

The Davie Record.

"HERE SHALL THE PRESS, THE PEOPLE'S RIGHTS MAINTAIN; UNAWED BY INFLUENCE AND UNBRIBED BY GAIN."

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SOIL ADAPTED FOR ALFALFA GROWING

An Article Tell of Experiments With Alfalfa—How and Where it Can Be Best Grown—One of the Coming Forage Crops.

Editor Record:—Below is an article on Alfalfa Culture, which I am sure will be of great interest to many of your farmer readers. As you know I am a successful raiser of this greatest of forage crops, on a small scale. I am often questioned by farmers who are interested in growing a patch of alfalfa, and this article will be of great interest to those who wish to raise it. The high price of all farm products and the increasing demand for everything the farmer raises, makes it evident to every thoughtful man that the improvement of the soil and increased productivity is the only solution of an adequate supply to meet the increasing demand made for everything produced by the farmer. The demand is now beyond the point of sufficient supply, and it behooves the farmer to improve his lands, increase his crops and reap the greater returns, and alfalfa is one of the future crops for the restoration of our depleted soils, and the restoration of its failing fertility, and at the same time increasing the bank accounts of our farmer friends. I hope some time to see hundreds of acres in Davie growing this finest of forage crops.

and soon the new field is thoroughly inoculated. If it is not practical to secure soil from an old alfalfa field some taken from patches of sweet clover found growing along roadsides or railways may be used. The same bacteria that live on this plant live also on alfalfa. There is no need of fearing to infect the land with sweet clover, as this plant is an annual and may be readily killed by mowing before the seed has matured. Artificial culture of these bacteria are now made which the farmer may secure, sprinkle over his seed and thus inoculate them in this manner. This method of inoculation is still in the experimental stage, however and we have not found these cultures a success in every case, so that their use is to be recommended only experimentally. Only about 25 per cent of our fields on which this culture was used have shown any benefits from inoculation, while soil from old alfalfa fields has given results on 85 per cent of the fields inoculated in this manner. This may be due to the improper methods of handling, but the average farmer will secure better results by using the soil rather than treating the seed with the culture.

Perhaps a fourth essential to the production of alfalfa is abundant lime in the soil. In many of the eastern states an application of lime is necessary to secure a good stand. However, most Missouri soils except a few that are poorly drained have an abundant supply of lime and our experiments show that only in a few cases is the lime necessary. It is sometimes beneficial for correcting the acidity of the soil, but only in this way. Lime is not a controlling factor in alfalfa growing in Missouri as in some states.

These experiments have shown that some soil in Missouri are much better adapted to growing alfalfa than others. In some sections it is a profitable crop to grow without an application of manure or fertilizer. In other words an application of manure and bone meal has been found beneficial, while in still others manure is essential to its successful production. This is due to the fact that some soils are naturally much more fertile than others and some that were once fertile have been run down by continuous cropping for a number of years.

Alfalfa is best adapted to deep, loose, fertile and well drained soil. Probably the best soil in the state for alfalfa in the land which has from 12 to 15 inches of rich, black, sandy loam, preferably bottom soil, underlain with a layer of sand. Such soils occur along the Missouri and Mississippi rivers and it is on this soil that alfalfa reaches its highest development in Missouri. This land produces in favorable season from four to five cuttings, averaging from one to one and one half tons per acre to the cutting. A good stand is readily obtained in these sections with no soil treatment other than good preparation of the seed.

The best alfalfa soils in Missouri are the heavier, bottom soils along the creeks and rivers within the state. These soils, while fertile, are hardly so well drained as those underlain with sand, hence hardly so well adapted to alfalfa. However, where well drained, alfalfa is grown on these soils without manuring or fertilization.

The loose soil which comprises the river hills along the Missouri and Mississippi rivers is also well adapted to alfalfa. This soil is fertile, deep and well drained and usually contains a sufficient amount of nitrogen to produce good crops without the use of manure. This is the best upland soil in the state for alfalfa and experiments in Andrew, Holt and Saline counties indicate that in most instances manure is not needed. The loose soil, however, does not generally contain the nitrogen-gathering bacteria and responds readily to inoculation.

The next best alfalfa soil in Missouri comprises the prairies of the northwest part of the state. Our experiments indicate that most of the soils respond to an application of manure which, though not always necessary to secure a good stand, gives sufficient increase to make its use profitable. The humus and nitrogen content of these soils is somewhat lower than the bottom lands and hence manure will often give good results.

The northeast Missouri prairie soils do not generally grow alfalfa as well as those of the northwestern part of the state. Here the nitrogen content has been run so low by continued cropping that there is not a sufficient amount of nitrates present to start the young plants off well, hence an application of manure is necessary in most places in this part of the state to secure a good stand. The alfalfa on the untreated plots of our experiments on these soils seldom succeeds in becoming established and soon dies. An equally important factor, however, in this part of the state is drainage, many sections being too flat and poorly drained for alfalfa.

The poorest alfalfa soil in the state are found in south Missouri. The ridge lands of this section are the poorest of all our soils and hence are the least adapted to the growing of alfalfa. With the liberal use of manure and inoculation it can be successfully grown in many places, even on the slopes of the Ozarks. But generally speaking it cannot be said to be a profitable crop for this section. However, one field sown on a southern slope in Phelps county which has been standing for four years produced three cuttings last year, averaging a ton per acre to the cutting.

The Missouri farmer is learning to grow alfalfa quite successfully. With a better understanding of the requirements of the plant it is only a question of time until it will be grown in practically all parts of the state. In north Missouri it will be grown on practically all well-drained soils, while in southern Missouri its successful cultivation will doubtless be somewhat more restricted. It is generally true that the longer alfalfa is raised on any farm the more readily it grows and the easier it becomes for the farmer to get a stand. This is due largely to the fact that he learns better how to seed and handle the crop, and the land becomes more thoroughly inoculated and better adapted for growing alfalfa.—Prof. C. B. Hutchison, Department of Agronomy, Missouri College of Agriculture.

E. H. MORRIS, Mocksville, N. C.

Alfalfa is one of the most important forage crops that the Missouri farmer is growing today. Its wide adaptability for feeding to all classes of farm animals, its high feeding value and its renovating effect upon the soil makes it a very desirable crop to grow. In many sections farmers are realizing this and are sowing more of it every year. With the increased interest taken in it the characteristics and requirements of the plant are being better understood and it is now grown successfully in many sections where a few years ago it was thought impossible to grow it. Every year it is coming to occupy more important place in system of farm management in those sections of the state best adapted to its productiveness, and there is no doubt that it will soon be grown to a greater or less extent all over the State. Alfalfa can be made to grow on practically every soil type in the state, but there some on which it is not a very profitable crop.

A few years ago the experiment station co-operating with the farmers of Missouri started a number of alfalfa experiments covering all of the soil types of the state with the idea of determining the best methods of securing a stand on these different soils. The result of these experiments show that a distinct relation exists between soil types and the successful growing of this crop.

There are perhaps three essentials to the successful growing of alfalfa—drainage, rich soil and inoculation. The crop needs a deep, loose, well-drained soil. Alfalfa roots go deep into the soil and the plant gets moisture from below. For this reason it thrives so well on the semiarid regions of the west. On wet lands where the underground water is near the surface the plants never do well and die. Alfalfa is not grown successfully on our flat prairie soils, which are poorly drained. These soils are underlain with a stiff clay subsoil in which the water level fluctuates often raising on the roots and drowning out the plants.

Another requisite for the successful growing of alfalfa is rich soil. Especially is this true in starting the crop. It may be started on thin land deficient in humus and nitrogen, but which contains a sufficient supply of mineral elements of plant food, but under such conditions it starts very slowly and will rarely produce profitable crops. In practically all such cases, however, crab grass and foxtail will come in so thickly as to crowd out the alfalfa before it can develop a good root system and become supplied with nitrogen-gathering bacteria sufficient to make a thrifty growth. In Missouri, where the conditions are not so favorable for alfalfa as in the west, it is necessary for its growth. Alfalfa is a heavy feeder on nitrogen and phosphorus—two elements that are deficient in Missouri soils. It is also a rather heavy feeder on potassium, but there is an abundant supply of this in our soil, so nitrogen and phosphorus become the limited elements. On the upland soil, then an application of manure and in some cases manure supplemented with bone meal, has been found necessary to secure a good stand. Manure furnishes the young plant with nitrate until it can become well established in the soil and supplied with its own nitrogen-gathering bacteria. On the better soils, however, where the plant food has not been so depleted, a good stand of alfalfa may be secured without manuring or fertilization. The third and perhaps most important factor controlling the growth of alfalfa is inoculation. By inoculation is meant putting into the soil the nitrogen-gathering bacteria that live in the roots of the alfalfa plant and furnish a part of the plant food. Many soils on which alfalfa has been grown do not contain these bacteria and hence it is necessary to supply them before the plants will thrive well. Inoculation is essential on practically all upland soils in Missouri. The most practical way for the farmer to inoculate his land is to scatter soil from an old alfalfa field over his ground before seeding. This may be applied at a rate of 300 to 400 pounds an acre and should be harrowed in immediately, since exposure to light kills the bacteria. The bacteria which soil contains multiply very rapidly

LITTLE HAPPENINGS FROM EVERYWHERE

General Happenings of the Week From All Over the Country as Gathered From Our Exchanges—Many Things Told in a Few Words.

Garfield Hutchins, a young convict working on the Forsyth roads, was shot and killed while trying to escape last week.

James West, 20 years old, of Hattiesburg, Miss., was burned to death in a boarding house last week. Other inmates escaped.

The steamer LaRochelle was sunk in the English channel last week and nine persons perished.

Statesville was visited by a severe electric, rain and windstorm the 19. Many houses were struck by lightning and crops damaged.

Theodore Roosevelt, Jr., and Miss Eleanor Alexander were married in New York the 20th. It was quite an elaborate affair.

Fire in Salisbury last week destroyed the old Swift & Co., warehouse and several other small buildings. Loss several thousand dollars.

The Jeffries-Johnson white man negro fight will be pulled off at Reno, Nev., on July 4th. California is to be congratulated.

Will Barham, a well-known blockader, was killed near Wendell last week by Pink Page. Women.

Lightning struck a negro in Winston last week, tearing his shoes off but leaving no ill-effects save a badly scared coon.

Ralph Lupton, of Newberne, was held up by a negro last week and shot through the thigh. He will recover.

Seventy-nine new doctors were granted license by the State Board last week, and turned loose on the country.

Our Raleigh Letter.

The Democratic primaries to chose delegates to the Democratic State Convention which meets in Charlotte July 14th, was held in every county of the State Saturday, June 25, and the county conventions will be held Saturday, July 2nd. This is the first time primaries have been held on the same day throughout the State and many regard this as a step towards the enactment by the Legislature of an iron-clad State primary law. The Democratic party has been steadily moving in that direction several years. In fact such laws have been passed by the last legislature for several counties, in an effort to fix the South Carolina primary system on this State. Such laws were passed for Halifax and Nash counties. Read Chapter 494, Acts of 1909 and you will find that if you lived in Nash county and wanted to participate in a Democratic primary you would be enrolled and if you scratched your Democratic ticket next November you could be indicted, convicted of perjury and sentenced to the roads. The Legislature attempted to make this apply to all political parties but the design is simply to foster a Democratic monopoly and destroy all independence at the polls.

In Wake county the denunciation of each other by the two Democratic factions continues. The "ins" or the so-called ring crowd, held a rally here Friday night in the Academy of Music and nearly all the speakers, particularly Senator W. B. Jones Representative Hinsdale and Commissioner Brewer, denounced Joseph Daniels, J. W. Bailey and the News and Observer. Senator Jones charged that an associate editor of the News and Observer declared that he had bought and stole votes for the Democratic party at the same time Nick DeBoy made his famous or infamous rather, assertion. Senator Jones said that Daniels was asked to print DeBoy's statement that an editor of Daniels paper boasted this, and that Daniels refused.

Plant More Peas.

Again we desire to remind farmers of the importance of planting every available cultivated acre to cowpeas. They are valuable for the following reasons:

They are a fairly good human food. They are one of our most nutritious foods for stock.

They shade the soil during the hottest part of the summer, thus aiding in the formation of valuable nitrates. If turned under, the vines add considerable fertility to the land.

The presence of decaying roots, stubble and vines in the soil helps to convert mineral substances into plant food.

If picked, the peas alone are worth from \$8 to \$12 per acre. The vines that grow on an acre are worth from \$6 to \$10 for stock food. Through their roots peas put into the soil from \$4 to \$6 worth of nitrogen per acre. Most of our unprofitable soils are lacking in this substance. The vines, roots and stubble help to make the soil loose and easily cultivated.

They also absorb and retain moisture that will aid the crop to go through a drought easily.

The roots of peavines are good subsoilers. They go to considerable depth and open up the earth so that air and water can make a deeper soil.

Peas get their nitrogen from the air, free of cost to the farmer, so that very little nitrogen is needed in their fertilizers except for very poor soils.

Peas feed strongly upon the supply of potash and phosphoric acid, therefore these substances should be supplied to them. Many crops fail for lack of acid and potash.

The price of peas is high, but this does not keep the wise farmer from planting them. He is thinking of the \$10 in value he is to receive later for every dollar invested in them now.

Let no farmer neglect to plant a bundantly of this important crop. Plant some for hay; plant some on poor land for turning under; plant some for grazing by horses, cows, hogs and other farm stock; and by all means plant and cultivate a few acres from which to obtain seed peas for next year's planting. Then you will rejoice if the price is high.

Plenty of cowpeas on the farm make loose, fertile lands, strong, fine stock and contented, prosperous farmers.

C. R. HUDSON, State Agent F. C. D. Work.

I hope that the farmers of Davie county have become convinced of the importance of raising cow peas; that they are not only valuable as a feed crop but also as a soil improving crop. I hope the farmers will not let the present high price of the cow peas keep them from planting and cultivating enough to make their own peas for next year's crop. The keeping of more cattle and the sowing of more peas and clover to build up the land, is the only salvation for the Southern farmer.

M. J. HENDRICKS, Local Agent F. C. Work.

Base Ball EXCURSION TO CHARLOTTE AND RETURN Thursday June 30, 1910

Take a day off and visit Charlotte, the city of electric energy, the home of the visitor, and witness the BALL GAME of the season. Game called at 4:30 p. m. The admission is only 25 cents.

THE PROFESSIONAL WRESTLING MATCH

YOUNG HACKENSMIDT, of Washington, D. C. VS. JACK SENTELL, of Omaha, Neb.

SCHEDULE			
WINSTON-SALEM	8.30 A.M.	Cornatzer	9.18 A.M.
Atood	8.35 "	Mocksville	9.40 "
Muddy Creek	8.40 "	Coolmees Junc.	9.50 "
Clemmons	8.56 "	Woodleaf	9.59 "
Idols	8.59 "	Barber	10.10 "
Advance	9.08 "	Mt. Ulla	10.25 "
Bixby	9.15 "	CHARLOTTE	11.30 "

All flag stops will be made between Winston and Mt. Ulla. Returning, train will leave Charlotte Southern Passenger Station at 11 P. M.

Remember the Date, THURSDAY, JUNE 30th, Only \$1.75 Round Trip from Winston-Salem to Mocksville. Coolmees Junction to Mt. Ulla, Only \$1.50 Round Trip.

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