

SURFACE CULTIVATION OF CORN.

Deep stirring of cornfield soils is never necessary. It is a positive injury to the plants after they have attained a height of eight or ten inches. At this stage of growth their root system becomes very complex and extensive, the moist soil to a depth of several inches containing a network of foraging rootlets which feed the plants. In dry seasons these rootlets are further from the surface than when the soil is abundantly supplied with moisture, but they are not in any event below the range of the cultivator shovels too commonly used.

Surface cultivation serves all the rational aims of tillage. It stirs the soil sufficiently to form a dust mulch, which aids in husbanding moisture, and destroys weeds. Moreover, the weeder or surface cultivator does this work without pruning the plant roots. Deep cultivation facilitates the escape of moisture, injures the roots and ridges the field. From every standpoint deep culture is fundamentally wrong and shallow or surface tillage scientifically correct. Such is the verdict of all recorded experimental work in which the two systems have been fairly tested.

Cultivation has more than the one object of eradicating weeds, which is no more important in growing corn than the aeration of the soil and conservation of moisture. Larger yields would be the result if corn-growers appreciated fully the threefold purpose of cultivation. If the maintenance of a surface dust mulch in their fields received as much attention as the extermination of weeds more profitable crops would be garnered. If the old-fashioned deep-running cultivator were abandoned and the surface-working implement adopted the wholesale destruction of corn plant roots would be avoided and an augmented yield would logically follow.

It is a common belief among growers of corn that in order to be effective the implement used in cultivating the crop must bring moist earth to the surface. To do this when the soil is markedly deficient in water, as it often is about the middle of July and during the month of August, requires excessively deep plowing. Determined to leave a black streak of moist dirt behind him as he cultivates from one side of the cornfield to the other the plowman sets his shovels so that they will stay out of sight, increasing his own work in handle or foot pressure, adding to the draft of the machine and, what is of far more consequence, tearing out a part of the root system of the corn plants.

When corn is laid by it is the rule in some parts of the country to throw dirt from the spaces between the rows toward and against the stalks, forming ridges which leave the field in very bad condition for subsequent use. Surface culture is best for corn from start to finish, but is especially appropriate as a finish. As it is easier on man and beast and enables the corn-grower to produce more bushels per acre than he could obtain from deep cultivation the system should be universally adopted.

Whether the season be wet or dry the man who surface-works his corn fields will grow more corn, other conditions being equal, than the farmer who cultivates his crop to a depth of from six to ten inches. Deep culture has long been practiced for no better reason than it covers up or smothers weeds which it does not uproot. But it does not occur to its advocates that while deep-running shovels kill and bury weeds they also injure the corn plants by cropping

their roots. Weed destruction may be effected much more thoroughly by the use of cultivators which shave the entire surface between the rows of corn, severing weeds just below their crowns or uprooting them entirely. A fair trial of shallow cultivation will bear out all the statements made in its favor.—Breder's Gazette.

Improved Machinery.

Last week we published a communication from Pottawattamie County, Iowa, on improved machinery, and we make it the occasion of a little more talk on that subject. The farmer is inclined to hang on to his old tools as long as they will do fairly decent work and without much reference to the cost of the work done, thus violating one of the first rules of success. The men who are running our successful manufacturing establishments are always on the lookout for improved machinery. Whenever they can find a machine which will turn out a unit of the thing manufactured at less cost than can be done with the old machines, they immediately get rid of the old and buy the new. What they are aiming at is economy of production and they will invest in whatever will economize in that line.

If the farmer is to succeed, he must pursue exactly the same policy. He is competing with the world and hence must produce a bushel of grain, a pound of live weight, or a ton of hay at the minimum of cost. Two of the main elements in the cost of production are labor and machinery. The farmer must choose between investing money in labor-saving machinery or in labor. Money paid out for labor is gone at once and never comes back to him again. The money paid out for an improved machine goes gradually while the machine lasts or its usefulness lasts. Referring again to the article, this correspondent says that a boy who can handle four horses with a gang plow can do as much work as two men with four horses with the ordinary plow. The purchase of a gang plow, therefore, saves the cost of one man and his board, or about \$25 to \$30 per month. How long will it take a gang plow to pay for itself under this showing? The same rule applies in every other kind of machinery? We are not advocating or championing gang plows or any other tool. The point we insist on is that where a man can reduce the cost of a bushel of wheat or corn, or a ton of hay, by investing in improved machinery, he should do it and at once. He should, however, be sure of it before he makes the change. Do not buy any new machine until you have tested it so thoroughly that you know just what you are doing. No man can afford to take any risks on this line.

Improved machinery necessarily requires improved labor, a man of higher ability, and this man will demand a higher price. There is the same difference between men that there is in machines. Our readers will all bear us out that in their past experience one hired hand has often been worth two others and at probably a difference of only \$5.00 per month in wages. We are quite sure that we can pick out hired hands on the farms of Iowa of whom their employers will say that they made them a large profit, and for every one we can pick out three or four, of whom their employers will testify that they have employed them at a loss. If improved machinery leads to the sifting out of hired men and relegating the poorest of them to some other business, it will in itself

be a blessing of no mean proportions. There is a sentiment abroad that anybody can work on the farm or is fit to be a hired hand on the modern farm. They imagine there is no skill about it, that it is simply hard knocks and the exercise of muscle. This is a very great mistake. The model farmer, whether he farms himself or is employed by others, is a skilled laborer, and the employment of unskilled labor to do the work of a skilled laborer necessarily means loss to the employer.

Bear in mind that first-class machinery requires a first-class man to run it and that a first-class man earns first-class pay and should have it.—Wallace's Farmer.

Fruit Growing on the Farm.

The greater value of fruit growing to the farmer is not primarily in its commercial aspect, or how much money it will bring in, although the receipts from the sale of the surplus are not to be despised, either; it is rather the "health of good living" that comes from an abundant supply of all kinds of fruit that may be readily grown in the locality, so that all the year 'round the family may have all they can consume. There are fruit specialists, the Homestead remarks, of course, just as there are specialists in other lines of farm industry, who make a handsome income out of the orchard and small fruit plantings. They like the work and therefore learn it easily and keep on learning until they are gray, and their knowledge becomes more valuable every year by accretion. Any young farmer who begins on a scale adapted to his home needs may grow into a specialist of this kind, but thousands never do. This is no reason why the thousands should not have all the fruit their families can use. Beginning with the most useful kinds and those most easily grown, the farmer can gradually surround himself with a good home orchard and small fruits of all kinds, that improve his living and reduce its cost, thus adding to his comfort and independence. We do not find it necessary to do much in the way of urging horticulture. Those who are already fitted for it know enough about it to determine for themselves whether or not they shall engage in it, while those who are not sufficiently informed must work their way to it, if at all, by beginning at the bottom of the ladder; and there is no better way to do this than by beginning with a few good trees in a home orchard, and small areas of small fruit for home use. We do urge this upon every farmer. If no cash income ever comes from it, it is still worth all the expense in time and money that it costs.

The Stock or No Fence Law.

It is a veritable mystery to me how it is and why it is that the soil tillers and land-owners of as old and otherwise progressive and up-to-date a State as that of old Virginia, can stand in their own light so far and adhere so faithfully to the antiquated, unprogressive and obsolete law known as the fence law, or a law that forces one to fence out his neighbor's stock instead of keeping his own in an enclosure.

Unprogressive as Mississippi may be in many other ways, she is still progressive enough to give her soil-tillers a chance to decide for themselves, in each and every township in the State, whether they shall have a fence law or a no fence law. The result is that, with the exception of a few of the most densely timbered sections, we have the stock or no fence law over almost the entire State. We have tried it for the past fifteen years, and the longer we try

it, the better we like it; and this is undoubtedly the universal verdict.

Scrub stock and razor-back hogs have become things of the past.

Speaking for myself and from an individual standpoint, I am not an advocate of the strictly no-fence law. I believe in fences, and as many as needed; not in order that I may keep other people's stock out, but that I may pasture my fields any time and every time I wish, and yet never let my stock out on my neighbors. This is exactly what I am doing. In addition to abundance of pasture, under a fence that is abundantly capable of effectually restraining any and all stock enclosed therein, I have a boundary fence around my entire farm. This enables me to glean the fields and pasture them at my own will and pleasure. This is as it should be, and I would not be satisfied to have it any other way. Our boundary fence consists of four barebd wires. This is sufficient to restrain our own stock and also that of other people. In spite of the fact that it is not best, in the long run, to habitually make a practice of pasturing the fields, the time does come, and with even the very best of farmers occasionally, when we are very much gratified in having a field that we can pasture, if we wish to; and we often wish to.

The stock law has many advantages—far too many to enumerate here—and entails no hardships on any one, with the single exception of those who are short of stock water, while it gives simple justice to many and does injustice to none. In short, the enacting of the "no-fence" law in any section is bound to result in the greatest good to the greatest number. It may result in fewer stock, but not necessarily so; and what stock there is will be better stock, and they will be better cared for; they will be both more profitable as well as more valuable, while, whenever they may, from any special cause, need the owner's attention, he always knows exactly where to find them.—G. H. Turner, Burgess, Miss., in Southern Planter.

Profit in Farming.

There is a very interesting story on the first page of this paper of the improvement of one of our worn-out Stokes County farms by a young man of intelligence and determination. The farm was bought when it wasn't paying the taxes and the interest on the money invested in it. To-day it is yielding a handsome profit and is worth many times what the owner paid for it. The Reporter has always contended that there is good money in sane methods of farming. Our proposition is demonstrated by the experience above referred to. While so many of our young men are restless, longing to go to the towns in search of easier jobs and better wages, they might, with much advantage, reflect on what this young Stokes County man has accomplished. A city job, unless the employe is more fortunate than the great majority of hirelings, means hard work—anywhere from ten to fifteen hours a day; a stern and strict boss, high expenses and poor pay. With little time for amusement or diversion, the novelty of the new life soon wears off, the glamour of the city becomes prosaic, and the boy longs for the ease and freedom of the old plantation. And it's ten to one that the next train brings him home. This we dare say is the case in hundreds of instances. The same hard work that was required of him in the city, and the same good judgment that directed his movements under the eye of the city boss, would, if applied to the farm, make him contented and happy.—Danbury Reporter.