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# THE PROGRESSIVE FARMER.

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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.

#### HOW TO HAVE GOOD ROADS.

The broad tire wheels were very thoroughly discussed in last week's issue. It would not come amiss to discuss how to make our roads passable. We have read how to keep them passable, now let us see if we can devise ways and means to put them in good condition.

Who really believes in the old system of turning out everybody who lives on the road to work it who are of the proper age? It is doubtful if anyone believes in such a system. Then how do our roads get worked so as to let the burden rest on all alike? With the system many shirked the road duty, because they were too good to work. It is shirked because they in professional man, who uses the road extensively, because he is well able to keep a team, be exempt from road duty, when his servant, possibly getting \$10 per month, is compelled to work!

Who does not remember under the old system seeing a rich man go scot free when a poor man working on his place would have to put in full time? Was this right? Some may say it was very well for the rich man, but hard on the poor man. To tell the truth, it was hard on both. Hard on the poor man to make him put in time on a road that he only used to walk in, and hard on the rich man to have a road the result of a system that would ruin his carriage, strain his horses and break down his wagons.

Bad roads have been the occasion of more profanity than most anything. The bad roads are cursed out; and the people who make them are cursed and discussed. However, there is nothing like having a scapegoat. The road overseer bore the sins and short comings of the community, and so it must be a year to year.

The roads are only second to the weather in importance of discussion. They are either dusty, muddy, or full of ruts and holes. How can the roads be worked so as to let all bear the burden equally? Only by taxation. But one kind of tax is not sufficient. If we make it a poll tax, then the rich and poor would be equally taxed and one walks on the road and the other hauls over it and and drives in his easy carriage.

Then what would be right? A poll tax would give all the same privilege of walking; a wheel tax would only tax those who owned vehicles; and a property tax would cause those owning property, that is benefited by good roads, to pay for the benefits.

It is plain that it would be just to make all pay some tax, for the support of our roads; it would be just to make those owning buggies, carriages, wagons, bicycles or any kind of vehicles, to pay for the privilege of running over these roads. That certainly will work an injustice to no one. If a person's property is benefited by a road running by it, then said person would surely raise no objection to paying for the improvement.

So we have three ways of collecting taxes for working the roads. By poll tax, wheel tax, and property tax. This method would be just to all and not burdensome to any.

#### TO GROW WATERMELONS AND LEARN A VALUABLE LESSON.

Correspondence of the Progressive Farmer.

Construct a trench from 3 to 4 feet wide and 18 inches deep, by plowing and throwing out with a shovel. A proper quantity of rich earth should be thrown into the trench. A couple of oak logs should then be placed, one on either side, leaving a space of about 2 feet between them. The tops of the logs should project slightly above the top of the ground. Some stable manure may be placed immediately under and around the logs; it will hasten the decay of the logs.

It would be well to drive some stakes into the bottom of the trench for the support of the logs; they would thus

rest on top of the stakes instead of the soil. A vacant space of several inches would thus be formed, which would soon be filled with carbonic acid gas.

At distances of about 8 feet apart construct rude compartments about 2 feet square by driving boards into the bottom of the trench. Then throw into each compartment a peck of corn cobs and a peck of bruised cotton seed on the cobs. Then, if convenient, fill with earth taken from beneath trees in which fowls have roosted. If not convenient, mix a half peck of hen manure with rich earth taken from beneath cedar trees and fill the compartments with this mixture, forming a hill and allowing for settling.

The residue of the trench may be filled with rich earth, that will not bake, sufficiently high to form a ridge. The walls of the compartments should then be removed.

A single handful of salt may be sprinkled in the bottom of each compartment before the cobs are placed; it serves a good purpose in dry weather.

The rows may be from 12 to 16 feet apart, the latter preferable.

For this climate, for early melons, plant about April 7th. A week later plant other seed in the same hills, thus securing a stand. Thin to 1 plant.

Holes 2 feet deep and 2 feet square, filled with corn cobs, cotton seed and earth from beneath cedar trees in which fowls had roosted, (the cobs and cotton seed applied as above), gave the best results that I have ever heard of. Four holes produced over 90 melons, some of them weighing over 30 pounds. The seed were planted early in April, the vines remained green all summer. When frost came there was not a yellow leaf on the vines, there being then a good supply of melons on them. No trench, logs nor salt were used here.

Oak logs (red oak or white oak probably best) have been tested and found to be good beyond conception. I therefore suggest them as an improvement on the above (holes).

Some recommend topping the vines when they are 3 or 4 feet long.

#### EFFECT OF PINE TOPS.

Last spring one of our neighbors dug a trench and partially filled it with green pine tops. The residue of the trench was filled with rich earth properly fertilized. Watermelon seed were then planted. The vines received no cultivation whatever, yet they remained green and stood the drouth far better than others in the immediate vicinity that were highly cultivated. The pine tops evidently exerted a beneficial influence in resisting the effects of drouth, but further tests will be necessary to decide the extent to which they can be profitably employed.

It would also be well to experiment in the same way with cedar tops.

Oak logs that have been cut a year or two will probably be best for present use, but if green logs have time to at least partially decay, they will doubtless be best.

Watermelons will not thrive two or more years in succession on the soil. It will be best to rotate between the logs with other crops for at least two years, in addition to removing the vines, as aforesaid. Then try melons again.

#### TO PREVENT THE RAVAGES OF INSECTS.

Construct a convenient number of small beds from 8 to 12 inches square in the immediate vicinity of the patch and fertilize well with stable manure, or rich earth, digging same into the soil. Then sow watermelon seed sufficiently thick to have a plant for about every square inch. The object of fertilizing is to make the plants tender, but no guano should be used, as it is offensive to the small speckled bugs that usually do the damage. If the weather be dry the beds should be occasionally watered, thus increasing the tenderness of the plants and making them more palatable for the bugs. These beds may be sown at the same time the hills are planted, or a few days earlier would not hurt.

The plants in the hills should be protected by drawing dirt around the stems close up to the leaves, but never hill higher than the leaves (the branches when they run out, should be wholly above ground.)

As a further protection, mix 1 part of wood ashes with 2 parts of soot and place in a basket. While the dew is on, dust the plants well with the mixture. This will drive the insects to the beds where they can be destroyed by throwing on dirt and packing down, or they can be picked off and killed. The plan of constructing beds has been thoroughly tested and will surely give satisfaction.

The above system of beds should be

continued by constructing new beds every two weeks, until all the insects in the vicinity have been destroyed.

#### CULTIVATION.

The vines should be plowed and hoed soon after every rain (but never worked when the ground is too wet, or when there is rain water or dew on the vines) until they run from 3 to 5 feet, when plowing should cease. But cultivation can be advantageously continued until the first crop of melons are grown, or until the ground becomes too thickly covered with vines, as follows:

Pass a long, narrow, thin blade gently beneath the vines sufficiently deep to break the crust, care being taken not to cut the roots nor bruise the vines. An excellent instrument for the purpose can be constructed of an ordinary hoe. Trim off the two sides, leaving a strip in the middle about 2 inches broad. Secure, with rivets, one of the pieces, cut off to said strip, and you have the desired instrument light and convenient.

An occasional patch, about 1 foot square and about 2 feet from the stem of the vine, may be dug deep. These patches will be of great service in admitting air to the roots, and the more carbonic acid gas they absorb, the sweeter will be the melons. Two patches for each vine will be ample, and in constructing them, care must be taken not to cut too many roots. The same patches may be dug after every rain until they become covered with vines.

It is impractical to employ the trench and log plan on a large scale, but it can be done to a sufficient extent to show the remarkable influence exerted by carbonic acid gas on vegetation. When farmers learn this lesson properly they will adopt necessary measures for burying all the wood possible, and for manufacturing carbonic acid gas by every other practical method in reach. This advancement will cause them to reduce the size of their farms and, as a result, make farming more pleasant and profitable. Seed for fall melons should be planted about June 7th. There is, therefore, still time to test these plans.

BRYAN TYSON.

Long Leaf, N. C.

#### BIRDS AND FARM PESTS.

We clip from Appleton's Popular Science Monthly the following article which contains some profitable suggestions for our farmer readers, now that spring time and the nesting season is at hand:

Mr. F. E. L. Beal, in a paper on Some Common Birds in their Relation to Agriculture, observes that whether a bird is injurious or beneficial depends almost entirely on what it eats. If crows or blackbirds are seen in numbers about cornfields, or if woodpeckers are noticed at work in an orchard, it is perhaps not surprising that they are accused of doing harm. Careful investigation, however, often shows that they are actually destroying noxious insects, and also that even those which do harm at one season may compensate for it by eating noxious species at another. Insects are eaten at all times by the majority of land birds, and during the breeding season most kinds subsist largely and rear their young exclusively on this food. When insects are unusually plentiful they are eaten by many birds which ordinarily do not touch them. Within certain limits birds feed upon the kind of food that is most accessible. Thus, as a rule, insectivorous birds eat the insects that are most easily obtained, provided they do not have some peculiarly disagreeable property. It is not probable that a bird habitually passes by one kind of insect to look for another that is more appetizing, and there seems little evidence in support of the theory that the selection of food is restricted to any particular species of insect, for it is evident that a bird eats those which by its own method of seeking are most easily obtained. Thus, a ground feeding bird eats those it finds among the dead leaves and grass; a flycatcher captures entirely different kinds; and the woodpecker and warbler in the tree tops select still others. The practical value of birds in controlling insect pests should be more generally recognized. It may be an easy matter to exterminate the birds in an orchard or grain field, but it is an extremely difficult one to control the insect pests. It is certain, too, that the value of our native sparrows as weed destroyers is not appreciated. Weed seed forms an important item of the winter food of many of these birds, and it is impossible to estimate the immense numbers

of noxious weeds which are thus annually destroyed. If birds are protected and encouraged to nest about the farm and garden, they will do their share in destroying noxious insects and weeds; and a few hours spent in putting up boxes for bluebirds, martins, and wrens will prove a good investment.

#### A NEW MONEY CROP.

Making Hay in Georgia at \$75 Profit to the Acre.

The Macon Georgia Telegraph says of Mr. W. H. Mansfield, a farmer, who lives in that city and farms near it, that when he was a boy he learned to "make hay when the sun shines," but now that he is a man, he "makes it all the time." He is a good farmer, to be gin with, as is proved by the fact that he "easily raises 75 bushels of corn to the acre" on his swamp land and large numbers of hogs, and he has achieved so great success with both corn and hay that "other farmers throughout the country are always seeking to learn his methods."

It is as a hay maker, however, that Mr. Mansfield has achieved most enviable distinction. He has a grass farm of "several hundred acres" near Macon, "from which he cuts three crops of hay every season." He grows "about six or seven tons to the acre" in a season, "which brings \$12 a ton on the market, and there is always a good demand." His grass crop "nets him about \$75 an acre."

His land is good, but there are thousands of acres like it in Georgia and North Carolina. He "cultivates" the grass on his farm and makes it pay. Being asked "if the quality of the land did not have a great deal to do with the yield" he replied: "Undoubtedly, but the man has a great deal more to do with it." As for the grass, which yields a "net" profit of \$75 an acre, every year, it is not a hitherto unheard of kind of grass at all. It grows in all parts of the South, and there is a good deal of it in South Carolina, in spots. General Hagood and Mr. W. G. Childs, of Columbia, we believe, cultivated it with some profit some years ago, if not more recently. The seed, or roots, can be obtained very cheaply, and when it has once been planted anywhere it grows right along, at the same place, for years, without requiring special attention. Fertilizing and cultivation, cutting and curing, are what make it pay \$75 net profit per year, to Mr. Mansfield every year. We do not recall its Latin name, but farmers in South Carolina usually refer to it as "that damp grass," when they do not call it "Bermuda."

Mr. Mansfield's money crop beats cotton; beats tobacco; beats grain; beats sugar beets; beats any crop with which we are acquainted. Other crops may bring more money to the acre—very few bring as much—but there is no other that we know of that leaves \$75 per acre clear profit in the farmers' hands, every year. If Bermuda grass had never been grown before in the United States, and Mr. Mansfield had just introduced it with the showing that he makes as to its profitability, farmers throughout the South would be falling over each other in their efforts to get a chance to try it, and paying high for the privilege. Some of them who have had it on their farms for years might do well to try it anyway—under the conditions exemplified by Mr. Mansfield.—Charleston News and Courier.

#### SPRING WORK.

Mr. Edwin R. Towle, of Vermont, who has written so many valuable dairy articles for THE PROGRESSIVE FARMER, is also a practical all-around farmer. In a recent issue of Farming World, we find the following timely article from his pen:

Ere we are aware spring will be with us again. The careful farmer has already made his plans for another season's work, so far as circumstances will admit, and should be perfecting all possible arrangements so that when the busy season of seeding arrives it may be improved to the best advantage.

If the agricultural implements and machines—the old fashioned tools not much used now—are in need of repairs or new ones are required, these matters should be attended to at once, before they are wanted for use. A farmer should not be extravagant in this respect or go beyond his means, but it certainly will not pay to use poor or unsuitable implements in the cultivation of the soil or harvesting of crops, when those a great deal better can be

afforded. Get those best adapted for the work to be done, use them properly and thoroughly, and then take care of them. The last is about as important as the first.

It is of the greatest necessity to have the land well plowed, fertilized and cultivated, and unless this work is properly done but indifferent results can be expected.

But equally important is it to get good, clean, pure seed. Without this there will be more or less of discouragement, failure and loss. The best seed of the best varieties should be sought for and if possible obtained, even if at a considerable increase in price over that which is poor, ordinary or fair.

All of the other work mentioned may be performed in the best manner, but if inferior seed is used the results cannot fail of being far from satisfactory. The securing of good, reliable seed is a matter that should concern every farmer. Many new and pestiferous weeds and plants are making their appearance here on the farms at the East, and very likely in other parts of the country as well. Some of these are of foreign parentage and others are natives of different parts of the United States. The seeds of these have been and are being scattered broadcast over the country from the grain and grass seeds that are being purchased and sown. It becomes farmers to be very careful in the selection of seeds that are to be purchased, in order to get the purest and best possible. Reliable seedmen should be able to meet this demand for pure, clean seed, and such should be patronized from truly the most economic motives in the end.

Occasionally the farmer will be benefited in getting new varieties of seeds, or even in obtaining the same variety from a different location and soil, but it will hardly be profitable to go into this business on too large a scale, making an experiment station of the farm. Let the stations do this kind of work.

Now I think the farmer can maintain and even increase the productive ness of his corn, potatoes and grains, by poorer care in selecting and grading. Take oats, for example. For years we have had the best of success in obtaining good seed by running the grain through a fanning and grading mill, that removes the small and imperfect grains, as well as foul stuff if there is any. By this process only the plumpest and most perfect grains are sown, and as a consequence the result is a large and uniform growth of straw, well filled with a heavy quantity of grain.

Since preparing seed in this way, I have noticed that these crops were remarkably free from weeds, which I attribute to this practice.

Potatoes for seed should be selected at digging time while the tubers are lying on the ground, choosing from the hills that produce the largest number of the most perfect specimens, as farmers cannot have failed to notice there is a great difference in this respect in different hills or parts of the field.

The same variety of corn has been kept up to a high standard of merit by judicious selection and care from year to year for generations. The careful reading of standard agricultural publications, will be of much help to the farmer in planning and carrying forward his work on the farm to the best advantage.

#### VALUE OF ARTICHOKE.

Artichokes are not given the attention they deserve; there is no crop on the farm that will give as great returns. They are drouth proof and a certain preventive of hog cholera. One acre will feed thirty shoats five or six months, as five to eight hundred bushels per acre is a common yield, while on rich soil one thousand bushels is frequently produced. As milk producers, fed to cows, the artichoke stands without a peer, and the tops make excellent feed for horse. They also make excellent pickles and salad when properly prepared, and withal are excellent fertilizers and easily grown.

Prepare the ground by plowing deep and pulverizing the lumps; mark the rows as for potatoes, four feet wide; cut to one eye and drop fourteen inches apart in row; cover about three or four inches; cultivate same as corn or potatoes. Plant from 1st to 15th of May. It is not necessary to dig them for hogs, as they will do their own harvesting, and freezing does not hurt them. Do not store in the cellar, but put in pits and cover with a layer of straw and four or five inches of earth.

I consider one acre of artichokes worth six acres of corn; try them next season, if only a small patch.—R. T. Patterson, Eldon, Mo., in Epitomist.

#### FARMING ON BUSINESS PRINCIPLES.

H. W. Williams, Hillsboro, N. C., writing in the Baltimore Farm Magazine, says:

"Replying to your letter concerning the work at this farm, I will say the situation now is about this: First. We have a large herd of fine Jerseys to care for. We have also thoroughbred hogs and poultry. Second. The problem before us is this: (a) To keep the stock healthy and growing. (b) To feed them entirely from the farm. (c) To get as much profit as is consistent with the first and second points. Third. Our method of work is this: (a) The chief food is ensilage. We make this from corn. The ear, stalk and fodder are all cut together. This mixture is then put into a silo. We made last year 200 tons on about 9 acres. The entire ensilage crop last year was 500 tons. It has kept perfectly. This year we hope to get 25 tons from an acre. Our ambition is to get thirty tons from an acre, and we expect to it.

(b) We raise cowpeas for soiling. These have not yet been tried as ensilage. (c) We believe in roots—beets, turnips and mangolds. Large quantities can be raised, and we rely upon them to tone up the constitution. (d) Alfalfa (lucerne) is our favorite crop for soiling. We carry the stock six months on alfalfa and cowpeas. Fourth. Our method of cultivation is this: (a) The land for corn is all ploughed in the late fall. Two heavy mules are used to an Oliver chisel plow. Then the corn is cultivated flat. (b) The manure is taken from the barns daily and buried at once. A deep furrow is opened and this is filled with manure. Upon this is planted the corn. In this way we expect the soil to get all the strength in the manure; the sun and wind to get nothing. (c) We believe in rotation of crops. Except for grass, the soil is never asked to give the same crop two years in succession. The soil is a heavy clay."

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#### SALT TO HASTEN DECOMPOSITION.

We are used to pickling meats and vegetables in salt to preserve them, that the fact is often forgotten that in small quantities salt hastens decomposition. Only when used in excess it hardens the meat, filling it with particles of salt so that it is an effectual bar to fermentation. A small amount of salt sprinkled over a manure heap will greatly increase its effectiveness by making it more soluble. It will also in small amounts be excellent for compost heaps to hasten their decomposition and conversion into effective fertilizers.—Ex.

#### HORTICULTURE

##### FIGHTING THE CODLING MOTH.

Correspondence of The Progressive Farmer. Bulletin 51 of Nebraska Station is an illustrated pamphlet of 50 pages, telling how to save apples from the attacks of the codling moth. The gist of these 50 pages is as follows:

The codling moth spoils too many apples in Nebraska. It does not follow the instructions laid down for it by the entomologists in the literature of the past. It does not lay its eggs in the calyx cup when the trees are in bloom, where the young worms can feed on the poison prepared for them and dutifully pass away, as well behaved worms should do. On the contrary, moth sleeps in his winter quarters till the blooms have fallen and the calyx is tightly closed. Then, when the mists of the spraying machine have cleared away, this wily Nebraska moth emerges and scatters its eggs over the upper surface of the leaves, about the first week in June. In seven to ten days, owing to the warmth, the eggs hatch, and the young worms scud for a hiding place within the young apple. Here it lives ten to fourteen days and grows fat, comes out, finds a hiding place and spins its cocoon, pupates ten days, and comes forth a full fledged moth about one month after the egg was laid. The husters which appear early in the spring produce four generations in a season; the laggards produce but two; the majority three.

The codling moth should be banished. This is not easy. Spraying alone, as generally recommended, will not do it. The mother is not easily poisoned. Lights in the orchard do not attract it. Sticky fly paper will not hold larvae. Only four-fifths of the mother enter at the calyx. Late spraying

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