

entirely eliminate the preliminary work of preparing the fiber ribbons, which requires as much labor as the actual work of stripping; it will eliminate at least 50 per cent of the waste of fiber; and it will greatly simplify the present complicated system of grading abacá fiber.

The pioneer work with abacá-cleaning machines has been done, but there still remain a number of problems to be solved. Improvements can undoubtedly be made in the machine itself, and the methods of drying and brushing the fiber are yet to be perfected. The change from the old hand-cleaning methods to the new system of machine cleaning will require an almost complete reorganization of the abacá industry. This will be a difficult work and one that can not be accomplished in a short period of time. It is a change that must be made, however, if the Philippine Islands are to compete successfully with other countries in the production of abacá fiber.

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ALFALFA of Ladak Variety is Promising for Northern States

Ladak is the name that has been given to a promising new variety of alfalfa that was introduced from the Province of Ladakh in northern India. In 1910 a small packet of seed of this alfalfa was received through the Office of Foreign Plant Introduction under S. P. I. No. 26927. In 1911 four additional packets were procured from the same source under S. P. I. Nos. 30433, 30434, 30435, and 30436. All five lots were labeled *Medicago falcata* but proved to be hybrids between the yellow-flowered species, *M. falcata*, and the purple-flowered species, *M. sativa*, with most of the *M. falcata* characteristics such as color of flowers, shape of pods, and general habit of growth predominating.

The various lots of seeds were sown in short rows at several of the northern experiment stations, and while some lots were mixed more or less with seed of the yellow-flowered sweet clover, the alfalfa plants from each lot proved to be of the same general type. Because of its unusually vigorous growth, apparent resistance to drought and cold, abundant seeding habits, and wide range of flower colors, this alfalfa attracted attention from the first. In the original sowings the predominant flower color was yellow, but as a result of natural crossing that has taken place with purple-flowered strains since its introduction into the United States, the proportion of purple flowers has gradually increased until shades of purple and similar colors are now predominant.

The promising appearance of this alfalfa led to efforts to increase the seed until enough was available for sowing plots which were first established in 1919. Since that time Ladak alfalfa has been tested in comparison with other varieties at several experiment stations in the northern Great Plains (fig. 3) and to a limited extent farther east. In 1926 arrangements were made for growing 2,000 pounds of seed under contract. This seed was distributed to farmers mostly through the State experiment stations in the late winter and early spring of 1927, from which several favorable reports have already been received.

Ladak alfalfa has consistently shown somewhat less winterkilling than the hardy commercial alfalfas such as Grimm and the Northern Common, and in the majority of cases has yielded a somewhat greater tonnage of hay and generally has produced better seed crops. It makes a remarkably heavy first crop, outyielding other varieties

by a considerable margin which at times has amounted to as much as a ton per acre under favorable conditions. It is therefore especially valuable in those regions where, because of a limited moisture supply or a short growing season, only one cutting is normally possible. The variety ordinarily becomes dormant in the fall somewhat earlier than Grimm alfalfa and recovers more slowly after cutting. However, after the new shoots start they develop very rapidly and are usually ready for cutting as soon as the hardy commercial varieties. While outyielding such varieties as Grimm and Dakota Common in first cutting, it is more than likely to fall below them in tonnage of later crops. Regardless of this fact, however, Ladak alfalfa has usually equaled or exceeded in total yield for the season the varieties grown in comparison with it in the Northern States. It is the opinion of some that the hay is of better quality, having finer stems and being more leafy. Somewhat to the surprise of the experimenters in tests

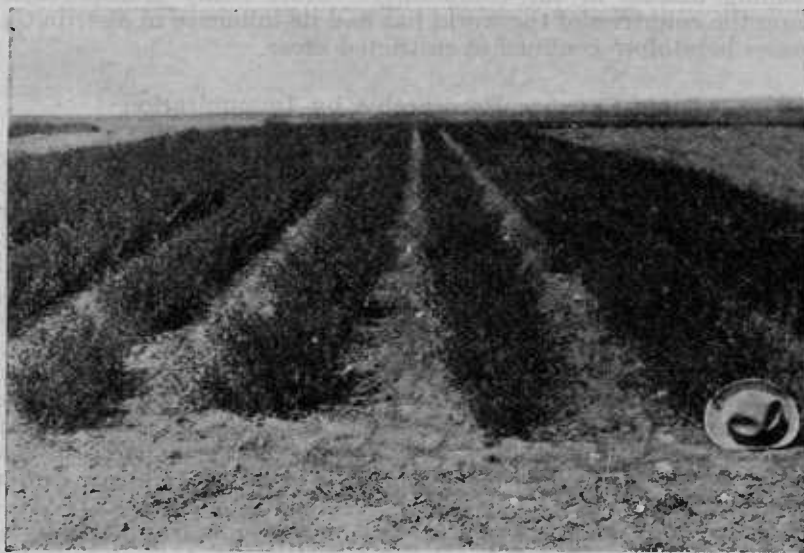


FIG. 3.—Ladak alfalfa in rows at Ilavre, Mont.

conducted at Manhattan, Kans., Ladak alfalfa stands among the three or four highest yielding varieties. It has not been as seriously affected by the bacterial wilt as the commercial alfalfas.

While the tests thus far conducted with the Ladak alfalfa have not shown any extraordinary superiority over Grimm alfalfa, still the advantage is believed to be sufficient to justify calling attention to the possibilities of obtaining larger yields from this variety, particularly in those regions where only one crop is ordinarily obtained. Even though the advantage in any individual case may not be great, it is believed that in the aggregate the advantages to be derived from more general use of the variety under those conditions to which it is adapted would be considerable. The supply of seed commercially available is at present very limited, but it is probable that there will soon be a considerable increase from the sowings made in the spring of 1927.

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