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Agriculture.

PROFITABLE WHEAT SOWING.

Hand Sowing vs. Drill Sowing—Fertilizing—Time for Sowing—The Kind of Seed Needed.

Correspondence of The Progressive Farmer.

Oer last week's article on wheat was how to prepare the ground. The next we want to know is, How and when to sow wheat for a profit. The writer has seen it sown almost every way and sowed it at all times from the middle of September until the first of January in North Carolina and Virginia. No matter how well your ground may be prepared, or how good your seed may be, or how much fertilizer you may use, if your wheat is not sowed right and at the right time all is in vain that you can or may do to make a profitable yield. The old plan of

SOWING WHEAT WITH THE HANDS

will not do to bring a profitable yield of wheat. When you sow with the hands, you get some too thick, some too thin, and some will get ploughed in too deep, some not deep enough and still others not at all.

Now, with wheat sowed in that condition, how could you expect a profitable yield? You find all over the country men who will go after the corn is gathered and plough up just what little loose ground there is and sow it down with the hands and expect to make wheat. And off of that kind of sowing they would get about five bushels of wheat per acre and their seed would cost $1 and their work to sow it would be worth $1 and it would cost $1 to harvest it all told before they could get it thrashed. It would cost them about $4 per acre. And at the price wheat has been selling for the last two years his five bushels of wheat would net him $3 50. So you see he is losing instead of gaining on wheat raising.

My experience and observation has convinced me there is

BUT ONE PROFITABLE WAY TO SOW WHEAT

and that is drill it after the ground has been thoroughly prepared, as we described in our last article on this subject. Drill it and use fertilizer. There is no use to drill and fertilize it if your ground is not thoroughly ploughed. If it is not ploughed good and deep the fertilizer will do harm in place of good.

Last year we took one acre in a three acre lot and drilled it with about 225 pounds to the acre of 13 per cent. acid phosphate. The land was just common upland and the acre made 15 bushels of wheat. We took the other two acres, the very same kind of land, and sowed them down with our hands and ploughed the wheat in with shovel ploughs; on these two acres we made about 5 or 6 bushels, a yield about one third on two acres of what was made on one acre properly prepared and well drilled and fertilized. To prepare the acre we drilled cost about $1, the seed $1, the fertilizer about $2, to sow it $1, and to harvest and thrash it $1.50, making a total cost of about $6 50. The fifteen bushels of wheat at the selling price when we thrashed would have net us about $11.25 that would have given us a profit of about $4.75 to that acre, a very good profit for common clay upland. And on the two acres we did not drill we lost in place of gaining.

There was a man who lived near us last year and he prepared all his ground well and fertilized it. Part of it he drilled and the other he sowed down both wheat and fertilizer with his hands. And on what he drilled he made about as much again per acre as he made on what he sowed with his hands. To drill wheat is the only sensible way there is to put it in the ground and my experience has been that it is the only profitable way to sow. If you have land that is rich enough to bring wheat without fertilizer, I am of the opinion that it will pay you to drill it. And this for the simple reason that if we just sow enough wheat down on a lot of land to bring a good stand and one-fifth gets covered so deep that it never comes, and one-fifth doesn't get covered so deep as to get enough moisture to come, while again one fifth doesn't get covered at all, this leaves us two-fifths which will get covered right and come up. Could you expect two fifths enough wheat on a piece of ground to bring you a profitable yield. These figures are not given to be the case all the while, but they give you a good idea of what the results are from sowing with the hand. This being the case with sowing with the hands, it is not the case with a good disc drill. These will open the ground just the right depth for you and put every grain of wheat to its place and then cover every grain just the right depth, and every grain will come up if it is sound wheat. Now

A WORD ABOUT USING FERTILIZER.

Our people should have all the information and advice on this that they can get, for there is but little land in North Carolina that will make wheat without fertilizer, and since it is very costly, if we do not know how to use it to pay, we will lose money on it, and that fast.

As to the amount to put to the acre, that is something that every man will have to find out by trying it on his land. I can only give you some idea of that and you can learn something up here in the Western part of North Carolina on these old red hill sides. If we will prepare our land right and put 300 pounds of 13 per cent. acid phosphate to the acre, it will pay us right well. And the better quality we use the less to the acre will bring the same yield. There is one mistake which people who have never used any fertilizer on wheat make, and that is they put their fertilizer on the poorest land they have.

In the neighborhood some man perhaps has used the drill and fertilizer and made a good yield of wheat—maybe somewhere about 15 or 20 bushels per acre—and when this news reaches his neighbors, some of them will say: "I am going to try the drill and fertilizer this fall. I have an old field out here that I have not made anything on for years and I am going to try drilling and fertilizing it and see what I can do." So he does and makes about 5 or 6 bushels to the acre, and he then says, "Well, there is no pay in fertilizer," or "The fertilizer is no good." Yet if he had sown the same land without the fertilizer the wheat would not have been worth cutting. If you wish fertilizer to pay, you put it on land that will that will yield 8 bushels to the acre, and I will assure you that if you do your work right, it will bring you 16 or 18 bushels per acre with the fertilizer.

As to

THE TIME WHEAT SHOULD BE SOWN

most men differ, and the best way is for us to learn by trying and seeing at what time it will do best. This is a very important part of making a profitable crop of wheat. We find all over the State people sowing wheat at all times from the last two weeks in September until Christmas. Now, my experience has been that the season for planting or sowing anything covers about two weeks and the wheat sowing two weeks in Western North Carolina is from the 10th of October to the 25th of October, and if we wish to make a profitable yield of wheat, this is the time to sow it. Everything which we plant or sow to bear grain or fruit of any kind, requires to be in the ground so many days, weeks or months that it may grow bear, and mature a profitable crop. And for wheat it takes just even eight months for it to mature, if it is good healthy wheat. And we find that all over the State wheat will be ready to cut from the 10th to the 20th of June, no matter if it was sowed Christmas. Now, if it requires eight months to grow and fully mature and is always ready to cut from the 10th to the 20th June that would make sowing time from the 10th to 20th of October all over the State of North Carolina.

Finally, a few suggestions as to the seed. Use

NOTHING BUT THE BEST SEED

and have it well cleaned before sowing. If you possibly can, have all the faulty and cockerel taken out. Most men put just the very amount on the ground they want to grow there, and if one-tenth of it is cockerel and one-tenth wheat that doesn't come up and one tenth wheat that has not vitality enough to start the wheat off after it comes up, that leaves seven tenths of the wheat you wished to stand on the ground. And all men know that if a piece of ground lacks three tenths being wheat enough on it, that ground will not bring a profitable crop.

Reader, if you will follow the above in sowing your wheat, I think you will be pleased with the results.

ZEB B. PYATT

McDowell Co., N. C.

The largest bull at the Pan-American was a Shorthorn that weighed twenty seven hundred and fifty pounds. The smallest full grown animal was a French Canadian cow, and she weighed less than four hundred.

NEW LANDS TO BE OPENED UP.

We learn from Wallace's Farmer that the State of Montana will shortly have a land sale that will eclipse that in Oklahoma where 2,000,000 acres were disposed of to homeseekers. About 3,000,000 acres distributed throughout all Montana will be auctioneered off. A State law prohibits the sale of any lands at less than $10 per acre and where it fails to receive bids of that much the State boards of commissioners will only lease the lands to the highest bidder. The board decided that purchases by any one person shall be limited to 160 acres agricultnral or 640 acres grazing land

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Our farmers are beginning to sow wheat, but very little has been sown up to this time. I think our farmers saved more fodder and hay than usual, and our corn crop is about an average in Jackson. I hear farmers from adjoining counties say that they have fine crops of corn. We have had three weeks of ideal October weather, very light frosts to date.—A. J. Long, Sr., Jackson Co, N. C.

THE SHREDDER IN MECKLENBURG.

A Machine That is Revolutionizing the Methods of Harvesting the Corn Crop.

The corn shredder is a new thing in this section of the country and is arousing almost as much interest among the farmers as did the appearance of the perambulating thresher, some years ago. Two of these shredders are being operated in Mecklenburg county, one by Mr. Robert Wallace, of Eastfield, and the other by Mr. Oscar Hunter, of Sharon. The shredders are run by steam power and are moved from farm to farm, like wheat threshers. Mr Wallace's shredder is now at work on the farm of Mr. John Sims, about three miles north of the city, and its operations are being watched with much interest by the neighboring farmers.

The introduction of the shredder marks a new era in agricultural operations in Mecklenburg. The shredder takes the corn as it was cut from the field, shucks the ear and by means of a belt elevator sends the grain to the bins. The stalks, shucks and fodder are cut to shreds and by means of another elevator are conveyed to the barn loft. The farmers who have had their corn crop handled by the shredder are delighted with the result. Every particle of the crop is saved and at the same time stored away, saving a great deal of labor, time and expense in the handling. The appearance of the shredder on the Mecklenburg farms means the passing of the old system of harvesting the corn crop. —Charlotte Observer.

The fall of the year is the time to buy fowls of the pure breeds, and prices are then lower and the majority of breeders do not care to winter more stock than they can accommodate comfortably, being consequently disposed to sell at lower prices than in the spring. Better stock can also be obtained in the fall, as breeders have more on hand from which to select, and can more easily satisfy customers.—Farm and Freside.

PROFITABLE VS. UNPROFITABLE FARM MANAGEMENT.

Poor Management of Maryland Soils Keeps Value of Best at About $10 Per Acre—Land no More Fertile in Pennsylvania Brings $125 per Acre—Difference Due to Less Thrifty Methods—A Paper That Can be Studied With Profit by Farmers Everywhere.

The Department of Agriculture has just issued a bulletin treating of the exhaustion and abandonment of soils. The report is compiled from the testimony of Prof. Milton Whitney, Chief of the Division of Soils, before the Industrial Commission.

The abandonment of soils is attributed to exhaustion, development of new areas, attempts to grow crops unsuited to particular soils, scarcity of water, unfavorable climatic conditions, flooding and inundation by storms and tides, labor and expense of maintaining proper physical conditions, social conditions and transportation conditions.

MARYLAND AND VIRGINIA.

In speaking of the cause of the deterioration and abandonment of lands in Maryland and Virginia Prof. Whitney says;

"The exhaustion of the soils, of which we have heard so much in Maryland, Virginia and the Southern States, is due unquestionably to improper and injudicious methods of cultivation and cropping. It is also due to the decrease in value of farm crops, due in turn to the cheaper production in the West and to the reduced cost of transportation, and to the increase and development of special industries in other localities—for example, in the production of the white burley tobacco in Ohio, which yields more per acre, is grown at a less cost per pound, and can be sold at a cheaper price than the Maryland leaf, and has largely taken the place of the Maryland leaf in the foreign markets, particularly in the French and Belgian markets.

OLD MORTGAGES A BURDEN.

"Furthermore, the changes in the social conditions due to the Civil War and the mortgages which are still outstanding against the lands have been a contributing cause to the abandonment or to the deterioration of many of these areas. It has been found possible in many portions of Maryland, with the prevailing crops and methods of cultivation, to obtain a fair interest on the labor and expense of cultivation, but it has been impossible to obtain a living from the land if at the same time the interest on mortgages, which have been running since the war, has had to be met. And I know of once prosperous communities in Southern Maryland where they could still be successful, where they could produce sufficient to maintain families without stint and with a fair degree of comfort, but where nearly all the farms are mortgaged as an inheritance of 30 years ago, and it is impossible to support the families and to pay off the mortgages at the same time. Areas now are being abandoned from that cause through out Maryland and the South.

SOILS NOT EXHAUSTED.

"One of the most important causes of deterioration, however, and I think I should put this first of all, is the method and system of agriculture that prevails throughout these States. The division of soils made a careful survey with soil maps of two of the counties of Southern Maryland this year—St. Mary's county and Calvert county—and of Lancaster county, Pennsylvia, and the study of the conditions which have prevailed and the methods particularly which have been used in these two areas has been a matter of considerable interest to me.

"In the first place, I would state that the soils of Southern Maryland are in no way exhausted in the sense that that term is generally used—that is, a chemical analysis shows that they have sufficient food for innumerable crops and that there is apparently no lack of plant food in the soil.

WHERE ST. MARY'S EQUALS LANCASTER

"Unquestionably the soil has been abused, the methods of cultivation and of cropping have been injudiciously selected and the soils are not now as productive as they should be. There is one area in particular of a certain soil with a heavy subsoil in St. Mary's county—probably about 40 per cent. of the area of the county—that is in my opinion as valuable in its way, and in much the same way as the limestone soil of Pennsylvania. This soil in St. Mary's county sells for from $1 to $3 per acre in forest, as it usually is, or for about $10 per acre where it is under cultivation, while the soils in Lancaster county sell now at from $125 to $150 an acre.

"But on the soil in St. Mary's county there have been several good farms that have been kept up. The Maryland farmer grows on soils in good condition from fifteen to twenty bushels of wheat; he grows clover; he grows tobacco, and he gets from 6 to 10 cents a pound for the tobacco. The Pennsylvania farmer grows from twenty-five to thirty-five bushels of wheat; he grows clover and grass, as in Maryland, under good treatment, and he grows tobacco, from which he gets from 6 to 10 cents a pound also. He gets the same price, but a larger yield. It is heavier tobacco.

SOCIAL CONDITIONS CONTRASTED.

"Now, from a consideration of the crops that are obtained from this Southern Maryland area and of the staple crops and of the yields and values obtained from the soils of Lancaster county, Pennsylvania, it seems to me evident that the soils of Southern Maryland ought to have a relatively higher value; and the reason why they have not is largely, in my opinion, because of the social conditions and the methods of farming. If you go into the home of a Lancaster county farmer and sit down to dinner with him he has an abundance of food in great variety. Everything, the chances are, has been grown upon his own farm. The meat has been raised by himself, the vegetables have been grown in his garden or in his fields, the preserves or whatever they may have for their dessert have been made by their families from the products of their garden. Even the sugar, the chances are, has been produced on the place, and actually nothing but the tea, coffee, salt and pepper has been purchased that goes to make up the family meal.

METHODS OF FARMING.

"The families as a rule are large. They have a good many children. The boys and girls are all brought up to work on the farm.

"It is the rarest thing that any of them leave the community or leave the farm. They stay there and they marry. It is a common thing for them to settle on a portion of the farm or on some neighboring farm. The farms are small, and labor is all done by the owner and his family. The girls are all brought up to look after the house. There is no expense for servants. They have their garden and their fruit. They put up their preserves and their apple butter and such things for their winter use.

"We find that very few products are sold from Lancaster county; very few things are sent out of the county except tobacco and stock. And they not only feed up all their corn and hay that they grow to their stock, but they import it often from other States and from other counties so that they can raise more stock and make more beef and mutton. Most of the products of the farm, including the wheat, which is ground up for flour in adjoining mills, are used on the farm or manufactured there into some sort of product that is sold or is used up in the district.

"There are manufactures and industries which require to be kept up in the large city of Lancaster and many smaller towns, in which there is a ready market for everything that is produced in the county, and the interesting thing is that the supply and demand are nearly equal, so that very little is sent out of the county and very little is brought in. The result is that it is a happy and contented and prosperous community. The lands have been handed down from generation to generation for ages, and people seldom think of leaving the place. They are a contented and happy and prosperous people.

WHY MARYLANDERS LOSE.

"In Maryland the methods are altogether different. In the first place, the Maryland farm is seldom worked by the man who owns it. There is for some reason an unfortunate prejudice which prevails in many localities, at any rate in Maryland, against a man who actually goes into the field and works his land. He usually has an overseer, a man who is paid to look after and direct his interests instead of doing this himself. Frequently he has not even so much control over his interests and lets his land out to a tenant farmer, who farms it in his own way, by his own methods and for a portion of the crop, and occasionally for a money consideration.

"The crops grown are the ordinary crops of general agriculture. They have corn, wheat and tobacco. The competition from the West and the low prices of wheat and corn make them scarcely profitable. The competition with the Ohio tobacco and the general specialization which has taken place in the tobacco industry and the necessity of producing something that is peculiarly adapted to a certain market or to a certain demand have lowered the price of Maryland tobacco.

"Now, after the Maryland farmer has raised these three things he has done, as he thinks, the best he can and he has nothing further to consider for his development. The corn is fed mainly to his work stock, and it all goes to that and his own labor. The wheat is sold and sent off the farm in exchange for flour, which he buys at a considerable increase in cost over what it would have cost him if he could have had it ground in his own neighborhood. The tobacco, of course, is sold and goes out in exchange for productions of all kinds for himself and family. He buys his meat, he buys his groceries and he frequently buys the vegetables that he should have raised in his garden.

IMPROVIDENCE AND THRIFT.

"There is no comparison between the conditions in a prosperous community like Lancaster county and the improvident methods that prevail in some of our Maryland counties and Virginia communities. There is no comparison whatever between the economical methods that are employed, and it seems to me that one of the most important contributing causes to the abandonment and impoverishment of the lands in Maryland and Virginia and of many of the Southern States is due to this one fact—that the farmers do not use the same thrifty methods that have marked the success of farmers in Lancaster county and in many other counties of the Northern States."

Prof. Gilbert, of Ottawa, Canada, was recently asked why poultry is valuable to the farmer. He summed up the whole field so nicely in his reply that we quote as follows: "Because he ought by their means to convert a great deal of the waste of his farm into money in the shape of eggs and chickens for market. Because with intelligent management they ought to be all year revenue producers, with the exception of perhaps two months during the moulting season. Because poultry will yield him quicker return for the capital invested than any other department of agriculture."

Lighting a bee smoker is a quick operation if rightly done. Here is a pointer: When through work don't empty out the fire and unburned material. Stuff some grass in the nozzle to stop the draft, when the fire will gradually go out, leaving some charred brands that kindle very easily. Use planer shavings for fuel. Poke a hole at one side in the half-burnt remains of the last fire, drop in a lighted piece of paper, give a puff or two, sprinkle in some fresh fuel, give another puff or two, fill up the smoker, and put on the cover. This is away ahead of lighting fresh shavings saturated with kerosene oil.—Selected.