THE PROGRESSIVE FARMER.

"The Progressive Farmer is a good paper—far above the average—and possibly the best advertising medium in N. C." Printers' Ink.

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

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PAPERS.

Progressive Farmer, State Organ,	Raleigh, N. C.
Caucasian,	Raleigh, N. C.
Mercury,	Hickory, N. C.
Rattler,	Whitakers, N. C.
Our Home,	Beaver Dam, N. C.
The Populist,	Lumberton, N. C.
The People's Paper,	Charlotte, N. C.
The Vestibule,	Concord, N. C.
The Plow-Boy.	Wadesboro, N. C.
Carolina Watchman,	Salisbury, N. C.

Each of the above-named papers are requested to keep the list standing on the first page and add others, provided they are duly elected. Any paper failing to advocate the Ocala platform will be dropped from the list promptly. Our people can now see what papers are published in their interest.

AGRICULTURE.

Sixteen thousand barrels of apples were gathered last fall from three adjoining farms in Maine.

Don't be afraid to plow the orchard in the spring. It won't hurt it. But do not go deep, only about three or four inches.

It is announced that some wonderful things can be made of ordinary corn stalks and a company has been formed to start an industry of that kind. We expect another trust "is a brewin'!"

It is stated that six million bushels of onions were imported into this country last year and they cost us about $3,400,000. Yet we can grow onions to perfection. Some plan should be adopted to remedy this matter.

Live stock on the farm makes the farm capable of giving a profit. The animals provide a market at home for a large share of the products and permit of selling in concentrated form that which would otherwise be too bulky to haul.

When clover seed is sown early the freezing and thawing of the ground get it covered well before there is enough warm weather to sprout it. When sprouted it is so well protected that it is not injured by a freeze which would kill it if the roots were exposed.

However low the prices may be, it will always pay to do the best we can. If the profit from a good crop of wheat or corn, from a good beef animal, is small, remember that it would have been much smaller still if the crop or the animal had been a poor one.

Potatoes are not much injured by the shade, and are a good crop to grow in a young orchard; and the potash, which is a good fertilizer for this crop, is also good for the trees. Corn is also a good crop to grow there, and it can be grown two or three years in succession.

It is not the land, but the man, usually, at fault when the crops are poor, and the man is to be credited when they are large and profitable. It is very certain that the success of a man's work depends upon the amount of intelligence possessed by the man himself.

WEEKLY DIGEST OF EXPERIMENT STATION BULLETINS.

TIMELY POINTS ABOUT TOCACCO.

Bulletin 122, of North Carolina Station, imparts much valuable information about tobacco culture. It is a timely bulletin. The wars in Cuba and the Philipine Islands have destroyed the plantations from which the world has drawn a large per centage of its supply of tobacco, and this will give a decided impetus to the industry in this country. The preparation of seed beds will begin in the lower South in February and progress northward till it ends in Connecticut and Wisconsin in April.

Sir Walter Raleigh's expedition found the Indians cultivating tobacco around Albemarle Sound in 1584, and the whites began its cultivation on a commercial scale in 1616 It soon became the most important product of the Virginia colony, and its use and production have increased till to day tobacco is grown in 42 of the 50 States and Territories of this Union.

The census of 1890 show that, excluding the counties that produced less than one acre, there were 692,990 acres in tobacco in 1889 which produced 488,255,896 pounds—an average of 705 pounds per acre, which brought the growers $340,844,449 –an average of a little more than 7 cents a pound, or $50.28 per acre.

Kentucky produced nearly half of the total yield, Virginia standing second, Ohio third, North Carolina fourth, Tennessee fifth, Pennsylvania sixth, and Wisconsin seventh; and these seven States produced 95 of every 100 pounds of the entire product of the Union, though Maryland, Missouri, New York, and Connecticut produced more than seven million pounds each. The total number of planters was 205,862.

Of the seed leaf types (cigar tobaccos) the average yield per acre varied from 854 pounds in Ohio to 1 402 pounds in Connecticut The average yield per acre of the manufacturing and export varieties varied from 375 pounds in North Carolina to 830 pounds in Missouri.

The average price per pound in 1889 varied from 4½ cents in Missouri and 47 10 in Maryland to 12 4 5 in Connecticut and 14 1 5 in North Carolina, though the Louisiana product, which was less than 50,000 pounds, brought the growers an average of 25 15 cents per pound. In Louisiana, Florida, and Southern Texas the cultivation of the finer types of Cuban tobacco has developed considerably since 1889 The above prices are averages; the finest crops often bringing 50 cents to $1 per pound.

To beginners in the culture of tobacco, the bulletin gives this warning: "None of the other large agricultural crops requires such careful and intelligent culture; and none yields so readily to the varying influences of climate, soil, fertilizers, cultivation, harvesting, curing, and handling; and there is scarcely another farm product the money value of which is enhanced to such a degree by a practical and intelligent knowledge of these agencies."

On the other hand, let it be remembered that the very fact that unusual care and skill are required insures a limited competition and a reasonably certain remuneration to those who do exercise the necessary care and skill.

In this connection we recall a Louisiana bulletin digested in these columns some months ago, in which the opinion is expressed that careful farmers of average intelligence may readily learn to plant, fertilize, worm, sucker, cultivate, harvest, cure, and handle tobacco so as to turn out the best product of which his soil and climate are capable.

The method followed in the introduction of the tobacco industry into the hill country of northern Louisiana was a most intelligent one and it brought immediate success. Experiments were made on a small scale to test the adaptability of the soil and climate to the production of the various types of tobacco, and to test the virtues of various mixtures of fertilizers. These having resulted satisfactorily, a joint stock company of planters and merchants was formed for the erection of a factory, and an expert, well endorsed, was secured from the tobacco-growing region of North Carolina, to instruct the farmers in the best methods and to superintend the construction of the factory and the operation of the same. This man had been reared on a tobacco plantation and had served in all sections of the factory, from apprentice to superintendent. Under his guidance no mistakes were made.

The long-continued cultivation of tobacco in different climates, different soils, and by different methods has given rise to much variation in type of the plant. There are now more than 100 different named tobaccos grown in the United States, many of which, however, are only local synonyms for one kind. There are but three types, under each of which there are several sub classes each embracing a number of varieties.

Type I.—Domestic Cigar Tobacco and Smokers. Of this type, 7 varieties are classed as "seed leaf and Havana seed," and 7 are classed as "other cigar and smoking tobacco."

Type II.—Chewing tobacco. Of this type, 9 varieties are classed as "fine cut and plug fillers," and 9 as "plug wrappers."

Type III.—Export Tobacco. Of this type, 11 varieties are classed as "English shippers," 17 as "Continental shippers," 3 as African shippers," and 2 as "Mexico, South American, and West Indies shippers."

As to soils, it is stated that while tobacco will grow in almost any soil that will produce other crops, no other crop is so radically affected by different conditions of soils and fertilizers. Success in producing a certain type of tobacco depends almost entirely on the soil and fertilizer. A soil may be ideal for one type and totally unfit for another. Soils of light color produce tobaccos of light color, and dark soils produce dark tobacco. The color of tobacco is also much affected by the texture and condition of the soil and the composition of the fertilizer. The seed leaf varieties produce a finer leaf on light sandy lands, but the demand in recent years has been for darker colors in cigar wrappers, and these are now grown upon heavier loams, highly fertilized. The fine yellow tobaccos of North Carolina and Virginia are grown upon light gray sandy soils.

In producing the fine aromatic flavors upon which the price of tobacco so largely depends, climate is probably the most important factor, but proper curing has an important influence also. Further than that high temperature and a moist atmosphere evidenced by heavy dews are favorable, the qualities of a tobacco climate are not so well understood as are those of a tobacco soil. Perfect drainage, either natural or artificial, and fine tilth are essential to the best results. The more sand in the soil the finer and silkier the leaf, but the more clay the heavier the yield.

Of the 75 varieties analyzed at the Station, the highest priced cigar wrapper was grown in Florida on a light sandy loam without any fertilizer, the yield being only 550 pounds per acre. The next best seed-leaf specimen was grown in Connecticut on a light sandy loam very heavily manured, the yield being 1,800 pounds per acre. The Massachusetts and Connecticut growers apply both stable manure and commercial fertilizers very heavily and say their lands are improving.

Tobacco lands in Florida range in price from $3 to $30 per acre; in North Carolina from $10 to $30, and in New York, Massachusetts, and Connecticut, from $50 to $250 per acre.

As to fertilizers, it is true that tobacco requires for the best results large applications of highly soluble and quickly available manures than most other crops, because its growth is made in two or three months in the hottest season of the year, the growth is heavy, and while drawing heavily on the soil's supply of nitrogen, lime, and potash, it returns nothing to the soil. The best form of lime for tobacco is gypsum, and the best form of potash is the sulphate. The muriate and kainit injure the burning quality of cigar and smoking tobacco. Nitrate of soda is one of the best forms of nitrogen, because most quickly available, but cotton seed meal, castor pomace, dried blood, etc., may be used if applied early so that it may rot down and become soluble. A good mixture is made of 1,100 pounds acid phosphate, 200 pounds sulphate of potash, 600 pounds cotton seed meal, and 100 pounds nitrate of soda. In this mixture the nitrate of soda will supply the crop with soluble nitrate during its earlier growth, while the cotton seed meal rots down and becomes available for the later period of growth. The acid phosphate is rich in lime.

Since nicotine is the active, stimulating property of tobacco, one would naturally suppose that the larger per centage of nicotine in the weed the greater its value, but the reverse is true; nicotine being such a violent poison that the smallest possible quantity of it is quite sufficient. An excessive quantity of nitrogen in the soil produces a rank, coarse, heavy weed containing a large per centage of nicotine. Such tobaccos have not the most delicate flavors nor do they burn well Limestone and heavy clay lands produce strong, coarse tobacco with a large per cent. of nicotine. The per cent. of nicotine in the leaf is greatest just as it attains maturity, and much of it can be driven off by the various process of fermentation incident to curing and manufacture.

The marketable part of the plant is the leaf stripped of its mid-rib, or central stem, and varieties differ widely as to the size of this central system and consequent waste. In some varieties it is less than 17 pounds in each 100 pounds, while in others it is more than 31 pounds in each 100.

Smoking tobaccos bring the highest prices, and bright chewing tobaccos rank next.

MISCELLANEOUS MATTERS

At the Michigan Station ten lots of lambs, 10 in each lot, as nearly even in size and quality as could be gotten, were fattened on ten different combinations of feed stuffs, with the following results:

Those fed a ration of corn, roots, and clover hay gave a net profit of $1 50 each; those fed corn, roots, and alfalfa gave a net profit of $1, 59 each; those fed on corn, roots, and a mixture of clover and millet hay gave a net profit of $1 68 each; those fed corn, roots and millet hay gave a net profit of $1.46 each; those fed corn, roots, and a mixture of clover hay and oats straw gave a net profit of $1 66 each; those fed corn, roots, and straw gave a net profit of $1 66 each; those fed corn, roots, clover hay and corn stalks gave a net profit of $1 82 each; those fed corn, roots, and corn stalks gave a net profit of $1 98 each; those fed corn, roots, clover hay, and bean straw gave a net profit of $1 67 each; those fed corn, roots, and bean straw gave a net profit of $1 63 each.

The corn was a yellow dent variety, the roots were rootabagas, and the clover, alfalfa, millet, and straw were of average quality. The corn stalks were cut into lengths of 1 to 3 inches on an ensilage cutter. All feeds were produced on the station farm and an adjoining farm and are charged at market prices.

Dr. Garber, a Swiss scientist, gives the following causes for tainted milk: Bad fodder, bad water, bad air, uncleanliness in caring for milk and vessels, keeping milk too long, bad ventilation and high temperature in the storage room, neglecting to aerate and cool the milk as quick as drawn, slow transportation, sick cows and cows in heat.

H. M. Fugel, a farmer and expert miller, of Missouri, tells a Farmer's Institute that wheat should not be harvested till thoroughly ripened. Such wheat keeps better in shock, stack, or bin, and it makes much better flour than that harvested in the dough stage of the grain. It will look somewhat shrunken, but in milling, the bran flakes off more easily, the flour is whiter and rises better in the oven than that from the smooth, plump wheat cut earlier. The best flour also comes from wheat which has gone through the sweat while yet in the straw. All wheat sweats, either in the stack or bin, and the gain in quality by having it sweat in the straw will more than pay for stacking rather than threshing from the shock.

TOBACCO MARKETS.

Correspondence of the Progressive Farmer.

ALAMANCE Co, N. C.

A few days ago I was on the tobacco market at ———, a leading market for that commodity. The day was fine. The condition of the tobacco was good; neither too hard nor too soft; the break was not heavy, the sale lasting about three hours. Quite a number of buyers were present, and among them one whom the auctioneer called by abreviation A. T. C., which in their lingo stands for American Tobacco Company. Every pile found a purchaser, though some of it only brought half enough to pay for the fertilizer used to produce it, and the producer got nothing for all his labor in raising it, and putting it on the market. In fact, there was not a pile on the break that did not sell from three to five times less than the same tobacco would have brought a few years ago. The warehouse men on being questioned, "When will the market be better?" replied: "We can't tell you a thing. The A. T. C. say they have enough on hand to last them four years. There is so much of the stuff, and it is so sorry, we can't even form a conjecture as to what is to be the future of the market." Now if those who make their living by speculating in tobacco are entirely at sea, and in uncertainty, how is any farmer to act? Is he to go it blind?

After the sale, I had a talk with a shop keeper who retails vast quantities of manufactured tobacco He said that for many years there had been no marked change in the price of manufactured tobacco. No wonder, then, that some of the manufacturers are making colossal fortunes and becoming millionaires.

My mind naturally reverted to the Border Tobacco Association, which was organized in Durham some years ago, and had such a glorious meeting in Oxford, where the Association had the hospitalities of the town extended to themselves, they were dined and wined to such fullness that it took three men to moderate the meeting, and the minutes and action of the various committees got so mixed up that they never could be printed, notwithstanding a large collection was made for that specific purpose. The three delegates from Alamance, B. K. and P., walked up to the clerk's table and laid down each a silver dollar. I was not a delegate, but I was there and saw and heard something. No minutes have ever been printed; at least, none have ever come to Alamance, nor have those silver dollars ever been returned, and as we had to tear ourselves away from our kind hosts and run for the train, we cannot think for a moment that a charge was against the chairman, for Baldy gave him a bottle of his best.

As the Association is defunct, I presume it is lawful at this late day to speak of the proceedings. Well, to begin: Some time during the second day of the meeting a delegation from the A. T. C. was announced. The chairman ruled that the Border Association, being a secret organization, the delegates from the A. T. C. could not be admitted to the Association. However, a committee from the Border Association was appointed to confer with them and report to the Association. As well as I can recollect, there were five delegates from the A. T. C. One of the Mr. Dukes and Mr. Geo. Watts, of Durham, were reported to be the chief speakers. The substance of their remarks as reported to the Border Association, was:

"We, the American Tobacco Company, have not organized to injure the farmer. We are going to do what the farmer has been making unavailing attempts to do: that is, to knock out the middle man and dispense with the leaf dealer. To do this, we intend to put on each leading market a salaried buyer; by so doing, the tobacco bought by us can be more uniformly graded. The profits that now go to the leaf dealer will be divided with the farmer. We intend to deal fairly and liberally with the farmers, but you farmers must not call us by hard names, for we have enough tobacco now in storage to do us several years, and it is just as we please whether we buy your tobacco or not."

Now it seems that the members of the Border Association became afraid of the A. T. C. and saw that that formidable trust or combine was stronger than the Jute Bagging Trust. As the sons of Jeremiah were to David—too hard for him, so were the Dukes, Watts, Allens Ginters, et al for the Border Association.

The price of tobacco soon declined; down, down it has gone, while the goods of the A. T. C. have remained about the same. Uncle Wash Duke, his sons and Mr. Watts have become millionaires. Many persons blame them. I do not. They have done, and are still doing, what the majority of the human race would gladly do.

What is needed is to abolish all trusts and combines; abolish the tobacco tax and give every man an even chance in life. The Messrs. Dukes and Watts are liberal supporters of their respective churches, patrons of learning and abundant in charities. How they spend their money does not concern us; but the manner in which they get it does. They have pretty effectively knocked out the Durham tobacco market, the leaf dealers and the farmers, too.

How different was the course of that noble man, the founder of the Durham tobacco trade? I refer to Buck Blackwell. He gave the farmer the worth of his tobacco. He was, and still is, a magnanimous man, and his name will be long held in fond remembrance by the old patrons of the Durham tobacco market.

As it is now, the hired buyer of the Dukes, a branch of the great A. T. C., starts through the different warehouses and giving but a glance at the piles of tobacco, bidding capriciously, giving one price one day, and the next day another price for the same quality. while the warehouse man goes hopelessly and helplessly along calling out, "Bid up, gentlemen; give the old man the worth of his tobacco."

Now, my farmer friends, what are you going to do about it? Are you still going to vote in the future for the parties that make combines and trusts possible? Nay more foster and cherish them. Are you going to plant full crops of tobacco? Please don't. Plant less and make it better.

B F. WHITE.

POULTRY YARD

SOME GENERAL PRINCIPLES OF BREEDING FOWLS.

Times without number we hear it said that "the male is one-half the pen." If we stop to consider that every chick among the progeny inherits one half the blood of the male, while only one-sixth, one tenth, or one twentieth, as the case may be, derive blood from each female, should we not decide that the male is far more than one half the pen? Exceptional vigor is certainly a first requisite for the male. The one cock that bosses all the rest is the very one to select for a breeder, if he is good otherwise. Extra weight is not always greatly to be desired in a cock. It often leads to injury of his mates; and as the bodies of progeny follow the female largely, extra weight is not so necessary for the male bird. Since the hens should be selected from exceptional layers, it follows that they should be hens, rather than pullets, as young pullets have seldom been well tested. The eating capacity of both parents deserves the best attention, as this, coupled with good digestion, usually distinguishes the best, the most vigorous fowls. Mating at the proper season is also a cardinal point. Early February or March for Asiatics, and late March or April for Leghorns and kindred breeds is, as a rule, far better than earlier dates.—American Agriculturist.

THE HEN ON THE FARM.

Correspondence of the Progressive Farmer.

This paper will begin with a confession. I was originally a total disbeliever in the hen. She was with me a fowl simply brought into existence to make life miserable for us poor men and to be tolerated only because of the pleas of the gentler sex. Born with an insatiable appetite and the most destructive of all creatures so far as relates to her beak and claws, I had thought she never should be allowed to occupy any place of consequence upon my premises. I no longer hold this view. Why?

Well, I still hold that the hen out of place is a troublesome thing. She will do an immense amount of damage out of her sphere. So I have been trying to fine the hen's sphere, and we, wife and I, think we have found it. Early in the game it began to be evident to me that the hen, in proportion to her value, was more profitable than any other thing in the shape of beast or fowl upon the farm. My wife attended to that branch of the business and does now. Keeping a record of her transactions, she was always able to show a balance on the right side. This opened my eyes gradually, and from being an opponent of the hen, I began to look with favor upon her. Beginning with a few hens, by degrees we increased our flock until it outgrew the house and then we made plans to enlarge the building. The past winter I have got out timbers for a hen house twice the size of the old one.

The feed is all raised on the place except the bran. In the morning the hens get a ration of warm feed composed of bran and meal. Later in the day they are fed corn on the cob, so that they may be compelled to work for what they get, or buckwheat or oats scattered in chaff or straw. In winter a cabbage is hung up in the house at such a height from the floor that they can only reach it by jumping. Shells are provided during confinement and a box of dust which they greatly enjoy. By setting hens early we get pullets which begin to lay in the early winter and keep it up while eggs brin a good price. As to breed, we have White Leghorns and barred Plymouth Rocks.

We fence the garden with wire and have a yard inclosed in the same way in which the hens are confined whenever occasion demands. Instead of looking upon the hen as an enemy to our peace and bodily comfort we consider her one of our best friends.

E. L. VINCENT,
Broome Co., N. Y.