

PROGRESSIVE FARMER

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

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THE PROGRESSIVE FARMER is the Official Organ of the North Carolina Farmers' State Alliance.

FARM GLEANINGS.

According to a proposition at a recent meeting of the Cabinet, Secretary of Agriculture Wilson will soon begin a series of agricultural experiments in Cuba, Porto Rico, Hawaii and the Philippines. If Congress will make the necessary appropriation, Secretary Wilson promises to carry on investigations of soil and climate and their adaptability to certain natural products, which will be of great value. Mr. Wilson believes that rubber can be produced in Porto Rico as well as in South America and Central America.

The following table is from Farmer's Bulletin, No. 106, of the Department of Agriculture, and gives the names of all the distinctively dairy breeds of cattle, the number registered and the number living in 1898:

Breeds.	No. Registered.	No. Living.
Ayreshires.....	22,000	6,050
Brown Swiss.....	2,871	1,250
Devons.....	18,343	10,000
Dutch Belted.....	1,129	500
Guernseys.....	16,600	11,000
Holstein Friesians.....	100,000	60,000
Jersays.....	184,000	90,000
Polled Durhams.....	1,321	1,200
Red Polls.....	119,063	(?)
Shorthorns.....	386,545	140,000
	731,878	320,000

Includes both American and Great Britain.

A correspondent of Farm and Fertilizer tells of the workings of the Grange in his neighborhood. The following extract may well be considered by Alliances and other farmers' clubs:

There is a Grange located in one of our counties that meets at the homes of its members, each in turn, once a month to discuss matters of interest to farmers. After the formal meeting, which lasts about ninety minutes, the members look over the premises and ask questions and offer suggestions. The owner knows three months before hand that the society will be at his place that day, and naturally he has things in the best shape for inspection. The condition of his farm, buildings and animals settles his standing as a farmer. If he is a master of his art his surroundings unmistakably show it. If he is only an "average" farmer the amount of wise talk can conceal that fact, and thereafter his talks and advice are rated at their true value by others.

The following item from an exchange is reprinted in The Progressive Farmer not because it contains anything new, for it does not. We give it merely as a timely reminder:

As the season of inclement weather approaches, the farmer and his family spread the time when mud, slush and snow are sources of aggravation. The good housekeeper knows that much labor and annoyance will be added to the many cares because of such conditions. Why not build walks to as many of the outbuildings as possible? One cannot farm without coming in touch with mother earth, but there is no need to just wade. Such improvements cost money, but they also increase the value of property. Mud wears out shoe leather, clothes, car-

pets and human nerves and wet feet destroy health and enrich the physician; why would it not be economy to make walks around the premises and lessen these unpleasant features of the farm life? Farmers are entitled to as many of the comforts of life as are men of other occupations. There is need of making a study of walks for the farm home that will be durable and of the smallest cost possible.

The New York Commercial Advertiser says:

"Up to the present time the tiller of the soil has become in every country except the United States either a serf or a peasant. How the American farmer is to maintain his economic independence and superiority is a problem of vital importance. With an abundance of free land at his disposal, he has until now been able to raise large crops at a low cost; but this will not suffice unless he learns also how to market them at a fair price and to secure for them a fair share of the profits. He is no longer an economic unit, but his position depends upon his knowledge of the conditions of the market as well as upon his ability to raise crops; the modern farmer must be at once agriculturist and business man."

There's a world of sense in this paragraph. You may think of it all winter and not exhaust the subject. Give it your attention, for the problem deserves serious consideration.

FARM AFFAIRS.

VARY THE FARM PRODUCE.

Dr. J. B. Alexander, a reader of The Progressive Farmer and a true blue Allianceman, has a thoughtful letter in Sunday's Charlotte Observer. We copy it herewith and commend it to our readers:

How many farmers in our State plant cotton as their sole crop, and if it fails from any cause or the price is not sufficient to cover the cost of production, the farmer is badly crippled or broken up entirely? We are blest with a climate and soil that will produce all most any crop not strictly tropical. In North Carolina we need an agricultural revolution. Cotton has held—in this section at least—the leading place in agriculture, at the expense of crops that would pay much better in every way. This is an age when intensive farming is called for; when every acre cultivated should be made to produce three times as much as formerly; every one from the most intelligent to the most ignorant, can work with double the energy and far more pleasure when he sees the fruit of his labors yielding an abundant harvest, and that he is to be handsomely paid for his labor.

Why not embark into vegetable culture, supply all that the town will use, or sell to the pickle factory, where they will buy all that is raised? Cabbage is always in demand the year round: it can be shipped here at a profit, it appears that it could be raised, without the cost of shipping, at a profit. So with onions, which are very prolific and seldom fail to bring a good price. I am sorry to see at almost every door Northern onions, when we have thousands of acres lying idle, or producing not enough cotton to pay for the cultivation. All the small fruits that last but a short time would find ready sale. The great number of children and young people who work in the many factories in this city, would be glad to partake of such delicacies, and by all means let them have them.

Tomatoes, cucumbers, pepper, beans, potatoes, both sweet and Irish, are easily cultivated and a ready market is found for them. (By adopting this plan, more time is had to raise more grain, more cattle, hogs; in fact, more stock of all kinds, and consequently more manure. At this day the basis of all successful farming is manure, and if this is applied with the common sense that other avocations of life are attended, we would produce a wonderful change in our system of farming.)

Charlotte has grown so rapidly that it would consume ten or twenty times as much as formerly, and we need a larger amount to supply the vinegar, catsups, pickles and condiments that always are in demand, that are now imported from beyond the limit of the State—whereby we help to enrich other States at the expense of ourselves. I have often thought how blind we are to our own interests by buying from others what we could produce at home.

FARMERS' QUESTION BOX.

This is to be a permanent department of The Progressive Farmer, one which we hope to make of much service to our subscribers and worth alone the subscription price of the paper. If you desire any information regarding crops, tools, stock of any kind, best methods of cultivating crops, new crops, diseases of crops or of stock, or any other farming matter, send on your inquiry to The Progressive Farmer and it will be freely answered by competent and experienced authority.

HOPS AND HOP GROWING.

EDITORS PROGRESSIVE FARMER:— Please inform me through The Progressive Farmer or otherwise where and at what price (about) I can get hop plants per 1,000 for next spring setting. Which is better, to start a crop from plants or seed? Thanking you for this and past favors, I am,

Very truly,
J. D. YATES

Chatham Co., N. C.

In reply to the inquiry of Mr. Yates, I would say that the only locality I know of to get the hop roots is in the hop growing section of New York, and the growers there will doubtless be glad to supply all that they have for very little money, as most of them have been about bankrupted in the business by the low price of the crop. Only last week a merchant in New York, who had been carrying the hop growers failed for half a million dollars because the hop growers could not pay their debts. There is not the slightest probability that hop growing can be made a profitable industry in this climate. It is an expensive crop to grow, cure and handle and requires as much experience as the handling and curing of tobacco. Mr. Yates had better grow 5 cent cotton the rest of his life than embark in hops. I do not know the address of any growers in New York. There was a patch planted on the Seaboard Air Line near Vass Station, and I expect Mr. Yates can get what are left of the roots there cheap.

Yours,

W. F. MASSEY,

Horticulturist N. C. Experiment Station.

CHEAP SILOS, AND SILAGE FOR HORSES.

EDITORS PROGRESSIVE FARMER:— As I wish to build a silo next fall and get an ensilage cutter, I improve this opportunity to write you for information as to building a silo. Please give me the cheapest plan on which to build a silo for 10 or 15 cows. I wish to know if ensilage is good to feed work horses and mules and about how much per head ought to be fed to cows and horses? What is the best crop to plant for silage? Name the best ensilage cutter, and also the best power to run the cutter when one cannot afford an engine. Please give me all the information you can in regard to material required to build the silo and oblige.

Yours respectfully,
J.

Anson Co., N. C.

(Answer by Cor. Editor Emery.)

The cheapest silos we have heard of were reported at the June meeting of the N. C. State Dairymen's Association.

Mr. Orr built a stave silo of 2x6 plank with separate tongues 10 feet in diameter and 20 feet deep for a sum not to \$20, but probably he omitted the cost of iron rods for hoops. The excavation foundation and other work Mr. Orr did himself.

Mr. W. E. Dulin built a balloon frame silo by setting up 2x4 studding on the foundation and boarding round inside and out with half inch fence boards as described by Prof. King, of Wisconsin. (See N. C. Ag'l Exp't Sta'n Bulletin No. 80 for full plan and cuts) Mr. Dulin did not name the cost of his silo, but it is believed to be about as cheap for material as the stave silo. It is not advisable to try to build so small for this kind of silo as for a stave silo.

In order to feed as many cows as J. T. P. proposes, he will need to count on feeding 40 to 50 pounds of silage per day. Then add 25 pounds each for horses and mules. It is desirable to begin with 4 or 5 pounds at one feed per day for horses and to increase this gradually and never give more than two feeds per day and allowing dry hay, corn shucks or fodder to be eaten freely at night. Horses may have, when used to good silage, from 10 to 20 pounds at a feed according to the size of the horse. Mules may be fed the same as horses.

To count the larger number of cows

at full feed 15 at 50 pounds would require 750 pounds per day. Four horses would add 100 to 150 pounds. Then there would be calves, heifers, a bull and possibly some colts on smaller rations of silage. But we will not figure on these last and leave Mr. J. T. P. to build a second silo when he shall have demonstrated for himself that it is a desirable feature and he needs another for the other stock.

How long will silage be needed in this inquirer's locality? We can only estimate it and name 150 days per year. This gives 900 pounds 150 times, or 135,000 pounds. Now add 20 per cent for waste and settling, which is about right for any method of curing and he needs a capacity of 162,000 pounds or 81 tons. It is common to over estimate the weight of silage per cubic foot because the early experiments were made with rather greener material than is commonly put in now. We will fix on 30 pounds per square foot. Divide 162,000 by 30 and we find the contents of the needed silo to be 5,400 cubic feet. We will fix on 15 feet as the diameter most desirable for the number of animals named and proceed to find the height.

The area of a circle is found by squaring the diameter and multiplying the product by decimal .7854, which gives 176.7 square feet as the area of the silo. Dividing 5400 by 176.7 gives 30.6 feet as the height or depth of the silo. If the ground is hilly or rolling we would advise locating when possible so a part of this depth can be in a sidehill and open at bottom on a level with the floor which it is proposed to feed the silage. Then build on that leveled portion the balloon or stave frame as desired. Put roof on the structure and provide for filling from the top. If the hillside can be utilized the cost of carrier can be reduced and the silo easier filled.

Maize or Indian corn is far the best crop to put in the silo. Other crops can be used and it is desirable to plant in the corn twining beans to add more forage and a more highly nitrogenous forage, but corn should, in most cases, be the main dependence. There are a number of good cutters on the market and we do not set up as being well enough informed to name the best. We have had experience with half a dozen which do satisfactory work in good hands. Recently we saw a convenient and doubtless satisfactory cutter and power made in Vermont on exhibition and selling freely to Georgia farmers at their State Fair The St. Albans, Vt., cutters and horse (read) powers have considerable popularity where known, but J. T. P. better consult the advertising columns of his agricultural papers and by correspondence find what suits his own judgment and purse, remembering that ordinarily it is best to deal with makers near at hand or with an agent who has accommodation enough to keep a machine on hand from which he will supply repairs and deal with no others.

It is a good plan to have neighbors unite in the purchase of machinery of this kind and run it together. Buy such as has capacity of 5 to 8 tons per hour, and not only cut silage but other kinds of forage and use the power for threshing and wood sawing, and possibly grinding grain in localities where grist mills are far apart.

To build the stave silo the bulletin plan named gives complete directions. If J. T. P. does not get it he will need after leveling foundation to nail round on it short pieces sawed to fit together and a second course to fit with joints broken over the first. This need not be exactly circular in form, but the inside needs to be so formed that when the studding is set up on the inner edge the boarding inside will pass down smooth to cover it. In both forms the frame on the foundation should be laid in fresh cement mortar and nailed down into the cracks of brick or stone, then nailed together when the second course is laid on.

A door way is provided for in both forms, narrow and the length of distance between hoops in stave silo and as wide as the studding or twice as wide as space between two studs and set apart so no two doors are close enough together to weaken the structure in the balloon frame silo, plans of which it is desirable to see before building to save planning the details all out for yourself.

FRANK E. EMERY.

The Progressive Farmer is very glad to receive letters on farming subjects from practical, everyday farmers. We have said this often, but are anxious to impress it upon our readers. Write your views on farm matters. They will interest others.

CONDITION NECESSARY TO CHEAP COTTON PRODUCTION.

Correspondence of the Progressive Farmer.

Cotton is, and always will be, the money crop of the South, and too much attention cannot be given to its successful production, for the Southern States are destined to become one of the richest sections of our country and become so by the production of cotton. At present we see cotton selling for 7 cents per pound, and it may possibly bring 8 cents, owing to the short crop; but one year with another, we cannot hope for an average of more than 6 cents. But that cotton can be made and sold for 6 cents, with a good margin of profit, is shown in numbers of instances. The North Carolina Experiment Station made it with college labor at a cost of 3½ cents, and the Georgia Experiment Station has grown it for 3 cents, and I am satisfied that it can be made for less, by proper methods of fertilizing and cultivation.

In taking up the economical growing of cotton, we must look at the question intelligently. We must stop planting large areas without sufficient preparation and go to farming on improved methods. Now cotton has a long tap root which under proper conditions will go down 2 to 3 feet into the sub soil and pump up water and plant food, thus enabling the plant to stand drought. But to do this the sub-soil must be broken with a sub soil plow, at least through the hard pan which has formed on most of our clay land. Then the top soil must be made fine so that the small feed roots which occupy the upper three or four inches of soil may be able to work freely and obtain plant food, and also to enable the air to penetrate and help the nitrifying organisms make plant food available.

It does not make so much difference what tools you use, or how you work, so that you get your land in this condition before planting. The best place for the cotton crop is on a pea vine stubble. Did you ever try it? Cotton, the whole plant, contains more ammonia than it does phosphoric acid and potash put together and yet this ammonia is what the cotton grower cannot afford to buy. First, because it is too expensive, costing more than double what phosphoric acid does per pound; and secondly, because he can obtain this ammonia from the air and fix it in the soil by the growing of cow peas. Now the bigger crop of cow peas you can grow, the more of this ammonia you will get, and the better cotton crop you will have. So that it will pay you to fertilize your pea crop to start with. You can cut the pea vines for hay, which will pay for this fertilizer, and a good profit on your work besides, and the ammonia which is mostly in the roots, will be ready for your cotton.

A fertilizer for cotton on our ordinary up land clays should contain ammonia 2 per cent, potash 3 per cent, and phosphoric acid 7 per cent, but with the proper kind of a pea vine stubble, the ammonia can be omitted. In fact, too much ammonia is apt to produce too rank a growth of stalk to the detriment of the fruit. A mixture of 1,000 pounds acid phosphate, with 150 pounds muriate of potash would be about right, and where the peas have been previously well fertilized an application of 500 pounds of this mixture to the acre would be sufficient. This should be applied to the drill before planting and well stirred into the soil.

Cotton should be thinned early, and kept well cultivated. And this cultivation should be done more with the harrow and cultivator and less with the scower and scrape. For the latter method causes the water during a rain to run away from the plant, accumulate in the rows and run off, washing the land and carrying away water and soil which should be held for the future use of the crop. The crust should be kept broken after every rain, and as the plants become large and their roots fill the surface soil, the cultivation should be very shallow.

The Georgia Experiment Station estimates the cost of growing an acre of cotton, without fertilizer and preparing it for market at \$9.42, after deducting the seed. They made 267 pounds of lint cotton on this acre which at 6 cents would give them a net profit of \$6.60. On another acre on which \$8 worth of a well balanced commercial fertilizer was used, they produced 600 pounds of lint, costing \$18.08, after deducting seed, which gives a net profit of \$17.92, a net gain of \$11.32 from the use of \$8 worth of fertilizer. From this we see that fertilizers will pay on cotton if properly applied, also that it pays to use them liberally.

F. J. MERRIAM.

Battle Hill, Ga.

THE SPANISH PEANUT AND ITS CULTURE.

BY H. B. HILLYER, BOWIE, TEX.

Address Delivered Before Texas Trunkers' Convention

The peanut is a true pea, but bears its pods below the ground. It is strictly an American plant, but like the Irish potato, its culture spread so rapidly all over the world that its exact time and place of discovery is at this date entirely lost. There are several varieties of the peanut, or rather "ground pea." There are several kinds of the well-known large varieties sold so much about the streets as "parched goobers." All these have running vines spreading out in every direction as do the cucumbers, they should be planted in hills four feet apart each way, the vines lie close to the ground, at the base of every bloom a rootlet is sent down into the soil, where it enlarges as a peanut, and grows and matures from the parent vine above. Should the soil below become too hard for these rootlets to penetrate they will wither and perish; hence these varieties will only succeed on loose, light sandy soil, and can succeed only in a small portion of the State.

The above described peanuts have several varieties of white and red, and some of the latter have decidedly an upright habit of growth. The pods of all these are large, holding from two to three peas each.

They ripen early all the peas at the same time, and if not gathered at once the older ones will soon sprout out and ruin. I have known almost an entire crop to thus be lost during long wet spells about harvest time. All peanuts will grow on poor land, and will enrich it very rapidly, but will respond very handsomely to good culture and rich soil. The large varieties meet with ready sale in the markets, are easy to gather, can be washed and dried without damage, and if secured from rats and mice they can be kept sweet and nice for several years.

The Spanish peanuts are strictly upright in their habits of growth, the blossoms have no visible connection with the peas, which mostly cluster about the tap root, which penetrates the soil to great depths as does the cotton plant, hence it is a great drought resister. The peas are small, rarely more than two in a pod, often only one. They are far sweeter than the old larger varieties and are far richer as food for either man or beast, being a bush pea they can be planted much closer together, and will produce fully twice as much per acre. They are as easy to cultivate as corn; will grow on any soil, light or heavy, poor or rich, though they do best on rich alluvial or sandy loam. Too much rain tends to rust them, and while they will keep green and grow through the hottest dryest summers, yet they do best with moderate rainfalls scattered through the season and they will continue to put on and mature peas until frost, and rarely ever sprout in the ground. Last year they yielded me 75 to 100 bushels per acre and two or three tons of the finest hay I ever used, fully equal to the best clover. I harvested them the 20th of September.

I have ten acres of them in cultivation this year. The rainfall has been very light the past season and for eight weeks we have had the hottest, dryest weather I ever saw, yet my vines look fresh and green and at this writing (Sept. 20th) are putting on fruit steadily, though the yield will hardly be more than half a crop.

I believe the Spanish peanut is by far the most valuable feed crop I have ever grown, one acre of it being better than two or three acres of corn, and just as easy to grow and harvest; moreover, the peanut vines grow largely from the air, are large "nitrogen gatherers" and with their large system of fine hair-like roots they do not impoverish but enrich the soil. But as both the peas and vines are taken off the land and they are large consumers of potash, they should not be grown long upon the same soil. They are also subject to rust and the repeated growing of them on the same piece of ground will increase this tendency. They are also subject to the same "root rot" as in cotton, and hence it is best to have them follow corn or other grain.

The past season, my previous year's peanut ground was planted in whip-poorwill peas, and sweet potatoes, and you can at a glance mark the exact line of the old peanut patch. The po-

[CONTINUED ON PAGE 8.]