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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, Agricultural and Mechanical College, Raleigh, has become a regular contributor to this department. All questions relating to the farm garden or orchard will be answered by Prof. Irby.

PROF. IRBY'S WEEKLY LETTER.

DEEP PLOWING IN SPRING.

Does it pay to plow deep? If so, why?

1. You need a deep seed bed for your crops to feed in.

2. Deep plowing insures easier cultivation.

3. Deep plowing makes a deep sponge to absorb the rains, thus storing up moisture for future use.

4. It prevents the land from washing, as it can readily be seen that if the soil absorbs the water that falls on it, there will be less to run off over the surface.

5. By causing all the water to run through the soil, or leach out, it will enable the soil to absorb or take up all the fertilizing elements from the rain water, which is considerable and well worth looking after.

6. It will enable the roots to feed deep down in the subsoil as well as in the soil, furnishing more food and moisture.

7. It will prevent drouth; or rather prevent the drouth from having the harmful effects that it would otherwise. Why? Because a soil broken ten or twelve inches will absorb and retain nine tenths of the water that falls on our soils. This, of course, is kept in reserve and drawn on by the crop as needed.

Many other good points could be given to prove the advantages of deep plowing.

It would be well to explain why so many beginners make ship wrecks of farming in carrying out the idea of deep plowing.

They plow too deep to start with. Land that has been plowed only four inches deep should not be plowed over six inches deep the first year, and then gradually increase, say one inch each year until the soil is plowed ten or twelve inches deep.

There is no necessity for turning light sandy land so deep. A good rule to follow is to turn up just a little clay each year.

Deep plowing ensures good crops. A little extra labor in spring will have a good effect all through the year.

THE USE OF HARROWS IN THE SOUTH.

Not many years have elapsed since the harrow in any but the crudest form was a stranger in the South.

Well can it be remembered even by our middle-aged men, that the grain of the cotton States was either put in by brush, or tree tops, or scratched in by a crude harrow made at home.

Who cannot remember seeing an old negro searching the woods over for half a day with the vain hope of finding a forked tree just the right shape to make a good "norrow," as he called it.

The single horse iron-toothed harrow was introduced, then the double-horse, and various styles soon followed, until now we have such a multiplicity of the useful implements that their value is legion.

Prominent among these can be mentioned the Disc, Acme, smoothing, spring toothed, adjustable, and last but not least the Clarke's Cutaway harrow.

The use of this valuable system of improvement has done as much to revolutionize the agricultural industry of the South as any other one implement. It is here, and here to stay. It came, has been thoroughly tested, it has conquered. What more need be said? Buy it; try it; and you will praise it.

CRIMSON CLOVER.

The North Carolina Station has for several years made a specialty of crimson clover, which it has commended highly in several bulletins. A new bulletin, No 145, reviews that Station's experiments with this plant.

The writer explains that the cowpea is the great soil renovator and cover crop during the summer, but it succumbs to frost. Crimson clover, on the contrary, flourishes all winter, preserving the fertility of the soil from the leaching effects of the late fall, winter and early spring rains. Southern soils are generally more or less sandy, and they do not freeze deep; hence they are much more liable to leaching and washing than soils of the North, and it is as important to have them covered in winter as in summer. Crimson clover does this perfectly.

At the end of 1897 the Station had the following further good words to say of crimson clover:

"It is worth while to spread the fact to every farmer that this clover can and will brings to him if he will but grow it.

"This crop starts and grows to full maturity and dies between August and the following June. It will start among corn, cotton or other crops, and need not interfere with the crop for the latter part of the season in which it is sown. When the summer crop is gone, crimson clover takes the soil and, provided it is not too poor, covers it with verdure and increases its fertility while preventing the unsightly washing which frequently occurs without its presence. It only holds the ground for a short time in spring against other crops. If grazed, no delay need be experienced in plowing for early crops, but we would plow all other ground first, as the later this is left the more good it will do stock and land, and the better it will be for the following crop.

"If made into hay the last of April will see it harvested and the weather will be propitious for hay making. Indeed, it may well be questioned if it would not be better, for a cotton crop, to have the land in this clover for hay cut at the time when cotton has usually hardly started in sickly yellow growth, and then turn the land at once and plant the cotton. The roots and stubble will have mellowed the soil and added a rich supply of plant food to push the cotton crop and save a heavy bill for fertilizers. If the crop is late it will doubtless make up the time in more rapid growth, and if it is not quite so far advanced when bolls begin to rot some years in August, it may be as well for the crop. At any rate corn can be planted after crimson clover has been cut for hay or seed, and will find its best development after such a crop.

"To show some of the possibilities in this crop, a statement is appended of the crop grown on the Experiment Station farm in 1894. This is only what any farmer may equal or exceed, but it shows a profitable use of land for the winter months. Of four acres in clover, two and a half were harvested in good order, while one and a half acres were storm beaten when ripe. The yield of seed in hulls on the unhurt portion was 1487 pounds per acre, valued at 3 cents per pound, a total of $44.61 per acre."

With the distribution of seed sent out by the station was sent a blank report to be made to the station by the farmers who should test the crop. Replies have been received which show that it has been a success on the sandy lands of the coast, on the loams of the foot hills, and on the clays of the mountains, and following is the final report of the station upon crimson clover:

"There are many words of praise and commendation for this crop from different parts of the State for grazing, for cutting to feed green and for hay. Our own digestion experiments have proven the hay from crimson clover, when well made as was the case in the digested hay to be richer in digestible food than any other clover which had then been subjected to experiment in that line. It is, however, as a seed crop and a soil improver that we would urge its growth on a large scale. Crimson clover seeds freely. It is capable of adding materially to the incomes of the farmers of every county and at the same time to be helping to increase the fertility of the farms if grown extensively enough to warrant the purchase of hullers to clean the seeds for sale. To improve land, this clover is probably next to the cowpea in value, and should follow the cowpea and not be used on poor land until the cowpea has begun an improvement which this crop can be used to continue. It is being grown regularly at the experiment farm. At Biltmore this spring we saw a very heavy crop of it being fed to the Jersey cows green, and hay was being made of it. The crop is worthy of the careful attention of every farmer in North Carolina.

"Little care and no cultivation after sowing is needed to grow this crop. It grows from fall to April or May, and may succeed a corn crop and leave the ground in season for corn to be grown on the same land as regularly as if it were left bare between the crops of corn. It can be grown the same in cotton fields if grazed off instead of making hay or seed, which could not be harvested from among the cotton stalks. Apiarists will find this clover the delight of their colonies, and can greatly extend the season for its blooming by judiciously grazing plantations of crimson clover. We dare not say all that might be said for this crop, but will be content to finish this paper with some notes for those who have no experience with it.

"The seed is for sale by all leading seeding seedsmen in the Eastern and Southern States. The time to sow this seed is from last of July to December. The latter sowing can give satisfactory results only when followed by very mild winter or late wet spring. The station has scored its best successes with July and August seeding. It advises preparation of the soil and light covering, though some growers near by only grow it broadcast in stubble land and give it no further attention until it is ready to be grazed; local climate and kind of soil determine this point. Mown for hay, or cut for seed, crimson clover without a nurse crop will profitably be fit to graze as early, or earlier, than any other clover. It will be in a stage to be made into hay by April or early in May, as the seed will be ripe during the last half of May. If cut early for hay a light seed crop can be taken in June from good land. When made into hay, cut it early for several good reasons.

"A clover seed huller is necessary to clean the seed, and one of these machines is capable of threshing 100 to 150 bushels of seed per day, and cleaning it ready for market at one operation. This is the only extra machine needed, as the seed can be cut by mower or reaper and should be hauled in wagons covered with canvass directly to the thresher, or stored in places where the shattered seed can be saved. The huller costs too much to afforded by any but those who have very large areas under cultivation, unless by co-operation, a number of farmers in a town or county can agree to buy one together. The cost will be $400 to $550, and for suitable power to run and move it if portable, or traction engine, perhaps $500 to $700 more."

THE SECRET AND BEAUTIES OF SUCCESSFUL FARMING.

The attached essay by Mr. C. H. Nimson, of Bellevue Farm, Cranberry, Mitchell Co., N C., recently received in a copy of a Mitchell county paper, is sent you hoping you may find a place for it some day. The paper accidentally came in contact with oil and before we knew it the name was consigned to the flames and we have lost name from memory, but saved the essay and herewith present it to your readers.

COL. NIMSON TELLS THE SECRET AND BEAUTIES OF SUCCESSFUL FARMING.

Col. C. H. Nimson was asked in a meeting of farmers, what the object was in holding farmers' institutes; the following was the answer he made:

Agriculture, in all its branches, has been the mainspring of all nations during their development and progress, and as soon as this industry is neglected, in any nation, the people revert in to dependence.

First they become dependent on the few who may have accumulated riches and power, and next the entire nation, of all classes, become dependent upon the other nations of the earth, and in some cases are enslaved by them.

It is true they may continue to work their land, and eke out a miserable existence, but they remain enslaved to the rest of the world as much, or more, than the tribes of half civilized or savage people.

Agriculture is the oldest and most permanent and secure occupation man has ever been engaged in; all others are of a kind that, while they have a glitter to the eyes, there is always connected with them a species of slavery and dependence that is not known on a farm or in any farming operation.

The secret of farming well and successfully is in the application of thought and patience, and the most intense and continuous thinking, not only by the principal, but also by each farm laborer as he proceeds with his work. It is this necessary thought and patience that seems to be what so many men shrink from, and in so many instances for the want of this, meet with such indifferent success, if not entire failure, in their occupation.

It is a common thing for people to say that, so and so is too lazy to work on a farm; now I do not believe this.

Most of these people are not too lazy to work, because they go to other employers and there make good hands, but they have never learned to think systematically, and persistently apply their thoughts to their work in hand, and find it a great burden to do so; therefore they prefer to go to some mine or furnace or railroad digging, or to some employment where some one else does the thinking, and where the work is meted out to them in such a way that they need not give it a thought, where they can work more like a beast of burden and let their thoughts ramble idly, a condition they seem to enjoy, only because they have never learned to think properly or direct their thoughts in the right channel.

On the farm, a man must work and think, if he wishes to succeed as a farmer or farmer's hand; he must think of what he is doing and not work at one thing and let his thoughts ramble around about some other matters. The exercise of the mind and this training of thoughts so they can be concentrated and held on one thing steadily until the subject is exhausted, is what is necessary to a successful farmer, or a farm hand; and this ability of the mind to concentrate their thoughts is what elevates and ennobles a man, and in my mind it is this that makes all progressive agricultural communities so reliable and gives such strength to governments, and so much independence and happiness to the individual families.

In my opinion no man can succeed in farming unless he is a good thinker. He must be able to concentrate his mind on his occupation; if he fails to do this he fails to make a success, not only in farming, but in any other occupation as well.

Now I would like to know how many of you do this, or how many men you know personally that do this on their farm?

Is it not a fact, known by everybody, that has a capacity for seeing things, that every man or farmer that does keep his mind on his occupation is successful? And is it not equally true that every one that does not is continually in trouble and always behind hand in all his life's doings?

The greatest misfortune that can be fall a man is becoming too lazy to think; too lazy to work is bad enough, but too lazy to think is worse.

The object of the institute is to get men to think, and to induce them to educate themselves into thinking systematically, and into learning to think out one thing at a time.

A man can no more think properly of two things at the same time than he can build a worm fence up one side of a hill, and lay off corn land down on the other at the same time; he can keep on a run between the fence and the corn land, putting down a few rails and then running back to the bull tongue and driving a few hundred feet, then back again to the fence to put up a few more rails. But would you not think and say he was a fool?

Well, he would not be much more of a fool than you are making of yourself when you try to think of two or three things at about the same time. Your effort at studying out the best way to work your crops and keep your stock would not amount to more than the work the man did on his corn land and his fence.

There is as much brain power in every hundred heads in this community as there is in every other community of the same number, and what we want to do is to get it to work, not on political money questions, or some other matter that is the capital in trade of the politician, merchant or manufacturer, but on your farms and farm work, and your capital in farming.

I do not believe that I would venture too far if I would undertake to show that for every dollar a man complains of being assessed too high, that he wastes two, either in some useless habits of life or by neglecting to attend to his business at home.

It is well and proper to keep down public expenditures, but the easiest way to do that, is to spend an evening or two in a year when the county accounts are published, in examining them, and if they seem extravagant, just go to the polls and vote against the "ins," and for the "outs." You can do all this in half a day, and do it much more effectively than you could by running around a month or two talking about it and neglecting your work at home.

The institute is, to your farming interests, what the political meetings are to politicians, and you should take as much interest in it as the politician does in his meeting, and until you do so the politician has the advantage of you.

THE DAIRY.

—EDITED BY—
FRANK E. EMERY, M. S.,
Agriculturist North Carolina Agricultural Experiment Station, and Secretary-Treasurer North Carolina Dairymen's Association.

Inquiries regarding Dairying cheerfully answered.

PROF. EMERY'S WEEKLY LETTER.

[Prepared Especially for THE PROGRESSIVE FARMER.]

We begin this week to give the readers of THE PROGRESSIVE FARMER some of the ideas we have concerning dairying for North Carolina. This we conceive to be a branch of farming capable of considerable development with little risk of overproduction. It can be used by corn growers as well as cotton growers, to help piece out the income, and relieve them from an entire dependence on the main staple for the means of subsistence. By this means some of the working force and capital will be diverted to new channels. A new order of things must necessarily be established since there will be cows to feed and milk, forage crops must be grown, and there must be more consideration given to the milk producing machine. There is said to be a certain balance in nature. The rivers can carry no more water out to sea than the clouds bring back and return to the land. The carbon dioxide breathed out by animals would smother the animals in a comparatively short time were it not for the plants which use it up from the air about as fast as it is returned by animals and decompositions of plant remains. The heat given off by a fire under a boiler has its effect in work done and we may in a rough way liken these to our own work with animals. The feed given the mule may be looked for in work, and that fed the cow will likewise return its value first in supporting the vital processes of the animal and in motion, lastly in production of work by the mule and also in a modified way by production of milk by the cow. The animal is born with a certain limitation as regards the food it can consume and the amount of work it is capable of performing after its life functions have been satisfied. Do we get as much from the mule, or the cow, as they are capable of producing for us? Do we try to see how little we can put into the animal? If so, we must expect but little work, and that our stewardship has a result to belittle the earning capacity of the animal and probably shorten its life. Do we overfeed and thus cause too much internal work at great expense to us in external or profitable work for ourselves? We are discussing the mule and the cow with regard to the amount of food they are able to use and turn to profitable account above what is required for for internal work, and whether we present our stock with a proper supply of the right kinds for obtaining the best results for ourselves. Any one who pleases can make the application to himself and discuss with himself whether he feeds himself for the external work he wishes to do, so there may be a harmony in the balance and the external work well accomplished will be satisfactory to himself. The digestive apparatus of the mule and cow must be well nigh perfect to give us profitable production in plowing and in milk production. There must be a high degree of animal comfort in the latter case before much work will be done as every other essential bit of internal and external work will be provided for first and milk making will only be accorded about what there is left over of the food consumed.

So we shall find an abundant food supply essential. It must be of an appetizing character and it must have such an effect physically as to nourish the animal keep the digestive apparatus in good order and supply all the elements needed to produce an abundance of material for milk, else there will be no, or only a very little milk.

Milk must be produced to do anything in dairying. Milk for the dairy must come from cows in this State as we do not raise any of the other species which have furnished their milk to the human family in numbers to be used to any extent. There are perhaps a few families who use goat's milk, but we never hear of goat's milk butter, or cheese here. We do hear and know of breeds of cows, and every reader may not only know all the prominent breeds, but he may have a favorite one among them. Who will contribute to this column some facts and arguments for his favorite breed, that we may all become familiar with their qualifications, so that, if some now, for the first time, starts to keeping a cow, he may start intelligently, and not be obliged to lose time and change because of ignorance at the beginning of his enterprise when you can set him right?

There have been "cow contests" here at the State Fair. The Jersey cow has so far come out ahead. One came out ahead in a similar contest at New Berne Fair once.

There is to be another contest of this kind at the New Berne Fair the first of next month, at which the winners will receive $15, $10 and $5, respectively. The terms are fair and anyone may enter the tests. The Jerseys may get it again. There are more of them, and they are better known here than other breeds, but there is a move on foot to stimulate breeders of other cows, late in conception, yet perhaps not too late, to defeat them, if the friends of Holstein-Friesian cows act promptly.

This is by gentlemen interested in the Holstein-Friesian breed who say "if the first prize is won by a representative of their breed the winner of the first prize shall have $15 more. Breeders of Holstein Friesians will do well to look after this opportunity to carry off $30, and the honor which after all may be as great, or the greater part of the prize.

We rest the breed question with readers. Let us hear from you. More will be said about feed in another issue. This is too important to all to be dropped with a few casual remarks, and may well become the subject of careful study.

Now, two questions have been raised. They are the breed of the cow and the feed of the cow. Is there any particular difference what the breed of the cow is for the dairy, or for our purpose? And by "our" readers may assume the use for their own particular farm needs. Does it matter what, where or when the cow is fed? and is this question of feed of such importance that we need to consider it much? These questions are open for comment by any one who chooses to help a beginner with whatsoever new light he can give.—Farmers and Experiment Stations.

FARMERS AND EXPERIMENT STATIONS.

When an arrangement was made with the management of THE PROGRESSIVE FARMER for the conduct of this column, it was understood that the work of others was to be liberally quoted and brought before the readers of its columns. In no other way could the column have been started and in no other way could it be kept up to a standard we hope to see it attain. With this simple statement we preface an editorial which has appeared in the last issue of Hoard's Dairyman. We copy this because we know from experience that while the work of the experiment stations is seemingly going into every possible channel, yet there are thousands of farmers who do not know about them, or that in every one of them there are earnest working men holding out helping hands to them. There has been times when the stations were laboring not only against this lack of information as to their object and usefulness, but there has been opposition which happily has lessened until little if anything is now heard of it.

There is probably not one which if not now aiming at the place where the most good can be done, would not readjust its line of sight if shown the place where the fire would be more effective. This help to keep in adjustment is obtained by keeping in touch with the army of farmers. This the station men are trying to do. Where they are met with an equal effort on the part of their farmer constituents, there such lights as Hoard's Dairyman and others are turned on to the farm problems and such progress as has been made in Wisconsin and neighboring States in the past few years has been possible.

Hoard's Dairyman gives great credit to a number of station men, unselfishly placing them first, whilst each and every one of those men treasure W. D. Hoard as great commoner of the Northwest who has been able to bring them into touch with the great army of their

[CONTINUED ON PAGE 8]