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FARM AFFAIRS.

TOBACCO GROWING—FROM SEED BED TO WAREHOUSE.

An Exhaustive Article by an Experienced Author—Of Special Interest to Tobacco Growing Readers of The Progressive Farmer

BY J. M. BARKER OF HENRY CO., VA.

The cultivation of tobacco requires much thought and care. If this is neglected and you have made a common nondescript crop your labors have been in vain But, upon the other hand, if you have made a fine crop you will be well rewarded financially, which is the more enjoyable.

You may go in almost any community where tobacco is grown, and you will find some farmers who usually get good prices for their tobacco, while others, who have equally as good lands, never get satisfactory prices, and they attribute the success of their neighbors to "luck." This is not always true, the success or "luck" comes to the grower who looks closely after his crops, and never neglects them.

There is no crop grown that varies in price like tobacco; it sells all the way from 50 cents to $50 per hundred pounds

I will give you my experience in the culture of tobacco for thirty years First, I select some good variety of seed that will suit my land, as there are several kinds of broad and narrow leaf tobacco grown in my county (Henry) The narrow leaf is more generally grown, and I prefer it, as it makes a tough, sweet filler, and on good gray soil will make fine mahogany wrappers. After selecting the kind of seed, I then select a suitable place to burn a seed bed. I usually select a southern or southeastern exposure, where the sun can shine on it most of the day, which causes the plants to grow rapidly, and to come in early.

Tobacco should be planted by the 25th of May, but I have seen good, fine tobacco made that was planted after this date, but, as a general rule, early planting is the best.

After I have selected by land for a seed bed, which should be a new place each year, I burn the land sufficiently hard to kill all vegetation. This burning may be done at any time from November 15th until the 25th of March, but the seed should not be sown before January 1st. I sow one tablespoonful of seed to 100 square yards. By sowing this quantity of seed you will not have your plants too thick in the bed.

After burning I prepare the bed very very fine and from two to three inches deep. I never like to dig or coulter up the clay. From 75 to 100 pounds of some good tobacco fertilizer should be applied to each 100 square yards, and well raked in before seeding. About the first of March I cover the bed with a canvas, which costs from 2 to 4 cents per yard; thicker in reason the better for the plants.

When my plants get large enough to set out I take off the canvas—say about four days before drawing them; this will toughen them, so they will stand the sun better when set out.

If I think that my plants have been killed I resow about the last of March; but if the first sowing has not been killed the last sowing will be in the way, as early plants will get such a start that they will keep the young plants back.

The next thing of importance is to have good tobacco growing land. I usually select gray gravel soil for fine tobacco. I prepare my land thoroughly just before my plants are ready to set out. I lay off my land 3½ feet between the rows, and make the hills or pats three feet in the row. I drill from 400 to 500 pounds of some good fertilizer to the acre.

When I get a season for setting out, I draw out the largest plants first and keep them separate from the others, as a large plant will usually grow off quicker than a smaller one; by this plan I have my tobacco more uniform in the field. I never like for my plants to get bruised or the roots to get dry, as this will prevent them from starting off early after they are set out.

When I set out my tobacco I want to work it just as quickly as I can; this working will give the plants an early start.

Never let your tobacco get grassy, as this will stunt its growth, and make it small and probably late. I lay my tobacco by, or stop cultivation when the plants are about 10 or 12 inches high. I never like for my land to bake and I usually plow my tobacco after every hard rain until I lay it by. Some say that when it is raining nearly every day that they cannot keep the grass out, but I find by using cultivators I can soon run over my crop, and should the ground continue too wet to plow, I take hoes and scrape around the plants. By this plan I can keep the grass out without injury to the tobacco.

When the plants get in top you reach the most difficult points in growing tobacco—that is, to know just how many leaves to leave on each stalk. This will depend on the growth. If it is a large, vigorous plant, I top it to 10 or 12 leaves after priming. In priming I always leave the first two long leaves on the stalk—say, from 6 to 10 inches from the ground.

A tobacco plant is shaped like a hornet's nest. It starts small from the ground and slopes out broad; then it tapers to the bud. A small, weak plant should never be topped as high as a large, vigorous one. If you top too low the plant will have a tendency to droop, which will usually make a common leaf. If you find you have topped rather too high, break out the top leaves until it is right.

After topping, keep the suckers off Never let them get them get over 4 inches long. There are usually but two full coats of suckers to the leaf, but sometimes there are more, owing to the failure to get the first suckers off clean.

It is important to keep the worms off, as a leaf eaten in part will not make a wrapper, and will have to be put in the filler pile, which is less valuable.

When tobacco ceases to bear suckers it is usually ripe, though this is not an infallible rule. It is very important to have your tobacco ripe when cut, and good judgment should be used, as green tobacco brings the lowest price of all tobaccos. Tobacco should not stand long after it is ripe, as it will soon begin to dead, speck, and burn at the bottom of the plant, and will become thin and papery, which generally makes a nondescript tobacco.

If I am not satisfied about my tobacco being ripe, I take a leaf from an average plant, and hang it in a close room. Is the tobacco is ripe the leaf will yellow a whiteish color, or what I term a clear yellow. If it is not ripe, the leaf will go dark, and will be streaked with green. If this occurs let your tobacco stand longer before cutting.

I have been mistaken about tobacco being ripe from the color of the leaf. Tobacco is not always ripe when the leaf looks yellow. If the weather is dry and hot the leaves will turn yellow, while really the plant is green,

When cutting tobacco drop sticks in every fourth row, sufficiently close to hang the plants as they are cut. If I should decide to pick out the ripe plants and leave the green ones, the sticks left over will be ready for the second cutting. I usually put from 6 to 8 plants on each stick. One person can hold sticks for two to cut. When the sticks are full lay them gently on the ground with the stalks towards the sun, when the tobacco is supple, so that the leaves will not break off in hanging. I load on wagon two coops of about 50 sticks each, and haul to the barn, and place the sticks 8 inches apart on the tier poles. I like to fill a barn in one day, so the tobacco will yellow uniformly. Tobacco barns should be built 18 feet square and 5 firing tiers high, and, if built of logs, should be well chinked and daubed. Log barns are better than framed ones, as they hold heat better. After I have filled my barn I build a fire in each flue sufficient to make the tobacco supple alike all through the barn. This I do at night, and by morning the fires will have burned down. I then want a regular heat. If the weather is warm, 85 or 90 degrees will not hurt, but if the weather is cool this amount of heat will begin to dry the leaves. If the weather is cool 70 degrees will be heat enough. I always regulate the heat by the condition of the weather.

When my tobacco is yellow enough to commence the curing of the leaf I open my barn door to give it air. This is the most critical point in the whole crop, for if you start the heat before your tobacco gets yellow it will cure up green, or probably have yellow and green streaks through the leaves, and if you let your tobacco get very yellow before starting the fires to cure it will often cure red (or, as some call it, a pumpkin yellow), and will have a thick sluggish appearance; therefore, be sure that you have just the proper shade of yellow before you begin the curing process. I never let my tobacco get thoroughly yellow before starting up the heat. I like to have a little greenish appearance on the leaves near the stalks; this will all leave when the heat strikes it

The very best judgment should be used when the heat is started to cure, for if the heat is too fast the tobacco may scald or get into a sweat, which, if allowed to continue, will give the leaf a dingy, dull appearance. In starting the heat to cure your tobacco you may ruin it by a slow as well as a fast heat, for slow heat will cause a sweat as soon as a fast heat. If the sweat is produced by fast fires knock out the chinking just under the tobacco, open the door wide, give plenty of air until the leaves dry off; then start up the heat. If the sweat comes from a slow heat increase the fires until the tobacco is dry.

When you begin to raise the heat, go up to 105 degrees and hold at that for a short while. This will toughen the leaf; then gradually increase the heat to, say, 110 degrees, when the face of your tobacco resembles the grain of upper leather You may continue raising the heat, and if you reach 120 degrees without injury you are safe, for this heat will cure the leaf; but I always push my fires as fast as the tobacco will allow. This will give the leaf a clear look while a slow heat gives a dirty appearance. I usually run the heat up to 200 degrees, and keep it there until my tobacco is thoroughly cured. If you have fine white tobacco don't let the heat get over 180 degrees If you want to give your tobacco a good scorch you may raise the heat to 220 degrees.

When you have finished curing, and your tobacco comes in damp order, if it is a white yellow it will sometimes change by getting too damp. To prevent this change in color the tobacco should, while in proper order, be closed up tight in the barns.

When your tobacco has thoroughly seasoned, open it out, so that it may come in supple order. Then strip it out while in this condition. I usually make from 4 to 6 grades of tobacco in each barn. If I do not want to market my tobacco as I strip, I rehang in barn, placing 8 to 10 small bundles to each stick, leaving space between the sticks, so it will dry out. If you can get the leaves in a bundle all the same length it will look nicer. If I have fine tobacco I usually tie up each plant in a bundle of 6 or 7 leaves. Handle your tobacco carefully, as it always looks better when so handled, and when you place it on the market it will bring more than it would if roughly handled.

If I do not market my tobacco before spring or summer, I take it down when a warm season comes, let the leaf be soft and the stems brittle, put it down in bulk, and when the bulk is finished, put on some heavy weight to press the tobacco together, so that dampness cannot penetrate. If you get the order right the tobacco will keep all summer. The bulk should be kept covered to prevent dampness and mold forming on the heads of the tobacco. Before taking your tobacco to market be sure and have the tobacco on outside of bulks in pliant order, and then select a warm, damp time for selling If you comply with the foregoing directions you will more than likely be one of the lucky ones referred to in the beginning of the paper.

THE FERTILIZER QUESTION.

Correspondence of the Progressive Farmer.

I want to say through your paper to the farmers everywhere that I think it important that we look out about our fertilizers as well as our leaf tobacco. We certainly cannot raise much tobacco without fertilizers of some sort. That we shall now, under the present low prices of leaf tobacco, be compelled to pay several dollars more per ton for guano, is absurd. Rather than be run over in that way, I, for one, instead of reducing my acreage 25 per cent., am willing to reduce it 75 per cent., or to any amount that we can fertilize with our home made manure. What say you, gentlemen?

I suggest that we do without guano if they ask one cent more than they made us pay last year. We can do without it as long as the manufacturers can hold it, and the sooner we get a move on us the sooner we can complete the job. Let us set a price—say to them we will pay the same as last year, and if they don't want that, let them keep it. What say you, brethren?

Let us buckle on the whole armor and fight like men. Is it not best to meet both the guano and the tobacco trust at the same time? Is certainly seems so, since it makes little difference whether we make much tobacco or not until we finish the fight

J. D. YATES.

Chatham Co., N. C

There are some things about an incubator that very few learn from reading directions If we were getting out a book of directions we would tell as nearly as possible what to do and then taken up about the same amount of space in telling what not to do It is not in failing to do what should be done so much as in doing so many things that should not be done that failure comes to the beginner with incubators. Send for every incubator catalogue that is offered and study carefully what the makers say, and choose that one which seems best to you, and nine times in ten you will have made the best selection.—Ex

BALANCED RATIONS FOR THE SOIL.

Correspondence of the Progressive Farmer.

In the application of manure and fertilizers to the soil success depends as much upon proper proportion as on quantity. It is much like feeding animals. A cow or steer fed too largely on fattening food loses muscle and strength, and in time may become sick through the unbalanced ration. Again, with little or no fattening grain or food, the animal may grow muscular and bony, with meat hardly fit for the table. It has required years of experiment to discover the right combinations for cattle, and no man would enter into dairying, cattle or sheep or poultry raising without some fundamental ideas of what constituted a regular balanced ration. Yet many continue to feed the soil without any idea of the meaning of the food. It is piled on and plowed under in any sort of mixture and proportion until the soil gets sick through indigestion. That is, too much of humus or other substance accumulates there, and this sours and injures the crps.

The same fertilizer does not do for every soil, nor for every crop, and to find out a well-balanced ration it is necessary to study local conditions and consider what has been raised on the soil in the past as well as to know what will be planted therein the future. By studying well balanced rotations of crops we partly simplify the subject before us, because in a good rotation of crops we add to the soil different manurial articles that always nourish and feed the soil. Different crops require different mineral elements in different proportions. All soils require humus, enough, in fact to hold the water so that the manure elements will not leach away too quickly. Humus thus added in the way of green manure or barnyard manure, accomplishes a purpose that we cannot get along without, but it does not suffice alone. Its function is more to keep the mechanical condition of the soil right than to add distinct fertilizing food to the crops. All crops rob the soil of this humus, and it must be added constantly, and a rotation of crops should always include one green crop that can be plowed under.

A substitute for this is an application of fifty to one hundred bushels of wood ashes to the acre annually; but the wood ashes do not alone supply a perfectly balanced ration any more than the humus or green crop turned under The soils must be fed with more phosphoric acid and potash than are contained in the wood ashes The application of the mineral elements in different forms is almost essential to our old soils. Alone they do not answer the purpose, but in conjunction with humus, green food, or wood ashes they produce results of great value. We cannot afford to neglect either, for they all help to constitute the balanced ration. Some soils and some crops require much larger proportions of one than another, but they all demand both the humus and the mineral elements to some degree.

With best wishes for The Progressive Farmer, C. S. WALTERS.

Shepperson, in his Cotton Facts, just out, gives the commercial crop of cotton at 9 500 000 bales, composed of about 400 000 bales carried over (in interior towns and an farms) from the previous crop, and indicates a yield this season of 9 100 000 bales, distributed as follows: North Carolina, 510 000; South Carolina, 760 000; Georgia, 1,300 000; Florida 50 000; Alabama, 960 000; Mississippi, 1 350 000; Louisiana, 510 000; Texas Indian Territory and Oklahoma, 2 750 000; Arkansas, 640 000; Tennessee, 240 000; Missouri and Virginia, 30 000.

FARMERS' INSTITUTES.

The Commissioner of Agriculture has arranged the first of a series of Farmers' Institutes, which will be held during the spring.

The following are the first dates selected:

Laurinburg, February 1st and 2d.
E field, February 8 h.
Wilson, February 9th and 10th.
Snow Hill, February 12th.
Duplin, February 14th.

Commissioner Patterson will be assisted in these institutes by Dr. Curtice, Dr, Kilgore and others.

The Cotton States Commissioners of Agriculture, at their recent session in New Orleans, petitioned the Governor and legislators of each and every cotton State, to enact laws requiring the county tax assessors to report at stated times to the State Commissioners of Agriculture of their respective States the number of acres devoted to the cultivation of cotton and other products; the condition of these products during the period of cultivation; estimates of yield thereof; shipment there of, and such other information relating thereto as may be deemed useful.

HOW MUCH PLANT FOOD DOES THE AVERAGE COMMERCIAL FERTILIZER CONTAIN?

From the annual reports of seventeen States we find the average to be 317 pounds of available plant food, leaving 1 683 pounds of the ton unavailable, commonly denominated filler. Separating this 317 pounds into the three most essential compounds, we have: Ammonia, 39 pounds; phosphoric acid, 244 pounds; potash, 24 pounds. At the commercial value usually given these compounds, we have $18 39 as an average for the crude material. If to this we add freight, commissions, interest on investment, we would have an additional cost of at least $6 per ton, or a total of $24 39.

It is stated in the Charlotte Observer that a Watauga county real estate dealer sold one walnut tree last week for $1 100. Walnut timber always sells well and the market is never crowded. Suppose your father when you were a boy, had set out a ten-acre orchard for you, and had taken care of it till you were 21; wouldn't that have given you a start? Why not do it for your boy?

Dr. D. E Salmon, chief of the Bureau of Animal Industry, has been lecturing to the Kansas farmers and urging a policy of retaliation on those nations which discriminate against American products. "Shall we," said he, "consent to the prohibition of our meats on the ground of trichinae, borax as a preventative, and alleged danger from Texas fever, and, on our part, continue to accept hides from cattle which died from anthrax, brandy made of potato spirit and oil of cognac, wines fortified with cheap alcohol and preserved with borax? Are not French peas colored to make them green, and German sausage made from the meat of broken down horses?"

FARMERS' QUESTION BOX.

HOME FERTILIZER MIXING.

EDITORS PROGRESSIVE FARMER:—I propose mixing a few tons of home fertilizer this season and would have you tell me if the formula and materials as prepared by the Home Fertilizer Chemical Works, Baltimore, Md., is as good a preparation as I can get for the price asked. They say its analysis averages: Phoeporic acid, 12 per cent; ammonia, 9 per cent.; potash, actual 7 per cent., and embraces a total of 620 pounds to be mixed with good dirt, stable manure, or crude cotton seed or all combined to make 1380 pounds plus the 620 pounds, one ton, costing f. o. b. Baltimore $9 50 cash, or $10 50 payable November 1st.

This formula has been on the market for several years and perhaps you know about its value already; if not please instruct me how to proceed to be sure I am buying something that will make corn, cotton and peanuts grow. I don't know anything about chemistry and am entirely dependent on the manufacturer when I buy fertilizers.

I highly value the Agricultural Department of The Progressive Farmer and am sure the whole get up of the paper is not excelled by any paper in the State. I am, yours very truly,

Enclosed find stamp for reply. J. C. F.

Johnston Co., N. C.

(Answer by Corresponding Editor Emery, M. S.)

I know nothing of The Home Fertilizer Chemical Works. If the 620 pounds contained the percentages claimed in the analyses, the values would stand thus:

620 pounds × 13 — 74 4 pounds phosphoric acid at 4 cents		$2 976
620 pounds × 09 — 55 8 pounds ammonia or 46 pounds nitrogen @ 12½		5 52
620 pounds × 07 — 43 4 pounds potash @ 5c		2 170
Total value		$10.66

The valuation is taken from the December Bulletin. The valuation is satisfactory if the ingredients are put together from good material. When the mixture has been raised to 2,000 pounds the amount of phosphoric acid, nitrogen and potash will have been increased a little but covered by cost of mixing.

The percentages of the ton of commercial manure will then stand about as follows: Divide the pounds of each ingredient by 20 and the quotient will be the percentage of the same in the mixture as it will be used; or phosphoric acid, 3.7 per cent.; nitrogen, 2 3 per cent, and potash 2 2 per cent. The nitrogen and potash rank with the ammoniated goods-which have been analyzed but in phosphoric acid there is only from one third to one-half as much as is found in those commercial articles.

This is all based on the claimed composition without regard to the sources of the different ingredients, but supposing them to be from the best sources. If the "ammonia" is obtained from refuse leather and the phosphoric acid from bone, the valuation drops considerably.

We do not find The Home Fertilizer Chemical Works named among those reported on in the Bulletin for December, but the company may be all right and its goods found in spring analyses. We would advise our correspondent to submit a sample to the State Department of Agriculture after taking it

[CONTINUED ON PAGE 8.]