

# PROGRESSIVE FARMER

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

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## Agriculture.

### SOME ADVANTAGES OF EXPERIMENT WORK ON THE FARM.

Correspondence of The Progressive Farmer.

Every farmer should have a true knowledge of the needs of every piece of land on his farm. Indeed, every successful farmer will have this knowledge to a greater or less extent. It is all very well to study the requirements of a crop and ascertain what fertilizer it will need to do its best. But if you neglect to study your soil as well you are still working at a disadvantage and cannot produce your crops in the most economical manner.

Almost all large fertilizer concerns manufacture special fertilizers. There are cotton fertilizers, potato growers, wheat growers, and vegetable and tobacco fertilizers. These foods are prepared to meet a number of requirements. They must meet the needs of the crop as nearly as possible, both from the standpoint of analysis and from that dictated by experience. They must suit all soils as nearly as can be done, and they must not be too expensive. Most of these goods are what is called well balanced fertilizers, that is, they contain three principal elements of plant food, ammonia, phosphoric acid and potash, in the right proportion to supply the needs of the respective crops for which they were prepared and the general run of land.

You can readily see that it would be impossible for these concerns to prepare a fertilizer that would suit all the different qualities and conditions of soil, as these vary more greatly even than the crops themselves.

And so it is that in using these fertilizers we may be paying for and applying material which our soil already contains. Or, our soil may be so lacking in some one element of plant food that the amount of this element contained in the fertilizer fails to balance the plant food in the soil even though it may be well balanced in the fertilizer itself. The result is that the crop produced will not be as large as the land is capable of making with a fertilizer which would properly balance the plant food already contained in the land.

It will be understood that when we speak of plant food as being balanced, we mean that the three principal elements, ammonia, phosphoric acid and potash, are present in the soil or fertilizer in the right proportion to supply the needs of the crop we wish to grow. If any one of these elements is present in excess a part of it must necessarily remain idle and the effect will be to produce an unhealthy and unsymmetrical growth. The ability of a crop to appropriate plant food is limited by that element which is in smallest supply. If ammonia and phosphoric acid are plentiful in the soil either naturally or put there through a fertilizer and potash is lacking, then the crop will be limited in a great measure to what little potash there is present in the soil or fertilizer. Thus, part of the phosphoric acid and ammonia will remain unused. So also it is with these other elements, any one of them being lacking the crop is limited to that extent.

On nearly every farm there is a great variety of soil and the successful farmer is the one who studies and acquaints himself with the needs of every piece of land in his possession. This is where the value of a little experimental work comes in. We must go to the field with our questions. They cannot be answered definitely in office or laboratory. A practical field test of the different crops with different fertilizers containing different combinations of the elements of plant food is the only way to learn how to fertilize our land as well as our crops. Here only can we obtain such practical information as will enable us to use these fertilizers with profit and economy. The idea that guano is guano no matter what its analysis or composition, and that it may be applied to all crops indiscriminately, will go with the successful and in-

telligent farmer. He will find out what his soil requires, and when he buys his fertilizer he will see that the elements of plant food are present in the right proportions to balance the plant food in his soil for the crop he intends to grow.

A few experiments with the different elements of plant food will cost but little. Acid phosphate or ground bone will furnish you with phosphoric acid. Cotton seed meal, dried blood, tankage, and nitrate of soda, will supply ammonia, and muriate of potash and kainit will give you potash. Try these materials separately and together in different combinations until you find what your soil requires in a fertilizer. In using these different materials remember that the "per cent." is the number of pounds of any given element of plant food which they contain per hundred pounds, and in applying them figure on the pounds of actual ammonia, phosphoric acid and potash you use, and not on the total bulk.

To compute the analysis when compounding a fertilizer, multiply the number of pounds of "carrier" or body in which these elements are contained, by the per centage of plant food it contains and divide the result by the total number of pounds of fertilizer you are preparing after the materials are mixed together. The result will be the per cent. of this element of plant food in your fertilizer. For instance, in preparing a ton of fertilizer we should use one thousand pounds of 14 per cent. acid phosphate, 800 pounds of 8 per cent. cotton seed meal, and 200 pounds of muriate of potash. We multiply the 1,000 pounds of acid phosphate by the 14 per cent. of plant food it contains, the result is 14,000. We divide this by 2,000 and the result is 7, or 7 per cent. of phosphoric acid in our ton of fertilizer. In the same manner we find that the meal gives us a fraction over 3 per cent. of ammonia, and the muriate of potash gives us 5 per cent. of potash.

By a little study of the above method one can easily learn to figure the analysis of any fertilizer you may wish to compound. When mixing be sure to see that it is done thoroughly. The mass should be shoveled over from one pile to another three or four times until the whole is of an even color.

F. J. MERRIAM.

Fulton Co., Ga.

### KEEPING BOYS OUT OF SCHOOL.

One of the greatest mistakes that many farmers make is in keeping the boys out of school in the fall to help do up the fall work. My friend, if your boy does not start when school begins, the chances are that he will start behind his classmates and remain behind the entire term. And under this condition it cannot be expected that he will learn nearly as well as if he had started at the beginning of the term. What I have said may, and often does, apply to the girls as well as the boys. Having had experience in this matter I know what it is to be kept out of school two or three months before starting. Brother farmer, if you are making a mistake in this direction this fall, I trust you will consider the matter well another fall and make a special effort to get the boys and girls started at the beginning of the term. Do give them as good an education as possible so that they may more fully and ably perform the duties of after life. In most of the States men can be hired in the fall for \$10 to \$20 per month and it will pay to hire, if need be, in order to get your boy and girl started on the road to fortune in time.—Glade Yeager, Sprinkle Mills, Pa.

Celery blight or rust may be kept under complete control by spraying either with ammoniacal carbonate of copper or with Bordeaux mixture. The spraying should be begun while the plants are still in the seed bed, and should be continued at intervals of from one to two weeks after the plants are transplanted until the cool weather prevents the further development of the fungus.—Prof. O. Townsend, Md., State Pathologist.

### HARRY FARMER'S TALKS.

#### XLIII.

Correspondence of The Progressive Farmer.

Many farmers sell their cotton in the seed. This some times is best. We have known big money made this way. We made a contract with a cotton buyer once when the market was uncertain to deliver 10,000 pounds of seed cotton at 2 1/2 cents per pound. We agreed to divide the loss if it exceeded 1/4 cent per pound for seed cotton, provided he (the merchant) would share the profits with us. Result: we got \$235 for the 10,000 pounds seed cotton. Cotton went down as usual and we gained by the transaction. The buyer held the cotton and made his money back. We always keep part of our seed. If the price is high, we sell all we can spare; if very low, we buy some for fertilizer. It is best to sell as early as you can. The holding of cotton by farmers nearly always results in loss.

We want our cotton picked as fast as it opens, at least once in ten days if the weather is good. Not every farmer can do this. Cotton is much better if picked soon after opening. We let the pickers go in early in the morning, if they wish, and pick while the dew is on the cotton, but always with the understanding that a few pounds must be deducted. Cotton can be gathered faster while it is damp, and if it is thrown in a pile to sweat, the lint will improve. It is supposed that the lint absorbs some oil from the seed. Gathering cotton seems to be one kind of work for which machinery has failed.

In the southern and eastern part of the State bunch beans, cabbage and peas and many other garden crops can be planted to furnish the table through the fall and winter with nice vegetables. This kind of work is too often neglected by our farmers. A good garden will pay a larger profit for the labor and fertilizer used than any other part of the farm. Mary Jane showed us some tomatoes she planted some time ago from cuttings. If the weather is not too dry we will have tomatoes until nearly Christmas. Our crop last year was a failure, but year before last we had all we wanted. Tomatoes will grow as well from cuttings as sweet potatoes. Where there are nice hot houses or pits to keep flowers in, it will be easy to have all the tomatoes you want until spring by using cuttings and starting the plants before very cold weather comes. Tomatoes that are grown can be kept for months by wrapping them just as lemons are found in the stores in summer. It will be best to expose the tomatoes a few days to heat and light to make them ripen.

HARRY FARMER.

Columbus Co., N. C.

### TO KEEP WEEVILS OUT OF CORN AND PEAS.

An Important Problem, and Mr. Barbrey Has a Simple Plan That Has so Far Proved Very Successful.

Correspondence of The Progressive Farmer.

Two years ago I adopted a plan for keeping weevils and other bugs from my corn and field peas that is so successful, and hence so satisfactory, that I want all farmers to know it. And as all farmers are presumed to be readers of The Progressive Farmer, I take it as the proper medium through which to give it.

It is this: A few days before you are ready to put your corn in barn, clean out the barn thoroughly, and put a few shovelfuls of dirt in the center of the floor about two feet wide and deep enough to prevent the floor from burning; then make a place in the center to hold a shovelful of live coals from green, hard wood; place in the coals, throw on a handful of pulverized sulphur, walk out and close the door. If the stacks are attached to the barn, take stock out, and when the burning is over, haul up your corn and throw into the barn about a foot deep and sprinkle bi-carbonate of soda—common cooking soda—over the corn and on sides of the wall; put in another layer and repeat the sprinkling and continue until the barn is full.

Soda can be bought at 5 cents per pound, and 5 pounds will do for about

30 barrels of corn. I put my large corn up with shuck. Prior to the use of the soda it was difficult to get seed corn as early as last days of March, and after June it was hardly fit for bread.

I now have in my barn old corn enough to feed stock and for bread until 15th of October, and the corn is as nice and as free from bugs of all kinds as it was in June. This has been the case every time I used the soda.

I clean out my peas and air them a few days and leave chaff in them, till I'm ready to plant. When they are dry enough I put in boxes in my barn, and sprinkle among them soda, and some times sulphur, first fumigating the boxes as I do my barn. The 15th of August I took from an eight bushel box the last half bushel and not a bug could be found. I put a few early peas in a bag and neglected to put in soda and sulphur and they were so badly eaten as to be unfit for planting.

The soda will sift off in shucking the corn and you will hardly discover that it has been used.

WM. A. BARBREY.

Sampson Co., N. C.

### WHY NOT STOP THIS LEAK?

We recently had a leak in our waterworks. We were very anxious to have it repaired, because it would likely increase our monthly water bill.

Traveling as we have recently, over two thousand miles, among the farmers of the South, we have been greatly impressed with the leaks in farm methods, and cannot help wondering why our farmers do not stop them. They certainly greatly increase the bill of expenses, or what is much the same, decrease the income.

#### THE HAY LEAK.

This seems to be the most general leak upon the farm. Scarcely a farmer seems to fully appreciate the value of the hay crops growing upon his farm. Grasses of many kinds are permitted to grow to waste, die and be burned up, as if it had no market value.

Many of these very farmers are buying Western hay to feed on. Many of their neighbors are buying Western hay to feed their sawmill steers or mules or their livery stable horses upon.

We saw one man, who was buying hay at twenty-two dollars per ton, and yet pulling fodder and losing all the hay he might have made from his corn stalks. We found one man who had over six hundred tons of corn stalks, enough to make over six hundred tons of first class hay; but this man could not make up his mind to buy a shredder to make them into hay, although he had an engine ready to pull it.

Why not stop this \$1,200 leak? Farmers are paying high prices for bagging and ties, when they do not need either.

Why not stop this leak? Farmers are buying thousands of tons of commercial fertilizers, when good, deep plowing and rapid harrowing would do their lands permanent good and make larger crops than the fertilizers do.

Why not stop this leak? Farmers are cutting rocks and stumps at great expense and loss. They could easily remove both of these.

Very many of them are still suffering their lands to wash away. Deep plowing and subsoling would stop this leak.

Many farmers are still growing scrub cows, when the same grass would grow Shorthorns and Herefords that would bring in four times the money. Why not get a Hereford or Shorthorn bull and stop this leak?

Many farmers have what they call pastures, but bushes, briars, worthless weeds and rocks occupy nearly all the fields.

Real good grass can hardly get hold. Why not clear out everything except the grass and have a pasture? Stop these leaks.—Southern Cultivator.

When planting carrots do not make the soil very rich, as it is the cause of the roots splitting.—I. D. Cook.

## Live Stock.

### SHEEP IN THE SOUTH.

#### XIII.

Third Mating Time—New Stock Ram an American Merino—Fully Described—Flowing Oil—Increased Wool His Main Usefulness—Footrot Surely Avoided—Making Lambs—Ear Tabs—New Stock Ram at Beginning of Sixth Year—A Shropshire Chosen and Described—Heavy Fleece and Best of Mutton Qualities—His Pedigree—Keep Stock Ram Alone.

Correspondence of The Progressive Farmer.

At eighteen or twenty months old the first crop of lambs are ready to be bred. It is the third time of mating for the old ewes or end of second year in the business. Now is the time to be again most careful in selecting a stock ram for the purpose, first of adding the greatest amount of fleece possible to the offspring; and second, of keeping the size up at least to the highest point yet attained.

The great excellence of the American Merino now comes to the front. There being some 50 odd young ewes, a yearling ram may be selected, if carefully handled and stood and not at all turned out with the ewes. No need of using a small ram because there are plenty of American Merino rams weighing 280 pounds and guaranteed to shear 30 pounds of long, fine greasy wool unwashed, of one year's growth. I should not discard wrinkles but rather prefer them moderately for this purpose and would be sure to select one with as greasy wool as possible, but in no case at any time breed from a ram that does not unmistakably show up a good healthy and robust constitution.

See that he has a broad deep breast, short rather than long legs, good well-formed, sound feet, (discard a foot rot sheep) good length of body, square and straight down buttock, rather straight (not swayed) back, short but broad head, with thick neck well set up at the shoulders, giving upheaved lofty carriage, with energetic, square (not shuffling) movement of each quarter in walking. See that his sire and grand sire, dam and grand dam possessed the same characteristics.

For our purpose in hand, high toned premiums, and even pedigrees may amount to but little; buy a sheep as well as pedigree.

I emphasize the matter of a thick, heavy fleece not too short in staple but well crimped at least two and a half—better three—inches long unstretched, and nearly of uniform length and density on belly and on other parts of the body, with the back. Much long very coarse hair on the heavy folds and hips is objectionable. For our purpose in view select a ram with some heavy folds on the neck, perhaps at flank and behind fore legs and on hips, but be far more particular to have small skin wrinkles much as possible all over the body and markedly so on the belly so as to give it a close, firm and solid feel and the appearance of good greasy wool.

See that there is an abundant flow of oil (yolk) from the skin into the wool on all parts. This excess of oil in the Merino sire has a tendency to increased wool and establishes a woolly propensity in the offspring of the cross, rather than too much grease; a characteristic that will prove very profitable in the flock for generations to come. This excess of grease in thoroughbred Merinos for thoroughbred breeding is a different matter. I am now writing of a cross that is to be followed by a much dryer woolled mutton sheep, hence the importance here attached to the elements of density, grease, crimp and quality of fleece.

In short, we may remember that every pound of wool secured in the heavy fleece of the Merino ram used in this cross means an increase of hundreds of pounds of wool added to the annual fleeces of the three crosses of lambs secured while he stands at the head of the flock. It is the great purpose to be gained by this Merino cross.

Supposing the ram to be shipped a distance, and to make sure of no footrot, immediately on receipt of

him, completely wash his feet and a little above the hoofs and carefully between hoofs in a pretty strong solution of blue vitriol (sulphate of copper) or of white vitriol (sulphate of zinc) and water, and repeat every few days for two or three weeks, meantime with a sharp knife paring off bottom of hoofs into as elegant shape as possible and continue to keep them so (also the feet of every stock ram) by frequent paring as long as he is used for a breeder. Besides this have a certificate from the breeder that the ram purchased has not been taken from a footrot or otherwise diseased flock and is free from it when shipped.

These precautions carefully followed will set aside any danger.

Of course the ewe lambs from these young ewes must be marked when they come so as to be readily known, to be permanently marked say at weaning time by using metallic ear tabs with initials and numbers engraved. They are very cheap and by keeping a reference book, are an infallible guide for keeping record of all separations, divisions, notes of matings, of conditions or of sales or any other matters of importance. Such marking and continuous record is of inestimable value to the owner or shepherd who does, or wishes to, understand his business. They should go in the ears of at least the ewe lambs each year at or before weaning time. Red paint spots put on when they first come will designate them until they can carry ear tabs.

By mating time or end of this third year in the business, and supposing the buck lambs to all have been put off, the ewe flock of all ages may stand about 115 old ewes, 50 two-year-olds, 50 yearlings and 75 lambs, in all 290 head. Or it may stand 115 old ewes, 60 two-year-olds, 60 yearlings and 85 lambs, in all 320 head.

I would say that if the number is below the former, something is seriously wrong, but if above the latter the shepherd deserves a high commendation. Though with nice care and feed and attention to the precocity of the stock ram and raising of twins a considerably higher record may be reached.

However, with a view to cutting the flock down at once, the old ones may be sold as stock sheep at a good price if they were young when bought.

The old ewes being sold, and the fourth and fifth years the young half-blood Dorsets being twice bred to the Merino ram brings us to beginning of sixth year with 150 half-blood Dorsets to be once more bred to the Merino and 65 young half-blood Merinos for which a new stock ram must be had, besides 85 half Merino ewe lambs just weaned. It will be a flock of large young ewes of superior quality, the half Dorsets clipping six pounds and the Merinos eight pounds at least on the average while many of the half Merino cross will shear ten pounds.

To hold their high characteristics in density, crimp and quality of fleece, while raising the average of the third cross fleeces up to ten pounds and increasing the weight of carcass to an average of 200 pounds in full fleece and flesh, improved in every way for mutton sheep, will be the problem which shall present itself to the owner and the question will be, "Where will the ram to do this be found?"

I fully believe there is more than one of the long wool and mutton breeds will do this, but I have not tried them all and shall write of what I know.

Notwithstanding the dark face that is disliked by some, I would buy a pedigreed Shropshire. I would pay less attention to some of the fine points of excellence that would make him a prize winner and see rather that he shear a long fibre, well crimped, very lustrous, dense and evenly set fleece, good wool on head, and between and below the eyes, especially dense long and good lustrous quality on the belly and hips as well as on sides and back, and weighing certainly not under 20

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