

in the form of an all-pervading mould, which, upon coming in contact with the roots of a flax plant soon causes it to wilt. Gradually all of the plants on such soil disappear, die away, and dry up. Hence such ground has been spoken of as "flax-sick" or "flax-tired" or "worn out for flax," etc.

Many experiments here at the North Dakota Experiment Station have demonstrated three very important points: First, the diseases may be distributed by the seed and in many other ways, as by farm machinery, by wind and by wash water, and that the reason why the crop is dying out so rapidly in the older regions of the Dakotas and Minnesota is due to the presence of these wilt fungi in the soil and to the fact that such fungi stay in the soil and develop there, after the same manner as the potato scab fungus, so that after a few crops no ordinary flax can grow in such soil. Second, I have proved that by proper grading of the seed so that only plump seed is left, and by properly treating this seed by the use of formaldehyde at the rate of 1 pound to 40 gallons of water, that there is no need of introducing the disease to new lands where it does not already exist, and that this mode of treatment increases the yield very largely, even though the seed perhaps be free from other kinds of diseases. It is probable that there are many types of flax diseases that are so distributed by the seed. Third, we have learned that by breeding and selecting flax plants, always on the sick land, that we can get strains of flax which are so resistant to the flax diseases that they will grow on the very sickest land that we know of, and produce a complete crop. We have so far advanced with this work, after a great many trials and discouraging destructions of the crop by hail, rain and other difficulties, that there is now about a thousand bushels of this seed in the hands of some thirty farmers. These men planted it only upon flax-sick soil, soil upon which ordinary flax would not live more than a few weeks from the seed. The average yield from seed in twenty farms in different parts of the state, growing upon such sick land was 14.4 bushels per acre. It should be noted that this crop was raised upon soil upon which other types of flax were tried alongside and found unable to live. This is what is meant by "resistant flax." Resistant flax does not mean "wilt-proof flax," for I have been able to find in almost every such crop indications that the plants are more or less attacked by the fungus, but nevertheless are able to produce plump seed and a normal yield.

The results of our co-operative experiments may be summarized in such manner as to allow us to state that better crops of this resistant flax can be grown upon old flax lands than is ordinarily produced on new lands by ordinary flax. A part of this, may, perhaps, be accounted for by the fact that each one of the types of resistant flax with which we are experimenting is pure-bred, coming from a parentage of an individual seed.

Thus there would seem to be great hope that the farmers of the Northwest will be able to maintain the flax crop as a permanent element in a permanent agriculture, but they can only do this by careful selection of their seed until it is plump and of good form, and treating it each year and sowing it upon their own soil; that is, by selecting and grading their own seed. There is also much to be hoped that by continuing the processes of seed breeding now being entered into by a number of farmers in co-operation we shall soon have flax seed of much more resistant ability to these diseases than that which has previously been used. It must, however, be remembered that the appearance of the seed is not different from ordinary flax seed, and when farmers have once obtained it they must continue to improve it by saving only the plumpest and best and by growing it on their own land. They must discontinue selling the best seed because they can get a few more cents per bushel for it. They must discontinue sowing the poor shrivelled seeds from sick mother plants, because the elevator man refuses to give them quite as much per bushel as for the number one northwestern.

Dominion Forestry Convention.

Ottawa, Dec. 8.
Sir,— Since Sir Wilfrid Laurier, Premier of Canada, has issued a call to a Dominion Forestry Convention to be held in the city of Quebec, Jan. 19, 1911, the work of preparation has been going forward rapidly.

The Convention is to be held under the auspices of the Canadian Forestry Association, of which His Excellency Earl Grey is the Patron, Sir Wilfrid Laurier, Honorary President, and Hon. W. C. Edwards, the great Ottawa lumberman, President. The Ministers of Crown lands in the various provinces are territorial Vice-Presidents, and Mr. R. L. Borden, M.P., is on the Board of Directors which includes leading lumbermen, forest administrators and forestry educationists.

The Commission of Conservation, of which Hon. Clifford Sifton is chairman, will hold its annual meeting in the city of Quebec on Jan 17th, so that the ancient capital will that week be the Mecca of all interested in the preservation of forests and all that depends upon them, such as navigation, water-powers, agriculture, fish and game, recreation, health and tourist travel. The absolute dependence of the miner upon the forest for pit props will also be fully dealt with. The Commission of Conservation, which has been all year gathering information about all of Canada's natural resources, will, through its experts, indicate the present state of each. The Forestry Convention will discuss and make clear the duty of the public, the press and the governments to Canada's forests.

The premier of Quebec, Sir Lomer Gouin, and the members of the government are enthusiastically taking up the project, the details of which will come under the direction of Hon. Jules Allard, the minister of Lands and Forests, Mr. James Lawler, the secretary of the Canadian Forestry Association, whose headquarters are in Ottawa, and to whom enquiries about the programme, etc., may be addressed, will visit Quebec frequently between now and the date of the convention to confer with Mr. Allard and the committee of the association there to see that no detail of the work is left undone.

Everything points to the largest and most practical forestry convention ever held in Canada. The legislature of Quebec will be in session at this time. Railways have granted special rates, and a strong programme is being prepared, the details of which will be announced later, or may be had from the secretary.

A Too Familiar Jingle.

In a village school, the rector's wife was questioning a mixed class of boys and girls on certain branches of their religious knowledge. Presently she came to the subject of Noah's Ark. After having touched briefly on that, she asked the children whether they knew of any other ark mentioned in the Bible.

"Yes," answered one eager little girl, "the Ark of the Covenant."

"Quite right," said the lady, much pleased. And then, thinking of the ark of bulrushes in connection with the baby Moses, she asked, "And can you mention any other?"

The child, after a few minutes hard thought, cried out, "Oh, yes, ma'am, 'ark the herald angels sing!'"

Vulgar Fractions.

A lady cookery-teacher was giving her girls a demonstration lesson, as it is called, on different kinds of meat pies and how to make them. Presently she said, "You see, girls, here I have a pound of steak for making a pie. If I cut it into four equal parts, what will those parts be?"

"Quarters," answered a girl.
"And if I cut the pieces equally again?"

"Eighths," answered the next girl.

"And if I cut them again?"

"Sixteenths," answered the next.

"And if I cut them once more?"

"Mince-meat, ma'am!" answered the girl.

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