



THE PROGRESSIVE FARMER

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PUBLISHED WEEKLY

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

"I am standing just behind the curtain, and in full view of the country sunset. Behind me are the shadows on the track before me; the dark valley and the river. When I mingle with the law's waters I want to cast one lingering look upon a country whose government is of the people, for the people, and by the people."—T. L. Cook, July 13, 1890

SPECIAL TO THE GENTLEMAN WHOSE NAME IS ON THE RED SLIP ABOVE.

THE PROGRESSIVE FARMER, as you know, gives more actual home print reading matter for \$1 than any other North Carolina paper. It costs a lot of money to run such a paper and it is expected that all subscribers will renew promptly. Hence we hope you will look at the date on your label and if it is behind the date of this issue, please renew at once; and in future also you will greatly oblige us by renewing immediately upon expiration of subscription.

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EDITORIAL NOTES.

Hon. Guy E. Mitchell, a leading agricultural writer, now of Washington, D. C., will not accept special correspondent of THE PROGRESSIVE FARMER, and to him we are indebted for many of the agricultural notes published on this page.

Best laying and best marketing qualities cannot be combined. The active, nervous breeds, which are constantly foraging and which will scratch for hours after worms, make the best layers. The best market fowls are less active and take on flesh more rapidly.

The N. A. Horticulturist is responsible for the following: Some soils seem to lack iron and it is said that any soil made much better for hydrangeas if in some form be placed near their base. Place a piece of old iron in the pot in your plant, and you will find more blossoms and a better color beside.

A cooperative enterprise has been organized at Rehoboth, Ind., for the purpose of engaging in dairying, fruit culture and general agriculture. The capital stock of the association is \$10,000. One share of \$100 is allowed to each individual member. A tract of land near Richmond has been purchased and a creamery and a fruit farm is being established. Branches of this commendable enterprise, it is stated, are about to be organized throughout the South.

Making the fowls exercise is a practice in general use among successful poultry raisers. No matter how deep the litter or trash may be, the bird will find every grain thrown into it. They can be seen scratching it over and working in it for hours after feed. This is just what they need, especially during cold weather.

In roofing farm buildings, a good pitch or slant to the roof is always desirable. Not only will snow slide off much easier, but water will run off quicker and the roof will withstand leaking longer. If a roof has a steep pitch, it may even be full of little holes and yet not leak; at least, it will leak only where a particle of rain falls clear through the holes, without touching the shingles, which is but slight.

Fowls can go for months without drinking water, and yet live and seem healthy; but they suffer greatly. A hen never has a look of such contentment as when she throws back her head to let the water trickle down her throat. Mark how a hen coming off eggs will run for water to the disregard of food. To a laying hen water is especially necessary, as eggs are over 80 per cent pure water.

The Savannah News states that reports from many sections of Georgia indicate that there will be a material decrease in next year's cotton acreage. Farmers are much discouraged with the returns from cotton and are looking about for other crops to take its place. They say they cannot raise 4 cent cotton and live at home. An immense acreage of wheat, corn, potatoes, hay and cane will take the place of the so-called money crop. North Carolina farmers should do likewise.

The sweet potato is coming to be considered a staple storage crop through out the South. In Louisiana the practice of feeding this root to stock was only comparatively recently introduced by Western farmers, who says that they have demonstrated to the native farmers its great superiority over corn as a feed for cattle, horses, mules, hogs, in fact everything alive on the farm. On the rich bottom lands of the far South, the sweet potato yields a maximum crop—two or three hundred bushels per acre—and with a minimum of labor expended; the work is principally planting and harvesting.

There is much to be learned concerning the cooking of foods for farm animals. As a rule cooked, warm, moist food is more palatable to stock than uncooked cold food, and for this reason alone, cooking might be an advantage, as it would induce heavier eating. Various experiments have been made as to the digestibility and nutrition of foods, cooked and uncooked, with varying results in different foods. Cooking potatoes is advantageous when fed to hogs, but the opposite if fed to milch cows. Experiments in cooking corn, oatmeal, barley meal, shorts, pease, oatmeal, potatoes and rye show generally that less is sustained rather than otherwise in the operation. The amount of food required to lay on a pound of flesh in the animal was greater with the cooked than with the raw ration.

The export trade of the United States with the United Kingdom is steadily increasing. According to the British official figures just received at the Treasury Department, in nearly all of the great classes of goods for which our producers are seeking a market abroad, the October exports to Great Britain from the United States, were in excess of those of preceding years. In agricultural products this is particularly noticeable. American exports of bacon to the United Kingdom in October, 1898, were, in round numbers, \$2 359,000 in value against \$1 819,920 in October, 1897; those of hams were \$1 518,000 in October, 1898 against \$988 000 in October of last year; those of butter, \$170,000 in October, 1898, against \$153,000 in October, 1897; those of lard, \$1, 030 000 in October, 1898, against \$833,000 in October, 1897; those of flour, \$3,200 000 in October, 1893, against \$2,608 000 in October, 1897; those of oats \$894,000 against \$618 000; those of leather, \$1 373 000 against \$878,000, etc.

American made agricultural machinery, says Consul Fleming, to Edinburgh, is widely used on the farms of Scotland. Most kinds of machinery for farm purposes manufactured in the United States have long been preferred there, on account of price, quality and

design. American manufacturers in this line have obtained the market by the readiness with which they have met the special requirements of the Scotch farmer. The American reaper in Scotland was a failure at first, as the blade was too light and the canvases were not properly adjusted for the heavy stands of barley and the thick young grass sown among it. No sooner were these defects—from the Scotch point of view—ascertained, than a heavier blade was introduced and soon the American self binder held the market. The chilled plow was not at first suited to the Scotch. They prefer a narrow furrow and do not deem it a good plan to throw the furrow over; they wish rather to set it on edge. The plow was changed to meet their ideas with the result that the American plow has gained general favor. Owing to the rank growth and humid atmosphere, American farm machinery of nearly every description has had to be altered in some important respect, but manufacturers have been quick to make the necessary changes and their enterprise has been abundantly rewarded.

Consul General Gowdy makes the following report to the State Department under date of November 31 concerning the importation of live stock into France: "There are no laws or regulations which prohibit the importation of live hogs into France from the United States; but the importation of live cattle, such as cows, bulls or steers from the latter country is absolutely prohibited. Animals which are imported, are upon arrival subjected to a sanitary examination by one of the official veterinary surgeons detailed for the purpose, and if found healthy are allowed to enter the country; but if any contagious disease is detected, the animal is killed at once and the rest of the herd put under strict surveillance. The duty on hogs is 21 cents per pound; sucking pigs weighing 55 pounds and under, 579 cents per head. I have been told by good authority that there have not been as many hogs raised in France this year as last. The sanitary inspection is for the purpose of discovering if the animals are suffering, principally from the following diseases: Aphtoe fever, rouget, infectious pneumo-enteritis. If they have the aphtoe fever they are sent to the slaughter house and killed for immediate use. In case of their being attacked with the two other diseases they are also sent at once to the slaughter house, but are not allowed to be sold for consumption unless the sanitary inspector is satisfied that there would be no danger from the use of the meat. Suspected animals or those which have been in contact with sick animals are marked and rejected and must be sent out of the country unless the importer prefers that they be immediately killed and sold. The production and the consumption of all live animals in France this year are very near balanced, with the exception of sheep. There is more demand for these animals than any other live stock."

AGRICULTURE.

SOIL FERTILITY.

Correspondence of The Progressive Farmer. In a recent communication to the American Chemical Society, Laed, of North Dakota, discusses the subject of humus in the soil and some of its relations to soil fertility. After eight years of as close work as other pressing duties have allowed for this work he is able only to give some indications of general principles to show where future work must begin.

But these "indications" seem rather pointed. They seem to show something which the practical, thoughtful agriculturist can turn to account with out waiting for the scientist to complete his long, detailed and arduous tasks. The analyses show percentages ranging from 3.84 to 15.26 with an average of 9.15 for humus. 1.56 to 7.90 with an average of 4.77 humates. Total nitrogen 0.18 to 0.456, average 0.292 of which 0.041 to 0.362, average 0.163 per cent. was in humus. Phosphoric acid averaged 0.269 per cent. with 0.133 per cent. in humus. Potash averaged 0.409 per cent. with 0.153 per cent. in humus, and of lime there was an average of 0.944 per cent. with 0.436 per cent. in humus. These small percentages represent considerable amounts in the soil. Ten inches of soil were represented and this amount was collected to weigh 2,

225 000, pounds per acre. These figures out the following per acre:

Nitrogen in humus	3067
Total to soil	3227
Humates	477
Humus	439
Phos. acid P ₂ O ₅	1918
Lime	5985
Highest	8634
Lowest	4005
Average	6497

Analyses of two soils is given of which one has been cropped continuously for seventeen years whilst the other was from an unbroken prairie lying near the old worn soil, and originally the same. A study of the percentages would enable one to distinguish between them and tell which was the virgin soil from the one beginning to fail in yield of crop. An examination of the soil humus was then made with results as follows:

	Per cent. old soil	Per cent. new soil
Humates	3.04	4.27
Humus	1.56	2.53
Phos. acid P ₂ O ₅	0.179	0.192
Lime CaO	0.892	1.030
Potash K ₂ O	0.075	0.089
Nitrogen	0.041	0.094

"The amount of humus originally in the soil was exceptionally low for a North Carolina soil, but by continuous cropping it has been reduced thirty nine per cent., while the nitrogen of the humus has been reduced fifty-six per cent., leaving so small an amount of humus and of nitrogen in the humates that it is questionable whether the soil would supply proper food for the growing crop. We find similar conditions, but to a less marked degree in the other mineral constituents of the soil. On the relation of mineral matter to humus it was found that the soil on the college farm after producing wheat 15 years continuously contained 126 000 pounds of mineral matter in the humates whilst in the surrounding unbroken prairie the average given was 218 000 pounds, thus indicating a loss of 92 000 pounds or of 42.2 per cent."

In another case figures are given to show a stocking up of the soil in humus and of P₂O₅ in humates by a system of rotation of crops on the college farm following the continuous growth of wheat for 15 years. From 1891 to 1898 humus gained 46.9 per cent. and "the gain of phosphoric acid in the form of humates has been 48 per cent."

This shows, perhaps, why continuous cropping runs down a soil in the best elements of plant food when the demands for the growth of one crop must be met; and how with a variation of the demands interspersed with recuperative crops such as clover, the cowpea and other legumes or even of rye when others fail the soil may be reasonably expected to increase in elements of plant food and at the same time become more productive. This is supporting all our practical experience that whatever we do at not too great a cost to increase the organic constituents in our soils the better, and that it is suicidal to continue one crop, or any series of crops calling for continuous drafts on the soil without some attempts at replacing some elements systematically and cheaply. This can best be done by rotating crops suitable to the locality and season when the land is best spared from crops. Where cotton and corn are the crops, winter growing improvers enter the rotation. With winter-growing crops, summer-growing legumes as the cowpea are indicated.

This idea is of very great practical importance and the above is worthy of careful study and putting its indication into practice on every farm. FRANK E. EMERY. For keeping up the health and vigor of an orchard a manure composed of three parts of wood ashes and one part of bone meal will be useful. If the ashes cannot be obtained then a mixture of two parts muriate of potash and three of bone meal may be used to advantage on most soils.—Selected.

STORING ICE—A REMINDER.

Correspondence of the Progressive Farmer. A reminder of the importance of storing ice on the farm will be in order at any time during the fall and winter months, yet an early hint is better than a late one as it gives the farmer opportunity to put his ice house in order if he has one; to build one if he has none and in either case to secure non-conducting material, such as saw dust or tan bark for packing the ice, if located where either or both are conveniently obtained. But a late reminder is better than none. An ice house need not be an expensive construction. In fact any rude building made of rough boards will answer the purpose. Good draining must be provided for, also good ventilation. The drain must not admit a current of air to the land. There must be a good foundation, or bed on the lower layer of ice is to rest and it should be covered with non-conducting material. It is better to build early, before cold weather sets in, yet it can be built at any time. The ice can even be put in a pile, on a proper foundation or bed, and a house put over it at convenience. An old hay bay or shed can be utilized for ice storage. In an emergency ice can be kept without any kind of a building over it. In sections of the country where lumber is scarce and high in price and hay is plenty and worth but little, the walls of ice houses have been made of pressed hay. Do not fail to secure ice for family and dairy use. F. W. MOSELEY. Clinton, Iowa.

EXPERIMENT FARMING.

Correspondence of The Progressive Farmer. The beginner in every trade or profession is compelled to draw his wisdom from the accumulated experiences of others. These experiences are tabulated and published in convenient forms for students of all kinds. Young lawyers with their first case consult standard law books and learn just what has been done under similar circumstances. Medical students at the beginning of their professional career have before them in convenient forms a guide to the experiences of the world's greatest physicians and surgeons; and so it is in all the so-called "learned" professions. The profession of farming, however, has been rather backward along these lines, and only during the past few years have any great strides been made. The establishment of agricultural colleges and experiment stations has led to wonderful improvements and it is now considered as necessary for a young man who expects to follow farming to receive a training in the special schools of agriculture, as for the young doctor or lawyer to go through the schools of medicine or jurisprudence.

Another gratifying evidence of the elevation of the profession of farming is the tendency of those who follow it to "specialize." This is as it should be. The range of farming is broad, it covers many special lines, and the man who concentrates, thus giving his time and labor to a particular branch, usually makes the best showing. This fact is evidently recognized by the experiment stations because no one of these institutions attempts to deal with all of the problems which confronts the general farmer. We see, for example, one station directing its main efforts towards improvements in dairying matters. In another, variety tests with fruits and vegetables absorb the attention of the experts. While another may concern itself with the important problem of plant feeding. This is one of the most serious questions which confronts the farmer to day—how to feed his crops so as to get the greatest returns from the smallest investment. Prices of agricultural products are low, margins between the profit and loss are almost indiscernable, and it requires no small amount of ability to put the balance on the right side of the ledger. An institution established about three years ago to work out important problems in plant feeding and which is now becoming well known throughout the country is the Experiment Farm of the North Carolina State Horticultural Society at Southern Pines, North Carolina. The land upon which the farm is located is ideal for experimental work. It is of a light sandy nature, very uniform in composition and quite level. There are two divisions, one devoted to experiments with fruits and the other to vegetables. The plots are laid off with mathematical

accuracy and the three recognized essential ingredients of plant food, phosphoric acid, potash, and nitrogen, are applied in various combinations and forms so as to afford farmers and fruit growers an opportunity to become thoroughly familiar with their action. The detailed work of that institution is under the supervision of trained experts. Regular annual reports giving an account of what has been done during the year are issued and distributed among farmers. The supervising committee of the farm also issue bulletins on topics of interest to farmers, and give them to all who are interested. The writer recently received a set of these books from the Superintendent of the Experimental Farm at Southern Pines, North Carolina, and found them to be of great practical value. The work being carried on at this farm is probably the most thorough in this line in the United States and will be of untold value to the agricultural and horticultural world. Every one who derives a living from tilling the soil, would do well to study the work of this experimental farm and likewise of every other experiment station in this country. BRYAN TYSON. Long Leaf, N. C.

SUCCESSFUL FARMING.

Dairying—Tobacco Raising—Cotton, Corn, Peanuts. Mr. T. P. Braswell has an excellent dairy farm near Battleboro Station, N. C., about eight miles from Rocky Mount. Commencing in 1888 with a few scrub cattle, he conceived the idea of grading them up with thoroughbred Jerseys, but at that time his sole idea was to keep cattle for the value of the manurial product, and with no thought of any profit from them except for the manure and occasionally a beef sold. After experimenting for three or four years he found that the business was not as profitable as he had expected, as the higher he graded his cattle the more attention they required.

With much misgiving he concluded to make a few pounds of butter and offer it to merchants. His first attempt proved so successful that he began to think even such heretofore considered small things as milk and butter might be made to return good, large dollars to him who managed them aright. In less than ten years he has built up such a trade that the present output of the farm, amounting to about 1,000 pounds a month, does not half supply the demand. He has 200 head of cattle, of which fifty are registered Jerseys and the remainder "grade" Jerseys, in many cases almost as good as the thoroughbreds for milking purposes. The dairy has separators, power churns, etc. Steam power can be applied at any time, but now Mr. Braswell uses the surplus energy of his bulls in a treadmill to generate the necessary power of the dairy machinery. The surplus milk is fed to his thoroughbred Poland China hogs, of which he has a quantity, and Plymouth Rock chickens and broiler turkeys can be seen in large flocks over the farm.

Mr. Braswell is not simply a dairyman by any means. He is the largest land owner and tax payer in the county. He has large real estate interests, and he is a member of the leaf tobacco firm of J. C. Braswell & Co. He raises the largest acreage of tobacco of anyone in this section of North Carolina, if not in the State, having the past year planted 200 acres, and has already sold nearly \$5,000 worth at the Rocky Mount market and has a large quantity yet for sale. It takes sixty barns to cure the product of his farms. Not alone tobacco, but cotton, corn, peanuts and hay are largely produced, and each one is made to pay a profit. Last year one piece of ground netted a bale and one quarter of cotton to the acre and this year, though a bad season, the same ground yielded one bale to the acre. The success of these gentlemen in their several lines shows what persevering, thoughtful work can accomplish in the South.—Baltimore Farm Magazine.

The sugar cane crop is reported as exceptionally firm in a number of sections of Louisiana, but at present it is very green, owing to the heavy rain during August, September and October. The old settlers predict an early and severe winter for Louisiana; should this be the case, it will hit the planters a hard blow, as it will take them until January 1st to move their immense crop.—G. E. M., Oct. 29, '98. When you write to advertisers please mention this paper.