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Timely Farm Suggestions

By TAIT BUTLER

Soy Beans an Excellent Crop

WE TOLD a friend last spring that he could avoid the purchase of a ton of cottonseed meal at what he thought too high a price to feed to his cattle by growing two acres of soy beans, for 35 bushels of soy beans are equal in feeding value to a ton of cottonseed meal. He now complains that while he grew the 35 bushels of soy beans and more on two acres, he cannot afford to feed them, because they are worth around \$2 a bushel to sell to the oil mills.

When the Southern farmer once wakes up to the value of soy beans and peanuts as money crops when prices are good and as feed crops when the relative prices of feeds and livestock justify their use for feeding, he will not look upon the coming of the boll weevil and the forced reduction of his cotton acreage as entirely an unmixed evil.

When a Farm Is Adequately Stocked

THE South is probably increasing her livestock production as rapidly as is safe and best. Increased feed production must go ahead of an increase in livestock. One animal unit to three acres of cultivated land is regarded as stocking rather heavily and one animal unit to every five acres as stocking rather lightly. If a farm of 200 acres of cultivated land keeps from 40 to 50 animal units it is well stocked, and much too heavily stocked when even half the acreage is in cotton, for there is no residue or by-products from the cotton crop for stock feeding. In time, we should come to not over one-third the cultivated land in cotton, because it will be found difficult to build and keep up soil fertility economically with more than one-third the cultivated land, or at least more than one-third the improved land, in cotton.

When we gradually grow into this improved cropping system, then a farm of 200 acres in cultivation should according to the rule keep something like the following animals or their equivalents:

8 horses or mules.....	= 8 units
14 cattle.....	= 15 units
10 young cattle.....	= 5 units
5 hogs.....	= 1 unit
30 pigs.....	= 3 units
35 sheep.....	= 5 units
28 lambs.....	= 2 units
100 hens.....	= 1 unit
Total.....	40 units

Feeding Hard-working Mules

A READER has a lot of hard-working mules weighing about 850 pounds each and wishes to know what proportions or amounts of corn, velvet beans in the pods and native hay should be fed daily to these mules.

The term "native" hay is rather an indefinite one, but assuming that it is grass hay, then probably about the following will be required to furnish these 850-pound mules what they require when doing hard work.

10 pounds hay.
6 pounds corn.
6 pounds velvet beans in the pods.

This may be divided into two or three feeds as may be thought best, but probably best results will be obtained by feeding all the hay at night and dividing the 12 pounds of grain into three equal parts and giving one part morning, noon and night. Or, if grain is only fed twice a day, then divide into two equal parts and feed at two feeds when most convenient.

If this is not sufficient to keep up the animals, one pound of velvet

beans in the pod may be added and if still more feed is needed then add another pound of corn. But we would not feed over 10 pounds of hay per day when the mules are working hard.

It is presumed that the velvet beans in the pods will be ground, and if this is done the corn may also be ground and the two mixed. If, however, the animals will eat the velvet beans without grinding it is not necessary to grind either corn or velvet beans unless it can be done cheaply.

A Miracle Wrought by Crimson Clover

THIS is a true story of a piece of land:

In the year 1910 this land produced a little less than six tons of silage per acre. Every year following for five more years, or six years in all, it grew a crop of silage corn. It was cultivated and handled in about the same way all these six years and during that time, received no stable manure or commercial fertilizer.

On the sixth year, this good plot of land grew nearly 12 tons of silage per acre. The cause of this doubling of the yield in six years is, of course, the interesting point of this story. How was this miracle brought about, for it is surely little short of a miracle to double the yield from land in six years, when the average acre of land in the South has not increased in fertility during the last 50 years? The miracle was worked because while growing a crop of corn this land also grew a crop of crimson clover between the crops of corn. Some of this crimson clover was removed, but most of it was plowed under.

It was the nitrogen taken from the air by the crimson clover and the vegetable matter which it furnished to decay in the soil, that brought about this marvelous transformation of an ordinary soil into a rich soil. This could only occur in a soil already well supplied with phosphorus and lime. This soil had these naturally in abundance. Where these do not exist in the soil they must be supplied, and then, the wonder worker, crimson clover, will do for other soils what it did for the soil of this story.

THE TRUE FUNCTION OF LIVESTOCK

While Not an Absolute Necessity, Livestock Are an Economic Necessity in Disposing of Certain Products to Best Advantage

PERHAPS the greatest obstacle to the development of the livestock industry in the South is the mistaken idea of the true function of livestock on the farm and their relation to the maintenance of soil fertility. The livestock advocates are themselves largely to blame for the erroneous ideas which exist as to the true relations of livestock to the economical maintenance of soil fertility.

It cannot be too often stated or too clearly understood that livestock add nothing in plant foods to the soil. They rather carry from the soil, when sold, small quantities of plant foods. The mineral matter of the bones of animals is largely phosphorus and calcium—phosphoric acid and lime. The lean meat and all other tissues also contain nitrogen and other plant foods.

It should also be remembered that a single money or sales crop consisting of livestock, while less destruc-

tive of soil fertility, is no more likely to be the most profitable than is a single money crop like cotton or corn.

The duty of the farmer is to take from the soil the largest possible amounts of plant foods in the form of crops. But it is also his duty to dispose of these crops in a manner which will give the largest net returns after replacing the plant foods taken from the soil. If he can sell a ton of cottonseed for \$60 and replace the phosphorus and potassium taken from the soil in commercial form for \$2.50 and the nitrogen and humus-forming material removed in the seed by growing a legume at a cost of another \$2.50 he is performing the essential and full duties of the farmer.

Likewise, if he must grow legumes to build up his soils, or to supply the nitrogen and humus required and all agree that he must do so to supply these most economically, then it is as much his duty to dispose of these legumes the most economically or advantageously, as it was to dispose of the ton of cottonseed to the best advantage.

Livestock are not essential to soil building or to the maintaining of soil fertility. In other words, they are not an absolute necessity; but they are an economic necessity in our farming. They are an economic necessity, because they enable the farmer to dispose of certain products, which are and must be grown on every farm, to a better advantage than is possible without livestock.

If a ton of cottonseed meal is worth \$32 for fertilizer, or \$32 for feeding, then if fed on the farm it is worth more than \$16 for fertilizer and also \$32 for feed, or \$48 in all, which is an increase of 50 per cent over its value for either alone. If a ton of legume hay is worth \$12 as a fertilizer or \$12 for feeding, then it is worth \$6 as a fertilizer and \$12 for feeding or \$18 in all when fed on the farm and the manure saved.

The function of livestock on the farm is to consume a maximum of rough by-products produced in the farming operations and a minimum of the high-priced grains or concentrates. Livestock add nothing to the soil, but serve as the best means of disposing of certain products, so as to obtain the largest net returns after returning to the land the plant foods removed in growing these products. The wailing of the chemists over the fact that animals destroy from 60 to 90 per cent of the humus-forming portion of feeds is not to be taken too seriously. One crop of sorghum plowed under would probably furnish as much humus-forming matter as two ordinary legume crops. Or if bedding is supplied the steers while eating the cottonseed meal or the legumes, there will be as much plant foods and as much humus-forming matter returned as if the cottonseed meal and legumes had been plowed under.

The aim of the farmer should be to maintain the humus and plant food supplies in his soil, or to increase them; but it is as much his duty to do these things most economically as it is to sell his products at the highest price.

Any farm product which is suitable for feeding livestock should not generally be plowed under or used direct as a fertilizer, because in so doing all of its feeding value is sacrificed for a gain of 25 to 50 per cent of its fertilizer value. The feeding value of a feedstuff is usually greater than its fertilizer value and consequently when a feedstuff is used direct as a fertilizer from one-third to one-half of its value is lost.

Are you necessary to the proper working of your neighborhood or are you just an ornament?

PASTURE PROBLEMS

A Discussion of the Essential Factors in Getting and Keeping Good Pastures

AFTER estimating the acreage which will be required to pasture the livestock, add 25 per cent more land to provide for dry weather and other unfavorable conditions.

We are often told that lands which cannot be cultivated ought to be put into permanent pastures. That is not sufficient. It is true, we should put our idle lands or those which cannot be cultivated into pastures, but a lot of land which is now cultivated, but for various reasons should not be, should also be put into pastures. There is a large amount of rolling land that washes badly, is difficult and expensive to cultivate, and yields small crops, which should go into pastures.

Moreover, our pastures ought to be still further extended. There is a large amount of feed furnished by the residues or remains of crops which is now wasted because of lack of fences and livestock, but that is not the limit of extension of our pasturage. Every cultivated field should have one or two years of pasturing in a five or six-year rotation. If good livestock are kept the net profits will not be far short of that from other crops, and the increased yields in succeeding years will more than make up any deficiency, if any exists, for the year the land is pastured. Of course, a year or two of pasturing in a rotation means the sowing of legumes suitable for pasturing, such as lespedeza and the true clovers. It should also mean that lime and phosphorus be applied for the pasture as for the other crops.

We would not discourage the use of the rough land which cannot be cultivated for pasturage, but we would have every man base his expectations of results on the facts as they exist, and it is positively not possible to get much grazing from rough, poor land on which trees, bushes and weeds have already established themselves, unless we remove these non-pasture plants which interfere with or prevent the growth of grasses and other pasture plants.

It is real pastures that the South needs. Many of the fields now in cultivation could be profitably built up into pastures. But they will require the same attention and assistance to grow pasture plants as they now require to grow cotton plants.

When the land is cleared it will be plenty soon enough to think about or discuss fencing, drainage, seeding and cultivating the pasture. One acre of good pasture will furnish more feed than five acres of the average Southern pasture.

Let us set out right now to make a real pasture. If we cannot make a large one or if our needs are not large we can make a small pasture, and every farm has need for such. No matter how large the other pastures may be or how much we neglect them; no matter how much brush and briars and trees there may be in the other pastures to prevent the growth of grass, let us have one pasture—whether large or small—that is a real pasture.

But the important thing right now is to resolve to have a real pasture and then to take the first step to get it, clear away all obstructions to the growth of pasture plants and to the cultivation of the pasture with the mower.