

PROGRESSIVE FARMER

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

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Agriculture.

HARRY FARMER'S TALKS.

PROGRESSIVE FARMER readers may be interested in the following statement of an ex-farmer:

WORKING AT THE FACTORY
I have lived as close as I can to the factory for three years, and get about one dollar per day. I am compelled to buy something to eat in order to keep up my strength, for my work is very heavy. I own about forty acres of land and have eight acres cleared. If I had put the same work on my farm that I did at the factory, I would have been much better off. I would have cleared all my land and I could have made a peach year. The wages I get tempted me away from my farm.

MADE A MISTAKE
A few years of such work will wear a man out. He will be old before middle age and have nothing. When the whistle blows I must beat my post. I would not advise any one to leave the farm for such work as I have to do. A man might work at it a little to get some money to start with, but it will not do to follow it. The chances for promotion are too few to run the risk. After a man starts his farm by close attention, a great deal will come to him with but little labor. I have made big money on some crops. The farmer's life is the happiest of all. I shall

GO BACK TO THE FARM.
I am not afraid of perishing. Here is the experience of a man who has the work that thousands of farmers' sons are anxious to do, until they have tried it. Harry Farmer wanted just such a job once and finally got it. He worked less than a year and gave it up in disgust and went back to his farm in about a year and has stayed there ever since, with the exception of a few months. He commenced farming at five years old. His first crop was watermelon. No king on his throne ever felt prouder than we did when we plucked our first melon. Father said it was nearly ripe and we took it on our shoulders and marched to the house with it. It was early in July and we had had no melons that season, and when the melon was opened, it was just like father said, not quite ripe, but it was perfect to our childish appetite. Our main crop next year was peanuts. (We have not seen many years since that we did not have peanuts the year round.) After then we had some cotton, potatoes, corn, etc.

BORN THE FARMER MAY HELP HIS CHILDREN
We think every farmer should give his children a small patch of some crop and see that they cultivate it. It will make them feel that they have something to work for. If you use commercial fertilizer, sell the children some and let them pay for it when the crop is sold, or before, if they can. If it is cotton, see that they weigh it and thus early learn to do business in business style. If other produce, let the regular business rules be carried out. So they will grow up to do business and save a great deal of trouble. Business is a matter to deal with those who have business training. It is often a puzzle to explain ditto to many farmers. It is such little things as these that make the difference between success and failure in life.

FOR THE HENS.
If you have not already done so, sow some oats near the house and plow them in for the chickens; they will pay for you for your trouble.

Collectors, N. C.
Greenboro Collector: Mr. J. White says that he gathered the nuts from a pecan tree on his lot and got forty pounds of nuts and sold them for six dollars for them at the store. The tree is thirteen years old and this is the third year of bearing. We believe pecans are the most profitable tree that our people could grow.

NEWS OF THE FARMING WORLD.

Our Washington Correspondent Tells What Progress is Being Made in the Various Sections of the Country.

Correspondence of The Progressive Farmer.

The Agricultural Department expects soon to announce a discovery which, in its ultimate results, may be described as of transcendent importance. For the first time, a method has been discovered of combating the movement through the soil of the tiny worms that attack the roots of plants, producing the SO CALLED ROOT KNOT DISEASE, and causing the plants to languish and die. So far, this method, which is one of selection of resistant strains, has been proved to be available only with the cow pea, which furnishes the great forage and green fertilizer crop of the South especially, but there is good reason to suppose that it will also apply to such widely separated products as peaches and violets, as well as to an immense number of other plants which suffer more or less from the ravages of the worms. The investigation was begun by H. J. Webber, of the Division of Plant Industry, in regard to the cow pea, because in some places that plant seemed in danger almost of extermination. Whole fields became incapable of producing a crop, leading to the belief that the soil must be exhausted, even though this seemed impossible with a plant, which, by its power of assimilating free nitrogen from the air, continually fertilized the land on which it grew. The roots would swell, develop knots and finally the plant would die. The Department soon found that the trouble was due to minute, almost invisible worms, which moved through the soil much as trichinae move through pork. In testing the roots with which they come in contact. To arrest their progress seemed hopeless. The Department, however, obtained specimens of every species of cow pea—some seventy-five in number—on which it could lay its hands, and grew them all on the worst infested land it could find, this happening to be in South Carolina. Seventy-four of the species withered and died under the attacks of the worm; one, the Little Iron cow pea, alone flourishing, immune to its attack.

This was last year; this year the test was repeated, the Little Iron cow pea being grown under even more trying conditions, and again it withstood the test triumphantly. It is not yet certain that all local strains of the Little Iron pea will bear the test equally well, but it is certain that this particular strain will do so, and the Department is now preparing to distribute the seed as widely as possible. Next year it hopes to have plenty of seed. The Little Iron pea is somewhat rare in this country, but farmers wishing to grow cow peas are advised to try it whenever they can procure the seed, even though, as was said above, all local strains have not yet been proved immune.

Similar tests are now being made with a number of other plants which suffer from the root-knot worms. If particular varieties or strains can be found that are immune, they will be distributed as rapidly as possible; if no variety can be found which fulfills the conditions, attempts will be made to develop one. Nearly always, certain individuals in an infested crop will escape the ruin that overtakes the others; by saving the seed of these, planting them, and again saving the seed of those that survive, a resistant variety can usually be developed in time. This will be done if necessary. It may be added, by the way, that those who have hesitated to grow the cow pea in their peach orchards, despite its fertilizing value, for fear that it might cause the infestation of their peaches, can now use the Little Iron variety with safety.

TOBACCO IN HAITI.
According to Minister Powell, at Haiti, that island will soon rival Cuba in the production of fine grade tobacco. It has, he says, a more equable climate, free from cyclones and hurricanes, and a far more fertile soil, which has not been weak-

ened by long-continued cultivation; all that is needed is skilled cultivation and proper curing. It may be said that tobacco culture has now passed the experimental stage and will within a few years become an important source of revenue to this Republic. A new species, which has been produced by cross fertilization, is said to surpass in many respects the best Cuban grades. One factory there, under American German management, employs a force of skilled Cuban cigar makers, who are turning out daily many thousands of fine cigars, amounting in value to \$15,000 per month. Fifty per cent. of this is consumed at home, 25 per cent. goes to Germany, and the remainder to France, England, and Mexico. Owing to the high tariff, no attempt has as yet been made to introduce the cigars into the United States.

VETERINARY SURGEONS WANTED.
The Agricultural Department is anxious to secure a number of veterinary surgeons for service in the Bureau of Animal Industry, where they will be employed as quarantine officers, to supervise the experiments of the Department, to inspect dairy products and certify to their purity and for other purposes. A civil service examination is required, but as that commission finds it impossible to supply the Department with the number of surgeons needed by it, no competent man will have the least difficulty in securing an appointment.

DOUBLE THE VALUE OF YOUR LAND BY TERRACING—HOW TO DO IT.
Mr. Blacknall Furnishes an Article Discussing the Value of Terracing, Especially to Strawberry Growers.
Correspondence of The Progressive Farmer.

The great enemy of the cultivator of the soil in hilly or even rolling regions is soil erosion—the washing of it away by rain. The annual loss to the country from this cause amounts to many millions of dollars. The sum total of this loss doubtless exceeds the value of all the commercial fertilizer used and probably that of all stable and barn yard manure besides. Strawberries having to be grown on very low beds, the damage from washing is far greater than when the field is planted in corn, cotton or anything grown on higher beds. This can be checked, finally practically prevented by proper terracing. The result of terracing properly done is to reduce to a level all the land in cultivation, stair step fashion as it were.

The process is simple and inexpensive as compared with the great good attained. The first terrace should be three feet lower than the crest of the hill and each succeeding one three feet lower than the one above; the distance between the terraces will of course depend on the steepness of the hill or slope. On slightly rolling land to get a fall of three feet you will have to go some distance; on a steep hill side a very little way. These

TERRACES MUST BE PROPERLY RUN
The instrument to run a terrace is the terracing level, a very sensitive spirit level mounted on a tripod to which is attached a field glass. Accuracy is most important especially on level terraces, which have proven better than the falling terrace which I formerly used and recommended in these columns. To begin, go to the crest of the hill, place your tripod as near level as possible, then by means of the leveling screws attached bring the delicate spirit level to a perfect level no matter in what direction it is turned.

This will bring the field glass attached also to a perfect level. In the center of this glass are two hairs crossing each other at right angles. The target used in getting the level is a small round piece of board also crossed with plain lines at right angles. The target can be elided at will up or down, a long rod and secured at any point by means of a small set screw. When this target is raised or lowered till the cross lines on it are exactly covered by the cross lines in the small field glass or telescope attached to the spirit level, then the level is the same to the minutest fraction of an inch.

Well, the instrument being brought to an exact level on the crest or the highest part of the hill slope, place your target right against it and lower or raise till the lines on the target come just even with the lines in the telescope; the feet of the target pole being of course on the ground between the legs of the tripod.

This accomplished raise the target on the pole, which should be marked off in inches, three feet higher. Then carry the target down hill, till with its elevation of three feet, the lines come even with the lines in the telescope. This will, of course, show a fall of three feet. On this level the first terrace should be run. It can be run

RUN EXACTLY LEVEL
by carrying the target around the hill, stopping every twenty feet and carrying it, pole and all, up or down hill till the cross lines on target as seen through the telescope correspond. This done, mark the spot by sticking in the ground a small stake; so on another 20 feet and do likewise until the hill is circled, or as much of it as you cultivate or wish to terrace, one of the many advantages of a level terrace being that as it sheds no water it may stop anywhere.

This being done, mark it off with a plow, rounding any very sharp curves. Then with a hill side or swivel plow run with this furrow and on its upper side backward and forward, throwing the dirt always

down hill. The swivel wing to do this by reversing it at every turn. This mode of plowing is continued until the crest of the hill is reached. Wait for the rain to settle the soil so it will turn well and repeat the plowing, beginning at the terrace line and working upwards as before. To attain the desired end at once, it would be necessary to repeat this plowing, with a settling rain between each one, till the whole space plowed has been raised eighteen inches on its lower, and lowered eighteen inches on its upper, side. By using a good two-horse swivel plow this can be accomplished at fewer plowings than would be supposed if done right when the soil turned well.

But there are objections to this summary mode. As each furrow run throws soil down hill, if two many plowings are done in one year the result is to leave several feet of space on the upper side of the terrace bare of soil and to pile it up at the lower. But if this is done gradually nature restores the denuded strip and but little harm will result. Certainly the harm will be wholly insignificant in proportion to

THE GREAT GOOD TO BE OBTAINED
by a proper system of terracing. The first year it will be best to give at least two extra plowings to a six-foot space just above the line of terrace. This will break the earth up on the terrace and hold the water till the gradual leveling process renders it unnecessary. So far, I have confined myself to give direction for the first or up terrace. The second terrace should be run off on just three feet lower than the first one. The plowing of this terrace begins on the line run off three feet below the first one and extends upward till the lower side of the one above is reached, taking pains, of course, not to plow it down. The third terrace is run off three feet lower than the second and so on down.

The strawberry or other crops must be run with the terrace. A good plan is to run off one row on the lower and then one on the upper side of each space between the terrace and let the short rows, if any, come midway between them. An unplowed strip about three feet wide should be left on the crest of each terrace. This is to prevent the water that flows over in the heaviest rains from washing off the soil. Grass, but not tall weeds, should be allowed to grow on and strengthen this crest.

WHY TERRACING PAYS.
The good results of proper terracing are manifold and cannot be over-estimated. Hilly or even rolling land can be thus doubled in value within ten years or less.

Washing or soil erosion is prevented in proportion to its thoroughness. Terraces and rows all being on a level, the water instead of collecting in ruinous torrents, finds its way slowly, gradually and evenly downward. No soil and little or no fertility is washed away, a far larger proportion of the rainfall soaks in than on unterraaced land, lessening the effect of drought. This alone would more than compensate the berry grower for terracing. Then erosion or washing stopped the soil gathers humus as it gathers fertility, which also enables it to conserve moisture and that also lessens effect of drought.

O. W. BLACKNALL.
Vance Co., N. C.

BUTTERINE SOLD FOR BUTTER.
An agent of the Secret Service Department of the Government was in Greensboro last week investigating the butter sold by the grocers of this city. There is no law against the sale of butterine, which is a perfectly harmless preparation, but it is illegal to place it on the market without being properly labeled. In the case of the Greensboro merchant, the imposition was practiced by the wholesale dealers or manufacturers who supplied the article—Greensboro Patriot.

The denial of self leads to the narrow way.—Exchange.

Live Stock.

THE LIVE STOCK INDUSTRY IN THE SOUTH.

Correspondence of The Progressive Farmer.

There is a very close relationship existing between the soil, the plant and the animal. Neither can exist without the other to fulfill its destiny within its name. A soil without plant or animal growth is barren, devoid of life, as shown by the great desert of Northern Africa. Nature is simple in her relationship. First, the soil with its many elements, but of which only ten are necessary for the growth of plants. These elements are the very basis of all plant and animal life. The body of the animal is made up of the identical elements found in the plant, yet the growth of the plant is necessary for the food of all animal life. The plant takes from the air and soil the simple, single chemical elements, such as nitrogen, phosphoric acid, potash, lime, and a few others and with these builds up plant tissue which in its turn is the food of the animal. Then the animal dies; with its decay and decomposition comes the change of animal tissue into single, simple chemical elements again, of which the soil is partially made. Then the plant grows out of the soil and the decay of animal and plant life to furnish food for the higher life. The animal feeds on the new plant or on animals that have fed on plant life, until that growth is obtained and then back to the soil again nature goes.

Thus we see the cycle of life. But what has this to do with our subject? Everything. And what follows in these articles will be along three lines, which have to do emphatically with the success or failure of farming. There can be no successful agriculture without a consideration of these three propositions:

I. A soil rich in single, simple chemical elements for the free growth of plant life;
II. An adoption of plant life to climatic and soil environments, so as to produce from the elements in the soil the largest growth of plant life for animal food;
III. The feeding of animal life to produce greatest growth with least expenditure of plant tissue.

The farmer to make agriculture remunerative must adapt himself to these propositions. He must enrich his soil. And here we find the fundamental basis. We have heard a great deal about worn out lands and exhausted soils. Practically speaking, we are confronted with vast areas of this kind of land; yet this idea is a fallacy.

WE HAVE NO EXHAUSTED SOILS.
We have only soils lacking in productivity because of the physical and mechanical condition these soils. To illustrate: In New England we have vast areas, as we have in the South, of farms that yield no profitable crops. You find those soils dead, depleted, lifeless. But they are not worn-out, they are not exhausted. In New Hampshire, the writer, by tillage, crop rotation and fertilization increased hay lands from less than a half ton per acre to three tons and over in three years' time. Let us look at these so-called soils of the South. You say they no longer produce paying crops. And they will not if they are abused. They hold within their surface large quantities of plant food.

WHAT THE SO CALLED EXHAUSTED SOILS CONTAIN.
The writer collected the analyses of 47 so-called exhausted soils and found that on an average they contained within the eight inches of surface soil nearly 4,000 pounds of nitrogen, 5,000 pounds of phosphoric acid, and 17,600 pounds of potash. There, in those "exhausted soils" to the depth of eight inches, was enough plant food for a hundred crops of wheat of thirty bushels per acre. Small crops result because the plant food is not available. We have "run them down," or in other words we have taken out the available, assimilable plant food, without permit-

[CONTINUED ON PAGE 8.]