

MORE LETTERS ABOUT SOIL FERTILITY.

Soil Fertility—What It is and How It Counts.

TWO clay loams on adjoining farms do not necessarily yield the same amount of crop, even if they were originally of the same formation, and are watered by the same rain and warmed by the same sun. To what is this due? The answer lies in the difference of physical condition. The physical character of the soil probably has a greater influence on crop yields than the majority of people realize. What is meant by physical condition is the texture of the soil. Whether it is an open, mellow soil, or whether it is a soggy, water-soaked soil with small air or pore space, and consequent heavy, sticky texture. Unless a soil is of fine texture it does not allow of entrance into the soil of sufficient air, and so the roots do not ramify and spread as they should, nor do they go deep into the soil in search of plant food, and so suffer in time of drouth.

Air is as important for the roots as for the leaves; in a water-sogged soil little air is present, and so besides this a cold soil is the result.

H. WEAME.

Rock Hill, S. C.

Good Livestock Makes Soil Building Easy.

THE two main essentials for building and maintaining soil fertility are: (1) a good rotation, (2) livestock.

Given a well-drained farm and strict and intelligent adherence to these two features our land must improve.

My plan is to practice a three-year rotation, and winter cover crops and dairy cows. The cover crops, such as vetches, crimson clover and rye, can be profitably grazed off and what is left plowed under to add humus to the soil. By keeping livestock the crops are not sold (except in case of surplus), but are fed and go back to the fields as manure.

By the added use of acid phosphate or ground phosphate rock the soil fertility can be increased from year to year.

Make the cows, or their produce, and hogs the money crop and watch the yields increase.

H. R. HUBBARD.

Williamsburg, Va.

Improving Land Without Fertilizer.

I TOOK charge of my father's farm when I was 16 years old, and had full management of it until I was 23. Since then I have been farming for myself eight years. On our loamy top soil with red underlying clay subsoil we doubled the yield on father's farm and have done almost as well on my own. On father's farm there was one upland field of 16 acres that had been in cultivation over 30 years. This land was producing, when father bought it, from four to five barrels of corn per acre, from 600 to 800 pounds of seed cotton, and from eight to 11 bushels of wheat per acre. Our rotation was as follows: Wheat, with cowpeas after wheat harvest at rate of one and a half bushels per acre, and rye after peas in fall. Cotton second year, with rye alone or rye and crimson clover at last plowing of cotton. Third year, corn with cowpeas at last plowing and rye in fall. No grass or stalks were wasted, but was turned for the benefit of soil.

The land was subsoiled several times, going about two inches deeper each fall, until it was broken and subsoiled to a depth of 18 inches. After nine years of such work, the yield on this land was from 1,600 to 2,150 pounds of seed cotton per acre; 18 to 28 bushels of wheat, and eight

to 12 barrels of corn. During this period not one pound of commercial fertilizer or no manure at all was used.

Since buying my farm, I have followed the same rotation, only wheat has been left out and potatoes and oats substituted. I have one three-acre field I want to briefly speak of. I have been subsoiling field every other year. Our first crop of corn made a little over 50 bushels per acre. Our first crop of potatoes ran hardly 200 bushels per acre. Our second crop of corn ran to 65 bushels per acre. These were made without any manure or fertilizer. Two years ago, by using 30 tons barnyard manure per acre, we made the splendid yield of 307 bushels of salable potatoes per acre. Last year, by again subsoiling, we made 121% bushels of choice shelled corn per acre. We also applied our first commercial fertilizer, 1,600 pounds per acre. I am keeping a good deal more stock, and expect to apply a large amount of barnyard manure. No filth at all is burned, and cover crop is kept over as much land as possible. I turn all rye growth when from 12 to 20 inches high.

W. C. CROOK.

How Good Tools and Good Work Pay.

AS I HAVE been manager of a badly run-down farm for the last three years, I will give some of my methods and conclusions in building up and increasing soil fertility.

I was probably better situated than most Southern farmers, in that I did not have to make the farm pay the bills and support a family. In the three years, as a whole, it did so, but the first year some \$3 was spent to every \$1 produced.

We stocked the place with plenty of work stock, heavy brood mares and a small dairy. For tools we had wagons, manure spreader, grain drill, mowing machine, hay rake, two-horse and one-horse cultivators, weeders and spike-tooth harrows, disk and moldboard plows, disk harrows, clod roller, seed planters and numerous small tools.

On this farm I have found the disk plow one of the most useful farm implements.

If you don't have the tools and use them, you will not have the fertile soil; for if our soil is not naturally fertile, we must make it so. For this there is nothing quite equal to barnyard manure, supplemented with proper commercial fertilizers. Most farms do not have this in sufficient quantity to avail much, so we must make the start without much manure. Then, with deep, thorough preparation, we have a good start toward a fertile soil, and by making use of all the summer and winter legumes possible success is almost assured.

The crying need of the South is more and better livestock, but I am firmly convinced that if the energies put forth in advocating more livestock were directed toward the growth of more and better feeds instead, the livestock interest would take care of itself. It is more feed and not more consumers of feed that we need, as the books of any Southern grain and hay merchant will show. Get the farmer to grow feed (cowpeas, soy beans, alfalfa, clovers, vetch, rye, etc.), and he will not turn it under in the raw state many times, but will feed it to cattle instead. Neither will he sell it; but if he does, his neighbor will buy it, and the South is no worse off.

Next to the disk plow, the thing that has helped me most is crimson clover, rye, etc., used to turn under and for feed. The first year I worked this farm I commenced sowing it

when laying-by corn, and continued until I had all cultivated land sowed. The stuff I had for feed and seed and to turn under, and the way that disk plow did work it up!

So my prescription for making a fertile soil is deep, thorough preparation, rapid, shallow cultivation; making all possible use of the legumes; spreading all barnyard manure on top of soil as fast as made; feeding all grain and hay it is possible to raise to good livestock; keeping the land working at all times; using heavier teams and larger tools; doing more work with same human labor.

These and like things persisted in, and we will soon be producing \$1,000 to \$2,000 per farm laborer, instead of \$200 to \$300 as at present.

CHAS. G. MEDLIN.

Salisbury, N. C.

How Cover Crops Have Helped.

I AM a young farmer 24 years old and I have been farming since I was 18. I started with three or four acres of poor land and the rest of the place was all in brush.

I did not have a cent to start with either. Now I have about 20 acres cleared that \$50 per acre would not buy. I will try and tell how I made them fertile. The first thing I did was to save all the manure and spread as fast as made. Then planted corn and sowed cowpeas, rye and crimson clover, taking nothing off except the corn. Left pea vines, clover and rye to be plowed down in the spring.

I kept this method up for two or three years. I would graze hogs on peas in fall until they gathered all the peas and then take them off until spring. Two acres of this ground raised 3,850 pounds of leaf tobacco last year that brought me over \$150 net per acre.

With the aid of 400 pounds 14 per cent acid phosphate per acre with peas, clover and manure saved from concrete stables, I do not own an acre of cleared land, but would grow 60 bushels of corn. Every foot of my cleared ground has got a growing crop on it now, and I always expect to keep my ground covered with some crop that gives a profit and then a feed crop. I always feed my land once a year with crimson clover or peas, and sometimes both, with the addition of a coat of stable manure.

I owe all I know about farming by reading good agricultural literature, and I am proud to say that The Progressive Farmer has been my teacher.

H. J. WOODWARD.

Clayville, Va.

Good farm books are good investments.

THEY ARE GOING LIKE HOT CAKES.

"Fertilizing for Profit"

By E. E. MILLER,
Managing Editor of The Progressive Farmer.

Order quick before you buy a pound of fertilizer. Don't wait to get this little book that tells in plain every-day language all about fertilizers and how to use them—and will save any wide-awake farmer ten times its price in a single season.

Farmers in the South spend \$50,000,000 a year for fertilizers and probably \$10,000,000 a year is lost through ignorance. If you have been fertilizing from force of habit, quit, and begin "Fertilizing for Profit." This book tells you how. It tells what fertilizers are and how to use them—all in a plain, straightforward way, and without the confusion so often caused by the use of strange-sounding terms.

SOME OF THE SUBJECTS TREATED ARE:

What Fertilizers Are and Why Used.
What Commercial Fertilizers Are.
What Nitrogen Does and How We Get It.
About Phosphoric Acid.
Potash in Commercial Fertilizers.
Why Fertilizers Pay Best on Good Soils.
How to Tell What Fertilizers Your Soil Needs.
Special Needs of Different Crops.
What the Analysis Means.
How to Do Home Mixing.

Best Methods of Applying Fertilizers.
How to Keep Up Soil Fertility.
Why Green Manures Benefit the Soil.
Making and Caring for Stable Manure.
How and When to Apply Stable Manure.
When and How to Use Lime.
Plant Food in Typical Soils.
What Crops Take From the Soil.
Fertilizing Materials in Feeding Stuffs.
Analyses of Fertilizing Materials.

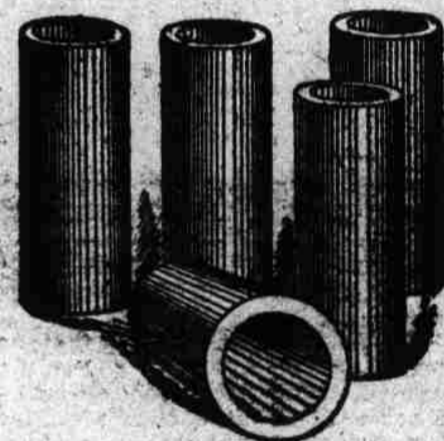
CLOTH BINDING, 75 CENTS, PAPER BINDING, 50 CENTS, POSTPAID.

The Progressive Farmer one year and one cloth copy for . . . \$1.40

The Progressive Farmer one year and one paper copy for . . . \$1.25

ORDER TO-DAY.

FARM DRAIN TILE



(Made of Cement)

Every Tile a good one, therefore the cheapest. Write for prices and copy of Literature (Tile Talks) Which explains in detail the advantages of Land Draining.

GRAY CONCRETE CO.,
Thomasville, N. C.

FREE TRIAL DIXIE RAZOR \$1.45
25 YEARS GUARANTEE

THEN, IF YOU ARE PLEASED, SEND US ONLY \$1.45, and you will own one of the best Razors made, also a Horseshoe and Canvas Strap Worth \$1.00. If you are not pleased, simply return the Razor. Could we make a fairer offer?

OUR DIXIE RAZOR is extra hollow ground, hand forged from Genuine Sheffield Steel. We use it and know it is the best Razor made and want you to find it out by giving it a fair trial.

WRITE US A POSTAL and say, "Send me your Razor on 10 days trial. I will send you \$1.45 or return Razor." We will send Razor and full particulars about our other offers.
DIXIE MFG. CO., BOX 54, UNION CITY, GA.
Formerly B. W. Middlebrooks & Co.

Big Bargains in QUAKER CITY FEED MILLS

The standard of quality for 44 years. 23 styles, from hand to 20 horsepower.

Freight Paid, Sent on Free Trial.

Grind Corn and Cob, Feed, Table Meal, Shuck and Kaffir Corn and all kinds of small grain, separately or mixed. If the mill is not entirely satisfactory after trial, return it at our expense. We also handle Engines, Cutters, Shellers. Send for Free Catalog.

THE A. W. STRAUB COMPANY
Dept. H, 28th & Filbert St., Phila., Pa.
Dept. L, 2701-9 So. Ashland Ave., Chicago, Ill.



The UNIT Road Machine

OPERATED BY

One Man and One Team

PRICE ONE-FIFTH AS MUCH AS

LARGE Graders

DOES WORK

AT HALF

THE COST

The Call-Watt Co.

RICHMOND, VA.



A Dixie Pea Huller

makes big profits out of Cow Peas. Hulls and cleans without bursting the peas, increases their value 10cts. per bushel. Thousands have given satisfaction for over 10 years. Illustrated catalog free upon request. Write today Dept. 24.

SANDERS MFG. CO.,
Rome, Ga.