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Agriculture.

PLANTING THE CORN THICKLY.

The Cost of Seed Corn Small, But a Loss by a Poor Stand is Great—Thin Out Scrub Stalks.

Correspondence of The Progressive Farmer.

During a recent trip through four of the best Illinois corn counties, I estimated the loss during 1900, at fully $100,000 to each county, from poor stands of growing corn. And from many visits to numerous localities throughout the corn States, during the past few years, I have concluded that the average annual loss occasioned by having the stand of corn either too thick, or too thin, will average, at a very conservative estimate, fully 15 bushels per acre. This would average about 70 million bushels that are annually lost in the total yield of our corn crop, owing to poor stands on corn. And permit me to say thal too thick a stand of corn is just as poor a stand as too thin a stand.

That there is much annual loss from having the stand of corn both too thin and too thick, no wide-awake farmer will dispute. Many farmers do not realize the importance of seed of the best possible germinating power. Many farmers almost annually see that their seed corn is not of the best vitality. But they usually delay the selecting (if selecting it can be called) of their season's supply of seed, until they are almost ready to plant. And then it is always a very busy time with them, and they "pick" the foundation of their corn crop, hurriedly, and in many instances carelessly, depending on "luck" for a good stand of growing plants. Many farmers do not select their seed corn in the autumn while husking, as they should invariably do, from individual stalks which have been marked while roguing the crop before its pollen is ripe. If seed corn is thus selected, and subsequently stored in a dry, airy place, it will not only germinate well, and make a full stand, but the product, owing to the fact that its parentage has been selected from nature's favorites, will naturally be of much higher quality, and much greater in quantity. Many farmers when ready to plant, watch for a "rainy day" in which to go to their corn cribs and "pick" their seed corn where their crop of the previous year is perhaps still on hand. Such cribs are in many instances not rain or snow proof, and were perhaps filled with corn before the grain was thoroughly dry. And damp warm weather ensuing perhaps, and heating the grain to the extent that its vitality was much impaired. Again, in "picking" seed corn from the crib, the farmer secures seed which is in varying degrees nature's weaklings, as regards barrenness and its attendant degeneracy—dry rot, smut, etc. In fact, every stalk, good, bad and indifferent, was allowed to exert its sexual influence in dictating the yield and breading standard of every other stalk in the field. In other words, they bred and produced in a similar manner to a herd of wild hogs—scrubs and all. There is an average annual loss of germinating power in all kinds of seeds, most especially if the variety has had no breeding, of fully 25 per cent., and in some instances 60 per cent., due to careless selection. A degenerate variety of seed corn, in which barrenness is always rampant, naturally has weak germs, and general languor of organization, and is in condition to be easily effected by extremes of weather, both before and after planting.

In corn as well as in general crop production, great yield, as well as high quality, can only be secured from seed of a well-bred variety, which has been almost freed from barrenness, disease, dry rot, low germinating power, and general organic languor, by a long course of careful breeding by an expert who has made a life study of plant breeding. But even seed of the highest possible vitality and inherent vigor, is not proof against severe weather conditions, or insect, bird, or rodent depredations, consequently the very best seed to be obtained, (according to the writer's experience) should, to form a vigorous foundation for a large yield, be planted fully twice as thickly as it is eventually wanted to mature as a proper stand. Perhaps almost every reader of this journal who is an active farmer has seen neighbors who suspected that their seed corn was poor, without knowing to a certainty, plant their corn very thickly, in many instances to be followed by very favorable weather and soil conditions, which germinated both vital, and half alive kernels, with a resultant very thick stand with a large proportion of barren and nubby stalks, and in the end a light yield for their work and expense. Or if on the other hand, weather and soil conditions happen to be very unfavorable, a very poor uneven stand resulted. Consequently a very uneven growth, poor pollenation and light yield of inferior quality of grain.

But even if the farmer plant the seed of the highest possible germinating power, and of a good variety, and which generally results in a good even stand, still then there are always many stalks in such growth which are nature's thoroughbred scrubs, and whose pollenating influence exerts a like demoralizing effect with all of the more productive stalks, as do human outcasts upon the whole fabric of society. And as there are no criminal legal penalties for the destruction of plant life, every wide-awake corn farmer should destroy all noticably weak, lazy stalks of growing corn before they form and shed their pollen, decrease the productiveness and rob nature's endowed stalks of their high breeding standard and rightful soil nutriment.

By this process the farmer will leave a proper seasonable stand of the most vigorous stalks, which have been endowed by old mother nature with the capacity and tendency to produce maximum grain yield of the highest quality and most vigorous germinating power.

Again, every farmer should only grow varieties of corn which fully mature a good merchantable grade of corn (with consequently more vital seed) in average years. Also every farmer should constantly keep two varieties of corn on his farm One a medium-sized variety with medium cob and long, large grains, which should be the stand-by for main crop. The other a 90 day corn of which a few acres should be planted each year for early feed. Or if the planting season be long delayed, as it often is, by unfavorable weather, almost as large a yield is secured by planting the 90-day corn fully twice as thickly as the larger, later maturing sort, and in addition secure a much better grade of grain. Verily, there is a host of questions yet unsolved, relating to the production of maximum corn yield.

Brother farmers, kindly give me your personal experience plong this line by early mail. In exchange for such information, I will take pleasure in giving any further desired information on this subject.

W. C. Suffern.

Voorhies, Ills.

Free rural mail delivery is easily secured. At the Rhode Island State Grange in '99 the State Master urged delegates on returning home to prepare petitions for the establishment of mail delivery routes. This was done by the Patrons of Davisville Grange. On the establishment of the route by the Postoffice Department August 15th, 1900, 64 pieces of mail were delivered at 28 places. The size of the mail has steadily increased. The largest number of pieces delivered in one day was 172. During last November the average was 133⅓ pieces per day. The carrier now stops at 60 places, an increase of 32. When the route was first started only three daily papers were taken; now there are 28.—C. O. Flagg.

Will you do us a favor? When you write to any man who advertises in this paper please state that you saw his advertisement in our columns.

SHREDDING CORN.

A Farmer Who Took the Advice of The Progressive Farmer and Bought a Shredder.

Correspondence of The Progressive Farmer.

Just a few words about stover. It may help to take the scare off some of our good farmers who just will keep on pulling fodder in the laborious old way.

I bought a shredder and cutterhead combined last fall from the St. Albans Foundry Co, and am well pleased with the quality of its work and capacity. You simply have your corn stalks, fodder and shucks torn into fine hay, all at one process. My stock eat it freely and are keeping up in better order than they have heretofore. Cattle and mules eat it up very clean; sometimes you may get a double handful from feeding a two-bushel basket full. The refuse is just nice to make fine manure.

Brother farmers, save all your feed by cutting your corn near the ground. Do not lose half your feed by pulling fodder any longer. Get a shredder and shred and cut your feed; it does go so much farther and stock keep up so much better on it than they do on feed thrown to them in the rough state.

I'll just give a little failure I made by shredding about one-third of my crop before it became dry enough. I hauled it to my barn in four weeks after cutting and shocking it. The weather was very favorable on it and it seemed to be dry; I shucked it out on the stalk, which no one need fear doing (a person can shuck very near as fast as can the old way). Next day I shredded a portion of it and packed it down in my barn as tight as a man could pack it, and in a month or so there was a little white mould all through the centre of the bulk, but my stock ate it up clean. The sap had not all gotten out of the pith of the stalk, and being packed so tight caused it to mould. The balance of my crop was packed away under shelter until November or December, and then I shredded the balance, which is keeping all O. K.

R. O. Cate.

Orange Co., N. C.

FERTILIZER FORMULAS FOR HOME-MIXING.

The Executive Committee of the New Jersey Board of Agriculture asked Prof. E. B. Voorhees to prepare a list of fertilizer formulas to the soils and crops of the State. These formulas were issued in a pamphlet of twelve pages and distributed to farmers with charge. Since they are equally well adapted to soils and crops of many other sections, we copy here portions of the pamphlet, including a few of the formulas.

For Field Corn.—No. 1. Ground bone, 250 pounds; acid phosphate, 500 pounds; muriate of potash, 25 pounds. No. 2. Cotton seed meal, 200 pounds; acid phosphate, 600 pounds; muriate of potash, 200 pounds.

Apply of either formula 200 to 300 pounds per acre on manured soils; 300 to 500 pounds on medium soils without manure.

For forage corn or silage dried blood may be substituted for cotton seed meal, in whole or in part as more nitrogen is needed.

For Oats.—No. 1. Nitrate of soda, 200 pounds; tankage, 150 pounds; acid phosphate, 600 pounds; muriate of potash, 50 pounds.

On good soils use 200 to 300 pounds per acre; 300 to 500 pounds on medium soils without manure.

For Wheat.—No. 1. Nitrate of soda, 50 pounds, tankage, 250 pounds; acid phosphate, 650 pounds; muriate of potash, 50 pounds.

No. 2. Dried blood, 150 pounds; tankage, 100 pounds; acid phosphate, 700 pounds; muriate of potash, 50 pounds.

No. 3. Cotton seed meal, 300 pounds; acid phosphate, 600 pounds; muriate of potash, 100 pounds. Apply the same as oat formula.

For Early Potatoes.—No. 1. Nitrate of soda, 100 pounds; sulphate of ammonia, 100 pounds; tankage, 100 pounds; acid phosphate, 500 pounds; sulphate, or muriate of potash, 200 pounds.

No. 2. Nitrate of soda, 50 pounds; sulphate of ammonia, 50 pounds; dried blood, 150 pounds; acid phosphate, 550 pounds; sulphate, or muriate of potash, 200 pounds.

Application may range from 800 to 1,200 lbs. per acre. [Farm Journal thinks no more than 800 pounds of such a mixture should be put in the drill; when the larger quantity is used 500 pounds should be broadcast and 700 pounds drilled in and well mixed with soil.]

For Late Potatoes.—Nitrate of soda, 50 pounds; dried blood, 100 pounds; tankage, 100 pounds; acid phosphate, 600 pounds; sulphate, or muriate of potash, 150 pounds. Use 600 to 800 pounds per acre.

For Sweet Potatoes.—No. 1. Tankage, 300 pounds; dried blood, 100 pounds; acid phosphate, 400 pounds; muriate of potash, 200 pounds.

No. 2. Dried blood, 75 pounds; tankage, 300 pounds; acid phosphate, 375 pounds; muriate of potash, 250 pounds. Use from 500 to 800 pounds per acre.

For Market Garden Crops.—Asparagus, cucumbers, early beets, cabbage, celery, egg plants, melons, peppers and squashes. No. 1. Nitrate of soda, 100 pounds; sulphate of ammonia, 100 pounds; dried blood, 150 pounds; ground bone, 100 pounds; acid phosphate, 450 pounds; muriate of potash, 150 pounds.

Use from 1,000 to 2,000 pounds per acre. It is sometimes desirable to apply at different stages of growth rather than all at time of planting.

For Fruits and Berries.—No. 1. Ground bone, 250 pounds; acid phosphate, 450 pounds; muriate of potash, 300 pounds.

No. 2. Ground bone, 600 pounds; muriate of potash, 400 pounds.

For ordinary soils and for large fruits apply after trees come into bearing, 300 to 500 pounds per acre annually. For berries apply 400 to 600 pounds before setting, and annually thereafter.

For early spring application to trees and berries on light soils, it is recommended to use formula No. 3: Nitrate of soda, 150 pounds; ground bone, 400 pounds; acid phosphate, 200 pounds: muriate of potash, 250 pounds.

For Timothy and Clover.—Nitrate of soda, 50 pounds; tankage, 150 pounds; acid phosphate, 700 pounds; muriate of potash, 100 pounds. Apply 300 to 500 pounds per acre at seeding time.

For Timothy Hay, Top Dressing. Nitrate of soda, 500 pounds; ground bone, 200 pounds; acid phosphate, 200 pounds; muriate of potash, 100 pounds. Apply 200 to 300 pounds per acre.

For Clovers, Cow Peas and Pasture.—Ground bone, 150 pounds; acid phosphate, 600 pounds; muriate of potash, 250 pounds. Apply 300 to 500 pounds per acre.

For Turnips, Swedes and Rape.—Nitrate of soda, 150 pounds; dried blood, 100 pounds; ground bone, 200 pounds; acid phosphate, 400 pounds; muriate of potash, 150 pounds. Apply 600 to 800 pounds per acre.

It is not believed that any one formula is the best for all conditions. These vary as widely as the soils and different methods of management.

Care should be exercised in the preparation of mixtures to obtain good mechanical condition. It is difficult to obtain a dry mixture from mineral ingredients alone, as acid phosphates, potash salt and nitrate of soda. Such mixtures are liable to become pasty, or, if left to stand, may harden into a solid mass. The addition of bone or tankage will help to make the fertilizer dry and workable in a drill or planter.

The suggestions made above as to the constituents to be used, and the amounts to be applied, have reference to average conditions of soil and practice where fertilizers are used as a supplement to the manures of the farm. For poor soil, and when manure is not used, the amount of fertilizer must be increased, and in the case of cereal crops, more nitrogen is needed in the mixtures.

If you receive more than one copy of The Progressive Farmer, hand to a neighbor and ask for his subscription.

HARRY FARMER'S TALKS.

XI.

Correspondence of The Progressive Farmer.

How often do we see farmers ask merchants or postmasters to write letters for them. If they want to order something they must get some one to do the writing. This is something to which school teachers should give more attention. Every boy and girl should be taught to write ordinary business and social letters. The writer knew a man who attended college who did not know how to order a barrel of flour from the city. Boys and girls, you can get copy books with business forms in them. You can practice at home during these long winter winter nights and in a short time be able to do your own writing. The nice letters written to Aunt Jennie show what boys and girls can do. Harry Farmer likes to see these letters and wishes all the young readers would write occasionally.

Do you make as many sweet potatoes to the acre as you would like? If not, in making up your fertilizer order add 100 pounds of sulphate of potash and 200 pounds 13 per cent. acid phosphate and scatter it along the rows with your other manure and note the result. I have seen kainit used in the place of potash. I knew a farmer to get 100 bushels of potatoes by using fertilizer in addition to his other manure at a cost of only $2.89. If you can get ashes you will not need any potash, as they contain enough for ordinary crops. Here is one fact that each farmer should always keep in mind: it is the top bushel or pound that gives the profit. If your corn costs you $5 per acre to make it and sells for 50 cents per bushel and you only make ten bushels per acre, you will be no better off at harvest than you were at planting time. But suppose you make 15 or 25 bushels per acre, that means a profit of $2.50 or $7.50. So you see just what I mean by the top crop or clear profit. Here is a place for that account book mentioned in a former article.

The Legislature may want to tax something to increase the public school fund. You can tax the dogs and help that way two important industries—sheep and eggs. A few years ago there were large flocks of sheep all over the country and if the number decreases in the next 25 years as it has in the last two decades they will be as scarce as deer. How many eggs are destroyed by the half-fed dogs no one can tell, but the number is great. Ask some of the women folks and see what a tale they will tell. A good dog is useful and should be well taken care of. It is the hungry cur whose owner cannot feed him that does the mischief.

Harry Farmer.

Columbus Co., N. C.

SPRING SEEDS.

Correspondence of The Progressive Farmer.

Farmers who sowed clover and grass seed last fall will find many bare patches and even bare fields as soon as the soil begins to warm up. While the fall is the best time to sow clover and grass seed in the latitude of North Carolina, fall droughts have to be reckoned with. The drought of the fall of 1900 was long and severe. It has damaged fall seedings and in some neighborhoods prevented the usual fall sowings of crimson clover.

The writer sowed 100 pounds of cleaned or hulled crimson clover in a cotton field near Raleigh in October last. Present prospects are that he will not get his seed back. Sowings of native seed, in chaff, i. e., uncleaned, made at about same time have done very well. Most of the cleaned crimson clover seed handled by seedsmen is imported—mostly from Germany. This seed is not acclimated to our conditions and is very far inferior to native and locally grown seed. This seed should not be hulled, but always sown in chaff. Probably all the clover tribe catch better when unhulled seed is used.

The American red clover crop of 1900 was nearly a failure. The price of this seed is now high and advancing. It has already appeared that unscrulpulous seedsmen are importing European-grown clover seed and selling it as American seed. Some of them are mixing with red clover seeds not true clovers, but millets and trefoils. These adulterants are of nearly the same size and color as red clover and are apt to escape the notice of those not expert in seed examination. As a general thing farmers of the South will do well to avoid spring sowings of clover this year. Where the stand of clover or grass from fall sowing is too poor to be allowed to grow, it will be more profitable to plow the field up and resow with the Burt oat, or a mixture of Burt oat and common vetch—*Vicia sativa*. A good mixture of above is one bushel of oats and 30 pounds of vetch. The oats can be bought in Raleigh and probably of most seedsmen for about 70 cents per bushel. The vetch costs $3 per bushel of 60 pounds.

Where improvement of the soil is the chief object the sand vetch (*Vicia villosa*) is much superior to the other species. It is, however, of little value for hay, as stock will not eat it unless starved to it. Both these vetches and also the Burt oat may be sown anywhere east of the mountains from February 20th to March 10th. They are all very hardy and not liable to damage from cold. But late sowing is likely to cause loss from rust of oats and mildew of vetch.

No farmer should buy any clover or grass seed this spring without first securing a sample and having it tested at the State Department of Agriculture. Such tests are free to farmers. Gerald McCarthy,

Botanist N. C. Dep't Agriculture.

The Country Gentleman in a recent issue printed a letter from an employee of the Chicago stock yards. He says that the thousands of barrels of oleo that leave the stock yards are not for export as many think. "These barrels are filled with anything that can be 'processed' and deodorized and turned into oleo oil, and then delivered to the factories. When these barrels are emptied they are returned to the grease producers and filled again. This is the principal ingredient in the finely colored butterine which is carefully gotten up for the retail trade. How about the product of the packing houses or the stockyards? That is put on the market in bulk packages. In these every fat product that cannot be disposed of otherwise finds its way into the butterine, and is shipped all over the country and sold as low as eight cents a pound. No tallow is sold from stock yards nowadays. Butterine demands it all. Soap manufacturers, candle manufacturers, etc., have to seek their stocks elsewhere. I have seen the business of oleo grow till everything in the fat line is utilized in its production. The demand for oleo oil or fat has so increased that the stock yards plant has introduced deodorizing processes, so that all kinds ol inferior fats and offal can be turned into products that go into oleo."

SHOULD THE STATE RAISE PEANUTS?

The farmers of Northeast North Carolina say not, and we think they have justice on their side of the case. Mr. W. F. Butterworth has written a ringing letter upon this subject. Commenting upon it, the Scotland Neck Commonwealth says:

"Mr. Butterworth's contention, coincided with by many farmers in this region is, that inasmuch as the State can raise on its farms all the other products in abundance, such as cotton, field peas, wheat, corn, etc., without coming into unequal competition with any particular territory, it ought not to jeopardize the prosperity of the farmers of this territory by raising a large crop of peanuts, which are raised nowhere else in the State.

"It is stated on good authority that the State has sixty thousand bushels of peanuts on hand now; and a merchant in Scotland Neck, a peanut buyer who is all the time well posted, said a few days ago that if the State did not have this large amount of peanuts on hand now, the farmers here would be getting a dollar a bushel for their peanuts instead of seventy and seventy-five cents."