

course, it remains to be seen how it will stand Canadian winters and our methods of cultivation. Whether the plant is hardy or not, Mr. Pollard's evident purpose of taking no chances has everything to commend it. In the case of pernicious weeds and insects, timely prevention is a thousand times better than cure.

The specific name *sativa* indicates that the plant was sometime and somewhere used for food. In an old botany by Gilbert Burnett, he speaks of its having been used as a culinary herb three centuries before his time, and adds that its strong and peculiar smell, which many people consider nauseous, has probably caused its discontinuance as a food plant.

J. DEARNESS.

FLAX CULTURE.

According to the report of the Ontario Bureau of Industries, the production of flax in the Province of Ontario is comparatively insignificant. Yet I presume that for the past thirty years the growing of flax has been a comparatively common crop in this vicinity. For many years the town of St. Mary's boasted of two flax mills, and provided a good deal of work for all kinds of helpers, including women, children, old men, teamsters, etc., till winter, when each mill would employ twenty to thirty men till spring. As the country grew older and people grew richer, it became increasingly difficult to get land for flax and labor to handle it. Consequently, the margin for the manufacturer grew smaller and smaller, till now the last remaining mill, it seems, is to be idle, and the raw fibre shipped away to be manufactured into twine. The land most used for flax is "new," or first-breaking. There are several reasons for this. Being sowed by hand or a grass-seed sower, and pulled by hand, rough ground and stumps are of less concern. It is also a good crop to rapidly reduce the nitrogen and fit the land for a grain crop that will stand up well. It also withstands wet soil and cold seasons fairly well, and has few fungoid or insect enemies. As this kind of land became less available, resort was had to old pasture, and, in some cases, any soil that appeared rich in nitrogen. The average rental for best land has now risen to \$12 per acre, the owner to do the plowing and preparation for seed, also harrowing and rolling after sowing. As everything goes off, the soil is left in good tilth, but much poorer, especially in nitrogen, and for this reason farmers generally do not care to rent much of their land for \$12 per acre; and as the manufacturer cannot well afford to pay more, the industry must soon decline, unless the introduction of the flax-pulling machine (which has been invented this season), or the manufacture into twine, will so lessen cost of production or manufacture that the rent of the land can be raised. Mill-owners will also accept flax by the ton, but, as labor is scarce on the farm, it is usually most profitable to rent by the acre. Farmers do not grow it for the seed or grain, as it can only be top-threshed by the ordinary machine, and not even that when we have the self-feeder. During the past season, flax was one of the few crops that averaged fair to good. The average yield would probably be one and a half to two tons per acre, thoroughly dried in the stook. It was also well headed, and would probably yield well in grain, although this is a secondary consideration. The wet weather early in the season retarded the growth on low, undrained land. As hinted above, it is a crop that appears to need what is commonly called a rich soil, and one would suppose that it might be profitably grown in the newer sections of the country, the sheaves top-threshed, and the straw baled and shipped to be manufactured. It requires some care in harvesting, or much seed will be wasted by shelling. It is somewhat worse than the common cereals in this respect.

J. H. BURNS.

PRESERVATION OF PITCH-PINE FENCE POSTS.

A bulletin giving an account of a series of experiments undertaken by Mr. B. C. Buffum, to determine the life of pitch-pine fence posts, and discover, if possible, some cheap method of treating them to prolong their usefulness, has just been issued by the Wyoming Experiment Station. The experiments covered a period of sixteen years, hence would appear to be comprehensive. Posts were inserted (1) coated with tar 2½ feet at bottom, (2) not treated at all, (3) treated with crude oil or petroleum 2½ feet at bottom, (4) with a tar band at ground surface, (5) with crude-oil band at ground surface, (6) with crude oil covering 2½ feet of bottom and the oil burned off, (7) with coating of tar 2½ feet of bottom and tar burned off, (8) band of crude oil at surface and burned off, (9) band of tar at surface and burned off, (10) one foot of bottom dipped in tar, (11) one foot of bottom dipped in tar and tar burned off, (12) well-charred posts, 2½ feet simply burned to produce a char, (13) one foot dipped in crude oil, (14) one foot dipped in crude oil and oil burned off.

The posts were set on April 15th, 1891, and

were dug up on June 27th of this year, the inferences drawn being as follows:

"The best treatment, and one which was eminently successful in preserving the posts, was dipping the lower ends in crude petroleum and burning off the oil a sufficient distance to come above the ground when set. This seems to drive hot oil into the post, which, with the protecting char cover, keeps it from decay. Sixteen years had made but slight inroads on the posts thus treated, and they apparently would last indefinitely. This dipping can be done very cheaply, and will undoubtedly pay.

"Simply dipping 2½ feet of the bottom of the posts in crude oil or in tar did fairly well. The oil seemed a better protection to the posts than did the coal tar. Posts that were well charred by burning came in about third place.

"There is little advantage to be gained by simply oiling or tarring a band to protect the post from dry rot where it comes through the ground, and less from any treatment of only a portion below the ground. Such oil band helped preserve the post, but the time taken to apply the oil in this manner would make it more expensive than dipping the entire lower end of the posts."

ASSOCIATION OF FARMERS' INSTITUTE WORKERS.

The Convention of the American Association of Farmers' Institute Workers, held in Washington, D. C., from October 23rd to the 25th, was a success in attendance, interest, and the value of the varied topics discussed. The roll-call showed over 100 delegates on hand.

After the formalities of welcoming the delegates, by Prof. Hayes, Assistant Secretary of Agriculture, who touched on his favorite theme of agricultural education being extended to the rural schools, and who took the place of Secretary Wilson, who was out of the city, and the re-



Photo by R. R. Sallows.

Flax Field in Stook.

ply by President G. C. Creelman, of the Agricultural College, Guelph, Ontario, the Convention got down to business.

President Burnett, of Nebraska, outlined concisely and clearly the objects and aims of the Farmers' Institute system. He emphasized the fact that the older methods and objects had not grown any less important, but the work was progressive, and the future Institutes would be successful, as they adopted and utilized, to the best advantage, the agricultural extension work. The burden of his address, as well as those of many others of the delegates, was that the Institute must help the men with whom it comes in contact, by assisting them to adopt those methods which would increase the productiveness of the farm and make farm life both pleasant and profitable. The valuable work which the women were doing to uplift the home was not overlooked.

Superintendent Taft, of Michigan, emphasized what the President had said, and laid much stress on the personality of the Institute worker.

Reports from States, Provinces and Territories showed that nearly every section had some kind of an organization, and that the work was becoming more popular and effective every year. Where hundreds of dollars were formerly used, now thousands are used to extend agricultural information.

Prof. Holden, of Iowa, a veritable enthusiast in agricultural extension work, spoke of the success of taking the gospel of agriculture to the people through what might be called normal training schools and round-table talks.

Depends on the Men.—Mr. F. H. Rankin, Illinois, in submitting a report of the Committee on Institute Organizations and Methods, emphasized that much of the success of the organizations was due to the men connected with them. As far as

possible, an Institute worker must be full of his subject and enthusiastic in presenting his matter, so that his hearers would be stimulated to go out and do things.

Mr. A. M. Soule, Georgia, contended that there were three things which would contribute to the success of the organization, viz., the location of the central office, the administration, and the financial support it received.

Mr. Bracken, Saskatchewan, discussed it from the development of new districts, in which he advocated co-operation in the various agricultural movements.

"The Institute Lecturer" was ably dealt with by Mr. Latta, Indiana; Mr. McKerrow, Wisconsin; and Mr. Calvert, Ohio—all of whom agreed that the ideal Institute lecturer was the exception, rather than the rule, yet there were many good, average men who were successful in farm practice and acceptable speakers that were doing good work in every State and Province.

Should Co-operate.—It was the opinion of Mr. Butterfield, Massachusetts, and Mr. Butler, North Carolina, that co-operation with other educational agencies was necessary. They were in favor of using every means available which would uplift the farmer and his work.

Movable schools of agriculture found warm advocates in Messrs. Creelman, Ontario; Martin, Pennsylvania, and Dawley, New York. They would use the best available help obtainable from the agricultural colleges and experimental stations for this purpose, and men who knew what they were talking about, and who could convey that information to others in a very practical way with living demonstrations.

Boys' and Girls' Institutes have not been very largely tried, but Mr. Taft, Michigan; Mr. French, Idaho, and Mr. Carson, Texas, thought that there were great possibilities along this line. The simple money prizes offered in the competitions in some States for corn, etc., were not enough. The competition must be educational as well.

Women's Institutes.—The matter of Women's Institutes found able exponents in Miss Maddock, Ontario; Mrs. Raymond, Illinois; and Mrs. Wells, New York. This work was practically new in many States, and in some was unattempted as yet. In Ontario it has found its highest development, where over 400 organizations are in existence.

Mr. Crosby, of Washington, D. C., and Mr. Agce, of Pennsylvania, were very strongly in favor of introducing courses of study in agriculture into the Institute, as were a number of other

delegates who were advocates of agricultural education extension work. Prof. Crosby outlined a five-day Institute in potato-culture, in which the potato would be dealt with from its origin, through its different phases of development, until it was marketed and made into a wholesome article of diet.

Prof. Zavitz, Ontario, and Prof. Hunt, Pennsylvania, dealt with the interesting question of field-demonstration work. It was one of the most valuable contributions to the Conference. Prof. Zavitz, in a concise, clear-cut paper, outlined the work of the Ontario Experimental Union, which was a practical demonstration of the question at issue, and which had resulted in untold good to the farmers of Ontario.

"The Woman Lecturer," dealt with by Mrs. Lee, Ohio, and Mrs. Wallace, Pennsylvania, was advocated along similar lines to what was said of the qualifications of the man lecturer. It was admitted by a number of Institute directors that she was much harder to get than men, and when once got she was hard to keep. All agreed that she was a most desirable feature in the future success of the Institute system.

Travelling Libraries.—Mr. Rankin, Illinois, and Mr. Galbraith, Ohio, thought that the travelling library was a most useful thing, but deplored the fact that their expectations, in a practical way, had not been realized.

Dr. Tome, of Washington, D. C., outlined a utility annual report, and Mr. Putnam, Ontario, thought the report of the future must be short, and perhaps specialize one or two important features each year.

Mr. Ellsworth, Massachusetts, and Mr. Dawley, New York, thought that the Field Institute was a useful method of imparting valuable information.