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

THE PROGRESSIVE FARMER.

Has the largest circulation of any family agricultural or political paper published between Richmond and Atlanta

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

Vol. 13. RALEIGH, N. C., FEBRUARY 15, 1898. No. 2

Agriculture
ALL AROUND THE FARM.

THE CARE OF MANURE BEFORE APPLYING TO THE SOIL.

An Important Question Discussed by the Late Professor of Agriculture of the A. M. College, Raleigh, N. C.

Correspondence of The Progressive Farmer.

Just how to handle manure economically and at the same time get the best results is a much discussed question. Some laud one theory and some another. We can be sure, however, that wherever manure is handled it is at a heavy cost. Second, that whenever it is handled it loses something. With these two facts in view it can be plainly seen that it pays to handle it as little as possible. The most economical method, of course, is to have the animals in a box stall and use plenty of bedding and haul the manure out about once a month. If the economy is to be carried still further, it would be best, if the land is ready, to haul the manure right from the barn to the field and spread it over the land. By this system you avoid heating, and handle but once. Then if there is any leaching it goes into the soil and is taken up by the land. It may not become soluble as soon as if it were composted, but it will in time be ready for the crop. If the land is not ready for the manure it can be put under a shelter covering a pit, or excavation, in the side of a hill, so that the manure can easily be dumped in from above or on the upper side, and hauled out from the lower side. It is best to cover the shelter with one layer of planks so that the rain will be carried off in the main, but enough will leak through to keep it moist and thus prevent "firefanging." The manure should be sheltered from the sun as well as from the rain.

Now if this compost is heated with gypsum or land plaster, it will be still better. Put in about 200 pounds to every load of manure and mix it in thoroughly. The best way to mix it is to put in a layer of manure and then a layer of plaster. Kainit is still better, as most soils are deficient in potash and most of the lands outside of the sandy belt have plenty of lime. The plaster and kainit serve a double purpose: the latter directly as fertilizer and both indirectly in rendering soluble the manure and elements in the soil. Then, too, they absorb moisture from the atmosphere and thus prevent heating. If the stables are cleaned out daily as many cattle barns are, then it would be best to put the plaster, or the potash, either one, in the gutters behind the later. This saves the trouble of mixing in the compost heap, and serves to deoderize the barns. By being careful no trouble will occur from injury to the feet. The kainit should not be put on the platform, but sprinkled in the gutters. Put about one pound behind each animal daily. Stable manures as a rule are deficient in both phosphoric acid and potash and it would save the expense of another application if some acid phosphate be mixed with the compost. This would then make a complete fertilizer containing the three plant food ingredients—phosphoric acid, potash and nitrogen—in readily available form.

By using this method in connection with the bedding on the platforms, very little loss will occur and the best results can be obtained. The idea is this: The potash is to be used anyway on most of our lands, so why not put it with the manure and serve a treble purpose: deoderizing the barn, absorbing and rendering soluble the manure and absorbing moisture from the atmosphere during the process of composting. It is a bad idea, generally speaking, to put rich nitrogenous stuff in a compost, but cotton seed can be added to this mixture of manure and kainit without much fear of heating. They should be thoroughly mixed and then when the pile is hauled out the mass should be forked over well to be sure of even distribution of the different ingredients.

B. Irby.

THE COTTON SEED INDUSTRY.

The extraordinary growth of the cotton seed industry in the South during the past decade constitutes one of the most striking features of our industrial progress since the war.

Ten years ago the cotton seed was looked upon with contempt as something which could not be utilized except for planting or fertilizing purposes; and on account of the vast quantity of cotton seed produced, most of the crop found its way back into the soil. To day the cotton seed is looked upon with admiring homage. On account of its increased value the farmer cannot afford to fertilize his soil with it as in times past, but prefers to haul it into market, where it becomes tributary to the cotton seed industry.

Since the birth of the cotton seed industry in this section each year has enlarged its growing area and increased the scope of its possibilities. At the present time the finest quality of salad oils, compound lard, butterine and other products are made from cotton seed; while the waste material resulting is used to fatten cows and hogs for market. If such results have been accomplished during the brief period of only ten years, can anyone limit the possibilities which the future holds in store for the cotton seed?

As to the present size and importance of the industry it is estimated that the total weight of cotton seed products manufactured in the South is fully equal to half the weight of the cotton crop. This is something enormous, as the weight of this year's cotton crop, on the basis of 10,000,000 bales, can hardly fall short of 5,000,000,000,000 pounds, making the total weight of cotton seed products manufactured not less than 2,500,000,000 pounds. But there is still room for much greater expansion. On the authority of agricultural experts, it is stated that the total amount of cotton seed produced yearly is double the amount of cotton baled; and applying this ratio to the present crop, it makes the amount of cotton seed aggregate at least 10,000,000,000 pounds. As the products manufactured from cotton seed aggregate in weight only one-fourth of this amount, it is evident that the industry as yet consumes only a small percentage of the cotton seed available.

Although restricted excusively to this section, the cotton seed industry has made itself felt in Northern and Eastern markets, and is destined in time to stamp its impress upon international commerce.—Atlanta Constitution.

THE FARMER'S LETTER BOX.

On January 27th I killed several hogs. One weighed 600 pounds, another 483. I am one of the oldest subscribers you have.—J. H. Mills, Ewing, N. C.

LIKES THE FARMERS' LETTER BOX.

It will not do to put horse stable manure and guano directly together for a fertilizer. If you desire to apply both in the drill, one of them should be mixed with the earth before applying the other. One seems to destroy the effect of the other.

My wife says she would like to know how to exterminate moles.

My advice to farmers is: quit raising so much tobacco and cotton, and raise more "hog and hominy." Then we will be more independent. Let us cry "hard times" less, and on election days "vote the way we pray." Peanuts is the most economical food with which I have tried to fatten hogs. One can fatten 700 or 800 pounds of pork to the acre, on very poor land. I plant the little Spanish pea.

We say, hurrah for our shoe factory, for we are getting anxious for some shoes. Our Alliance is standing firm.

I admire the pluck and energy of The Progressive Farmer. I think the "Farmers' Letter Box" will prove of great benefit to farmers.

J. D. Yates.

Williams' Mills, N. C.

AYRSHIRE MEETING.

The Ayrshire Breeders' Association held its 23d annual meeting at the Fifth Avenue Hotel, New York, January 26, 1898.

The committee on Home Dairy Tests reported the testing of herds belonging to N. E. Sears, Elmwood, Conn., L. D. Stowell, Black Creek, N. Y., A. H. Elliott, Garratsville, N. Y., Geo. H. Yeaton and W. R. Garvin, Dover, N. H., C. H. Hayes & Son, Portsmouth, N. H., and C. M. Winslow & Son, Brandon, Vt., and for Fair Ground Teets, Vermont State Fair.

Voted to conduct seven day tests of herd and single cows for market butter and total solids.

Voted to offer special prizes at fairs for largest quantities of butter fat from one day's milking.

Prof. L. L. Van Slyke, of the New York Experiment Station, gave a very instructive lecture on "Some of the Solved and Unsolved Problems of Dairying."

1. Voted to hold the next annual meeting in New York at some time in January.

2. There is general complaint among breeders of fine cattle that railroad rates on live stock are too high, and in many cases prohibitive. On motion of J. D. W. French, of North Andover, Mass., the Executive Committee was directed to co operate with committees of other associations in trying to secure lower rates.

C. M. Winslow, Sec'y.

LESSONS FROM EXPERIENCE.

When I left my farm I had about thirty head of nice Devon cattle and about one hundred head of nice Poland China hogs. I was in a way to make farming pay something if only a small profit. I raised red clover and had some eight or ten different varieties of grasses, the seed of which I bought, besides our native varieties. My farm, up to the time I left, was improving; will make now over double what it would when I bought it.

Now what we want is to raise at least our meat and bread at home, have plenty of milk and butter, chickens and eggs, and we are independent.

Labor is such, and the price is such that we can't make money by hiring hands to make five cent cotton on a large scale, nor yet tobacco on a large scale.

I can run fifteen to twenty plows on my farm, but eight is sufficient. This year I am running too many—twelve in all.

I have a good farm of over eight hundred acres—five hundred cleared. I ought not to cultivate over one-third in a hoed crop, but circumstances are such that I shall cultivate more than I wish. I rent upon shares and will not cost me so much, but I am aware my land will not improve as it has. I thought I could stand it one year, but if I live I shall get back to my cattle, (but change some to Jerseys) and raise hogs, grass and clover.

But we have a serious difficulty to contend with now. The last legislature passed an act that all stock might be turned out in January and February. Bad law, that.

I have tried keeping up stock before we had the fence law, and I know it will pay any man. I know some small farmers are opposed to it, and honestly, too, but they are mistaken. It is the only way to have fine stock and good stock, and the manure will pay for the trouble.

Now let a man have plenty of good grass and stock to eat it, and the kind of stock will depend upon the man's situation.

Be sure to have plenty of meat, bread, milk, butter, chickens and eggs, and my word for it we will have a good living, as any good woman can make as good a meal out of these things as a king ought to eat.

I forgot to state that I cultivate a part of the land this year simply to get it in condition to seed down to clover and grass. No need of pulling fodder, if you have plenty of grass to cut, and I include in my hay crop soja beans and field peas. I consider soja beans best. I shall have some land in sowed corn. Some will be planted the last of March, two acres May 1st, two acres June 1st, two acres July 1st, making 8 or 10 acres in all, and when that begins to tassel, I begin to feed, and never stop until near frost. Before frost, or when it gets ripe, I cut and shock up for feed.

We do not need to hire but one or two good hands to the hundred acres of land. Let us make plenty of clover hay and hay of all kinds up to the sowed corn, and if we have stock to eat it, we will come out ahead.

McK.

ITEMS FROM THE FARM.

As you invite people any and everywhere to write for your paper, I consider that I am welcome to write a few lines. As I am a farmer, and have always been one, I think it best to write about that which I know the most about. I raise cotton, tobacco, corn, oats, peas and potatoes, and believe raising hogs pays better than any crop I have tried. I like the red rust proof best. They "come off" soon enough to give you good time to plant your peas. If you plant these oats early in the fall they will ripen between May 25th and June 10th, and then you can plant your peas. I prefer to have my peas planted in rows and give them one plowing, pick them early in the fall, and mix them half and half with oats. This is a cheaper food for horses than corn. I used peas and corn together last year, but I intend to try oats and peas mixed this year. I believe this plan of farming oats and pears is better and cheaper than raising corn for horses and cattle.

But a little about corn: I think it is not best to have only one variety of corn. My experience proves it best to have long, narrow grains of white and yellow corn with a small cob. I favor wide rows. Let them be 5½ to 6 feet apart, and the stalks about 2½ to 3 feet distant in the drill. A good handful of cotton seed to the hill the second time plowing is the best manure I have yet seen.

I intend to sow plant beds this year without burning them. I think tobacco should be cultivated in drill rows three feet three inches apart and 28 inches between the plants. I tried thirty loads of dirt, forty bushels of stable manure, and eight hundred and fifty pounds of guano to the acre and liked it very well. I think when I finish selling I will get between sixty and sixty-five dollars an acre.

I will say a little about cotton. It is best to select your seed every year from the middle of the stalk all through. The price is so low I don't care very much about raising it.

As hog raising is more interesting to me than any of the field crops, I will have something to say about them. It is a good plan to raise plenty of food for them in the shape of squash and collards. They can be raised as cheaply, they are better cooked than raw. Potatoes make good food in the fall. Few things are better than chufas, and our farmers should raise more of them. I took a close observation of my hogs last year. I had scrub stock and gave them but little attention. I will give the experience and profit last year, making the expense as large as possible and profit as small as possible. Hogs on hand January 1st, 1897, $13; bought hogs, $34; feed for hogs, $35; feed raised in field, $10; makes the total expense $92 35. I killed 1,833 pounds meat. At 5 cents per pound it is worth $91.65, and on January 1st 1898, I had on hand $36 worth of hogs. This leaves a clear profit of $35.30. This is better than I did on any of my field crops; so you know I am well pleased with hog raising.

I will close on these subjects and say a little about the Farmers' Alliance. I belong to Bath's Chapel Alliance, No. 1,013. We organized in December with six members; we now have eight and four to come in next meeting. I think we will soon have a large membership. I joined the Alliance about nine years ago and have been a member nearly ever since, and all I wish about it is that every farmer could see the need of it as I do. I am an Allianceman, and I hope to see the Alliance principles stand on top before I die.

J. R. Thorne.

FARM CROP TESTS.

For the benefit of those of your readers who have not the time to read the entire bulletin, I will give an epitome of Bulletin 146 of your North Carolina Station. This bulletin gives account of tests of cow peas, cotton, Irish potatoes and wheat.

In the cow pea tests the black cow pea was earliest and gave the smallest yield. Clay was latest to ripen and gave next smallest yield. Unknown gave the heaviest yield of the peas, closely followed by Red Ripper. Clay Bank gave the heaviest yield of vines.

In the variety tests of cotton, King's No. 1, King's No. 2, Shine's Early Prolific and Peterkin gave heaviest yields of lint—over 600 pounds per acre. The general average of all fourteen varieties tested was 530 pounds lint and 1,055 pounds seed per acre. The lowest yield was 188 pounds lint and 377 pounds seed per acre by an Egyptian variety.

In tests with Irish potatoes deep planting with level culture yielded 254 bushels per acre, and shallow culture planting with hill culture gave a yield of 224 bushels per acre. Early planting yielded 254 bushels per acre and late planting 145½ bushels per acre. Plats receiving twelve bushels per acre of seed yielded 224 bushels per acre; those receiving eighteen bushels of seed per acre yielded 263 bushels per acre, and those receiving twenty-four bushels of seed per acre yielded 275 bushels per acre; so we see that while twelve bushels of seed per acre seems to be pretty heavy seeding, an addition of six bushels increased the yield thirty-nine bushels, and an addition of twelve bushels of seed increased the yield fifty-one bushels per acre. It should here be stated that the same number of seed pieces per acre were planted in all cases, the pieces in the heavier seeding being larger but not more numerous. This intelligently accounts for the heavier yield from the heavier seeding, for it is well known that the young plant draws all its sustenance from the seed piece till its roots strike far enough out into the soil to feed the plant from the soil; hence, a large seed piece gives a stronger, more growth to the young plant than a small piece could give.

This bulletin states an impressive lesson in spraying as follows:

"The Colorado potato beetle strongly attacked the potatoes. They were sprayed four times. The first time a shower washed the Paris green off from the foliage. The second spraying was done as soon as the weather cleared and was very efficacious in removing beetles and larva. There were unhatched eggs, and some beetles which escaped. The third spraying nearly cleared up the second lot of larva, and a week later a fourth spraying was given for a few scattered lots left, the tops were in a very vigorous, thrifty condition, and were in strong contrast with some garden plats in the neighborhood which had not been sprayed and which were fairly stripped of foliage."

The wheat test was to ascertain the effect of cotton seed meal and other commercial fertilizers on the germination of the seed wheat. It was found that these fertilizers, and especially cotton seed meal, kill the germ of seed wheat if in immediate contact with it; hence, such fertilizers should be broad casted and harrowed in, and mixed with the soil before sowing the seed. If they are drilled in with the seed, or sown on the surface after seeding, they destroy or weaken much of the seed.

J. L. Ladd.

Bay City, Texas.

THE DAIRY.

OUR DAIRY LETTER.

Correspondence of the Progressive Farmer.

From a letter written by Mrs. J. W. Goss, of Hygiene, Boulder county, Colorado, we copy the following:

"Some people have returned to deep setting and home skimming, in the vicinity of the Hygiene creamery, that they may save so many trips with milk and may have sweet (skim) milk without the addition of water."

An exchange says: "The farmer who does his own work gets pay for it instead of having a share of what butter he sells go to the maker at the factory. Moreover, his by-products are in the best possible condition."

The above quotations are indicative and suggestive. For years the great amount of capital back of the separator and the public creamery interests was able to so thoroughly mold public opinion—doing it in many ways—that cold deep setting of milk for cream raising and private dairy making were naturally forced to take back seats. For a year or two there has been a reaction, especially in certain sections of the country and it is constantly extending. As it relates to the hand separator, such reaction has taken place to the greatest degree in those sections where that machine was first introduced and sufficient time allowed to demonstrate its non adaptability to the average private dairy. For a time its novelty kept it in place, but work that could not always reconcile the users to the amount of hard work called for twice a day to run it by hand. Even if a power was provided the work of cleaning the separator remained and was found no small matter—many users reporting it to be greater than all the work connected with running and caring for a modern portable creamery, including the final separation of the cream from the milk which is accomplished by drawing the latter from under the former and which includes no hard work.

A lady—a farmer's wife—who had for sometime been using a portable creamery, was induced to try a hand separator under the representation that it would result in more cream and save labor. She said to the writer that a careful test and comparison showed no gain of cream or butter resulting from the use of the separator, over the creamery, while the labor connected with the former was much greater than with the latter. And that, besides, even if she should use a separator, something would be needed in which to store the cream, skim milk and butter, and that she had found nothing answered that purpose as well as a portable creamery with refrigerator combined. After a fair trial she let the separator go, feeling more than ever satisfied with her creamery.

The writer does not wish to be understood as writing the public creamery down as a failure, for in many cases it has proved and is proving a success—or at any rate apparently so, if to no one else, to the proprietors. In some instances it is without doubt a success so far as some if not all the patrons are concerned. But in many instances patrons of public creameries would be better off by making up their own milk at home and many are now finding it out, hence the reaction referred to above.

It is safe to say that at the best not over thirty per cent. of butter made in this country is produced in public creameries, which leaves seventy per cent. to be made in private or farm dairies. In view of this, everything that can be done, to encourage farmers, who make their own butter, to adopt the best methods should be done. And even if they would be better off if sending their milk or cream to a public creamery—which in very many cases they would not be—tens of thousands of them are in sections of the country where establishing a public creamery would be entirely impractical.

F. W. Moseley.

Clinton, Iowa.

IMPORTANT DAIRY EXPERIMENTS.

Correspondence of The Progressive Farmer.

Formerly calves were raised on the farms of Iowa and other agricultural States by allowing them to follow the cows and take all the milk, just as they are now raised on the Western ranches. But when a creamery was established in a neighborhood, whole milk became too valuable for calf food and as the soured skim milk did not agree with the calves, many were knocked in the head at birth.

But by and by the separator came into use, extracting the cream while the milk was sweet and warm, and only needing something to replace the fat extracted for butter making, to render it as good as whole milk for the calves.

There is a wide spread practical interest, in the best methods of supplementing separator milk so as to make it a good substitute for the whole milk in calf feeding. For the purpose of investigating this problem, the Iowa station has conducted three experiments during three years, and the results have been very uniform and contrary to general opinion and practice.

Oil meal (flaxseed meal) is the feed usually recommended and almost universally used for mixing with the separator milk to take the place of the cream extracted for butter making. But in each of these three experiments oil meal has given lower and more expensive gains than either oatmeal or a mixture of cornmeal and flaxseed, and even cornmeal alone gave better results than oil meal.

When it is remembered that oil meal is much more expensive than oatmeal or cornmeal, the importance of this test is apparent. But these results are just what ought to be expected. Cream is a highly carbonaceous substance, and it is reasonable to suppose that it would be best replaced by a carbonacious feed like cornmeal rather than by a highly nitrogenous feed like oil meal.

These experiments further demonstrated the well-known capacity of the calf to return good results for the food consumed. These calves gained 1 pound for every 1¼ pounds of dry matter in the food they ate, and this shows clearly that in the early life of the calf, under favorable circumstances, it is possible to get a pound of gain for every pound of dry matter in the food consumed. Wool, in Germany, even did better than that. In mature cattle it requires 10 to 11 pounds dry matter in the feed to produce 1 pound of gain.

Bulletin 123, of New Jersey Station, treats of the food value of milk, and gives results of experiments to test the influence of feed on the quality of the milk, and of tests which suggest that milk should be graded in price by the percentage of cream it contains.

Milk is the best balanced, most perfect, most digestible and one of the cheapest human foods known. It contains in proper proportion all the elements necessary for the complete nourishment of the body, and as compared with meat, is very cheap as food. Yet the small consumption of milk per capita by city people shows that it is not properly appreciated, or does not

[CONTINUED ON PAGE 8.]