THE PROGRESSIVE FARMER

THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

Vol. 1[illegible] Raleigh, N. C., March 4, 1902.

Agriculture.

HARRY FARMER'S TALKS.

LXIII.

Correspondence of The Progressive Farmer.

On the same trip that we mentioned in our last talk we saw several large piles of compost scattered over the field.

THIS COMPOST

was made with stable manure, ditch bank, kainit and acid phosphate. As this farmer does not grow anything but regular field crops, like cotton, corn, etc., he certainly does a vast deal of hard work for little profit. The same materials scattered along in a furrow a few weeks before plant ing would give the same results and save the heavy work of loading and hauling the materials used in the composts. If a farmer wishes to get the benefit of the manure, etc., for pushing an early crop like Irish potatoes or other truck, it might pay to go to the expense of composting, but for crops that grow all the summer. such as corn, cotton, sweet potatoes, it is a useless expenditure of labor.

We have a piece of land that we want to plant in late potatoes (sweet) but it does not contain so much

HUMUS OR VEGETABLE MATTER

as we desire, and as it does not need any nitrogen, we are going to sow it in spring oats and expect to get a heavy crop. This land was in corn and peas last year. The peas were waist deep and the corn made a heavy crop. So by sowing the oats we will put a plenty of humus in the soil and will use a little commercial fertilizer and expect a heavy crop of potatoes.

A SAVING OF TIME AND MONEY.

This is much easier done than going in the woods and raking up a lot of leaves, straw, etc., and hauling and scattering over the land. The roots and stubble of the oats will be nicely mixed with the soil, far better than we can do it with the plow, and the crop of oats will cost us nothing but the seed, plowing in and harvesting, and then be out of our way in time to plant the potato cuttings. We believe there are many farmers that can do this very thing this spring and summer, and when they have gotten two good crops with the labor that is usually put on the potato crop, they will wonder why they have not done it before.

When hay and other feed is so high, let us do our best and see if we can't get some of that money that will be paid for this feed.

Have you some nice dry land on which you can

PLANT SOME EARLY CORN

and make a crop to be gathered early in the summer, so that you can furnish that neighbor in nice new meal? He will be glad to get it. You can afford to undersell the merchants a little and get all this trade. A great many are predicting $1 50 corn next summer. If this is true, you can well afford to sell at $1.35. Some one will say that if everybody does it, the market will be glutted. Bless your life, you need not be afraid; some farmers will not think about it until they see what you have done. They will try it next year after you have skimmed the cream; they will try to get a little cream themselves after you have the money in your pocket for the butter. It is such opportunities as these that make many men succeed and get ahead in this country.

HARRY FARMER.

Columbus Co., N. C.

The farmer should not only save his stalks and straw for feed and fertilizing purposes, but he should carefully save his soil from wasteful methods of cultivation and removing the crops while returning nothing. The soil is the farmers' bank, but if he continually draws on his resources and deposits nothing, the bank will break, and the farmer will be a bankrupt. There are plenty of broken banks of this sort in every part of the country. But they can be "put on their feet" again by intelligent management, but it were far better to have managed them so as to render this expensive process unnecessary.—Farm and Ranch.

PITT COUNTY FARM NOTES.

Correspondence of The Progressive Farmer.

The farmers are behind with their crops. Laborers are scarce and I fear too much tobacco will be planted, but I have not much fear that too much good tobacco will be made. The more planted the more common or low grade made, but less fine tobacco.

More attention will be paid to corn than usual. Corn is scarce here.

Less cotton will be planted in this vicinity, but more cotton seed have been sold this year than were sold in five other years combined, the East Carolina Railroad from Tarboro to Farmville being the cause.

We do not need good roads as badly as the middle section of the State. Still a great improvement might be made in our roads at a comparatively small cost. A. J. M.

Pitt Co., N. C.

GUILFORD FARM NOTES.

Correspondence of The Progressive Farmer.

Having inquired of many of our farmers as to the condition of wheat and oats, I learn that some wheat crops are yet in good condition; some crops have not come up so as to tell the real condition; some crops seem to be an entire failure. So also with oat crops. Some sowed late to avoid the fly in wheat and as they tried to avoid one danger they ran into a worse. Late sowed clover is a complete loss.

It is getting to be common for some farmers in these parts when done sowing wheat to haul out all his manure and scatter over his wheat on top and find the results good in many ways. He will then sow peas after the wheat is taken off, so he gets the full benefit of manure.

Stock are in fair condition. Sheep are scarce but in fair plight for common stock.

Farmers are not making much headway in the preparation of land; work on ditches and brier hedges is put off till spring.

To farm properly there is no time to lose. Just now all mucks and anything that will make manure could be brought to the compost heap at any time, where it may be thrown in stalls where wanted.

My cabbage and lettuce have stood the cold fairly well. Spinach is fine; winter mustard holds well. Of onions planted in August, some killed, tops frosted.

We have a new comer who says he wants to put out thirty thousand cabbage this spring. He has much experience in cabbage growing. This is something new in this section. We are glad to have such men come that are well informed in their business.

R. R. MOORE.

Guilford Co., N. C.

ENCOURAGING FARM CONDITIONS IN DURHAM COUNTY.

Correspondence of The Progressive Farmer.

The condition of the farmers of Durham county has very much improved for the last five years. A great many debts have been paid, while their homes, stock and farms have also taken on a new life. More of their sons and daughters are in the high schools and colleges. Society is also improving.

This gratifying condition is partly due to the necessary economy during the hard years which preceded, and partly due to the fact that we have a better market. The growth of Durham, the great number of employees in her many factories, has created a demand for almost anything we raise. This has begotten a spirit of diversity in farming which cannot but be helpful in a large degree.

Last year was a failure with our staple crops. All feed stuffs are high, but the farmers are bracing against this by hauling wood during the winter and are already sowing seed for early vegetables in spring. Irish potatoes and table corn will be largely planted; also sweet potatoes and turnips for fall market. So that the wide-awake farmers in Durham county can about meet family expenses without touching the main crop. PLEAS. H. MASSEY.

Durham Co., N. C.

FEEDING VALUE OF CITRONS.

Correspondence of The Progressive Farmer.

Some time ago I wrote our Experiment Station in regard to the feeding value of citrons and received the following reply:

"Your postal in regard to the feeding value of citrons is received. We do not know of any experiments along this line and do not have any analyses of citrons. For this reason it is not possible for us to say definitely what the feeding value would be. I think, however, you would not be far wrong in assigning to them, practically the feeding value of pumpkins, and if stock like them, as you state, they should be quite serviceable and beneficial as feed."

These citrons, largely used for preserving, are very prolific; on rich ground as many as 20 melons are some times found on one vine. If the tough rind is broken open, hogs eat them with avidity. I should like to know if Harry Farmer or any other PROGRESSIVE FARMER reader can give me any information as to their value. S. P. M.

Chatham Co., N. C.

LEGUMINOUS MEADOWS.

Correspondence of The Progressive Farmer.

It has been known for centuries that a crop of clover, alfalfa or other legume improves the soil for a wheat, corn or root crop. It has only recently been discovered how the legume improves the soil. It does so by adding to the soil nitrogen, taken from the atmosphere. Grasses, grain plants and root crops generally depend upon the soil for their entire supply of food. These add nothing of much value so the soil which they did not take from it before.

But legumes, while depending upon the soil for lime, phosphoric acid and potash, take nitrogen in large quantities from the atmosphere. When the roots, leaves or stems of legumes decay in the soil, or are returned to the soil in the form of stable manure or animals' droppings, the nitrogen is given up to the soil in the form of ammonia. Exact experiments have shown that one acre of alfalfa can in one year's growth draw down from the atmosphere $161 worth of nitrogen. That is to say, as much nitrogen as $161 would buy in the form of nitrate of soda. The cow pea will, during four months' growth, draw down nitrogen which would cost to buy over $50. Red clover soy bean, vetches and other legumes act in the same way. The manurial value of legumes is in addition to their feeding value. By plowing under the entire growth of a leguminous crop we return at once all the mineral food—lime, phosphoric acid and potash—which the plant absorbed from the soil. We add in addition to this the nitrogen which the legume took from the air. This may be worth $50. But we lose the feeding value of the crop which for four tons of good clover or cow pea hay is about $50.

If instead of plowing under the entire growth we feed it and return the droppings of the animals, which ate the hay, we get back in the droppings about four-fifths of the plant food contained in the hay. By combining the feeding and fertilizing value we may under the theoretically most favorable circumstances make every acre of clover, cow peas or alfalfa pay from $100 to $200 annually. This may appear over stated, but it is not.

In other words, if we had to buy the feed and the fertilizer at market prices, we would have to pay for the sums just needed. In practice a farmer may waste the feeding value of the crop upon animals which neither grow nor fatten; and waste the fertilizer by allowing it to leach into some stream or pond. But this is not the fault of the theory. The best farmer is he who in practice most nearly obtains the theoretical value of his crops.

Legumes add largely to the value of the land upon which they grow and at the same time yield a great deal of valuable and nutritious forage. Grasses and grains add nothing to the soil upon which they grow. The forage they yield is less valuable and nutritious than that of legumes. It is, therefore, certain and reasonable that it is better and more profitable for the land owner to grow legumes than grasses or grains. Grains must, however, be grown for human consumption because the public taste and custom demands them. But there is no reason why grass, hay, oats and other animal foods should not be wholly replaced by legumes. There are many reasons why this should not be done. There is no reason but the force of habit why farmers should continue at a loss to lay down land to grass when a large profit can be made from legume meadows and pastures.

It must always be remembered that though legumes can draw abundance of nitrogen from the atmosphere, they depend wholly upon the soil for their mineral food—lime, phosphoric acid and potash. Without plenty of mineral food the plants will be unable to draw to their fullest capacity upon the atmospheric nitrogen. The exact amount of mineral food necessary to supply any particular leguminous crop upon any particular field can be determined only by special trials upon the field and crop in question. These trials are best done by means of trial plots of 1-10 acre each. The three mineral foods above named can be tried upon these plots alone and in various combinations until the most profitable combination is discovered.

In practice, however, we should not be particular about the lower limit of plant food. The best rule is to give the plants more mineral food than they can assimilate and to repeat the dose every year. The excess fertilizer is not lost but remains stored up in the soil. When after a number of years the leguminous turf is broken up and grain or roots grown on the field all the plant food stored in the soil by previous fertilization will be recovered in the new crops. Mineral plant food is comparatively cheap. Lime costs about $5 per ton. Phosphoric acid as superphosphate about $13 per ton. Potash as muriate of potash about $45 per ton.

A good general formula for all legumes is given below, but this is to be increased as many times as tons of the legumes are expected. In other words, the food given is sufficient for one ton of growth only.

Muriate of potash	80 pounds.
Superphosphate	100 "
Lime	75 "

GERALD MCCARTHY, M. S.

Wake Co., N. C.

TAKING SEED CORN SOUTH.

A correspondent of Southern Iowa asks whether it will do to take seed corn from that locality two hundred miles further South.

Why not? The people of Texas have for years depended largely on Iowa grown seed corn. The larger and later varieties, however, should be taken in order to be given the full benefit of the long season. Corn naturally adapts itself at first to the length of the season where grown; hence, only the earlier varieties of corn should be moved from the South to the North and only the later varieties from the North to the South, unless it is desirable for some particular reason to secure an abnormally early ripening, in which case the earlier Northern varieties may be used. For example, Sibley's Pride of the North, or some other very early variety, might be grown this year where the object is to get early corn for feeding pigs.

If the varieties that mature in the latitude of Southern Kansas and Missouri are brought North say into Northern Iowa or Minnesota, they would not ripen before frost. They would calculate on a longer season and would be disappointed. If, however, some of the ears should be pulled off before ripening, but still mature enough to produce seed, and this kept up for two or three years, they would adapt themselves to the new climate. In fact, corn brought from the South to the North never does as well the first year as it does a year or two afterwards. It needs some time to adapt itself to the new conditions and, so to speak, feel at home.—Wallace (Iowa) Farmer.

THE PERENNIAL QUESTION OF FERTILIZING.

Dr. J. B. Hunnicutt, of Georgia, who occasionally contributes to the agricultural department of THE PROGRESSIVE FARMER, has a very timely article, and a thoughtful one as well, in the current issue of the Southern Cultivator on the question of fertilizers for the farm. We quote:

Very much has been written and spoken upon this subject, but the annual return of the season for planting brings up the subject again. So very few of those who write upon the subject seem to understand clearly what is desired and how it can be gained, shows that much confusion of ideas still exists.

Nearly every one writes as if the object was to change the soil power of production by the use of chemically prepared mixtures, called guanos, fertilizers, acids and so on. This is a total misapprehension of the basis of the whole business, and has led to all sorts of mistakes.

Manures from animals or decaying vegetation do enrich the soil. They increase its productive power more or less permanently. This is not the case with commercial fertilizers as generally prepared and sold. They are made with direct reference to feeding plants. They are used in the soil because we cannot feed plants direct.

Plants take all their food from the soil. They take it in through the little spongiole rootlets after it has been dissolved and prepared by the soil.

Hence we first prepare some article of plant food so that it will dissolve in water. We then put this preparation in the soil and the soil feeds it to the plant, after working it over and separating the useful from the useless and hurtful.

WE FERTILIZE CROPS, NOT SOILS.

We get hundreds of inquiries what fertilizers, and how to use them on such and such soils. The writers evidently think the soil is the thing to be studied.

If a piece of land has a hardpan and the water cannot circulate through it, the owner wishes to know what kind of fertilizer he must use. If a piece of land is water soaked because the subsoil is too hard for the water to drain away, he at once wishes to know what sort of fertilizer to use. If his land has been skim-plowed and leached until all the fine particles are gone and the sand is left, he wishes to know what kind of fertilizer to use. If bad management has destroyed the humus, he wants to know what fertilizer to use.

The idea prevails that if we just knew the right kind of fertilizer to get we could remedy all the defects of our soil and the errors of our fathers.

Now what we really want to do is to study intelligently the needs of the crop we are going to plant and fertilize the crop, not the soil.

THE MECHANICAL CONDITION OF THE SOIL.

To farm successfully we need to get our soil in good mechanical condition. This is the great essential point with all soils, whether red or gray, upland or bottom, clay or sandy. The soil to make a good root-bed and water supply must be deep and fine. The deeper and finer, the better. We insist that this is the foundation of all real success in farming. This will require deep breaking when dry, often harrowing, mixing in much vegetable matter, level culture, heavy manuring with animal and vegetable manures, and such like.

When you get your soil deep and fine, and filled with vegetable matter, then you are ready to take up the fertilizer question.

God has so created and preserved the earth that practically all soils will make good crops when put in good condition.

THE NEED FOR FERTILIZERS IS EVIDENCE OF OUR ERRORS.

Bad farming has created the need for fertilizers. They are not essential. They are artificial wants Our lands need fertilizers to help the crops because we have misused the land. The washed hill sides need help because they have been plowed shallow and plowed when wet. Now plow when dry and stop the washing. They are lacking in humus because we have burned up or hauled off the vegetable matter. Change your plan, quit burning and haul vegetable matter on and you will soon have humus. Bad management has destroyed the normal amount of nitrogen. Grow peas, beans, and clover and cow manure and restore the nitrogen.

The potash and phosphoric acid are already there; make them soluble by good culture and your soil will be ready to make crops.

WHERE FERTILIZERS PAY.

Fertilizers do not pay on very poor land with two inches of soil. Such soil does not furnish sufficient root-bed or water. They pay upon deep soils with plenty of water to grow a plenty of stalk. They pay when used to increase the yield of fruit upon the crop, if the right kind and quantity is used. But when cotton needs phosphoric acid to mature the seed and lint it does not pay to feed the cotton with nitrogen. When corn needs phosphoric acid to fill out and mature the grain, it does not pay to feed it with a complete fertilizer.

When there is plenty of phosphoric acid in the soil which has been made available, by good preparation and culture, it is wasting money to buy and use more phosphate upon that crop.

We wish to impress the idea that it is the previous treatment and present mechanical condition of the soil that decides what kind and how much fertilizers will pay.

It is at last more a question of work than buying fertilizers. If you have grown a crop of clover or peas or beans on a piece of land you do not need to buy nitrogen to put on the crop that follows.

Fertilizers pay on good land which is able to make good crops without them, rather than on poor land, just as extra food fed to fat and growing cattle or pigs pays better than when fed to stunted and lousy ones.

Consider the condition and strength of your land and the wants of the crop you wish to grow and you can come at what fertilizer ingredients to use.

Set, printed formulas are useful only as guides but must not be followed too closely.

Poor lands had better be put in grass or peas or both and plowed deeply until they are in good condition before you waste fertilizers on them.

HOW TO USE.

We insist on farmers buying the material and mixing for themselves because it saves money and gives better results. There is no secret about mixing. Indeed the mixing is only a convenience in distributing. They would do just as well sown separately. But it saves time to sow all at once. Stir well together with shovel and hoe.

We say sow, because it pays better to use fertilizers broadcast. The plants get more of them.

Put the old worn lands in grass. Cultivate only the fields that will pay. Then fertilize the crop if you wish. In this way you will save expenses and increase profits.

But it is better to grow cattle, save manure, and make your farm rich and be independent.

Simply as guides, we suggest for ordinary fair soils, in good condition, about the following:

FOR CORN.

Cotton seed meal	200 lbs.
Acid phosphate	1600 "
Kainit	200 "

Use from 200 to 1,000 lbs.

FOR COTTON.

Cotton seed meal	200 lbs.
Acid phosphate	1400 "
Kainit	300 "

Use from 200 to 800 lbs.

FOR POTATOES, MELONS, ETC.

Cotton seed meal	600 lbs.
Acid phosphate	1,000 "
Kainit	400 "

Use from 600 to 2,000 lbs.

FOR SMALL GRAIN, GRASSES, ETC.

Cotton seed meal	800 lbs.
Acid phosphate	1,000 "
Kainit	200 "

Use from 200 to 600 lbs.

On any and all crops nitrate of soda and land plaster pay well as top dressings.