NATIVE MEDICINAL PLANTS.

Prof. R. H. Denniston.

If I were to ask for a definition of native medicinal plants you would probably tell me they are our native plants which are used in the cure of disease. But if I were to describe all the plants which have been, or are still being used in medicine, I should be able to give you but little more than the bare list of names, in the time allotted me.

In early days in this country when apothecary shops and physicians were not as plentiful as they are at present, the people were their own doctors and their remedies were taken from nearly every tree, shrub and herb that grew in woodland or meadow. When the baby was sick, instead of giving him Castoria, catnip tea was the household remedy, and although I never heard that babies cried for it, probably as many of them grew to be healthy men and women as modern babies do.

In nearly every garden there was a patch of chamomile and caraway, and every summer the prudent housewife laid in a stock of boneset, smartweed, elder berry juice, skunk cabbage and wild turnip, against the ills of winter. Certain wild medicinal plants were collected and sold in the market. The demand for these plants has increased with the growing population and in many parts of the country they have now been practically exterminated. Millions of pounds of wild growing drugs are now collected every year.

Ginseng was formerly fairly abundant in our woods not far from Madison, but now one might tramp all day without finding a single plant. Ladies’ slipper and Seneca snake root are fast disappearing and if they are not cultivated it will be but a short time till they are no longer to be found in the market.

The drug collector is not the only destroying agent however, as has been pointed out by Dr. True of the Department of Agriculture. Other causes which lead to the destruction of wild plants are the cutting of the forests and the use of forest land for the pasturing of stock.
STILLS AND ENGINE HOUSE, FARM OF H. HOGGARD, NEAR OKEE, WIS.

TILLING THE STILL, L. S. DREW FARM.
Although the price of drugs has gone up with their increasing scarcity, there are few places in our state at present where a collector of native wild plants could make a good living. It is true that there are many drug collectors in Wisconsin at present, but most of them have other occupations, and collect drugs only at certain seasons.

The question as to whether medicinal plants can be raised in Wisconsin can be answered at once in the affirmative. They do grow all about us, in our gardens, fields and woods. So plentiful are they that we have passed laws against some of them as noxious weeds; among the latter are the burdock, yellow dock, dandelion and mustard, and the curious fact about it is, that we import annually thousands of pounds of drugs from these same weed plants.

You will ask why we do not use more of our own plants instead of importing them, the reason is that we are too prosperous and the cost of labor is too high. We can hardly raise these drugs at a profit and at present find it cheaper to import them. But the government has endeavored to point out to the farmer that, in ridding his farm of weeds, he may be able to make the pests a source of small income. In order to help the farmer to obtain the best prices for such products a bulletin has been issued giving instructions for the collection and preparation of crude drugs derived from weeds. (Farmers’ Bulletin No. 188.)

These drugs consist of various plant parts, leaves, flowers, fruits and seeds which are used in medicine. Among the common weeds described are burdock, yellow dock, dandelion, couch grass, mullein, lobelia, tansy, boneset, catnip, yarrow, Canada fleabane, black and white mustard. The prices paid for these weed drugs are not high; burdock root brings from 3 to 8 cents a pound; dandelion root from 4 to 6 cents; couch grass, 3 to 7; mullein leaves, 2½ to 5 cents; lobelia tops from 3 to 8 cents; tansy tops, 3 to 6 cents, etc.

It is possible that the cultivation of these drugs in large quantities would prove profitable. Large quantities are consumed annually in this country and the supply now comes largely from abroad.
BACK OF STILL SHOWING COOLING CISTERNS IN FOREGROUND AND CONDENSING PIPES, L. S. DREW FARM.

HARVESTING WORMWOOD NEAR LODI, WIS., FARM OF L. S. DREW.
We imported during the year ended June 30th, 1902, over 5,302,500 pounds of mustard seed having a value of $265,000. We import about 30,000 pounds of tansy every year. The mullein plant is cultivated in Germany and we import from there about 5,000 lbs. of the flowers annually at a price ranging from 25 to 75 cents a pound. We import about 250,000 pounds of couch grass every year. This is one of the worst pests of the farmer in certain parts of the country.

The cultivation of medicinal plants in Wisconsin is not a new thing. A few miles from Edgerton, W. A. Clark has been raising sage for the past twelve years. He has from 5 to 12 acres planted to sage and says it is not difficult to cultivate, after the first year. A good yield is about 1,500 pounds per acre, and the price paid is from 5 to 12 cents. The herb is cut and spread on racks to dry which requires about 3 weeks. Then on a moist day it is packed in bags for market. If the stubs are trimmed in the spring, one planting is good for eight years.

Near Lodi there are two farmers who raise annually from 40 to 60 acres of wormwood apiece. Both of them have stills and extract the oil. The yield is usually from 7 to 10 pounds of oil per acre and the price ranges from $4 to $7 a pound.

Ginseng is raised in various parts of the state. The government has issued a bulletin on its cultivation. (Bulletin No. 16, Div. of Bot.) and it is not difficult to grow if instructions are followed closely. It is a plant of the woods, hence an artificial protection from the sun is necessary, and the soil must be as near like the rich mold of the woods as possible. An artificial shade is constructed by nailing lath to a frame about an inch apart and raising the same about 8 feet from the ground. A farmer near Baraboo has four beds of ginseng, each 6 ft. wide and 7 rods long. After planting the seed, it requires from 4 to 7 years to produce the first crop of marketable roots. The ginseng seed must never be allowed to become dry. After they are sown it takes about 18 months for them to germinate. When the plants are two or three years old they may be transplanted and set 4 to 6 inches apart. Ginseng is now worth from $4 to $8 a pound according to quality.

On a farm near Milwaukee, German chamomile grows wild.
It comes up around the edges of the field, between the grain and the fence. The farmer on whose farm it grows thinks that if cultivated, 500 to 600 pounds per acre could be raised. It brings 20 cents a pound in the market.

A number of drug plants which were formerly collected wild in Wisconsin, have now become practically exterminated in all parts of the country. The demand for them has increased rather than diminished and the price has gone up accordingly. On this account the Department of Agriculture has undertaken to find out the way in which they may be cultivated. Golden seal and Seneca snake root are two such plants. A bulletin has just been issued on golden seal. Experiments on its cultivation have been in progress since 1899. Much the same treatment is necessary as for ginseng. As yet it has not been successfully raised from the seed, but is propagated by division of the rhizome, and by means of small plants formed on the stronger fibrous roots. The roots may be gathered at the end of two or three years, and for propagation alone, one year will give good results. The yield of the first crop raised by the government is estimated at about 1,500 pounds of dried roots per acre. The price is sensitive to market conditions, and in 1904 varied from $.74 to $1.50 a pound. The annual consumption of golden seal in all countries is estimated at from 200,000 to 300,000 pounds.

To sum up, it is seen that we have all about us plants which have been used in the cure of disease, few of these are used at present. They have been replaced in many cases by synthetic chemical preparations. Of these common native plants some have a market value which, however, is so low that it does not pay to collect and prepare them.

Other native plants which are still in considerable demand have been practically exterminated. The limited cultivation of these if wisely carried on should prove remunerative. Besides these two classes of native medicinal plants, there are those of foreign origin, of which large quantities are now imported and used in this country. The government has shown that licorice can be grown in this country. We imported over 109,000,000 pounds of licorice products in 1902 at a cost of nearly $2,000-
Other plants which have been successfully cultivated by
the government are capsicum, belladonna, henbane, stramonium,
caraway, anise and coriander. Certain of these will grow in
Wisconsin, and only an experiment will show whether or not
they may be raised profitably.

**DISCUSSION.**

The President: This is a very interesting subject to me,
and it ought to be interesting to a good many others, but per-
haps some of these things are not so widely known.

Mr. W. J. Moyle: Give us a little more information about
belladonna. What kind of a plant is it and what is it used for?

Prof. Denniston: Belladonna is used largely in this coun-
try. The bulk of it is raised in New Jersey where there is a
twelve acre farm. The price of belladonna is good, I think it
is about twenty cents a pound. Whether or not belladonna can
be raised in Wisconsin I do not know. Certainly it would
have to be started under glass and the seedlings transplanted.

Mr. Moyle: To what order does it belong?

Prof. Denniston: Solanaceae.

Mr. Moyle: One gentleman spoke of ginseng. J. C.
Vaughan states that the cultivated variety could not be sold. I
would like to know whether the professor knows anything about
that.

Prof. Denniston: There is a demand for ginseng or people
would not grow it. There are five hundred growers in New
York state, and the market reports show that ginseng brings a
good price.

Mr. Cranefield: I beg of you don’t go into ginseng today.
I want to promise you this, next winter or summer we will
take up the subject of ginseng and allow you to thresh it out.

The President: I think we shall have to close this discus-
sion unless someone wishes especially to be heard.
PANSY FIELD OF WILLIAM TOOLE, BARABOO, WIS., SEPTEMBER, 1905.