raise our own medicines, and the next few years are expected to make us truly our own doctors.

As a first step to this work the government started the experimental cultivation of drug plants from foreign lands.

Success has attended these efforts to a



Growing the Poppy in Vermont.

degree altogether unforeseen even by the most optimistic of the experts who have been engaged in the work.

Plants imported from Europe and the Orient—from China and Japan—were used in the experimental work. Experiment stations were established at Washington, at Ebenezer, S. C., and at Burlington, Vt., and, as occasion warranted, at other places.

In several cases the behavior of important drug-producing plants of Europe and the Orient under conditions in the United States has been determined.

Great strides have been made with the poppy. In making this test, the poppy from China was used—not to facilitate the "hitting of the pipe" by Hip Sing and Hop Loy, back of the laundry, but to furnish part of the vast amount of opium products which America needs for medicinal purposes each year.

It was found that opium can be made to thrive in the most widely separated parts of the United States. In so cold a climate as Vermont and in the warm sections of the South it has shown ability to maintain a vigorous existence.

And this American poppy has been found to contain the product from which morphine, codeine and other medicinal alkaloids are extracted.

Indeed, the experiments have gone much further than this, for one of the attaches of the Bureau of Plant Industry, W. O. Richtmann, has experimented extensively with a process for separating the commercial product from the plant, a task which, under the old system, was accomplished with a common sausage grinder.

In a single year, recently, the importations of crude opium and other products of the poppy were over \$2,600,000. Wouldn't this be worth saving?

South California has been found to have about the most favorable conditions for poppy culture in the United States, excepting that labor is not cheap. Some parts of Texas, it is thought, might more properly meet the requirements.

In Texas—in the town of Pierce—the government has lately begun to experiment with camphor, which has for a number of years been successfully raised in Florida.

Not alone for medicinal purposes is the growing of camphor expected to prove of use; as a wind-break about plantations rows of camphor trees may prove a godsend to many resi-

dents of the Southwest.

Derived, until recently, almost entirely from Japan, the world's supply of camphor is now being somewhat augmented from American soil, although the industry has not yet been placed on a commercial basis.

Since the camphor importations amount to about \$1,000,000 a year, every effort is being made to get American farmers interested in the industry.

Importing camphor trees and distributing them through various parts of the South, the government has practically demonstrated that various sections of that territory are suited for its growth.

The readiness with which the camphor tree is propagated from seed, and its rapid growth, together with the large yield of gum and oil—in Florida the yield has been 1½ per cent. pure camphor—make the economic possibilities in camphor growing look very bright.

Although the bulk of licorice used for medicine in the United States—this item alone amounts to about \$2,000,000 annually—comes from the countries bordering on the Mediterranean Sea, the Bureau of Plant Industry has found the plant to be hardy, capable of growing, almost in a wild state, as far north as Pennsylvania. This is one of the medicinal plants which will certainly be raised in the United States for home use before long.

Belladonna and digitalis are among the important minor crude drug importations which might just as well be produced in America as elsewhere; in fact, the cultivation of belladonna on a commercial scale has been successfully taken up during the last several years by an American firm.

It has been found easy to raise foxglove—the plant from which digitalis is secured—at Washington and in South Carolina.

Peppers are being readily raised in America; but, on account of the restricted demand, this industry is not likely to reach an important stage.

Another plant, used as medicine and food, which America has been importing, while it could just as well be gathered on American shores, is Irish moss.

The cultivation of the cascara sagrada tree has been carried on with great success at Washington and at Ebenezer, S. C. Not only is the bark in great demand in America, but in foreign lands; and, since a foreign shortage in the near future seems inevitable, American farmers have been advised to take up its culture.

Among the American native weeds, generally neglected, which are held to be valuable as medicines, are golden seal, burdock, lobelia (a poisonous weed), pokeweed and boneset. But there are many others.

Especially gratifying have been the results with regard to the golden seal root. By no means new is this remedy. The Indians used it not only to stain their faces and dye their clothing—they found the root a valuable medicine. Captain Lewis learned, when he was making his expedition with Clark, in 1804, across the West, that golden seal was a great remedy for sore eyes.

Yet it remains for the government to teach the people of the present day the desirability of cultivating it.

It is native from southern New York to Minnesota and western Ontario south to Georgia and Missouri, ascending to an altitude of 2500 feet in Virginia. Prior to 1900 there had been no record of any one who had attempted the cultivation of golden seal for the market.

The government started its cultivation on a small scale at Washington, and as a result it is now announced that it is susceptible of being profitably propagated.

As illustrating the profit that there would be in more general cultivation of golden seal, it may be cited that in ten years from 1894 the price has increased from 23 cents to \$1.25 a pound, and has continued to climb.

Estimates by reliable dealers are that the annual consumption, or, rather, demand, is about 300,000 pounds. But, of course, if a large number of people should successfully engage in growing golden seal the price would soon go down.

Oversupply, indeed, seems to be the only thing to be feared, once America seriously determines to become her own doctor and druggist.