THE PROGRESSIVE FARMER

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

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Agriculture.

THE BOYS ON THE FARM.

The Problem as Mr. Shoemaker Sees It.

Correspondence of The Progressive Farmer.

The tendencies of modern inventions are towards increasing the city and decreasing the country population. Too many young men are induced to join the army of consumers and leave the ranks of producers. The results are noticeable wherever we have hard times and money is close. Then there are thousands out of employment and families are compelled to live in poverty. This is an indication that there is something radically wrong with the methods of agriculturists. The boys are neglected. They see more signs of prosperity among their city cousins and are easily led into the metropolitan channels. The gaudy displays of apparent wealth make them believe that life is more real in the city than in the country.

The evils of the cities are alluring pitfalls into which many thousands of honest country boys fall before they realize their mistake. Some of the responsibilities for this condition of affairs must rest on the shoulders of parents. The instructors in the district schools and even in some of the colleges are largely to blame for directly and indirectly sneering at men who come from the farm. Boys are taught from many sources that manual labor is degrading and not characteristic of modern Americanism. They see their parents struggling on old farms upon which former families have failed and believe there is nothing in farming. The frequent dilapidated condition of rented farms and the small yields in comparison with the days of their fathers cause boys to lose faith in agriculture.

In every avenue of life the boys notice the results of concerted organization against the farmer. They see the numerous trusts, great corporations and combinations of capital arrayed against the farmer with no apparent better conditions in sight for the future. The land produces small crops of wheat, corn and potatoes and a combination of buyers or a board of trade corners the market and lowers the prices of wheat the farmer has to sell and raises the charges when he is the buyer. These unfavorable conditions must change before the boys will be content to remain on the farm. They must be recognized by the present farmers in the matter of wages and the future of land holdings.

One of the great evils of farming, noted by the boys, is the general loss of soil fertility and the consequent decrease of crops and land values. A crop of corn yielding 50 bushels per acre, will remove 31 pounds of phosphoric acid, 67 pounds of nitrogen and 50 pounds of potash annually from that one acre. If this is kept up for many years without replenishing the plant food the soil becomes worthless for corn growing. A 15 bushel crop of wheat takes from the soil 24 pounds of phosphoric acid, 39 pounds of nitrogen and 31 pounds of potash. The same land will not long remain a prolific wheat field if the soil is not replenished. This can be done only by using fertilizers containing the elements of plant food taken up by the respective crops. Rotation of crops does some good and leaving the land to rest occasionally assists in holding the essentials of plant food, but annual applications of fertilizers is necessary.

Every farmer should study first how to increase his annual yield of farm products, and second how to properly market what he produces. The secret of the first lies in the purchasing and using of fertilizers, and the second in co-operating with other farmers in securing a profitable market. A proper mixture of potash, phosphoric acid and nitrogen, which can be learned by reading reliable agricultural journals and testing the soil, will increase the yield of corn from 30 to 50 per cent. and leave the land in fine condition for the following year. Repeated official experiments have demonstrated this as the various agricultural experiment stations in the States where corn is grown. What is true of one crop is equally true of another. If the land is kept in good tilth so it produces choice crops and the farmer co-operates with his neighbor in selling products, so as to get the best price, and purchases in such a manner as to secure low rates on what he consumes, the boys will see more beauties in the fields of agriculture and stay on the farm.

JOEL SHOEMAKER.

FILLING UP THE SILO.

Correspondence of The Progressive Farmer.

Not only for winter feeding but for summer also is ensilage one of the best and most economical food for the dairy cows. It looks as if the old-time pasture fields were condemned in localities where farming land is expensive. I believe with the owner of a large fancy dairy, that where land is worth as much as $100 an acre it is a losing game to pasture it. Indeed, I believe it would prove so in nine cases out of ten where the land is worth only $65 or $75 per acre. Such land is usually located within a pretty reasonable distance of a large city and good dairy market.

Now if it is to be made at all profitable for dairy purposes it must be done so through the silo. You can raise so much more food on an acre in this way, and extend the feeding period over such a long season that you are bound to make a profit if there is any in the business.

Ensilage produces a higher and richer quality of milk through the summer season than most pastures. Of course rich, succulent June grass furnishes the best food for this purpose, but June is with us only a short time. After that the June grass grows larger and the pastures dry up and lose the qualities that made the milk so rich earlier. Corn ensilage produces the very best food for the cows, and it is better to turn the pasture fields into corn fields for filling the silo, and raise the hay for additional feeding in another field. With good hay, ensilage for coarse fodder and a fair proportion of grain, we can raise the finest dairy herd in the world, and make the milk flow not only large but unusually rich. These seem like artificial conditions, and I do not doubt but the cows would miss the clean, sweet pastures; but the dairy cow today is a machine, and we treat her as a machine. We feed her for the purpose of getting the greatest returns from her. There is no sentiment in the matter. It is purely a business proposition. Some people may keep pet cows for the sentiment, but farmers and dairymen give the very best treatment to their cows because they expect to make money out of it. They have found that kind treatment, liberal feeding and good care of the cows pay in the end. Therefore every wise dairyman adopts these rules and practices and enforces them on his farm.

E. P. SMITH.

DROUGHT AND CULTURE.

Correspondence of The Progressive Farmer.

The comparative success of most farm crops this year in spite of the worst drought that the country has had for many years shows the value of improved culture over the old system of neglect. In nearly all instances where the soil has been well enriched with manures and fertilizers, and the crop continuously cultivated, the loss has not been sufficient to discourage farmers. Indeed a normal crop is reported in most parts of the country, and a larger crop than usual in others. This looks very much as if we had at least broken the grip and terror of the old-time dry summer, which meant the loss of millions of dollars and the ruin of thousands of farmers. It is the superior methods of culture that have gradually been adopted in all parts of this country. It is really the fruit of that campaign of scientific and intensive farming which has been carried on by the Department of Agriculture, the State experiment stations, and individual progressive farmers for the past two decades.

To sum up this up briefly, it is the application of plenty of the right kind of food to the soil, and then the cultivation of them sufficiently to keep the crops in excellent condition. Soils must be rich to produce good crops, but waste of fertilizers is not what is needed. We can apply too much of these to the land so that the soil gets clogged, and suffers, as it were, from indigestion. It is unable to assimilate the fertilizer and turn it into fit condition for the plants to use. The wise farmer gives to his soil only so much manure as it can readily absorb and then keeps the soil well stirred to enable the rains and sunlight to touch every part of of the land and make them ready for plant use. The cultivation of the soil is even of more value than the fertilizing, for in too many cases the mechanical conditions of the soil are such that neither moisture nor food can penetrate it nor in any way become an integral part of it. Frequent cultivation of the soil alters all this, and helps the soil to retain the moisture, and in times of drought enables the plants to draw up moisture from the underground reservoirs. Thorough and constant cultivation of crops this past summer has undoubtedly saved millions of dollars to the farmers of the country.

W. E. EDWARDS.

SOME ESSENTIALS OF WHEAT GROWING.

A Successful Virginia Farmer Tells What Experience Has Taught Him.

In the first place wheat should be sown on stubble land. It is important to recognize at the outset that a very large percentage of farming land of this section is not adapted to profitable wheat growing. Less than fifteen bushels to the acre will not pay at the present price of wheat. Some of the land especially unsuitable for wheat is land from which the nitrogen, humus, and other vegetable matter has been exhausted, and land filled with briars and sassafras bushes and like filth. Farmers having such land should get a small flock of Angora goats and have it thoroughly cleaned by pasturing them on it before trying to grow wheat on it. Wheat grows best after clover, peas, soy beans or some of the legumes or nitrogen gatherers. Still if the land is properly fertilized, good results may be obtained after a corn crop, but the yield of wheat can usually be increased by sowing a crop of peas at the last cultivation of the corn, and if the corn is cut off as soon as it is glazed, and shocked, which is really the only economical method of saving fodder of the peas, will make a very good growth before frost, but if the corn is left on the ground and the blades pulled off and tops cut, the pea crop will be cut short. The stalks will be in the way and at least one-third of the value of the fodder lost. Next to the right selection and proper fertilization of the soil, comes the preparation of the seed bed. The land should be deeply plowed and finely pulverized. It must be remembered that all the cultivation that wheat gets, it must get before it is sowed, and in order that the roots penetrate the ground properly, so as not to be easily damaged by winter frosts, and that the soil absorb and conserve the moisture, it is highly important that all clods be broken up and thoroughly pulverized. This also renders a value to all the latent plant food within the soil. This can best bs done by plowing the ground as early as possible then harrow and roll it several times until it is in proper condition before seeding. In sowing corn land, the old method of sowing wheat down on the stalks and plowing in with shovel plow is a very poor one in several reasons. In the first place the land is never gotten into proper shape for the reception of the seed by this process. Much of the seed is covered too deep and rendered unproductive, and the whole job is a botch from start to finish. The result is, even on land fairly well fertilized, usually a poor crop of wheat.—Robert Poteet, Bland Co., Virginia.

To the credit of the Alliance it can be said that rarely, if ever, has an Alliance appeared as defendant in the criminal courts.

NORTH CAROLINA'S FARM PROSPECTS.

Agricultural and Industrial Development go Hand in Hand.

The rapid increase in number of cotton mills and development of mining, lumber and other industries in North Carolina is creating new agricultural conditions. Increased demands are being made upon the farmer. The market for his produce is not only widening and changing, but is coming nearer his door.

A few years ago cotton, tobacco, and truck for Northern markets, in the East, and cotton, wheat and corn in the Piedmont and Western counties were the farmer's cash staples. Now in addition to these staples, the rapid-growing manufacturing towns in all parts of the State furnish a reliable cash home market for his garden produce, fruit, poultry, milk, butter and all the other so-called by-products, which have so long brought prosperity and independence to many Northern farmers.

The introduction of roller mills in the State is another important factor in agricultural development. It has caused a wonderful increase in acreage of wheat, especially in the western counties. In the Piedmont counties, it is said, fully one hundred roller mills are now in operation. These mills have not only driven western flour out of the markets in a large portion of the State, but are exporting large quantities of flour to States South. They have created a local demand for wheat which so far the farmers have been unable to meet, and large shipments are made from the West.

After looking the ground over carefully we are convinced that prospects for success in farming at present are particularly bright in North Carolina. Opportunities for development are increasing. If the farmers are quick to grasp them and make earnest, intelligent efforts to meet these new conditions in a spirit of progress and thrift, agriculture will advance hand in hand with manufacturing and commerce.—Selected.

THE RIGHT SORT OF MANURE HEAP.

Eds. Country Gentleman:—Should horse manure be fully exposed and if so, for how long? Or should it be stored under shed open on three sides? Should the urine from stall drains discharge on manure heap, or be kept separate in cistern? If the latter, how should it be used for fertilizing? H.

Stockbridge, Mass.

(Answer by Prof. I. P. Roberts.)

Horse manure may be fully exposed for six or eight months, if piled two to four feet deep, with edges nearly perpendicular, if properly cared for. It may deteriorate as fast or faster during the summer in a covered shed, if not cared for, as when fully exposed. Horse manure—by which is understood the solid and liquid droppings, mixed with more or less straw or other similar absorbents—is quite porous, contains considerable quantities of potential nitrogen, and hence heats and ferments very rapidly. In doing this, a large portion of the nitrogenous compounds may be driven off if no pains are taken to arrest them.

One of the following methods, or better, all three of them, may be used to arrest the escape of these compounds while the manure is being broken down, and its constituents made more readily available. If the manure is solidified or tramped, too rapid fermentation may in part be arrested. Adding water to the pile also serves to keep the mass cool and drive out the air, in the absence of which fermentation goes on slowly. And third, absorbents, such as muck, soil earth or gypsum, may be used to absorb the escaping gases. Since horse manure is too dry for best results, the urine should all be added, and usually, in addition, water should be added to the heap until it begins to ooze out a little around the small trenches at the base of the pile. Whatever oozes out, and there should be some, should be thrown on top of the pile with a scoop shovel. As the pile is formed, some earth should be sprinkled through it, and water added as the judgment dictates. Finally, earth may be used to the depth of two or three inches, to arrest and absorb the gases. If fermentation tends to go on too rapidly, add a quart of salt for each load and put on more water.

Once during the time it might be well to overhaul the pile, in order to place the outer edges of it in the middle, that the decomposition may be fairly equal and complete in all parts. It should have been said in the beginning that the manure should be piled on ground that has been tramped, or has been made fairly impervious to the passage of water through it by covering the area to be occupied by the pile with pounded puddled clay. Our outdoor rotting pit is made basin fashion, roughly grouted and plastered with cement mortar. At the edge and lowest point a cistern holding three or four barrels is constructed to receive the seepage. Here it can be easily dipped out with a pail and returned to the pile. A common oil barrel might well serve the purpose, in lieu of the miniature cistern.

Experiments conducted at Cornell University similar to the method described above, showed that six months' fermentation in the open destroyed the germinative power of all weed seeds near the middle of the pile where a sample of the manure was buried in a sack of wire netting. A large kettleful of earth was heated for nearly a day in order to kill the weed seeds in it. The sample of manure was mixed with the earth, put in a warm place and kept moist. No weed seeds appeared. Of course, this is but the one investigation, but it seems to point to the feasibility of killing the germinating power of weed seeds in the center of the pile; it is probable that they were not all killed on the outer edges.

WHEAT SEEDING.

In our last issue, we wrote at some length on the preparation of the land for wheat seeding, and we therein laid stress upon the importance of a fine preparation of the land as a controlling factor in the production of a good crop. We think it well to say a few words more upon this subject, moved thereto by the fact that on account of the long and serious drouth through which we have passed there has been but little if any opportunity given for the commencement of the work of fallowing the land for the wheat crop. This is going to cause a great pressure of work to be thrown upon the teams and hands during this and the following month, and the temptation will be great to seed without securing as fine a seed-bed as should be We want to say, and to say emphatically and advisedly, that it will be better to seed a little later than one would wish rather than to sow on a piece of land not in proper condition. Usually, we have fine open weather in the South up to the end of November, and if wheat is only seeded upon a well-prepared bed before the end of October, it can make quite as much growth before winter sets in as will enable it to go through the winter in good condition for a vigorous growth in the spring. If, however, it be seeded on badly prepared land, even in September or the early part of October, it will suffer much more from the effects of freezes and thaws than if seeded later. Few farmers fully realize how important is the necessity, not only for a fine deep solid bed, but also how necessary it is that the soil of the bed should be thoroughly mixed before seeding. The question debated ought not to be is the land fit to sow, but whether it can be made more fit and not unduly delay the sowing. Ten bushels of wheat extra per acre can easily be got from a piece of land by tillage alone, all other conditions being the same. This is not mere assertion, but has been proved over and over again by experience. Every additional working of the land, when in a proper condition to work, will make available plant food lying inert in the land which otherwise will be lost to the crop. This food can be got in this way at less cost than from the fertilizer merchant, and it will also result in more permant benefit to succeeding crops than when purchased. Besides all these considerations, it is more easily within the competence of most of our farmers to get it in this way than by purchasing it. A word to the wise should be sufficient. Try what we advise. Prof. Hunnicutt said recently:

We once selected one acre in a twenty-acre field, average spot, and plowed and harrowed this acre fourteen times right along before we quit. We then planted and cultivated this acre just as we did the rest of the field, running the rows right along through it.

The yield was much more than double any other acre. This has continued to be true for five years in all kinds of crops. All through the growing season, this acre can be distinguished as far as you can see the field. All crops grow off quicker and yield heavier. "Culture is manure" is true.—Southern Planter.

WHEAT GROWING.

The results of trials at the Experiment Station at Stillwater, Oklahoma, and the practical experience of wheat growers all over the territory show that early plowing and early sowing for wheat have given the highest yields and the best wheat, says a bulletin from the Oklahoma Station. At the Experiment Station, wheat on ground plowed on July 19 yielded a little more than twice as much as that plowed on September 11, the seeding in both cases being done on September 15. The explanation of this is that the early-plowed land is in condition to absorb and retain the moisture while that which has just been plowed is not in good condition for the germination of the seed.

Wheat seeded September 15 yielded 37; October 15, 35; and November 15, 23 bushels per acre. The early seeding was much less affected by rust than the late seeding. These results agree with those of former years. Seeding should be completed before the middle of October and better results will be obtained from seeding from the middle to the last of September.

As to varieties, the hard wheat as a rule are preferred in the western half of the territory and the soft wheats in the eastern. At the station, the highest yield, 44.52 bushels per acre, was obtained from Sibley's New Golden; the lowest from Big English. German Emperor, Turkey, Pickaway, Red Russian, Early Ripe, Fulcaster, New Red Wonder, Fultz, Missouri Blue Stem and Early Red Clawson all gave satisfactory yields. All of these varieties are medium early, with but a few days difference in time of heading and ripening. The seed is all kept up to high standard by careful selection and grading each year. If more fanning mills were used in the preparation of seed wheat, there would be less complaint of varieties "running out" and less of demand for new varieties.

THE FARMER AND THE "RED SPIDER."

Laurinburg Exchange.

A few weeks ago some samples of "Red Spider" cotton were forwarded from this section to the Agricultural Department at Washington City. The following letter to Hon. John D. Bellamy, Congressman from this district, is the result of this action. As this is a subject in which all the farmers of this community must be deeply interested. as the principle crop seems to be doomed by this insect we gladly make room for the entire letter:

U. S. DDPARTMENT OF AGRICULTURE,
Division of Entomology,
Washington, D. C., Aug. 15, 1900.

DEAR SIR:—I am in receipt of letters of July 24 and August 11, which have been referred to this Division by the Division of Vegetable Physiology and pathology, together with accompanying specimens.

The stalks of cotton which you send show the presence of what has been termed the cotton mite (*Tetranychus gloveri Banks*). It is a near relative of the so-called red

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