

Salem is Now the Fiber Flax Center of the United States, and It Will Before Long Have Twine and Thread Factories and in Due time Great Linen Mills.

WHAT WAS SAID A YEAR AGO AND IS STILL TRUE

In Brief Paragraphs, the History of the Flax Industry in the Salem District—Great Credit Due the Pioneers Who Had Faith

Following are some brief excerpts from the leading article in the Salem sagan issue of The Statesman of October 30, 1919:

Linen is the world's oldest vegetable-fiber fabric.

Linen will outlast cotton in everyday wear in proportion of one to eight or more; that is, one linen sheet or tablecloth will outwear eight or more of cotton.

It is extremely important, therefore, that the world should have more linen; it is bound to have more and more; the cry now is for more and more.

Ireland now manufactures more than one-third of the linen of the world; and she produces only about 2 per cent of the flax needed in her manufactures.

About 90 per cent of her raw materials have come from Russia.

The world has been using 800,000 to 1,000,000 tons of flax fiber in her manufactures; with 92 per cent of it all raised in Russia and Belgium.

Russia is now out of it; it perhaps permanently; for before the war it was raised by Russian peasants as a tax tribute crop.

The United States was a flax-growing and manufacturing country in colonial days; making the "home-spin" on hand looms in the houses of the people; each farmer cultivating a small patch of flax.

The United States manufactured more flax in 1776 than she does now.

But a new day is coming.

A recent authoritative statement reads: "It is said that prob-

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pany, financed by Theodore Roth, E. J. Hansett and other Salem parties, three years ago built a scutching and a tow mill at Turner, seven miles south of Salem. They have been only reasonably successful in getting flax grown. They have themselves hampered by scarcity and high cost of labor.

They are in active business, however, under the direction of Mr. Hansett as superintendent, and they have capacity to make 300 to 400 tons of tow and 200 to 300 tons of fiber annually—and they expect to solve the problem of getting the flax grown in some way or other.

Now for the most convincing proof of all that this is the best flax country on earth, for the flax:

Listen:

Mr. Miller, near Turner, took samples of flax fiber grown by himself to the Philadelphia Centennial in 1876.

His product came into competition with every flax growing country in the world.

The judges did not know where the samples were raised. They judged by points—length, strength, etc., nine points in all. Not one of the judges, however, knew the findings of any other judge. When the footings were made it was found that the Oregon flax had WON ALL NINE POINTS.

It was the best flax fiber grown in the world in every single particular.

At that time, a great Belfast manufacturer of linen products made the statement that no other country could come up to Oregon, and that he could take two pounds of the Marlon county fiber AND SPIN A THREAD THAT WOULD REACH AROUND THE WORLD.

The Barbours are spinning linen thread and selling it now at \$6 a pound; \$12,000 a ton.

Fishermen at Astoria are paying \$3.85 a pound for the twine that goes into their nets. It costs them \$400 for a net; and, in the salt water, the net lasts only two years.

Hence, the high cost of fish.

Why should not Salem people who could cut these prices in two several times, put the rug and twine and linen industries on their feet—Salem by nature designated to do all this?

James J. Hill said many times, that commerce was bound to follow the lines of least resistance. No man, no company of men, no nation, can for long resist the decrees of nature.

"Eventually, why not now?"

Eventually, Salem will be the flax and linen center of the world. Why not now?

Flax was first grown on a considerable scale in Oregon for its seed; in the seventies and early eighties for the linseed oil mills of the Gray family, the mills being located on the present site of the Salem woolen mills.

In 1895, Eugene Bosse, from Belgium, who had been exporting flax for the United States department of agriculture, came to Salem. He had been so employed for two years, the flax being grown under the direction of the various state agricultural college experiment stations—and he had found that the best flax in the United States or the world—the best fiber flax—was raised in this section of Oregon.

This fact was known before to a few people, as will appear below.

Mr. Bosse raised and treated flax for its fiber here for a number of years, with varying business success or failure, due to many causes, the story being too long for details at this time.

In 1896 Mrs. W. P. Lord, wife of Governor Lord of Oregon, organized the Oregon Women's Flax Fiber association, and under the direction of this association and its financing, several crops of flax were raised. Due to several misfortunes including a fire, this association was not financially able to carry out its program; but it at least demonstrated over again the superiority of the flax grown here, for its fiber.

Dr. Deimel, the great manufacturer of linen mesh wearing apparel, investigated conditions here, and he was on the point of establishing a mill here when the war interfered.

The companies with which he is connected may yet be interested; and they will have to look somewhere for raw materials, at least.

The Oregon Flax Fiber com-

FLAX CULTURE IN OREGON, BY SUPERINTENDENT CRAWFORD

He Tells Farmers How to Prepare Their Land, How to Sow the Seed, How to Harvest the Crop—He Declares That Flax Growing Is Not Hard on the Soil

(Robert Crawford, superintendent of the state flax industry, in the Oregon state penitentiary, on April 1 last issued a printed circular on "Flax Culture in Oregon," the full text of which is printed below:)

Flax for fibre can be grown successfully on any soil that will produce good wheat, oats, rye, barley or other cereals, but soils best suited are deep loams which are well drained and in good condition of fertility.

Flax does well on stubble or corn land, and it also does well on sod, especially following clover, where it is worked into a good, fine seed bed, and compact.

Fibre flax is easily distinguished from seed flax, as it grows taller, reaching a height of thirty-six to forty-eight inches and not branching until near the top, therefore producing less seed. The root penetrates little more than an inch into the ground and the feeders are about the size of a hair. This short description of the flax plant should explain why it is a dainty feeder and does not draw heavily from the soil, and why the ground should be well prepared.

Is Flax Hard on Soil?

For years there has been an erroneous impression that flax was hard on soil. This arose from the practice of a class of farmers who grew the crop for seed only, and persisted in growing it year after year on the same ground.

Flax grown on some soils is absolutely beneficial, and I beg to submit herewith an extract from Bulletin No. 74, issued by the Minnesota Agricultural Experiment Station.

"The flax crop has for years been one of the most lucrative in Minnesota, and in order to maintain the acreage, and to ascertain the effect upon the soil, the State of Minnesota instructed its experiment station to make thorough investigation and to particularly ascertain if flax depleted the soil. The following section from the report made by the station shows that many of the common crops remove more fertility than flax does.

"A corn crop removes a half more nitrogen, twice as much potash, and about the same amount of phosphoric acid. A clover crop removes practically the same amount of nitrogen and phosphoric acid and about three-quarters more potash than a flax crop. Compared with wheat, flax removes less phosphoric acid and potash from the land, but about one-half more nitrogen. Potatoes remove about the same amount of phosphoric acid, about one-third less nitrogen and nearly three times more potash per acre than an average crop of flax. In flax growing the heavy draft falls upon the nitrogen, but when clover is grown, the loss of nitrogen is not at all a serious matter, because one fair crop of clover will more than return all of the nitrogen removed by two crops of flax."

This statement is also supported by the United States Department of Agriculture; also by the Oregon Agricultural College in this state.

Selection of Soil for a Flax Crop.

As before stated, flax does well on any good soil, but some good soils differ in fertility, and are not suited for a profitable flax crop, producing a large amount of straw with a small yield of fibre. For instance, a deep, fertile and mellow loam will grow a heavy crop of both seed and fibre. A deep, clay loam with a clay subsoil is good. Taking loam as a standard flax soil, you may vary from this to a soil that is half way between and a heavy clay. On the other hand, one can go as far as half way between loam and a light sandy soil, with good results. But whatever the soil may be, it is very important that it should be well drained. Although flax requires a certain amount of moisture, a good crop cannot be

expected from ground that is covered with surface water in the winter. The land should be rich in itself, and made as free from weeds as possible by previous cultivation.

Clover sod, old pasture, meadow land, or land under a hood crop of the previous year is usually the best ground for flax. If it is at all found necessary to use barn-yard manure on a field, it should be applied to a previous crop, and not directly to the flax.

By applying barn-yard manure directly to a flax field the same year it is liable to produce an uneven growth and cause weeds which are injurious to the crop. Commercial fertilizers are preferable providing the proper ingredients are used.

Preparing the Land.

Indeed, too much cannot be said in this respect. Fall plowing is recommended very strongly, but it has been found that early spring plowing, if the season is favorable, does very well. It has been proven without doubt that deep plowing produces the best results and in plowing sod land a plow equipped with a jointer should be used in order that all the grass may be turned up to prevent it from coming up in the flax. This also gives you a much easier surface to disc and work up into a fine, pulverized bed, which is absolutely essential. And it must be in mind that a good crop of flax cannot be expected on a poor, wet, half-pulverized seed bed. So, if the land is at all lumpy, it is better to roll it with a corrugated roller, then harrow again before sowing. Sowing should not be done immediately after using corrugated rollers; if it is, it will be in much better to harrow again by all means.

It is very important that the seed bed be well pulverized and fine on top, flax seed being very small and easily lost in poorly prepared land. If the seed is buried too deep, it usually dies, or if it comes up at all, it is sickly and stunted and does not mature evenly.

Sowing the Seed for Fibre.

Using a broadcast seeder produces the best results, as it is very important that the seed be evenly distributed to insure an average crop. After sowing, the lightest seed-harrow possible should be

used, and a double harrowing is highly recommended, then rolled with a smooth roller. This closes the surface and produces a more even and better germination, insuring a more uniform crop.

As a general rule the best time for sowing flax for fibre is between April 1st and May 10th, and no sowing for this crop should be done after the latter date. However, in some instances, good crops have been produced by sowing up to May 20th.

Amount of Seed Sown to Acre.

Overseeding is as much to be avoided as underseeding. It is recommended from our experience here that 50 to 100 pounds to the acre gives the most satisfactory results to the grower.

Cultivation.

Fibre flax requires no cultivation whatever during any part of the growing season, but it is most desirable and highly recommended that any large, noxious weeds that make their appearance in a field of flax when it is six to eight inches high should be pulled, or stubbed carefully.

Harvesting.

This is one of the most important operations in producing good fibre flax. It is heavy flax that pays the grower and it is heavy flax that pays the fibre mill. A good flax straw properly harvested at the right time weighs heavy and produces strong fibre. As the flax straw becomes over-ripe, it loses weight on curing beyond the same straw cured at the right stage.

As a general rule flax straw in Oregon has not been harvested until too ripe, too much attention being paid to the seed.

The flax should be pulled or cut when the stalks begin to strip their leaves eight or ten inches from the root. The seed is then firm in the holes and not yet rattling. The seed will ripen after harvesting.

In harvesting, either pulling or cutting, care should be taken that the bundles are not made too large. They should not be over six inches in diameter in order to cure properly. Care should also be exercised to see that the straw is kept even at the butt, whether pulled or cut.

Curing.

As soon as the straw is harvested, whether pulled or cut, and bound, it should be shocked or stooked, and not left lay on the ground for any length of time. In forming the shock or stook use care to see that it is put up so that it will not fall down. Arrange the sheaves or bundles in rows, eight or ten together, taking two sheaves at a time and leaning them against each other. This forms a long narrow shock or stook; one sheaf or bundle to

THE OREGON FLAX FIBRE COMPANY IS HAVING SUCCESS

This Pioneer Institution in the Development of the Flax Industry is Without Doubt the Forerunner of Great Things in the Salem District, Including Twine and Linen Mills

Editor Statesman:

The Oregon Flax Fibre company of Turner, with their office at Salem, have been running their mill for five years and have made a splendid success of it. Why? Just because the land and the climate of the Willamette valley are perfectly adapted to raise and manufacture flax fibre.

We have certainly sometimes, a drawback that is a wet fall. This can be remedied by doing the retting through the summer.

Mr. Lyster Dewey, of the fibre investigation at Washington, D. C., came to visit our plant last summer on his way from Canada, Michigan, and some other states where there are some flax mills. He told me that we were getting more tonnage to the acre, and the quality of the flax was so much better. He must know, being in that line of business for 35 years.

I will make the statement that there is no sense in saying that the farmers have to learn to prepare their flax fields, so as to raise a good crop. I notice that most of them have their land prepared just as good as in Belgium.

Take for example P. A. Thomason, J. Denham, E. A. Bradley, and a good many others who have been raising flax for five years. They must do good work or their returns would not bring as high as \$100 to \$120 clear money to the acre.

Taking an average of 100 acres on the same farms. The return was this last crop from \$40 to \$50 an acre. So well pleased are they that every year they raise 100 acres each. On account of the wet fall most of the crop will be put in in the spring, and a big flax corporation could get all the acreage needed. This is proved by so many farmers coming every day to sign contracts for next year.

—E. J. Hansett,
Superintendent of the Oregon Flax Fibre Co.
Turner, Or., Oct. 26, 1920.

A Busy Place.

The Salem sagan editor visited Turner on Sunday last and found Mr. Hansett and a number of helpers busy with their flax being dried in the fields and on the vac-

ant lots—taking full advantage of the sunshine, which had been all too scarce for their purpose for several weeks.

The plant of the Oregon Flax Fibre Co. is easily the outstanding industry of Turner, and there is every reason to predict that it will grow steadily in importance and magnitude, as it has done since it was started there.

In fact, there is every prospect that it will make Turner a most prosperous and progressive suburb of Salem—as it will virtually be after the completion of the paved market road next summer.

The Oregon Flax Fibre Co. obtained the flax from 240 acres of land the past season; about 450 tons, or an average of about two tons to the acre. The reader will see that the work is "cut out" for Mr. Hansett and his assistants, putting all that nearly a million pounds of flax through their machines before the time of the next harvest.

Mr. Hansett said he was embarrassed now by the number of farmers wishing to put out large fields of flax for their company next season—many more acres being offered than their machinery for working and finances for handling will allow at the present time.

Good for the Farmers.

To the farmers who did their own harvesting, the Oregon Flax Fibre company paid the past season \$50 a ton for their flax.

The company itself raised and harvested some of the flax.

Mr. Hansett says some of their flax has threshed out as high as 18 bushels of seed to the acre—worth at sowing time, last year \$6.50 a bushel. He says the seed alone, in some cases, will pay the company for the straw.

In paying the farmers \$50 a ton for their flax, the company also furnished the seed for sowing free of cost to the farmers.

So well pleased have been the farmers with the net returns for their flax, grown for the Oregon Flax Fibre Co., that several of them want to raise larger fields; one man offering to grow 250 acres, and others 100 acres each

MRS. LORD WRITES ON FLAX AND HEMP CROPS

She Urges the Growers to Give Flax Good Cultivation, in Order to Produce a Fine Quality of Fiber, and Says Hemp is Also Important

(Mrs. W. P. Lord was asked for an article for this Salem sagan issue. She has been very busy, but she managed, last evening, to find time to furnish the following. She promises further contributions when she can get more time, especially on the importance of raising hemp on our lands adapted to its growth.)

A leading article in a number of the Saturday Evening Post, in the month of August, called attention to the great scarcity of flax fiber.

Here is one paragraph: "Before the war, Russia produced 92 per cent of all the flax grown in the world. Up until the time of the revolution in Russia flax was grown by individual farmers and all the large estates, as a compulsory tax crop. Bolshevism has changed all that and the outlook now is that Russia will never again produce as much flax, or as cheap flax, as was raised in the past."

It was Russian flax which principally furnished the raw material for the twines used in sewing the

millions of bags containing the products of our fields of wheat and other cereals, and potatoes and onions—and the farmers' patience is sorely tried today by the least strain, largely made of jute. The only material which will resist the action of salt water is flax fiber, and seems must be renewed every other year, at an almost unbelievable price. Probably no state in the union has a greater personal interest in the products of flax fiber than our own.

While we have done a great deal of talking—and I might almost say boasting—about the flax we CAN raise, we have never yet come down—to make use of a slang phrase—to brass tacks, and grown flax in such quantities as to commend our product to the world of commerce.

We must grow flax commercially before we can ever expect to manufacture even the common twine.

(Continued on page 8)

A THOUSAND ACRES OF FLAX FOR PRISON PLANT

The Acreage Next Year Will be More Than Three Times as Large as it Was This Year—This is the Best Plant in the United States, but it Needs Many Improvements Yet

The Salem sagan editor visited the flax plant at the Oregon state penitentiary on Monday and had a talk with Robert Crawford, superintendent of the Oregon State Flax industry.

Mr. Crawford was born a flax man, in the great linen city of Belfast, Ireland, and he has been a flax worker all his busy life.

So Worden is foreman of the working forces inside the prison, and together these men have brought system to the industry in the prison shops. Everything is in order; everything goes according to system and method.

This is the best flax fiber plant in the United States; but, even so, it is not nearly as good as it should be, and as Mr. Crawford would like to make it.

The machinery when bought was archaic, and a large part of it should be replaced by new machinery, and there should be artificial retting facilities and an artificial drying system.

However, they are working 50 men now, and they have facilities

for working 55. With even the present plant the flax from 1000 acres could be taken care of; and with the improvements suggested above, and some more storage room, they could take care of the product of a much larger acreage, with the same sized forces.

It was formerly estimated that the needed improvements might be made for \$5000. They might cost \$10,000 now, and they would be cheap at that.

Would Pay for Themselves.

Moreover, no appropriation would be needed to pay for these improvements—if only the funds earned by the plant were made available for the purpose.

In fact, the plant will not only earn the money to pay for all needed improvements, but in two or three years, it will earn enough to put in spinning machines, so that the twine for the fishermen of Oregon could be made here, and the twine for the farmers which they need for sewing their grain sacks.

(Continued on page 4)

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Running the flax threshing machines, getting out the seed, at the Oregon prison plant.

MR. STREET ASKS WHAT SALEM HAS BEEN DOING

Since the Conditions Are Ideal Here for a Great Flax Industry, Why Have Oregonians Been so Slow in Taking Full Advantage of the Opportunities so Generously Provided by Nature?

"What have your people been doing all these years?"

That was the question put to a Statesman reporter by George H. Street at Hotel Marlon last Saturday.

He meant, what have the people of the Salem district been doing all these years, when they knew, or ought to have known, that the best fiber flax in the world is produced here; and that ideal manufacturing conditions were provided by nature? That is, everybody here ought to know these facts, for they have been demonstrated over and over again for many years.

For away back in 1876, at the Philadelphia Centennial, fiber flax grown near Turner took the first prize against the flax of all other countries; on all the same points considered by the judges;

and that at that time a great Belfast linen manufacturer said he could take two pounds of Marlon county flax and SPIN A THREAD THAT WOULD REACH AROUND THE WORLD.

And away back before that, and up to the early eighties, the Gray family had a linseed oil mill in Salem, where the Salem woolen mill now stands, and they had flax grown all over the Willamette valley, and as far south as Douglas county, and the men of those days knew this section was especially adapted to the growing of fiber flax.

And year after year, in many experiments, it has been shown that no section of the world can raise better fiber flax than has been produced here—

(Continued on page 4)



Pulling flax in the field near Salem during the last harvest.



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