# THE PROGRESSIVE FARMER

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

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## Agricultu[illegible].

### HARRY FARMER'S [illegible]KS.

XXX.

Correspondence of The Progressive Farmer.

Does it pay to get improved seed at a high price? In our own experience, we find that the difference is as great as that which some patent medicines make in their advertisements of "before taking and after taking." We find this demonstrated in the Irish potato crop more than in anything else. We planted a few nice potatoes which we purchased from a country store, marked on the package "Early Rose." Seed came up nicely, and looked one time as if they were going to leave our home-grown potatoes far behind; but the yield now of our old seed is more than double the store seed. A neighbor bought some improved home-grown potatoes from a truck farmer who paid $5 or $6 per barrel for the original seed; these promise to outyield any other potatoes ever brought here. Such seed compared with most potatoes sold by merchants would be cheap at $1 per peck. Let us make some figures and see what the difference on one acre would be:

COMMON POTATOES.

| | Dr. | Cr. |
|---|---|---|
| 3 bbls country-store potatoes @ $2.50 per bbl | $ 7.50 | |
| Fertilizer | 15.00 | |
| Total | $22.50 | |
| By 25 bbls. merchantable potatoes @ $2.50 per bbl | | $62.50 |
| Net proceeds, not counting labor | | $40.00 |

IMPROVED POTATOES.

| | | |
|---|---|---|
| 3 bbls. improved seed @ $5.00 | $15.00 | |
| Fertilizer | 15.00 | |
| Extra labor and bbls | 4.00 | |
| | $34.00 | |
| By 60 bbls. merchantable potatoes @ $2.50 | | 150.00 |
| Net proceeds, counting part labor | $116.00 | |
| Difference in favor of good seed | 76.00 | |

The average farmer plants about one-half bushel of potatoes for his table, which is equal to 1-15 of an acre, so his gain would be about $5.06; but he would have to pay 50 cents per peck for seed instead of 25 cents. Now, would you think of paying such a high price for seed? Some farmers will go for the lowest priced seed regardless of these figures; while another will stop and figure a little, then make money to lend to his neighbor who does not count the cost. And in a few years, the thinking farmer will buy the land of the unthinking one and let him go somewhere else and work for some man who will give him just enough to live on while he is able to work and send him to the poor house to die, while his children are made "hewers of wood and bearers of water" for other people. We know this will touch a tender place with some farmers; but if we can help them to improve, we do not care how mad we make them.

We have seen oats this year where the difference is 10 to 1; and yet we are often told that there is no difference in seed. Merchants are not to blame, for they generally buy for the farmer just such goods as he demands.

We are going to try the Chadbourn farmer's plan of planting potatoes and sowing early peas to be cut for hay. The peas will store us a nice let of nitrogen, which suits Irish potatoes. We have some corn planted on land that was in peas last year, and it looks much better than where we had cotton. What a wonderful thing the cow pea is! Nitrogen is worth about 15 cents per pound; a good crop of peas will add 100 pounds to the acre, besides giving you a good crop of hay or grain. We think it is best to have some crop growing on the land during the winter, as Prof. Massey says, "a nitrogen trap." Green weeds or grass is all right.

HARRY FARMER.

Columbus Co., N. C.

### 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 Year Book of the Department of Agriculture is now being distributed—a large handsomely illustrated volume of over 800 pages that should be of interest to the thoughtful readers of The Progressive Farmer. A postal card application to your Congresman will secure a free copy for you.

Information received in this city shows

A GENERAL INCREASE IN VALUE OF FARMING LANDS

pretty much all over the United States. Some years ago land fell to a low valuation, farms with good buildings selling for less than the buildings cost. But the return of business activity and good prices has greatly altered the situation. Under such circumstances land was bound to improve in price, and it has done so. In the West there has been a decided advance in farming lands. Ranch lands in parts of Kansas, Nebraska and the Dakotas have advanced 20 per cent. over the prices that prevailed three years ago. Large bodies of land are being taken up by syndicates in the belief that the rapid settlement of the Indian lands and the substitution of agriculture for grazing will soon produce a strong demand. Improved methods have brought into use large areas that were formerly barren. The outlook is accordingly considered very promising. The general situation is such as to indicate a better day for land values all over the country. In Maryland and Virginia, for example, and much more in Delaware, Pennsylvania, New Jersey and New York, there is a tendency of the wealth of the cities to spread to the more attractive country districts. The electric car and telephone are becoming ubiquitious. The dreary isolation, which was some years ago the feature of farm life that made it odious to young people, is less marked in this day of bicycles and improved communications.

The Department of Agriculture is INVESTIGATING THE GREEN PEA LOUSE, which last year destroyed about half of the pea crop, and which bade fair to be even more destructive this year. So far no really effective method of extermination has been found, though several palliatives are suggested. The best yet discovered is to grow the peas in rows sufficiently wide apart as to admit of a one-horse cultivator between them. The lice are brushed from the plants with boughs of pine with their leaves on, and a cultivator then follows down the rows as soon afterward as possible. For the perfect success of this method it should be practiced in the heat of the day, when the ground is dry and hot, and the repetition of the brushing is necessary every three to seven days until the crop is ready for picking. Such lice as are not buried in the ground by the cultivator will be killed by the dust which closes their breathing pores, while a considerable proportion are destroyed also by the force of the brushing. This method has the advantage of not being so destructive to the natural enemies as other means that might be employed, the louse being more fragile and delicate than any of its insect enemies. Moreover, peas planted in rows to permit of frequent cultivation suffer much less injury than when sown broadcast. As soon as the last picking has been made infested plants should be promptly destroyed by plowing under. This plan succeeded perfectly on a Maryland farm, which was about to be destroyed. The pests live during the winter in clover fields or on vetches, so that it is advisable not to plant peas near these. It is also advisable to plant a different area in peas each year.

The Department is felicitating itself on

THE EXTENSION OF CERTAIN CROP AREAS IN THE UNITED STATES

due to experiments inaugurated by itself. Particularly, is it feeling happy over the success with which tobacco is now being raised in Minnesota—a success so marked that within a few seasons that State may have become one of the most important producers in the country. Tobacco has heretofore been generally associated with the warmer sections of the country, and the most famous brands are grown in the semi-tropical regions. But it has also been grown with some success as far north as Connecticut, thus demonstrating that its success does not depend so much upon the climate as upon the character of the soil. There is a certain element which gives the weed its richness and flavor, just as other plants depend for their success upon peculiarities of their nutritive mediums. The Department of Agriculture has of late years been doing excellent work in ascertaining the precise elements which most surely favor individual growths. There was a substantial reason for the project, negatived by the last Congress, to map the soils of the United States, though it remains a question whether the immediate benefits to be derived would justify the enormous expense involved. There is no forecasting the changes which may be caused by this development, persistently pursued, both in the inclusion in the American growths of plants not now successfully grown here and in a more economical and productive arrangement of the growths.

A. B. MARRIOTT.

Washington, D. C.

### HOW THE SCIENTIST HELPS THE FARMER.

Do you know that the government expends nearly ten millions of dollars annually and employs nearly five thousand persons, every dollar of which might remain unexpended and every person unemployed without impairing one jot or one tittle the efficiency of the government as a legislative power, or as an administrative force, or as a judicial interpreter of laws? And what is this vast sum and army of men employed for? Simply and solely to develop the utilities which go to make up our industry and our commerce. What has brought this country to the industrial and commercial supremacy it now enjoys but the utilization of the skill of the world? This skill, however, has very largely been imported. We have drawn from the schools of the Old World. We should develop it here by and among ourselves and from our own brains, and make it a part of the home equipment of our varied industry. It should be developed along with the development of our inexhaustible natural resources. This the government is trying to do, and it is a beneficent employment of wealth and men.

In the cotton districts of the South values are often interfered with and crops reduced by diseases which seem naturally to belong to the cotton, but the government is finding out, has found out in a large degree, just how to prevent or cure these diseases. It has found out by long and patient scientific study what causes the losses in the cotton crop. Here is a practical illustration, practical not only in the way of production, but in the way of saving wealth and of helping the cotton growers to understand without much cost to themselves how to protect the great cotton crops of the South. In the tobacco fields the government is demonstrating how to preserve flavor of the leaf and what makes the difference in flavors, thus scientifically adding to the value which nature has given the plant; it supplements nature, and will ultimately give to the tobacco grower as well as to the tobacco manufacturer assistance which without science they never could have gained.

An exceedingly interesting experiment in this matter of the application of scientific knowledge to the products of the soil is found in the attempts to raise Smyrna figs in California. The government imported Smyrna fig trees for several years, but the crop of figs constantly and persistently failed, no matter what the attempts to protect them. At last, after long and patient study, it was found that where Smyrna figs were considered as indigenous there was a little wasp that fertilized the blossom of the fig trees, and it was insisted in those peculiar sections where the Smyrna fig tree prospered that it was this peculiar fertilization by the wasp that brought success to the crop. So the Federal Government while importing fig trees, imported the wasps that made them successful, and the next experiment resulted in raising some fifteen or sixteen tons of perfect Smyrna figs.

We may look to forestry as a field for the exercise of skill and scientific training, and I am sure that the South is interested in the developments going on under the care of the government. How to secure all the wood that is needed for the various purposes and necessities without destroying forests is a very grave question. We have all seen here, and in the North and in the West, great forests actually slaughtered for the purpose of securing small results. Now with the application of skill and science this slaughtering of the trees can be avoided and yet the products secured. A great paper trust, or, as it should be called, a great combination of paper interests, has recently purchased thousands of acres of spruce lands in the State of Maine, but instead of going over the forests as the driver of a mowing machine would run through a wheat field, cutting down everything and using all sizes of spruce trees for the manufacture of pulp, the company has set a corps of scientifically trained foresters at work, so that the trees that are fit to be cut, that are of a size to be cut, shall first be used, and the others allows allowed to grow until they have reached maturity. Thus while securing a sufficient supply for the manufacture of pulp, the company is constantly increasing its supply from among the smaller trees. And I suspect that here in the South, in the use of Southern pine, there has been little or no discrimination, no attempt to save for future use by culling the suitable sizes from the rich pine forests.

These illustrations might be extended as seen in the development of roads, the propagation of grasses, the composition and use of fertilizers, the introduction of new crops—everything that means the development of varied products, and hence of wealth.

Perhaps one of the most useful directions in which this science I speak of is being utilized for practical purposes is in the matter of soil. How much waste there has been, both of labor and of effort, of time and of money, in trying to produce from a particular soil crops that could not thrive in it! The wrong crop and the wrong soil for other crops has been the rule rather than the exception. Now science comes in and tells the agriculturist how to use his different soils, what crops will flourish best in this or that field, how to mix his soils. The farmer had a primitive knowledge which taught him that if his soil was sandy he had better cart upon it a sufficient quantity of muck, which when mixed with the soil, gave something profitable; or, if he had a black, mucky soil, how to mix sand with it, and thus reverse the process. But when it became a question of the chemical elements of the soil and the necessities of different plants for specific chemical elements to secure their growth and success, the farmer was at a loss. Now he has learned, or he may learn if he feels so disposed, how to utilize his different soils by planting different seeds. He knows what is essential. He has learned by practical experience that he may return to the soil some of the elements of the tobacco plant, and thus prevent its exhaustion. He has learned from practical experience the science of rotation. But he needs to know something more that he may become familiar with what we know in these days as intensive farming. All these things mean wealth, prosperity, development, the the best and highest possible use of the gifts of nature; by them man learns how to develop and thus to utilize the great attribute which has been given him and which allies him to his Creator.—From the Commencement Address of Hon. Carroll D. Wright, N. C. A. and M. College, May 29, 1901.

### SALE CROPS AND CROP COVERS.

Correspondence of The Progressive Farmer.

As the object of farming is to make money, and as money is only made through sale crops, we should never lose sight of the fact that all farm operations should be aimed to enlarge or increase the value of the sale crops. There are many sides to this matter, too many for a single article, and we will confine ourselves here to the consideration of the fertilizing question solely.

This fertilizing question, like all other farm problems, is largely a matter of dollars and cents. Money must be paid out for plant food, and the main point is to make a given sum go as far as it will. It is far more economical in practical farm work to fully fertilize one acre than to half fertilize two acres. The reason is, that as a rule the more useless part of a crop, such as leaf, straw, roots, vine, etc., is grown first, and if this exhausts the soil of valuable plant food the seeds or tubers, as the case may be, have to suffer starvation. More than this, a half crop costs quite as much in rent, taxes, interest, plowing, seed and many other things, as a full crop.

Of course, farm yard manures and roughage of all sorts must be used on long-growing crops, such as corn. This crop covers a long period of growth, and has a powerful root system. It can use forms of plant food which would be quite useless to potatoes or fruit. As an illustration of a sale crop, we will take a rotation of corn, followed by late potatoes. The cover crop in this case crimson clover, is sown in the corn at last working, early in August. It is supposed that the corn crop has received heavy manuring in roughage or farm yard manure, supplemented, as is the best custom, by 250 pounds of kainit per acre.

A corn crop of 70 bushels per acre will use actually of nitrogen, 83 pounds; potash, 55 pounds; phosphoric acid, 48 pounds.

As experimental work has shown, the potash and phosphoric acid of this roughage is not readily available, also that it is impossible to realize more than about two-thirds of the fertilizer applied whether in roughage or in chemicals. Consequently, for the corn crop mentioned about 13 sons of farm yard manure should have been used per acre, to which was added 250 pounds of kainit. If the yield falls below 70 bushels per acre, then we have evidence that the supply of plant food was insufficient. The probabilities are that the corn crop must be supplied with sufficient plant food for its own use, and here is where we must commence figuring on the economy of the potato crop to follow next year.

The cover crop being a legume, will supply its own nitrogen, if given plenty of potash. From official experments we learn that a good crop of crimson clover contains, nitrogen, 130 pounds; potash, 140 pounds; phosphoric acid, 40 pounds. The potash and phosphoric acid must be supplied to the cover crop at seeding of same, as only two-thirds of the fertilizer is found in actual crop returns, the potash and phosphoric acid necessary in the application is 210 pounds of potash and 60 pounds of phosphoric acid, costing at 5 cents each $13.50 (may be supplied as 400 pounds acid phosphate and 400 pounds muriate of potash, or 1,600 pounds kainit). This seems a heavy application, but it must be remembered, we are really fertilizing the following potato crop.

In the spring, late, the cover crop is turned under, soil thoroughly mellowed, and the potatoes planted. We have available, as actual plant food for the potatoes 130 pounds nitrogen, 140 pounds potash and 40 pounds phosphoric acid, which have cost $13.50. A crop of 400 bushels of potatoes, and this crop should be obtained, if soil and seed are good, requires plant food as follows: Nitrogen, 92 pounds; potash, 158 pounds; phosphoric acid, 42 pounds.

We have ample quantities of fertilizers, nitrogen and nearly enough potash and phosphoric acid. An application of 200 pounds acid phosphate and 100 pounds sulphate of potash at planting will complete the full needs of the crop, at a cost of $2.25 for the potash and $1.50 for the acid phosphate, in round figures in all $3.75, add to this the $13.50 fertilizer cost of the cover crop and we have the total fertilizer cost of 400 bushels of potatoes $17.25, or less than four and one-third cents per bushel.

Had the cover crop not been used, and fertilizers used directly for the potato crop and even supposing every pound of the fertilizer applied was realized in the crop, which is impossible, the cost would have been:

| | | |
|---|---|---|
| Nitrogen, | 92 lbs. @ 12c. | $11.04 |
| Potash, | 158 lbs. @ 5c. | 7.90 |
| Phos. acid, | 42 lbs. @ 5c. | 2.10 |
| | | $21.04 |

Or $3.80 per acre more than the actual cost. As a matter of fact, the cost instead of being $21.04 would have been nearer $31.04, as not more than two-thirds of a fertilizer application can be expected to be realized in crops.

GEO. K. WILSON.

The World's Work rightly considers the subject "good roads" of great importance. From a recent issue we quote:

"The subject, 'Good Roads' is more important than it is interesting to reporters and essayists. It is more important, in fact, than most subjects, religious or secular, that conventions of men and women meet to discuss; for a man that in any way helps to build a good road where a bad one ran, does a greater service to his kind, and builds a more lasting monument than the man who writes an historical novel, for instance, or sends a missionary to China, for a good road will outlast a bad book and give to Christian character serenity and continuity."

### COTTON CULTURE IN HUNGARY.

Consul Mahin, of Reichenberg, under date of April 22, 1901, reports:

It is intended this year to essay the cultivation of the cotton plant in Hungary. It is said that it will ripen in the southern part of that Kingdom; the efforts to grow cotton in the lower provinces of Asiatic Russia, in the same latitude as Hungary, have been successful. It is probable that bounties will be paid the cotton planters, in keeping with Hungary's liberal treatment of the founders of factories. More or less success is now attending the culture of cotton in Spain, southern Italy, Macedonia, and Malta.

Cattle can be raised better by the small farmer, as he can give more of his time to it, than can the planter. Wherever we have grass I am satisfied we can raise beef cheaper than it can be raised anywhere else. The first and main point is to secure the beef type of cattle; we cannot expect to succeed with our native stock.—Col. F. L. Maxwell, Madison Parish, Louisiana.

Raspberries and blackberries require a well drained soil highly fertilized. They do best when the ground is mulched.

### PROFIT IN STRAWBERRIES.

Correspondence of The Progressive Farmer.

There is really no farm crop that can be made more productive than the strawberry when the market facilities are good; but in order to do this there must be a thorough understanding of the nature of the plants and their needs. I do not know of any other crop that shows a wider variation in profits and productivity than the strawberry. The returns from an acre run all the way from fifty and sixty dollars to several hundred, with here and there even greater figures than these reported. I should not advise any one to attempt raising strawberries for commercial profit who is not satisfied to begin moderately and gradually learn by experience how to increase the quantity and quality of the fruit, and consequently the profits.

S. W. CHAMBERS.