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# THE PROGRESSIVE FARMER.

Has the largest circulation of any family agricultural or political paper published between Richmond and Atlanta

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

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## Agriculture

### ALL AROUND THE FARM.

EDITED BY BENJ. IRBY, RALEIGH, N. C.

Prof. Benj. Irby late Professor of Agriculture at Agricultural and Mechanical College, Raleigh, has become a regular contributer to this department. All questions relating to the farm, garden or orchard will be answered by Prof. Irby.

### PROF. IRBY'S WEEKLY LETTER.

#### HOW TO GROW CORN CHEAPLY IN THE SOUTH.

The day has passed when it will pay to raise cotton or tobacco and buy corn in the South. When cotton sold for 35 cents per pound and corn for $1 per bushel, there was some excuse for the Southern farmer buying corn from the people of Illinois. Then they could clear about 10 cents per pound on cotton, but cotton at 5 cents is really made at a loss. The cotton farmer has gotten down so that he is afraid to count his own time, and he has cut wages until there is only a bare existance for the laborer.

Now if he has to buy feed for his stock to subsist on while they are making this 5 cent cotton, then low indeed will be his income. It is true that three bushels of corn can be grown in the corn belt to one here in the South, as far as expense goes; but that same corn has to pass through the hands of three middlemen, and freighted several hundred miles. All of this costs heavily and the consumer has to foot the bill.

The question naturally arises how to raise the corn cheapest.

Try to have a sod of some kind for the corn to grow on; a clover sod is preferable. Pea stubble is excellent and can be had by any farmer.

If cotton lands are sowed with crimson clover in September, the land will be occupied during the winter and serve for early pasturage and then can be turned under early enough to make a fine corn crop the following season.

The clover or the peas insure an abundance of organic matter in the soil and plenty of nitrogenous matter. Thus the most expensive element of a fertilizer can be supplied cheaply, and not only with little cost, but made to pay for itself in food stuff grown.

If we will look on any fertilizer sack we see only three elements enumerated, namely: nitrogen, phosphorus and potash. If the nitrogen has been supplied in abundance by the clover, the remaining two can be easily supplied, as they are the least expensive.

The corn crop requires a good supply of nitrogen, as this crop, like all of its class, has a rather poor faculty of collecting nitrogen from the soil. Hence it is best to supply it in a readily soluble form, and there is no better form than in decaying plants rich in nitrogen. If the fertilizer has to be depended on entirely for all these ensential elements, then it would be best to use a brand with at least 2½ to 3 per cent. nitrogen, 8 to 10 per cent. phosphorus, and 2 to 3 per cent. potash. It pays to use a good grade of fertilizer. It costs just as much in freight to handle a low grade as a high grade, and it costs as much to distribute a low grade as a high grade.

If your dealer has no high grade, then get him to order it, and if he can't get it, then do your own mixing.

Of course it goes without saying that all the manure on the farm should be carefully saved and put on the land. The fertilizer is simply to be used as a supplement. It is best to break corn land in the fall or winter. This, of course, cannot be done if the land is occupied by a clover crop.

Heavy clay soils, especially, should be broken deep and early. It is usually best to plant and cultivate on a level. Fertilizer should be drilled about one or two weeks before planting. It is best to put the fertilizer about two or three inches where the corn grain will be, for two reasons, namely: that the corn roots will have to search deeper, and then the young plant is not burnt by the fertilizer. By the time the roots get down to the fertilizer, it has become incorporated in the soil.

Use all the manure possible, use rotating crops and supplement with fertilizers and we will no longer need to call on the Western farmer for corn, as we can grow it at home cheaper than we can buy.

It cost something to haul corn out, and it gets the farmer in bad habits to go to town, with an empty wagon and return with a load of corn. He gets so dependent that he is hardly worthy of the title of farmer. Learn to live at home, and let your stock feed on home raised corn.

#### A CHANCE FOR A NEW INDUSTRY.

A Kansas man has written to the Farmers' Voice suggesting the making of molasses from melons on a commercial scale; and the editor of the Voice is of opinion that the suggestion is a good one, indicating what he calls "a chance for the arid West." He says: "Certainly here is a field for investigation and experimentation at least, with a fair promise of changing the almost desert lands of the West into a garden spot, with industry abounding." But here is the testimony of the Kansas man: "For the last half dozen years I have made molasses from watermelons for our own family use. It is beautiful in color, delicious in flavor, and, in my estimation, equals the maple syrup of the East."

This is from Kansas, and now the Suwannee (Fla.) Democrat says that two farmers in Polk county have been making syrup out of watermelons. They found the market so glutted with melons that they concluded to turn them into syrup. So they procured an ordinary cider press and pressed the meats of the melons into watermelon cider, and boiling this down, they made a splendid syrup. Out of 3 000 melons they made over 100 gallons, which sold at 90 cents a gallon. The Cedartown Standard says the syrup is very fine and predicts a future for watermelon syrup in the coming years.

In North Carolina and adjoining States thousands of watermelons are allowed to rot in the fields or are given to hogs after the vines begin the wilt. Perhaps some of our own farmers can profit by the experience of these Kansas and Florida farmers.

### SUGAR BEET SEED FOR DISTRIBUTION.

Correspondence of The Progressive Farmer.

By the courtesy of the Secretary of Agriculture, who has done so much to stimulate interest in the sugar beet industry, the Experiment Station will have, for gratuitous distribution to farmers in the different counties of the State, several pounds of selected sugar beet seed. In accordance with the wishes of the Secretary, the beet seed will be distributed in North Carolina only to those who promise to follow directions in regard to planting, cultivating, harvesting, and who will send samples for analysis, and give us full information as to cost. The farmer who undertakes the work should be able to realize a good yield, and as the beet is very excellent for table use and proves a valuable feed for stock, the farmer will be fully repaid for his time and trouble.

North Carolina is not located in the isothermal belt in which it is known that the sugar beet is grown most successfully for commercial purposes; but should we be able to grow a beet with a sufficiently high percentage of sugar, this will doubtless lead to the erection of a factory in the State, and there will be many benefits to come to our people in consequence.

The Experiment Station will be very glad to receive applications for sugar beet seed on the conditions above named, and to correspond with anyone interested in the subject.

W. A. WITHERS,
Acting Director N. C. Exp't Stat'n.

### SOUND SENSE.

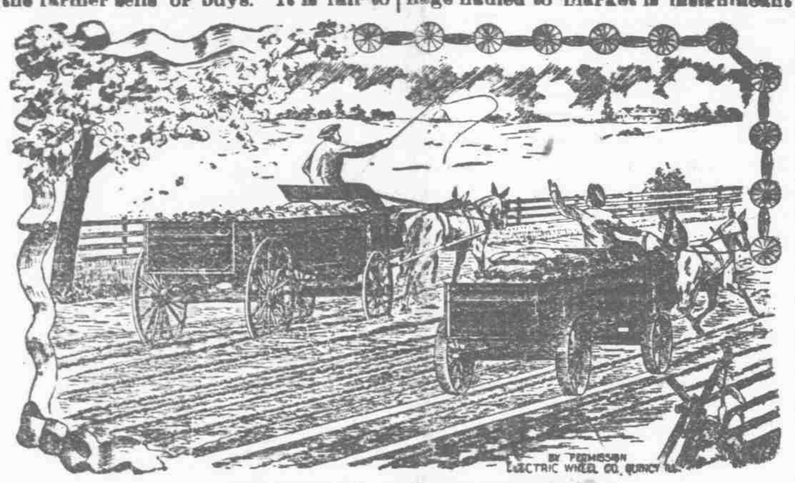
When the farmer sneers at the scientific study of agriculture he is trying to look out of the back of his head. Every farmer is a scientist that strives to gain a knowledge of the facts and forces about him, and further a knowledge of the law that governs their action. He is the best farmer, that can bring to his aid the largest knowledge of nature's forces, and the best skill in the management of these forces. To take advantage of his own knowledge, and all the knowledge of other men that he can absorb is the true way to be practical. That is wisdom. To refuse to do this is folly. To be able to handle this knowledge to his own profit and advancement, that is skill. Knowledge of the science of this or that comes through study, making the mind familiar with it. Skill comes through practicing what a man knows. Without practice there can be no skill.—Hoard's Dairyman.

A good speech is a good thing, but the verdict is the thing.—Daniel O'Connell.

### GOOD ROADS WILL SAVE YOU $4,500,000 ANNUALLY.

The average cost of moving a ton one mile over our country roads is 25 cents, and to move a ton ten miles it will cost $2, or 20 cents per mile, and this does not include the driver's time. The average distance of our farms from their local market or mill is ten miles. The average price of wheat on the farm is 10 cents less than it is at the local mill or market. This seems to indicate beyond all doubt that the average cost of transporting wheat from the farm to the nearest market is 10 cents per bushel and this is about 20 per cent of the price of wheat at the average local mill.

Now it costs 10 cents a bushel to haul this wheat because the roads are poor and if the roads were good the average cost of hauling would be cut in two and thus 10 per cent. would be saved to the farmer. This saving would not only apply to wheat, but everything the farmer sells or buys. It is fair to say that the saving made by good roads in a few years would be sufficient to give every farmer an asphalt pavement from his front door to the nearest market.



BROAD TIRES / GOOD ROADS } VS { NARROW TIRES / BAD ROADS

The total amount of farm products sold in this country annually is about $3,000,000 000 and the amount of purchases made by the farmer is about $1,500 000,000. hence good roads will save 10 per cent. on these amounts or $4 500 000 annually to the American farmer. The best road machines in the world are wide tires. They take the place and render almost unnecessary the road scraper, etc. The narrow tires cut the best roads to piece in a short time and make the bad roads worse. The wide tires improve and preserve the good roads and make the bad roads into first class highways.

#### BROAD TIRED WAGONS.

The Missouri Experiment Station has made a large number of experiments during the past two years with the draft of broad and narrow tired wagons. These tests have been made with the ordinary narrow tired wheels and with six inch tires, on macadam streets, gravel and dirt roads in all conditions, on meadows, pasture, stubble and plowed fields both wet and dry. Bulletin No. 39 of the Station, by Director H. J. Waters, gives the results of these tests.

The broad tires pulled materially lighter on the macadam street and the gravel roads. Also on dirt roads in all conditions except when soft or sloppy on the surface, underlaid by hard road bed, and when the mud was very deep and sticky. In both of these conditions the narrow tires pulled considerably lighter. It should be borne in mind, however, that the roads are in these conditions for a comparatively short period of time, and this at seasons when their use has naturally been reduced to the minimum. The tests on meadows, pastures, stubble land, corn land and plowed ground in every condition, from dry, hard and firm to very wet and soft, show, without a single exception, a large saving in draft by the use of the broad tires.

The bulk of the hauling done by the farmer is on the farm, in hauling feed from the fields and hauling manure from the barns, etc. The actual tonnage hauled to market is insignificant in comparison with that hauled about on the farm, inasmuch as a large proportion of the products of the average farm is sent to market in the form of live stock or its products.

These experiments further indicate that six inches is the best width of tire for the farm and road wagon, and that both axles should be the same length, so that the front and rear wheels shall run in the same track. A profusely illustrated bulletin giving full report of these tests is now ready for free distribution upon application to the Director of the Missouri Experiment Station at Columbia.

It is clearly shown by these experiments that in many instances where the narrow tire is very injurious to the road or field, the broad tire proves positively beneficial when the same load is hauled. When it is considered, therefore, that the average draft of the broad tire is materially less than the narrow tire, and that the injury done to the roads and farms by the narrow tire can be almost wholly corrected by the use of the wide tires, there remains no longer any good reason for the use of the narrow-tired wagons.

### HUMUS.

#### Beneficial Effects of Green Crops Turned Under—Economical Employment of Fertilizers.

Correspondence of the Progressive Farmer.

The writer was much interested in reading the following extract from a bulletin of the Minnesota Experiment Station: It is an important subject, and one which should interest every Southern farmer.

"For these reasons farm manures possess a value over and above the market price of the nitrogen, phosphoric acid and potash they contain. Their bulk is mostly humus, a valuable material that exists in very small quantities in commercial fertilizers.

"For the same reason clover, peas and other green crops—even weeds—turned under are largely beneficial to land, aside from the nitrogen they have gathered from the air and the phosphoric acid and potash their long roots may have brought up from the subsoil."

The humus contained in green crops, turned under at maturity, exerts a beneficial effect on the soil by rendering it loose, thus restoring, to a great extent, the original new ground principle. Green crops thus turned will also exert a remarkable influence in resisting the ordinary effects of drouth.

But there are yet other important advantages derived from turning green crops, implied, but not directly expressed, in the above.

While the green crops are undergoing decomposition the oxygen of the air, or of rain water, unites with the carbon of the plants and forms carbonic acid gas. This gas is a powerful solvent and acts on certain rebellious elements in the soil, reducing them to plant food.

Farm manures generally undergo a rotting process after they are hauled out and plowed under, thus generating carbonic acid gas, as above described. Hence, "they possess a value over and above the market price of the nitrogen, phosphoric acid and potash they contain." They should be applied fresh and plowed under, not thrown into heaps to rot. Green crops, to be of much value when turned, should be properly fertilized, thus producing a rank growth.

Crops of the legume family, such as clover, cow peas, beans, etc., are the proper ones to grow to turn under. They do not require nitrogenous fertilizers, at least not to any considerable extent, as they draw the necessary nitrogen from the air. Hence, by applying phosphoric acid, and potash to any one of said crops we virtually grow nitrogen, which, if purchased in the market (nitrate of soda,) is far more costly than either of said elements. Acid phosphate (usually called by the farmers, acid) supplies the former (phosphoric acid) and muriate of potash or kainit usually supplies the latter (potash.)

It is a comparatively simple matter to fertilize cow peas or clover; all that is necessary is to put on about 300 pounds acid phosphate and 400 pounds kainit (or its equivalent 100 pounds muriate of potash) per acre, broadcasted, and then plow them in. These fertilizing materials will promote a rank growth of clover or peas, which in turn will absorb a large quantity of nitrogen from the air, and the entire mass, if turned under, will improve both the physical and economical condition of the soil.

The peas should be sown in drills about four feet apart and well cultivated until the vines become too large. If you desire to raise peas for edible purposes the rows should be wider, say five feet, and if the Unknown pea (considered best for all purposes) be planted the plants in the drill should be at least two feet apart, thus giving 10 square feet for each plant. I suggest, as an experiment, that some plants be given from four to five feet distance in the drill. Peas, as a general thing, are too much crowded for bearing purposes, but for fertilizing purposes they may be thicker. In thinning, pull up the vines, don't cut them off, as the stubs exert a bad influence.

Try at least one acre as above. When the vines and peas are ripe, say towards fall, after the weather has turned cool, turn well and let lay until the following spring. Then prepare and plant in sweet potatoes and treble the ordinary yield. One acre properly prepared for gathering nitrogen etc., and for manufacturing humus and carbonic acid gas, in connection with proper cultivation, would revolutionize farming in this country. Will you try an acre, only one?

BRYAN TYSON.
Long Leaf, N. C.

### DEEP PLOWING.

Correspondence of The Progressive Farmer.

In no other operation on the farm is there so much reform needed in the South as in the mode of plowing. Most farmers plow only deep enough to supply a good mouthful for the first heavy rain that falls, which sweeps the soil away to some lower land, where it is not needed. The very cream of the hillsides is thereby rendered a hideous deformity to the landscape.

There is sound philosophy in deep plowing. It enables crops to resist drouth by preparing a place for the retention of moisture. It gives greater room for the roots of plants to travel in search of food. It supplies drainage and it increases the capacity of the soil for retaining and utilising fertilizers.

Many of our farmers plow as if they only owned four inches of surface.

In England, since the inauguration of deep plowing, the productive capacity of the soil has been greatly increased. Where lands have been plowed deep, the crops remain fresh and green during a drouth, while the shallow-plowed fields parch up and waste away. Continuous shallow plowing means poverty for the farmer, poverty for the land and poverty for our State. Every year where shallow plowing is done, will show a small yield in products of the farm, and the farms on which it is practiced are becoming scarified with red gullies. Sterility of soil will most assuredly result from shallow plowing.

Deep plowing is deep sense—a sure guarantee of success, and the only means of assuring the highest development. We should be careful not to deepen our soil too suddenly. It can be done with best results gradually—only a few inches deeper each year. Farmers cannot afford in their present straightened circumstances and low prices of produce, to continue the same old careless mode of cultivation. So let us change. HENRY N. CLARK.
Raleigh, N. C.

By actual experience, writes C. E. Morrison, of Waldron, Mich., in the Practical Farmer, we have proved that by working in partnership any reasonable debt can be paid. It is customary here for the wife to have the butter, eggs and poultry money for her own, the husband taking everything else. Now who ever heard of a business firm of two or more members where they ran the business in that way? Instead of dividing the profits, they divide the business, and a divided business is like a divided house, it cannot stand. We started out when married as full partners, and now at the end of nine years can say we know it is the way to be financially successful. Wish every P. F. family would try it.

Whatever is worth doing at all is worth doing well.—Lord Chesterfield.

### POOR ECONOMY.

Those farmers who didn't care to take THE PROGRESSIVE FARMER or any other agricultural newspaper, but preferred politicial ones and were humbugged by the "Limbless" cotton agents, can sympathize with the hero of this story.

Some years ago, says an exchange, the editor of a weekly paper, published in a Pennsylvania town, was very much surprised by a call from an old farmer who stated that he wished to subscribe for the paper and wanted to pay for it for ten years in advance. This declaration was followed by his puting twenty dollars down on the table, the subscription price being two dollars per year. The editor expressed his surprise and gratification at this and remarked that he had been trying for a number of years to induce him to take the paper, but that he had persistently refused to do so, on the ground that it was a useless expense. Well, replied the farmer, it would have been much better for me if I had been taking it as I would have saved a good deal of money had I been a subscriber and had read the paper. He went on to state that a smooth-tongued wender of agricultural machinery had managed to cheat him out of about $800, and just a few days after a neighbor had lent him a paper, the one he was now subscribing for, and there was a notice in it warning people against having anything to do with the man who had swindled him out the $300.

This is just one of the many illustrations that might be given of the false economy that prevents a man from subscribing for papers on the ground that he can't spare the money. These kind of men have divided into classes, misers who deny themselves the ordinary comforts and enjoyments of life for the purpose of hoarding money, or those who are so proud of their ignorance that they deliberately turn away from the opportunity of acquiring knowledge.

Daniel Webster once made the statement that it would be impossible to make up a newspaper without getting in something worth reading. The late Senator Plumb, of Kansas, a man of ability and a very astute politician, subscribed for every paper in his State, giving as his reason for doing so that he could not otherwise keep up with public opinion and know the wants and desires of his constituents.

There is absolutely no reason why farmers should not keep just as well posted in his calling as men do in other lines of business and in the different professions, except for the fact that he will not read. This just states the case in a nutshell. The editor of this paper is well acquainted with a farmer, a very intelligent and successful one, who takes six or eight agricultural papers and what is more reads them and adopts the suggestions that are suitable to his soil and crops. He is not a man that wastes money, but simply takes these papers for his own pleasure and improvement. It is almost needless to say that if every farmer in this section was as well posted about agricultural matters as the gentleman alluded to above, this would be the garden spot of the South. Nothing in the way of agricultural advancement escapes his notice.

### WANDERING THOUGHTS.

North Carolinians will no longer be compelled to write to some farm journal in another state when they wish to ask questions regarding the farm or anything on it. THE PROGRESSIVE FARMER is here to serve you. Profs. Emery and Irby are practical farmers, in sympathy with the great common people, and they know the farms of North Carolina almost to perfection. No farmer in this or adjoining states can afford to do without their letters. Send on your inquiries. Write us your experiences. Tell us your mistakes, failures and successes. Tell your neighbors too what we are doing and get them to subscribe for a year. If they say "no" to this, ask for a six month's subscription—fifty cents. We will also take trial subscriptions, at three months for 25 cents.

The farmer who is horrified at the idea of burning his corn, practically does the same thing when he stints his fattening stock, when he feeds it to poorly bred animals, when he attempts to make it take the place of shelter, and when he is careless in his methods of hauling it. To feed a poorly balanced ration is one way of burning it. To waste corn is certainly worse than warming one's self by it on a winter day.—Farmers' Journal.