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FARM DEPARTMENT.
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FALL SEEDING OF ALFALFA.

IN SOME sections, this summer, tame-grass pastures were eaten to the roots, and then the cattle were turned on the meadows, and these were grazed as closely as the pastures. Where this is the case, it is probable that with the unusual conditions during the coming fall and winter a large part of these pastures and meadows will, next spring, be either dead or so badly killed that they will have to be plowed up. This will make a severe shortage in hay next year, and farmers should plan to meet this difficulty. The only sure way, and the most profitable way, to insure an abundance of hay next summer, is by seeding alfalfa this fall, putting it in between August 15 and September 15. Alfalfa sowed at this time will, under favorable conditions, in eastern Kansas, yield a good cutting of hay next May, and, with ordinary conditions, yield three to four cuttings of hay next summer. On average soil, the yield of hay should be from four to six tons per acre for the season, and alfalfa hay is worth more, ton for ton, for feeding beef cattle, dairy cows, young stock, sheep and hogs than any other hay that can be raised on Kansas farms.

WHEN TO SOW.

Alfalfa may be sown from August 15 to September 15, and if the season is favorable, will make a vigorous growth through the fall and go through the winter in good condition. August sowing is preferable, as it gives the alfalfa a longer time in which to grow before the ground freezes.

PLATE I.



Fall-seeded alfalfa, cut May 29, 1901, on Col. Guilford Dudley's farm, near Topeka.

PLATE II.



Mowing fall-seeded alfalfa, May 29, 1901, on Col. Guilford Dudley's farm, near Topeka.

ing of alfalfa fails more often than it succeeds. Last year, in Wa-baunsee county, a farmer secured a heavy stand of alfalfa from fall seeding on a field where he had tried spring seeding for four years in succession and failed. Alfalfa seeded in September, 1900, yielded its first crop of hay in May, 1901.

West of a line 120 miles west of the eastern line of the state, fall seeding of alfalfa is not so certain. If conditions are right it will pay; otherwise spring seeding is best. Judging from our correspondence and investigation, fall seeding is usually best in states east of Kansas.

ADVANTAGES OF FALL SEEDING.

Alfalfa may be seeded in the fall after another crop has been taken off. The next year it will yield full crops of hay, and no time is lost. Alfalfa seeded in the spring usually yields no hay until the following year, and requires mowing several times during the first summer to keep the weeds down. Alfalfa sown in the fall under proper conditions requires no attention whatever until the following spring, when a crop of hay is ready to be harvested.

It must be remembered, though, that conditions must be right or fall seeding will fail, as a vigorous growth must be secured in order to carry the alfalfa through the winter.

VALUE OF ALFALFA.

Alfalfa, when sold, will probably return a greater cash income year by year than any other feed crop raised in Kansas. When fed on the farm where raised it ranks among the most profitable crops.

At this Station, pigs are pastured through the summer on alfalfa with a light feeding of corn. After deducting the probable gain from the corn, the gain per acre from the alfalfa pasture was 776 pounds of pork. One lot of fattening hogs were fed all the grain they would eat; another lot all the grain and dry alfalfa hay they would eat. The lot having the hay made a gain of 868 pounds of pork per ton of alfalfa hay. Alfalfa should form part of the daily ration of every growing pig and of all stock hogs.

With scrub cows fed alfalfa hay and Kafir-corn grain, at ordinary prices for feed, butter-fat was produced at a cost for feed of seven cents per pound. On the College farm young cattle are wintered on alfalfa hay and corn, Kafir-corn or sorghum fodder, and make through the winter a good growth without grain.

A stockman in Rice county, Kansas, made a gain of five pounds per day per head on steers for forty-seven days with alfalfa hay and corn. In ordinary feeding, 1000 pounds of grain are required to put 100 pounds of gain on a fattening steer. With alfalfa hay and corn-meal, at this Station, fattening steers made 100 pounds gain for each 718 pounds of grain.

Alfalfa makes good pasturage for horses. Horsemen report a gain of six pounds a day per head on horses pastured on alfalfa and given a light ration of corn or Kafir-corn.

Alfalfa hay is one of the best feeds for sheep that is grown, and both green and dry alfalfa are valuable feeds for poultry.

On account of its effect on the skin and hair, alfalfa is one of the best feeds for cattle being fitted for the show ring.

At the Wyoming Experiment Station, part of a field was seeded to alfalfa and part planted to a variety of field crops. At the end of five years, the alfalfa was plowed up and planted to the same crops as the other part of the field. Wheat, on the part kept for five years in alfalfa, yielded thirty bushels per acre; on the other part, eighteen bushels. Oats on the alfalfa land yielded seventy-eight bushels per acre; on the other land, thirty-seven bushels. Alfalfa increases the fertility of the land and improves its physical condition, making stiff soils mellow and binding loose soils. Kansas farmers need alfalfa for profitable feeding, and they need alfalfa for increasing the yield of their other crops.

SOILS ADAPTED TO ALFALFA.

Alfalfa is adapted to a wide range of soils and climate. It will make the greatest growth on rich, well-drained bottom land, where the subsoil, while not sand or gravel, is porous. It has been grown for years on the farm of the Kansas State Agricultural College on high upland, where the subsoil is stiff hard-pan, and where it is 180 feet to water. The yield on this land averages more than three tons per acre per year. On better land the yield is four to six tons per acre per year.

Alfalfa will not grow in wet land, nor on land subject to overflow. On the College farm, a part of one field has only four feet of soil and then solid rock. In ordinary years fair crops are raised on this part of the field. In drought the yield is light, but the alfalfa lives, ready to grow with vigor as soon as rain comes.

Many farmers in eastern Kansas have tried to grow alfalfa and have failed, and the general impression is that alfalfa is not a suitable crop for that section of the state. The failures are due to improper methods of seeding or to wrong treatment after seeding. Secretary Coburn, in his recently published book on *Alfalfa*,* shows that alfalfa is a profitable crop in thirty-one states and territories. It grows successfully in such widely different soils and climates as that of California and Washington, and Delaware and New Jersey; Idaho and Montana, and Louisiana and Georgia. Secretary Coburn shows that the annual yield per acre in New Jersey has a feed value equal to six tons of bran; that in Montana fields sixteen years old are now yielding good crops, and that in Louisiana six cuttings are made annually.

With this showing, farmers in eastern Kansas should not be afraid of alfalfa not succeeding with them. We have found a yield of six tons per acre in a single season in Jackson county, where the best farmers believed it could not grow. From careful investigations made during the past five years, we are convinced that ninety per cent. of the tillable land of eastern Kansas is adapted to growing alfalfa. It does not live long on sandy soils and should not be sown on any soil that is not in good condition.

On most farms in eastern Kansas fall-sown alfalfa, seeded on well-drained land, will grow well and will yield profitable crops. It is a profitable crop for both bottom and upland.

*"Alfalfa," by F. D. COBURN, secretary of the Kansas State Board of Agriculture, published by Orange Judd Company, New York. Price, 50 cents.