

ALFALFA—THE GREAT CROP FOR FORAGE AT PRESENT.

Able Paper From the Pen of W. J. Spillman of the United States Department of Agriculture.

A large proportion of our readers are directly interested in growing alfalfa, and even those who are not will find the following well written and readable article from W. J. Spillman, agronomist of the United States department of Agriculture well worth reading.

Alfalfa is probably the most ancient forage plant of which we have any record. It was cultivated extensively on the irrigated fields of Babylon, and it is known to have been the principal hay in the stables of the ancient Persian monarchs. It was brought from Persia to Greece about 470 B. C., and its cultivation began in Italy about 200 B. C. It is mentioned by a number of Latin writers, especially Virgil, Varro and Columella. From Italy it was introduced into Spain in the sixteenth century, and thence spread to many parts of the world. Its introduction into the United States seems to have been through the Spanish missionaries, at an early day, going up the western coast of the continent from Mexico and South America.

Origin of the Name.

The name alfalfa is of Arabic origin and has persistently followed the plant throughout Latin America and into those parts of America in which the Spaniards introduced it. The plant is not unknown in the eastern United States, having been introduced a number of times from western Europe, particularly from France, where it is known as "lucerne," but it has never gained a foothold in the east, at least, until the last few years. It is now being introduced under its proper name "alfalfa." At present there is a genuine craze among the farmers of the eastern half of the United States concerning this plant and some of its more important varieties. It will undoubtedly become the leading hay crop of the east in those sections where soil and climate favor its development.

Alfalfa has always been the standard hay plant of arid America, where it is grown almost exclusively under irrigation. In those parts of the irrigated section where the soil and climate are favorable alfalfa is indeed a marvelous plant. In Southern California, where irrigation water is plentiful, and intelligently applied five crops of hay are cut in a single season, while as far north as central Washington three good crops are secured, and, in exceptional seasons four.

Proper Conditions Necessary.

Unfortunately alfalfa is somewhat particular as regards soil and climate. From its habit of growth it is not suited to heavy clay soils, or soils underlaid by clay hardpan. Its roots penetrate very deeply and if the soil is of proper texture it is no uncommon thing for the roots to penetrate the soil from fifteen to twenty feet. In exceptional instances roots have been known to penetrate the soil more than a hundred feet. This great depth of root growth enables alfalfa to draw up stores of plant food that are unavailable to ordinary crops and gives it great longevity. Many alfalfa fields in the west are yielding good crops of hay after having been cut for twenty-five years. It is seldom wise to leave a field of alfalfa for so long a time as this, because plants will be killed out here and there by tramping, making the stand thinner and thinner and allowing weeds to get a start; but as long as the stand is good and weeds do not bother there is no object in plowing up an alfalfa field.

For its best development this crop requires a deep sandy loam free from standing water within several feet of the surface; abundant water to be preferably applied at stated intervals by irrigation, in not too large quantities; long hot summers and winters not too severe. Where these conditions exist alfalfa has no competitor as a hay producer, but it will thrive on a good many types of soil; in fact, almost anywhere except in stiff clays, light dry sands and wet soils. The

great value of alfalfa lies in its great yielding power, its palatability to stock and the large amount of nitrogen it contains. Most of the hay crops of this country contain too little nitrogen and it is necessary for the stockman to make up this deficiency by buying expensive mill products, such as cottonseed meal, linseed oil cake, etc. Alfalfa is one of those plants which draw a large amount of nitrogen from the atmosphere. It enriches the ground upon which it grows as far as nitrogen is concerned, and it has been found that, almost without exception, a grain crop following alfalfa makes phenomenal yields.

Equal to Bran When Treated Properly.

Some recent experiments indicate that when alfalfa hay is run through a shredder and pulverized it is almost equal, pound for pound, to bran as a food for cattle. When stockmen learn this it will certainly have a decided effect upon the cost of keeping live stock, particularly dairy cows, in those sections where alfalfa is grown. Another point that should not be overlooked is the increased value of the farm yard manure when live stock are fed rich nitrogenous food like alfalfa hay.

Although alfalfa is somewhat particular as to soil and climate, or rather, it should be said, responds readily to favorable conditions of soil and climate, it is at the same time widely distributed in this country. On the Pacific Coast it has been cultivated from Southern California to the British line and even beyond. It is not grown west of the coast range of mountains, but in the interior valleys of the coast States it has proven itself perfectly at home. It has also done well in Louisiana, Mississippi and the

other Southern States, and last year a farmer in New York reports five tons per acre. This shows that the range of the adaptability of this plant is greater than was previously supposed.

During recent years agricultural explorers have endeavored to find varieties of alfalfa that were more hardy with reference to cold and that could be grown on arid lands without irrigation. Their efforts have been partially successful. It was mentioned in the first part of this article that alfalfa was known to the ancient Persians and Babylonians. It is still extensively cultivated in western and southern Asia, and several varieties of it have been recently secured from Turkestan and adjacent regions. Some of these give promise of being able to withstand the winter of our Northern States, and it is possible that we may yet find varieties that will compete with sage brush on arid lands.

Remarkable Interest Shown.

The interest which the general public has taken in Turkestan alfalfa is remarkable. The United States department of agriculture and the State department experiment station are besieged daily with requests for information concerning this plant and for packages of seed. Unfortunately the seed crop last year seems to have been a failure nearly everywhere, and it has been impossible to extend the cultivation of Turkestan alfalfa during the season. Every effort will be made to secure seed for distribution another year in order that the limits of its cultivation may be ascertained. It is probable that we may find varieties superior to those already tried. Owing to the great interest involved, extensive investigation in this direction would certainly be justified.—Pacific Tree and Vine.

The man who declares that the world owes him a living always finds out when it is too late that the world is an awfully slow liquidator of its debts.

It is a foolish man that throws himself in the way of temptation for the purpose of ascertaining if he is able to resist it.

It would seem like old times to again see a girl with her head wrapped up in a "nuby."

There are a lot of people who never give with either hand for fear the other will find it out.

The joy of giving is increased by the necessity of working for what is given.

"All the world's a stage," and too many supes endeavor to play leads.

Only one thing is easier than making a good resolution—breaking it.

Some men never know they have a heart until something hurts it.

Baking powder would not make some men rise in the world.

It takes something more than furniture to fit up a home.

The praying Christian is never in doubt.

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