

# Better Farming Talks.

By R. L. MOSS.

## FUNDAMENTAL THINGS IN PROFITABLE CROP PRODUCTION.

Soil Conservation and Soil Building; Crop Rotations With Winter and Summer Legumes; Good Seed, Good Preparation and Cultivation.

IF I were asked to name the one greatest obstacle to greater farm wealth and better living in the South, I would unhesitatingly point to the low per acre production of our staple crops. Just so long as we continue to average less than 20 bushels of oats and corn to the acre and one-third of a bale of cotton, we must expect the rural South to remain comparatively poor and backward in the introduction of the better things that make farm life worth while. For it takes money to build good homes, schools and churches and to educate children; and money in sufficient quantity to do these things cannot possibly come to the farmer who does not rise above the average in crop production.

In raising our yields to a point at which a reasonable profit may be made, a rich, productive soil is the first and most important essential. I have seen ignorant Negroes make a bale of cotton per acre on rich Mississippi Delta land, merely by keeping the crop free from grass and weeds; but a highly trained, really good farmer will fail to make profitable crops on a gullied hillside, devoid of humus. Good cultural methods are of great importance, but unless applied on humus-filled, fertile soils they are not of themselves insurance against poor yields.

Not only must our lands, if they are to produce good crops, be made fertile, but they must be kept so. Consequently soil building and soil conservation are two of our main problems in increasing yields.

### Soil Conservation.

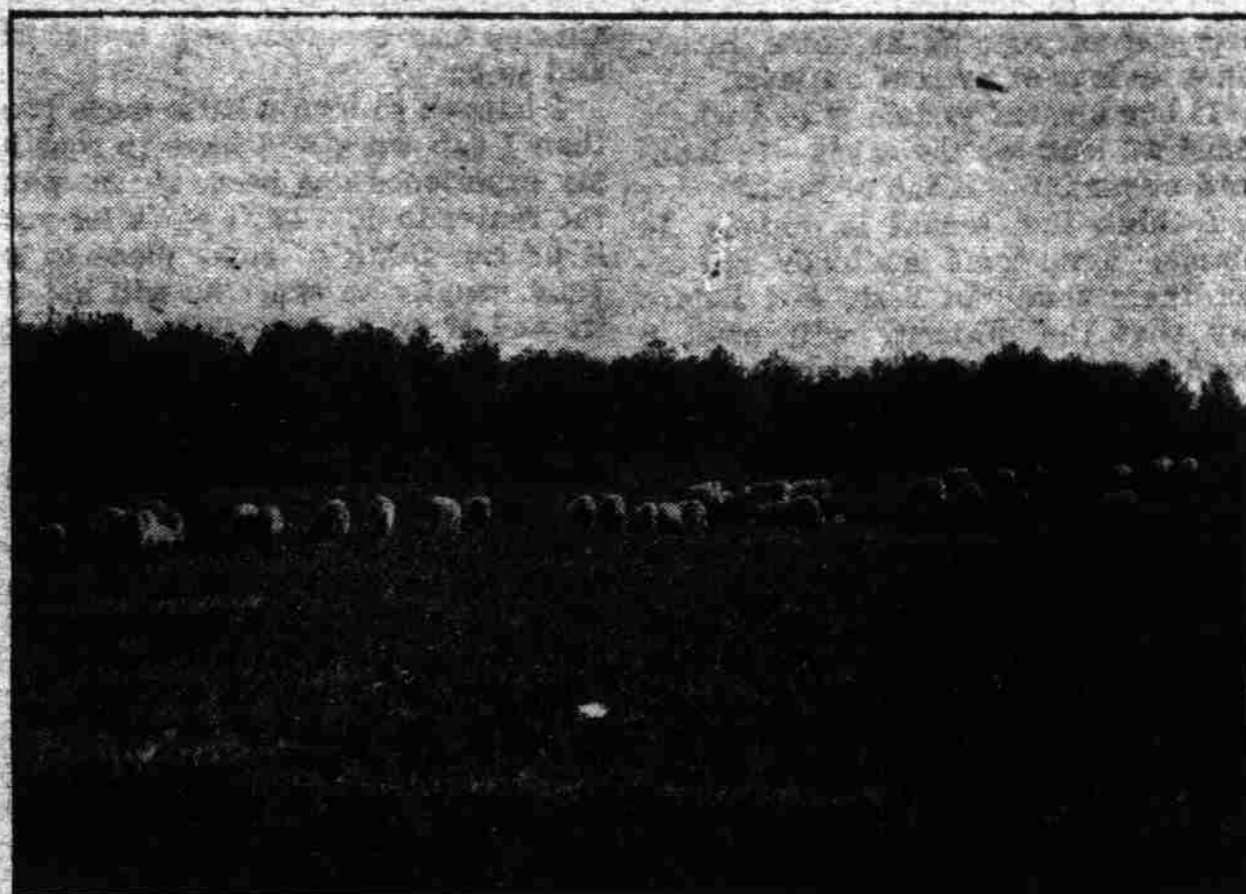
LET us consider the latter first. The average Southern farmer for generations has played the robber, taking from his land more than he gave it. Not only this, but he has aided and abetted the elements in stripping our hillsides, leaving them eye-sores and worthless until nature, disgusted with his bad management, has taken the land and the problem out of his hands, gradually to restore the farm's wasted fertility.

In the South Atlantic and Gulf States, on the more rolling lands, it is an error to assume that deep plowing, humus and winter cover crops, valuable as they are, will entirely prevent erosion. They will aid, of course, but with them must go a system of carefully constructed terraces. Most farm lands in the South have been terraced after a fashion, but in so careless a manner has this been done that in most cases it has been of little help in preventing erosion. A properly constructed terrace should be laid off with a fall of from four to six inches to the hundred feet and, beginning at the center, a broad bed, one and one-half feet high and from 16 to 20 feet in width, should be plowed up. Rows should then be laid off on top of and parallel to this terrace. In this way there need not be a foot of waste land in the field and erosion is entirely prevented. The old-fashioned, "razor-back" terrace should forthwith be relegated to the agricultural "dark ages".

### Soil Building.

WHEN we have so terraced our hill lands that losses from washing have been reduced to a minimum, the next step is one of soil building. Our livestock authorities tell us, most of them, that livestock are indispensable if we are to have rich soils. I agree with them that farm animals, by consuming our surplus feeds and returning the manure to the land, probably afford us the most economi-

cal means of increasing soil fertility; but it is not true that a man cannot have rich land without livestock. Such an assumption is incorrect and misleading, as has been widely proved by the success of winter and summer soil-improving crops throughout the South. We know now that a good crop of crimson or bur clover plowed under on land that has averaged 15 bushels of corn to the acre, will double the yield in one year, and at only a nominal cost. If I were asked to designate, in my opinion, the one thing that would, most economi-



CRIMSON CLOVER AND LIVESTOCK MAKE RICH LAND.

Courtesy Norfolk & Western Railway.

cally, come nearest to doubling our per acre production of corn in a single year, I would say plant crimson clover next fall on every acre of land that is to go in corn the following spring. The amount of humus and nitrogen thus supplied, supplemented with some acid phosphate, and possibly potash, will work an amazing change in the soil's producing power.

We have been told that humus makes cold land warm, wet land dry, and dreathy lands moist. It does all these, and in addition is the key that unlocks the vast stores of unavailable plant food in the soil, closed by a wise nature against improvident, despoiling soil robbers. Chemical analyses show that in the average Southern soil there are sufficient plant food elements for hundreds of years of cropping, provided they were available. Still we go on, year by year, buying expensive fertilizers, nitrogen particularly, at high prices.

These are serious defects that must be remedied if our agricultural system is to be put on a sound, profitable basis. What are the remedies? Tons and tons of atmospheric nitrogen, worth thousands of dollars, lie above every acre of our land. Bar and crimson clover, lespedeza, cowpeas and soy and velvet beans have the wonderful power of capturing this nitrogen and storing it in the soil for subsequent crops. Few other sections are so naturally favored with excellent soil-building crops as are the Southern States. Their presence and adaptability make for us great opportunities for agricultural supremacy; but we are only just beginning to find ourselves.

### Crop Rotations.

THE production of the leguminous crops must be made a means rather than an end—the means by which we are to enrich our soils, double our corn and cotton yields, and make possible the profitable production of live-

stock everywhere in the South. Under present conditions a registered beef or dairy animal brought from a distance, if it escapes speedy death from ticks, is too often condemned to a lingering death from starvation on pastures that are such in name only. Good crops of cattle and hogs, like good crops of corn, are only made on good land. We must learn to combine our staple crops with our soil-improving crops, winter and summer, and with livestock in such a way that soil fertility will be conserved and yields increased.

Many cropping combinations are possible and the merits of each have their advocates. Which rotation system shall be used must largely be determined by local conditions. For the average Southern farmer who makes cotton his only cash crop, we would suggest the following:

First year, corn and peas; second year, oats and peas or oats and lespedeza, with crimson clover sown in the fall; third year, cotton, with crimson clover sown in September or

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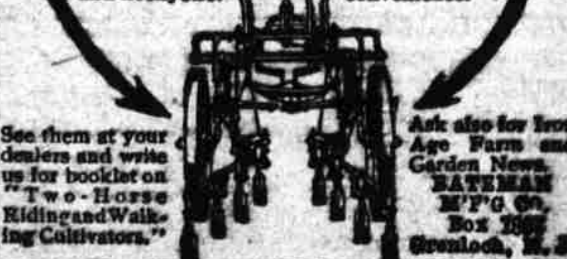
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### Proper Use of Fertilizers.

ONCE a good rotation is established the matter of fertilization becomes easy. For instance, in either of the suggested rotations the necessity for expensive commercial nitrogen is eliminated, leaving only phosphoric acid and potash to be supplied. As a rule the Piedmont regions and the territory from West Alabama westward need no potash except for special fruit and truck crops, thus further simplifying the problem; and finally, when our soils are filled with humus from legumes and manures, phosphoric acid may be purchased in the form of finely ground rock or floats, at a cost per unit of about one-fourth the present price. The annual commercial fertilizer bill of the South is about \$100,000,000, and it is safe to say that a large proportion of this expenditure is for nitrogen, an element that is easily and cheaply supplied by leguminous crops.