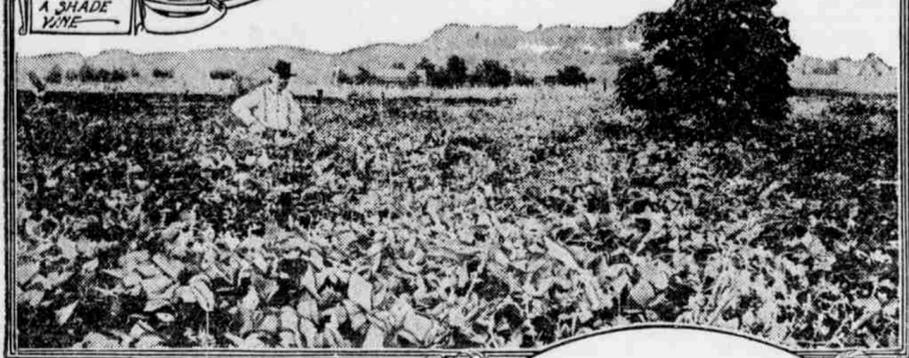


KUDZU: New Forage Plant

By Robert H. Moulton.



KUDZU AS A SHADE VINE



FIRST FIELD GROWN IN THE UNITED STATES



KUDZU, WHEEL DEEP IN JUNE

AMONG the many scientific discoveries brought about by the war is the fact that in kudzu, a leguminous plant, this country possesses one of the hardest and most valuable forage plants known. Indeed, this remarkable vine seems destined to become one of the leading sources of wealth in certain sections of the United States. Especially is this true of the southern states, where the slow development of agriculture has been due in large measure to the lack of good nutritious pastures and of roughage that lasts throughout the entire year.

While kudzu is by no means a new plant, it was only a year ago that any extensive experiments were made with it; the number of farms on which it was grown was insignificant. In fact, it appears not to have been studiously cultivated anywhere until a Florida man made the accidental discovery that his live stock seemed to prefer it to any other kind of forage plant and that they waxed fat upon it. As this was at a time when the high cost of feed forced many farmers to reduce the daily allowance of their animals, he hastened to plant a number of acres to kudzu, with the most satisfactory results.

Builds Up Poor Land.

It was not only as a feed for his farm animals that he discovered virtue in the plant, however. He found that, by reason of its power of extracting nitrogen from the air through the medium of the bacteria on its roots and adding this essential element to the soil, it quickly built up poor and worn-out land, making it fertile and productive. In this respect he believes it even superior to clover, alfalfa and other leguminous plants. Last season he made the best corn ever grown in Florida, averaging 50 bushels to the acre, on land that the season before had been planted to kudzu, and this without any fertilizer whatever. What made the experiment more interesting was the fact that this land previously never produced a good crop of any sort, being considered practically worthless.

All this came about as the result of a few vines which had been planted on the lawn of his home for ornamental purposes. Kudzu makes a beautiful growth, the leaves being of a dark green, and is one of the fastest growers known, producing a dense shade in a very short time. On the lawn of this Florida man it was grown to cover a summer house.

So rapid was its growth, in fact, that after the second year he grubbed it out as something of a nuisance, because the vines trailed all over the lawn, making it impossible to keep the growth confined to the summer house.

The three roots so dug up were thrown on a trash pile in one corner of the yard, with the idea that, since it wanted to run off the ground, it would grow and conceal the trash pile. It not only did this the first season, but continued to reach out until it covered all the adjoining fences, finally reaching the barn lot, where the family horse was kept. According to its owner, the horse literally wore his mane off reaching under the bars of the fence for the vine, while the neighbors' cattle and dogs continually broke through the fence to get it.

Becoming alarmed, lest the plant might be poisonous, the owner of the horse sent some of it to the department of agriculture for an opinion. On learning from this source that kudzu had no poisonous properties that were known of, he began investigating and experimenting, with the result that it was found by repeated analyses to contain an average of 17 per cent of protein. In one instance the percentage being 19.82. The average percentage of protein in alfalfa is 14.3 per cent. On a measured space 30 feet square he cut during one season at the rate of 11 tons cured hay at four cuttings. This, however, was an exceptionally favorable season, there being no late frosts, and the first cutting was ready May 1. The second cutting was made June 11, the third the last of July, and the fourth early in September.

While it is not claimed that kudzu will make four cuttings every season, nor yield 11 tons per acre at a cutting it is believed that a safe estimate is from two to three cuttings, with a yield of from four to six tons per acre, anywhere that the plant may be grown under favorable circumstances, and experiments have proved that it is perfectly hardy all over the United States, enduring the winters as far north as Nova Scotia.

Needed in the South.

What is needed in the South especially, is a forage that stock can live and keep fat on the year around. There are many valuable cultivated crops that make immense yields, but their period of mature life is short, making frequent plantings necessary in order to have a complete succession. The velvet bean, for instance, is an all-season crop, but it is not ready to feed until November. The cowpea, soy bean, and the various sorghums and millets are good forage crops, but all must be planted in succession and cultivated for best results. Furthermore, in the case of crops that must be harvested before feeding, the farmer has only a few days in which to get it in its prime condition, something that is impossible if rains are frequent.

Again, all the legumes, with the exception of kudzu, are open to objection through dropping their leaves and shattering while curing and harvesting. And a heavy rain on them, or

any of the grasses, hays or fodders during the period of curing means serious injury if not complete ruin.

Kudzu's Hardy Qualities.

Kudzu, however, possesses none of these disadvantages. One planting lasts for many years and it may be cut or pastured at any time during the season, in north Florida, from about the middle of April until frost comes. And where there is a growth left in the ground, stock will feed on it all winter. Stock, in fact, have been known to eat the dead leaves and vines which have lain out and weathered until March, when it was hauled in for bedding, in preference to the best hay that could be bought. The vines do not bloom or bear seed, and its roots penetrate the soil deeply, for which reason they remain green and full of life during the entire growing season. Accordingly, the hay can be cut any time when weather conditions are suitable for curing hay, as kudzu is not injured by waiting for good weather as other hay crops are. In fact, even if kudzu is thoroughly soaked during the curing period, it will afterwards show little effect of wetting.

Most people might think that, because kudzu is a vine, it must be very difficult to cut and handle it as a hay crop. On the contrary, experience has shown that it is no more trouble to cut or handle than a heavy crop of red clover, Mexican clover, crabgrass, or any other hay that makes a matted growth, while it is much easier to handle than either cowpea or velvet bean hay. Unlike the cowpea and velvet bean, kudzu is anchored to the ground every few inches, and so the vines cannot drag ahead of the mower blade, as in the case of peas and beans.

Kudzu should be propagated by means of the rooted plants, for when these plants are removed to new fields they carry with them the bacteria, on the tubercles of their roots, which are necessary to inoculate the new soil in order to secure the best results. When the plant becomes well established it needs no further cultivation, being able to control native weeds and grasses without assistance. The roots live for many years and do not require replanting after the first season.

The proper time for planting kudzu is two or three weeks in advance of corn planting, or a little earlier if one can get the ground ready. A full crop of corn may be grown on the same land during the first year by simply dropping the grains between the plants. Neither crop will interfere with the other and both need about the same attention. The ground, however, should be left smooth and level at the last cultivation to permit easy rooting of the vines or runners and subsequent mowing for hay. After the first year the kudzu will not need any cultivation at all, as the vines will root at the joints.

DAIRY

GRAIN MIXTURES FOR CALVES

Wheat Bran Is Relished by Young Animals and Corn Has Excellent Physiological Effect.

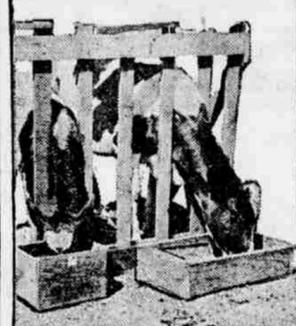
(Prepared by the United States Department of Agriculture.)

When the calf is in its second week it should begin to receive grain, and when one month old it should eat about half a pound a day. After this time the quantity of grain may be gradually increased, feeding all that the calf will eat until three pounds a day is reached, probably during the third month. Grain fed to supplement separated milk should never be mixed with the milk. It is questionable whether the preparation of grain in any way, such as soaking or boiling, is advisable under most circumstances.

Wheat bran is eaten readily by young calves. Corn has an excellent physiological effect and to a great extent may take the place of fat removed from skim or separated milk. Experiments tend to show that corn fed to calves should be cracked rather than finely ground. Ground oats are good in grain mixtures when available, but in many cases cost much more per unit of feed than corn and bran. The following grain mixtures are recommended by dairy specialists of the United States department of agriculture:

1. Three parts cracked corn and one part wheat bran.
2. Three parts cracked corn, one part wheat bran and one part ground oats.
3. Three parts cracked corn, one part wheat bran, one part ground oats, and one part linseed meal.
4. Five parts cracked corn, one part wheat bran, one part ground oats, and one part blood meal.
5. Oats, ground.

Clover hay, alfalfa hay, or the most palatable roughage available should be given the calf after the second week. Alfalfa is likely to cause scours, and should be fed sparingly at first and in-



A Good Method of Feeding Calves So That Each Will Get Its Share.

creased only after the calf gets accustomed to it. At first hay should be furnished only a handful at a time, and be placed so that it cannot be soiled. For the first six months, at least, the calf should receive all the roughage of good quality that it will eat up clean. When the calf has access to good pasture during the first six months it need not receive other roughage. It is not advisable, however, to have the calf under two months of age on pasture in the early spring.

GOOD BLOOD ASSISTED DAIRY

Good Dairy Bull, Purchased as Calf for \$100, Put at Head of Herd Is Good Investment.

(Prepared by the United States Department of Agriculture.)

A good dairy bull, purchased by a Montana county farm bureau member, cost \$100 as a calf; it was put at the head of a herd of ten cows, the average annual production of which was 4,800 pounds of milk and 260 pounds of butterfat. The daughters of the bull have now replaced the old cows in the herd and exceed the production of their dams by an average of 102 pounds butterfat and 1,828 pounds of milk per year. This improvement nets \$300 profit each year without taking into account the difference in value of the calves. A cow should "carry on" for at least six years, which would mean \$1,800 additional profit from the ten cows, because of the \$100 invested in the bull calf. "It was a bully good investment," says the farmer.

ENEMIES OF DAIRY INDUSTRY

They Are the Men Who Cause to Be Manufactured Poor Grade of Butter for Market.

There is a class of men who are more dangerous to the dairy industry than the men who use the substitute, and they are the men who cause to be manufactured a poor grade of butter. There is no substitute for first-class butter, but for butter made from old, stale cream there is not only danger of substitutes, but there is danger of many people not using butter at all.

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Everything Lovely.
"Howdy, Gap!" saluted an acquaintance, upon meeting the well known Rumpus Ridge citizen on a shopping expedition in Tumlinville. "How's everything going with you?" "Finer'n frog hair, Jurd!" triumphantly replied Gap Johnson. "Of course, my wife has been sorter puny, yur of late, and several of the children have got the measles and mumps and one thing and another, and the lightning struck the corner of the house tuther night and like to have tore the whole place to pieces, and one of the kids fell out of a tree and broke his arm, and a feller took a shot at me day before yesterday and ventilated my ear, and such as that, but I swapped for a running horse last week, and a couple of my bounds have got six pups apiece. Aw, I tell you, they can't keep a good man down!"—Kansas City Star.

Well Known.
I was hurrying home up the hill when a little boy came rushing down in such haste that he ran headlong into me. He was quite breathless and very flushed. "Have you seen my pa?" he managed to stammer. "I don't know your pa, little boy," said I. He looked at me in round-eyed wonder and his pink cheeks fairly stuck out. "You don't know my pa?" he said incredulously. "Why, I know pa just as easy!"—Exchange.

EATONIC FOR YOUR ACID-STOMACH

KNOW THAT WOULD STOP HIM

Lawyer Evidently Was Well Acquainted With the Weakness of His Long-Winded Friend.

C. H. Murphy relates the story of a Philadelphia lawyer, retired, who, in the days of his active practice, was notorious for his long-windedness. On one occasion he had been spouting forth his concluding argument for six hours, and the end was nowhere in sight, when the opposing attorney beckoned his associate and whispered: "Can't you stop him, Jack?" "Till stop him in two minutes," Jack replied confidently. And he wrote and passed to the orator the following note:

"My Dear Colonel—As soon as you finish your magnificent argument I would like you to join me at the hotel in a bumper of rare old Bourbon." The lawyer halted in the midst of an impassioned period, put on his glasses, and read the note that had been handed him, then he removed his glasses again and, taking up his hat and bag, he said: "And now, may it please the court and gentlemen of the jury, I leave the case with you." A minute later he was proceeding in stately fashion in the direction of the hotel bar. Who'd do the work of the world if everybody were rich?

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MUCH IN LITTLE

Mrs. Marshall Stetson of Hanson stuffed and baked 40 chickens for the supper served at the Red Men's hall.

Detailed soil surveys covering 38,136 square miles of the United States were made last year by department of agriculture scientists.

To string beads quickly a crank-operated machine has been invented by a European that feeds them upon the point of a threaded needle.

A velocipede for two has been designed, so constructed that a smaller boy can ride safely behind a larger one, who supplies the motive power.

A railroad in Brazil utilizes its old rails, mounted in pairs, for telegraph poles in a region where insects destroy wooden ones.

A dead whale that drifted ashore, high on the rocks on Pemquid point, facing Johns bay, has been blown up by dynamite. The carcass was 60 feet long and was estimated to weigh more than 20 tons.

Try kerosene oil for washing windows. Dampen a cloth with it and clean the glass, then polish with a dry cloth.

Mrs. Henry E. Snow of Brockton and her twin sister, Mrs. Evelina Dawley of Providence, aged 70, just had a birthday party.

A chemical for preserving art objects in good condition has been devised by Dr. Chickashige, professor of the Kyoto university. It has proved very effective in protecting wall pictures and other fine works of art.