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FEWER ACRES

— WITH A —

S Y S T E M

— OF —

IMPROVEMENT

— OR —

TWENTY*ACRES*TO*THE*MORSE

— IN ALL —

CROPS, ENOUGH.

“Feed thy farm and thy farm will feed thee.”

BY

J. ROMULUS CLINE,

CATAWBA, N. C.

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FEWER ACRES

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SYSTEM OF IMPROVEMENT

—OR—

TWENTY ACRES TO THE HORSE

—IN ALL—

CROPS, ENOUGH.

BY

J. ROMULUS CLINE,
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PREFACE.

Knowing the tenacity of the average southern farmer to stick to "daddy's old ruts" regardless of consequences and in many cases even his own convictions, before entering on the subject proper of this little work, I deem it necessary that I may show him the folly of such a course, and the more effectually convince him of the error of his ways, and thereby induce him to pull out and establish a system tending toward the permanent improvement of the soil, to devote a few pages of this work to a brief rehearsal of our condition as a class, and establishment of its cause, if perhapse I may be able.

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OUR CONDITION—ITS CAUSE.

That the condition of the southern farmer as a class is bad, and from some cause is fast growing from bad to worse, needs no argument to establish; but is fully evidenced by the thousands of care worn, haggard looking farmers all over the land, with their impoverished and gully washed farms and their dilapidated rickety buildings standing as monuments indicating adversity and oppression. With debts hanging over them of which in their honest efforts to relieve themselves, each year only finds them more deeply involved.

While there are individual farms and farmers, and even sections of country here and there to which this condition in its worst form does not apply, (and wherever so, note the system) yet that it does apply to the masses is a fact that cannot be successfully disputed, and one too that calls for the most serious consideration and deepest thought of every tiller of the soil.

As a rule there is no better index to the condition of any people than their immediate surroundings—their homes.

Compare the homes of farmers with those of other classes. To do this, pass through the country and into the town or city. Note the difference in their homes and then settle with yourself the question—why this great disparity?

This is an age of improvement; and in order to success each avocation must move apace with the others if it would prosper. Let us go back ten years. Think of every other business. The successful merchant has doubled his stock; the manufacturer has added improved machinery and doubled his capacity; factories of various kinds have gone up in our midst; railroads are being

built; steam has taken the place of horse power in almost every thing; improved agricultural machinery is scattered all over the country—drills, reapers, mowers, rakes, double, tripple, quadruple, and even sextuple sulky plows, sulky turn plows, revolving harrows, and every variety of improved tools with which one man and horse can perform the work that required two to perform ten or fifteen years ago, and yet with all these advantages we have not prospered, we have retrograded.

Is it not strange? And is it not still more strange that in this progressive age, dating as it were with the very introduction of these improved tools—ten or fifteen years ago—that instead of advancing our retrogression has been so rapid and marked, and that with their use we have struck bottom as it were so soon? Look back and take things as they are. Does it not seem that they have helped us down the slick road? For does our condition show any advantage from their use? If so, where is it? If not so let us find the cause.

But before we go further let us bring up another horse about the same age, but blind in both eyes—commercial fertilizer.

While I do not say that the fault has been in either the tools or the fertilizers, for they are each a “God send,” and creatures of an advanced age, either of which hence forward we can not do without, as I will show further on; but I do say that with these tools in our hands, a sack of fertilizer on our backs, and in our heads that infernal greed or disposition to own and cultivate many acres regardless of the fertility of the soil, we have drifted into a slip shod system, that has emptied our pockets, put us in debt and worse than all, impoverished our farms until four times as many acres as we ought to, or can successfully cultivate, positively refuse to feed us.

Nor is this all; many of our farms, stock, tools, etc., are mortgaged, here and there they are being fore-

closed, and the once happy landlord becomes a renter to the money king.

To put it in a nutshell, we have killed the goose that lays the golden egg, and our condition will not—can not improve until we resuscitate her—build up these run down farms and establish a system tending to the permanent improvement of the soil as the first and all-important thing to successful agriculture.

Stick a pin here. But to be more explicit, let us return to those improved tools and commercial fertilizers. The fact is we have never had a system of improvement. Our system has been to take out and put nothing back—to tear down; hence here we have always retrograded so far as improvement is concerned. But in the days of the single shovel it was not so perceptible; for as we would wear out one field, another was cleared, thus using the original fertility of the soil. The worn fields were thrown out for rest or pasture, where they quietly lay under nature's reclaiming process, until the introduction of these improved tools and commercial fertilizer, when, with the advantages of the tools and the fertilizer as a stimulant to lead us on, together with that greed which we naturally possessed we expanded our wings, reclaimed the worn lands, cleared the forest and without system or regard for rotation of crops with a view to fertility of the soil, drifted into that ruinous one crop system, that has moved our smoke house to Chicago, our corn crib to Cincinnati, impoverished our farms, and is responsible for the ills that befall us to day.

Proof: If a system of farming is wrong with a single shovel, is it not doubly wrong with a double shovel? That is, if a single shovel will scratch twenty acres to death, will not a double shovel scratch forty to death in the same length of time?

I know that diversity of opinion prevails even among farmers themselves as to the cause of our condition: such as class legislation; middle men; commercial fertil-

izer; what we sell too low; what we buy too high; monopoly of capital, etc. *ad in finitum*.

Strang to say that it never occurs to them that it is the non productiveness of the soil—that we cultivate about four acres for what one ought to produce; for however much these alleged causes may oppress us, and however much they may seem to cause our oppression, they are only results of the one great cause—POOR LAND, and their oppression will vanish as the dew before the morning sun at its removal.

For with rich farms, why need we fear any of these? Our cribs, smokehouses, graneries and barns, would all be full to overflowing; our pockets would jingle with the cash; our children would be educated; we ourselves would have time to post up and become better citizens, thereby exerting an influence to be felt even in our legislative halls; our legislators would become our servants instead of our masters; middle men could be brought to terms or dispensed with altogether and that most desirable event accomplished—the producer and the consumer brought face to face.

Commercial fertilizers could be profitably used or dispensed with; what we sell would be high enough, because of its abundance and cheapness of production; what we buy would be low enough because we would have the cash with which to buy, thereby using the advantages of competition and buying where we please.

Last but not least, and the most to be dreaded of all—That king of monsters—Monopoly of capital—the master of the poor, and the servant of the Devil, could not seriously oppress us in that we would have a little of the articles ourselves, besides being so safely ensconced behind the breastworks of prosperity and independence. But to the subject:—

THOSE SKINNY FARMS.

As a rule the only competition with the southern farmer has been—who can cultivate (or skin, for that is

what has been done) the greatest number of acres.

Many times the large ones have felt larger, and the small ones been made to feel smaller, when the self important gentleman, leaning back on his dignity, and with thumbs hooked in the armpits of his vest would exclaim: "I cultivate fifty acres or one hundred acres in corn, the same amount in cotton, in wheat, oats, etc. I pay tax on five hundred or one thousand acres, when at the same time this individual buys fertilizer on time, and the proceeds of that skinny thousand acres will not pay his store account in the fall.

His only craving is all the land that joins him; this he would have if he had the money to buy it, or could get it on easy payments.

Yet this individual will cry trust—monopoly, when he is into a land trust and poor land at that—one that does not make himself rich, but his country poor.

This spirit—to own many acres; this lack of enterprise—investing in land because of its safety, regardless of the prosperity of the country, go hand in hand as the producing elements in the cause of our condition. Both are largely responsible for the slip shod system that has impoverished the farms, and the thousands that have been invested in land merely because, "It is a safe investment," if put into factories and machine shops, would have paid handsome dividends to the investors, and kept millions among us that have gone to foster the more enterprising people of other sections.

But this spirit does not belong to the farmer alone; all classes are affected alike; for even the merchant or the mechanic if, his business declares a dividend, he puts it into land as a "safe investment."

The whole South is land poor. The farmers own and try to work too much land. While this is the case they will remain poor. For at this advanced age—this age of improvement—this age wherein the capacity of every thing except our acres has been doubled, trippled, and

even quadrupled—this age, when every thing we use on the farm—clothes, shoes, plows, bolts, horse-shoes, wagons, buggies and a thousand and one other things, are all manufactured by machinery cheaper than we can make them ourselves, and must be purchased with the products of the farm. Can we do this and farm poor land? Under these circumstances can we educate our children and fit them for society with those of other classes? And are we doing it? How many farmer's children attend the summer school? How many have time to attend the four months term of free school during a three months winter? Frequently they are kept at home a month in the fall to gather in the products of that skinny farm, and again in the spring they are taken from the school another month to go to skinning for another skinny crop. How long is this to continue?

Cotton cards, spinning wheels and hand looms are things of the past and our system of farming ought to have gone with them. There is but little difference in the average southern farmer so far as profits are concerned, and the man who would set up a factory, by the purchase of a hundred cards, wheels and looms, and hire a hundred women to work them. As with the farmer, so with the factory man, some merchant would have to "run him."

As with the aid of machinery and improved tools the capacity of man is doubled, so to keep abreast of the times ought not the capacity of our acres be doubled? For how are we benefited with the use of tools wherewith one man can do the work that required two to perform ten years ago, if our acres produce only one half as much as they did then? Without the use of commercial fertilizer, is not this just about the case? If not why have we retrograded?

Let us make a comparison. A rich farm will produce fifty to one hundred bushels of corn per acre; twenty to forty bushels of wheat; one to three bales of cotton;

fifty to one hundred bushels of oats; clover and grass in abundance; other crops in proportion. Its soil is easily worked, retains moisture and is drought proof. The crop is encouraging to look upon, encouraging to work, and best of all it fills the cribs, smoke-houses and barns; and pleasure, plenty and profit, are reaped from its culture.

Nor is this all; the premises put on an inviting appearance; the buildings are all in first class order; the yards are beautifully grassed and shaded; the proprietor is cheerful and gay; the wife is happy, not overworked and looks as tidy as the premises; the children are being educated and fitted for society and the various pursuits of the world, and happiness supreme reigns in this home.

A poor farm will produce five to fifteen bushels corn per acre; four to six bushels wheat; one third bale cotton; oats too short to cut at all; clover and the grasses unknown; other crops in proportion. Its soil dries out quickly, bakes, is hard to work, will not stand drought, the crop presents a ghastly picture, is discouraging to work, and the profits of such a farm—hard times—are reaped by a majority of Southern farmers to-day. In the name of common sense how long is this to continue?

Now friendly farmer, these are true pictures; drawn by a practical and experienced artist—a farmer; the one a beautiful thing—a superb painting? not overdrawn, but a fair representation of what each farm, large or small should be all over this beautiful land.

The other a familiar picture, needs no description and can be seen from the front door of a large majority of the farmers all over the South.

With these farms compare yours. Does it stand with the poor one? Make it richer. Between the two? Make it richer. With the rich one? Make it richer. Let your watchword be—IMPROVE THE FARM. With this large crops will follow as a natural consequence; with large

crops, cheap crops; with cheap crops, profitable crops; and with profitable crops, prosperity and independence.

You may talk about the rate per cent. we pay for what we buy, even at these enormous time prices which are ruinous and from which the country has suffered so much, but they sink into comparative nothingness when compared to the cost of products raised on a rich farm or on a poor one.

For instance: The products of an acre in corn at fifty cents per bushel, grown on land that produces forty bushels per acre, is worth twenty dollars. On land that produces ten bushels per acre, five dollars.

But what did it cost? If the forty bushels cost twenty dollars, did not the ten bushels also?

What! two dollars per bushel!! Who ever heard of such "time prices?" Yet these very prices are paid to-day, in advance at that, by men who cultivate such farms, if not in money, in its equivalent—time and labor, and the sooner they learn that this is money, the better for them. Can't you see?

On what does the farmer base his calculations when he pitches a crop? Other things being equal, is it not on the fertility of the soil? Then is it not a very foolish thing to cultivate four acres for what one can be made to produce with the extra labor that it requires to prepare and cultivate the three extra acres?

Is not permanent improvement the all-important thing to successful agriculture? Is there any other remedy for our condition? Can legislation help us? Not unless it pensions us. If the middle men were all driven into the sea, would that better our condition? Some of us could not run another year. Or if Jay Gould with all the capitalists were reduced to poverty and rags would that make us rich? Not unless they would give us some of their old clothes.

What matter it if these are all for us or against us, are we not architects of our own fortune? And did we

not hew them out with our own hands? Then why lay the blame to any other cause? Let us make the best of our lot and try to improve it, for if we have made no money, we have learned an important lesson from that best of teachers—experience.

FARMING IS A SCIENCE.

Farming is a science, and that true farming tends to the permanent improvement of the soil, and any system that disregards it sooner or later will fail, though it begins with a rich farm.

A farm will no more live as a paying thing without feed than a horse; the only difference you feed a horse one thousand and ninety five times a year and a farm will make out on one square ration. This it must have or like the horse on short rations can only perform short duty.

In short, farming is feeding the farm for what it will produce; for, other things being equal, in proportion as you feed it, in that proportion will it feed you.

Then: Feed thy farm and thy farm will feed thee, is no less true than, “Keep thy shop and thy shop will keep thee” or *vice versa*.

Just so true as that many acres with a hap hazzard system has reduced our farms and brought us to our present conditon, just so true it is that

FEWER ACRES, WITH A SYSTEM OF IMPROVEMENT,

a thorough system tending to the permanent improvement of the soil, must build them up and advance our condition. Nothing else has reduced us, nothing else can elevate us. We are poor in consequence of their reduction, and can only advance as their condition is advanced, or remain poor with them. There is no other remedy. Stick a pin here.

Other things being equal, farming yields a profit in

proportion as the farm is rich or a loss in proportion as it is poor. This being true I deem it unnecessary to take up further time in the discussion of our condition: for should there be any who might differ with me as to the cause, it is believed that all will agree with me as to the remedy.

WORKING FORCE AND ACREAGE ADJUSTED,
WITH A VIEW TO THE PERMANENT IM-
PROVEMENT OF THE SOIL.

This suggests at once to every intelligent farmer that the number of arable acres of each farm must be adjusted to the working force—laborers, stock, tools etc., to cultivate and feed it, otherwise if the farm is too large for the force, like a horse on half rations the farm will grow poorer and ultimately refuse to yield a profit to its owner.

Everything has a capacity beyond which it cannot go. A man can do so much, no more. A horse with a sufficient number of laborers can cultivate so much, no more. But cultivation is not all of farming. The farm must be fed—improved. This requires labor—man labor, horse labor. A farm will produce in proportion as it is fed, and has a manure producing capacity in proportion to the amount of stock kept on it. This requires labor at times all through the year, and should always be pushed to its utmost capacity, for on it depends largely the success of the farmer.

Besides this, crops for green manuring must be sown at the proper time; often in the midst of the cultivating, season; this requires time and labor and must never be neglected, for it is the cheapest manure a farm receives and the all important element in the building up a farm.

Then the question naturally arises: How many acres can I feed? How many acres to the horse in all crops.

While this may vary in the different localities of such

a large section of country as the whole South, because of its variegated soil and climate, its ease of cultivation advantages of fertilization and adaptability to particular crops etc, yet for all sections there is an adequate number of acres beyond which if one goes his farm will suffer in proportion to this excess. But for general farming the variation could be but little at most, and I would suggest as a model:

TWENTY ACRES TO THE HORSE IN ALL CROPS, ENOUGH.

Two horse farming being the prettiest and most convenient of all others, I will here note the mode of operating a model two horse farm of forty acres, from which proportions for any other size can be drawn.

Divide the farm into six parts or fields of six acres each, for general crops, leaving four acres to be devoted to truck, etc. While it is not necessary for me to say that each farm should be planted to crops adapted to that particular section, for this we all know; but those crops should be selected with a view to diversity, for the sustenance of man and beast, the pecuniary interest and preservation of the farm. Therefore any particular line of crops that I might lay down in the model, would need change in the different localities. This the farmer must do for himself. But the important thing that I wish to impress, is to plant in all sections a proper diversity of crops, following each other under a judicious system of rotation, that the farm may be self sustaining, both as regards manure and supplies: remembering that

ROTATION IS MANURE OF ITSELF

and an indispensable pre-requisite in the economy of farm operations, both as regards immediate returns, and enriching the farm.

No two crops require the same ingredients for their growth; besides this some are great exhausters of the

soil, while others are great feeders. All cultivated crops are exhausters, and should never follow each other in succession: while on the other hand the uncultivated crops are not exhausters, yet it is necessary that every few years each field should be cultivated or pastured in order to clean it of filth etc. Hence another necessity for rotation.

Then we have the feeders—the pea and the clover. These crops must come in for their full share in the rotation on every farm; for without them or one of them, it is very doubtful if a farm can be improved, and if at all, the process would be slow and expensive to say the least. We can not rely on manure alone to improve the farm, as the quantity falls far too short for the acreage, unless it is exclusively a stock farm, or we have access to livery stables, butcher yards etc., and then the price paid and time taken to haul makes it an expensive process.

Manure is an important element in the production of crops, and in the preservation and improvement of the farm, and its quantity should be doubled, trippled, yea, even quadrupled on every farm; yet with all this the quantity would be far too short for our needs, unaided by a systematic rotation of crops. Together they must go hand in hand, and wherever so the farm will grow rich, and an era of prosperity will dawn upon that farm. An exclusively cultivated crop exhausts the land in that it is kept clean of vegetable matter and in consequence, nothing is returned to the soil. I know that it is believed by some that it is the continual working—the turning and exposing the soil to the sun. While this may have an exhausting effect, it is as nothing in comparison to the other. Any system of farming that plows deep and in which an abundance of vegetable matter of any kind is returned to the soil will improve a farm, and eventually make it rich. Decaying vegetable matter or humus is the life of the soil, and can be supplied cheaper

through a systematic rotation of crops, in which crops for green manuring enter largely, than in any other way. Therefore while it is the farmer's duty to make all the manure he can and to look after this interest with redoubled energy, he must not depend on it at a sacrifice of his rotation of crops, through greed or any other cause. For as has been said before they are both soil feeders and must go hand in hand. Then we can afford to use commercial fertilizers and then as has been said before we can not do without them. For all know their judicious use on rich land has never been questioned, but acknowledged by all as a paying investment.

A farm is a self feeding machine, and will grow most wonderfully fat on it's own products and pay back to the farmer a proportionate superabundance for it, if it is properly treated. No system is farming, in the true sense of that word, under which a farm grows poorer, but is rather robbery. Every farm is self sustaining as regards manure, but it is the system that makes it so. And the system that effects this is the most important thing of all others to successful agriculture, and as such is the most perplexing question with which the intelligent farmer has to contend.

There is no question so important as: How to improve the farm? There is nothing that pays better; indeed, it is the very essence of farming and the quintessence to its successful following. Therefore a system that will accomplish this end must be adopted by every farmer if he would succeed. To do this he must first adjust his working force and acreage to each other. And then with a careful husbanding of all manures, and the proper crops planted to follow each other under a systematic rotation, with deep plowing and thorough culture, the desired end will be accomplished—the farm will grow richer, and in consequence, the farmer will prosper.

Farmer friend, have you a system of rotation? If so

what is it? If not so, adjust your working force to your acres or your acres to your working force, and, planting the crops adapted to your section, try the system as laid down in my little farm of forty acres.

Plant one field to clover, one to oats, one to corn, one to peas, one to cotton, and one to wheat. These are your general crops and should be rotated together. The remaining four acres devoted to truck etc., as follows: One acre to sweet potatoes, one to ground peas, one half acre to sorghum, one half acre to irish potatoes, one half acre to melons, and one half acre to garden.

In your rotation let wheat follow clover; clover follow oats; oats follow corn; corn follow peas; peas follow cotton; and cotton follow wheat. Thus we have a six shift system. That is a particular field will receive a particular crop every six years. Only two crops requiring clean cultivation—exhausters; and two strong land feeders—the clover and the pea.

In some localities the division might need change. For instance; a crop that goes to perfection might be increased to the diminution of another not so well adapted to that locality; or a crop may be discarded altogether and the acreage of others increased as the case may demand. For instance, in the Northern or mountainous sections, cotton must be discarded, other crops taking its place adapted to the locality.

The same in other sections with wheat oats clover etc, but the old “stand by”—corn, by far the best of all crops (for the farmer suffers more in consequence of its shortage than any other,) will grow any where this side the Artic Regions, and should be grown in abundance on every farm. It fills the crib, the granery, the smoke house; produces milk and butter, poultry and eggs; makes fine stock, and, in fact is the very back bone of the farm.

The pea will grow any where in the South, and is an important crop in the rotation not only for the grain if

produces but also for the fertilizing qualities it possesses, and should occupy a permanent place in the rotation on every farm. It is a farm feeder, will grow on the poorest soil, and in a few years bring it up to a high state of cultivation.

Just here I will say, that in the present poor condition of our land, clover will not grow as a paying crop, and the pea may occupy its place in the rotation until the fertility is sufficient to grow clover; thus devoting two fields to the pea until this is accomplished.

Or when the farm becomes rich, the pea may be discarded, clover and the grasses taking its place. In either instance the farm may be divided into five fields instead of six for general farming. But I much prefer the division as it is—one third of your general farming land occupied by feeding crops. This will insure a richer farm. Of course this farm only represents the arable land, and it is presumed that there is an orchard of two or three acres in the best variety of fruits, wood land to supply fuel and a few acres of hill land for permanent pasture.

There should also be an acre in clover near the barn for soiling purposes, and an acre of rye to be used before clover comes in.

These can be rotated with each other, and as soon as the rye is off, this lot may be planted in drill corn for cows in fall. This represents an up-land farm and it is presumed that if one is so fortunate as to own bottom lands that he will know what to do with them, and will divide and arrange his farm accordingly. Much of our bottom lands that have been considered inexhaustable have long ago yielded to the exorbitant exactions of an exclusive cultivated system, and to-day are but little if any better than the average uplands.

They too must be built up, for which purpose a system of rotation must be adopted for their special use, as some of the crops suited to an upland farm are not adapted to bottom lands.

Divide your bottom land into two plats. Plant to corn and oats, and rotate together; but immediately after cutting your oats each year, sow to peas. In fall or winter, turn under your pea-sward preparatory to another corn crop. Thus continue year after year and your lands will grow rich.

While this farm is cut and sliced for the average southern farmer, it is not to be presumed that all two horse farms should be the same size for reasons other than those already given. For one man might work fifty acres under the same system with more ease and better success than another would work forty.

Then again a very "Go ahead man," with a number one team (not brood mares,) and a big force, might work sixty. But he would always be in a stew and a fret, never having time to go to mill. Unless he hired his force, could not send his children to school, and the whole thing would be unsatisfactory and unenjoyable.

Whereas a man and boy can work this little farm of forty acres with ease, and without the unnecessary expense of a hired hand.

The children can be sent to school through the summer as well as winter and the most desirable object of all accomplished. The children educated and the farming world on the high road to prosperity and intelligence. This it will lead to, and until this is accomplished we will have hard paddling to keep our heads above water. But by combined effort and strict attention to business under an improved system, with our children in the schools and being fitted for society with those of other classes, we will soon begin to command respect; and the next generation will be an age of educated farmers. Cut this country up into such farms, and who can doubt the assertion? What imagination can even grasp at the condition of things then? Who would be the underlings, and what class would be the controlling power in this country? Ah! then our impositions will

have passed away one after another. For as we have become more intelligent the forces that were arrayed against us are broken and gone, and the very powers that oppressed us will seek our counsel. Educated farmers will represent us in our Legislature and in our National Congress, and thousands will be able to stand up for our rights and defend our cause at all times and under all circumstances. This is no idle fancy but a solid reality, that is sure to grow out of the system. And this is as it should be. For why should not the farmer be educated? Why should not the rural districts be dotted with comfortable school houses, and showy academies and colleges? Why should not our homes be beautified and their surroundings made attractive? Why should not the farm itself be a thing of beauty to catch the gaze of the weary traveler's eye as he passes the way? And last but not least, why should not the farming class—the class that feeds the world and the source from which all wealth is derived—that deals with Nature and whose business is as it were in copartnership with Nature's God, be equal to that of any other class mentally, morally, socially and materially?

THE CULTIVATION OF CROPS.

That the benefits to be derived from the system of rotation may more readily be seen, we will presume that this is the second year and will enter upon the mode of preparation and cultivation of crops.

THE CORN CROP.

As corn follows the pea crop, and knowing the benefits of the pea as a feeder of the soil, it will be a pleasant task for the intelligent farmer to prepare the land for this crop.

In fall or winter break eight or ten inches deep with two horse turn plow, turning under everything that was left on the land by the pea, and the deeper the better, as

there is no plant in our catalogue that requires deeper breaking than corn, especially on upland for which this mode is intended. In fact it is the only way we can raise it successfully. Deep breaking is a preventive against drought, the greatest drawback on upland corn.

Harrow two or three times previous to planting, and if land is level, lay off each way rows three to three and one half feet apart, or wider according to fertility of soil. The furrow in which you drop the corn, lay off with two horses to ten or twelve inch shovel plow, or an eight inch shovel with a ten or twelve inch following in same furrow, with one horse. This is done to get a deep clean furrow in order to get the seed as deep in the ground as possible, the nearer the hard pan below, the better.

To fertilize with stable manure or compost, drop a handful in furrow on each side of hill; with guano or phosphate always drill in the row, as then the plant will feed on it even until the very ear is made. Cover lightly with double shovel plow on which are two very small short bull tongues. This leaves the surface of the ground that covers the corn if properly done three to five inches lower than the general surface; which is the very thing you want for an easy time working, and a prevention of drought. First working use two horse harrow running with the rows in which the corn was planted. This will work just enough dirt to the little corn to cover all vegetation that may have started, not even scratching out a single stalk, leaving the corn still a few inches beneath the general surface. Next working, use side cultivator the same direction as before, which will again work just enough dirt around the corn to hoe the crop, covering vegetation etc., still leaving the plant below the general surface.

Continue with the cultivator at short intervals until laid by, which should be at least four times in all, when the last working will find the ground level, in fine con-

dition to stand drought and in the very best condition to receive the next crop. Under this mode of cultivation there is no use for a hoe in the field, except to chop briars, sprouts, etc., as the cultivator if run at regular intervals effectually works every hill and if not kept out too long at a time, scarcely a sprig of grass can be seen in the field in the fall. There is but one system to work corn, and that is the dirting system—a continual working dirt to it; but that end is accomplished in two ways—dirting up or dirting down. The one is to plant in shallow furrow and continually dirt up with twister or turn plow; the other is to plant in a deep furrow and continually dirt down with very light cultivator. The one the ridge system, the other the level system. Each has its advantages in the different soils. In low bottom land the ridge system, but on uplands the level system always; and should be adopted by every farmer who cultivates upland smooth enough on which to use the side harrow. The harrow is a five tooth implement and if properly made will thoroughly clean the land and sweep a row at a round.

Another mode for planting is to bed land as for bottom, and then plant in water furrow; a very good mode except that the plant will not start off as fast in a poor water furrow, but will come in on the "home stretch."

Another still; especially where ground was broken early and has become grassy before planting, is to bar off your land with twister or turn plow, leaving an imaginary row and completely covering up the middles, then with an eight or ten inch shovel break out this imaginary row and drop your corn, covering as before. This you will observe requires three furrows to the row, but effectually covers and freshens up the entire field, leaving a deep furrow in which to plant the grain, and I believe the very best plan to follow even in all conditons. I should have said above, at second working, thin to one stalk in the hill.

THE WHEAT CROP.

As wheat follows clover, where the land is in condition in August or September, (the sooner the better,) turn your clover with two horse turn plow 8 to 10 inches deep thoroughly covering all vegetation. Near seeding time, (which in this latitude is about the first of October) and when the land is in good working order harrow two or three times leaving a good seed bed to receive the grain; letting the last harrowing just precede the sowing that the land may be fresh. Sow with drill, using 100 to 200 lbs phosphate per acre, and one to one and a half bushels seed. Or better still, if land is level, sow both ways, using half amount of seed and phosphate each way. This will insure the largest yield as the seed will be more evenly distributed over the land.

If not convenient to drill and fertilize, sow broad cast, using same amount of seed, and harrow in or plow with double shovels using bull tongues. On such land as will grow a good clover crop, thoroughly prepared, and well put in, under either mode of seeding, a yield of 20 to 40 bushels per acre may be expected.

THE OAT CROP.

This crop follows corn. If you wish to sow in the fall which generally is best, in September or October,—after fodder is gathered, sow among the standing corn one and a half to two bushels per acre, harrowing in with side harrow or cultivator, running with the rows very close to standing corn in order that all the seed may be covered. If corn is in hill the harrowing can be done both ways; but one way is sufficient.

To sow in spring, sow one to one and a half bushels per acre and plow in nicely—very nicely. As this crop matures in a very short time the land must be well cultivated and thoroughly cleaned of filth etc.

As a choice between fall or spring sowing, any condition of land,—filthy or clean,—can be sown in fall; but none but the cleanest may be sown in spring. If as

a choice of evils you have to sow filthy land in spring, always burn off nicely all trash.

THE COTTON CROP.

As soon as the wheat is cut start the plows to sow peas on the stubble at the rate of one to two bushels per acre. Plow in nicely; if double shovel will not do good work, use single shovels and plow thoroughly. The better the work, the heavier the sward, and that is what you want to improve the land.

During the winter—say December or January break deep turning under every thing thoroughly. Previous to planting harrow fine, after which lay off rows with large shovel plow three to four feet apart according to fertility; the richer the land the wider the row; deep furrows; in these drill your manure and bed on it with turn plow. Plant at proper time, covering lightly and just before the plant is ready to come out, run over with drag pole taking two rows at a time. This flattens the row on top, kills all vegetation that may have started, leaving the land in the finest order for the side harrow, which should start as soon as the plant begins to appear above the ground. Continue to harrow at short intervals, never letting the grass appear among the cotton, remembering that you have but to stir a seed in the sprout to kill it, otherwise nothing short of the hoe will do it.

Early thin to a stand and if the harrow passes at short intervals VERY close to the little cotton, little hoeing will be necessary. But woe unto you if your crop gets grassy, which I have told you how to prevent, but if through carelessness or any other cause it does appear, do the best you can under the circumstances and help yourself, for I am at too great a distance to lend a helping hand were I ever so willing to do so.

THE CLOVER CROP.

Clover can be sown with about equal success either in fall or spring, say September or March.

While there may be some disadvantage as regards fall sowing—the risk of freezing out during the following winter—yet notwithstanding this, there is a great advantage to be derived from it, in that the plant is well rooted the next spring and frequently a fair crop is cut that season; which rarely ever occurs with spring sowing. In any event your farm must be well up and in a fair state of cultivation before you can grow this plant to any profit except as an improver of soil, and this will be a slow process if your land is very poor; for it is hard to get it to catch on poor land. Clover will make rich land richer and produce a paying crop at the same time; but land that is too poor to receive this crop had better be brought up with manure and the pea.

If sown with or immediately after the grain, sow ten or twelve lbs of seed per acre and brush in with a pretty heavy brush. But if grain was sown in fall and it is desired to sow the clover seed in the spring, sow same amount of seed, but harrow in with heavy two horse harrow; if land is hard, harrow twice.

Cover well; and if land is sufficiently fertile, a good crop may be expected. Cut for hay when $\frac{1}{3}$ of bloom has turned brown.

THE PEA CROP.

As the pea follows cotton, the thoughtful or rather the brainy farmer, in August or September sowed his cotton field to rye, sowing $\frac{1}{2}$ to $\frac{3}{4}$ bushels per acre covering with the cultivator running between the rows. After the cotton is picked, which generally is about Christmas, turn on your cows for winter pasture, and now look out for yellow butter, and at the very time that it brings a big price.

About two weeks before you wish to turn for peas—say about 1st. to middle of April, take off your cows and let it grow, to turn under. At proper time turn under the rye, cotton stalks and all deep and thoroughly, harrow fine, and about 1st. to middle of May sow to

peas, one to one and a half bushels per acre; harrow in or plow with double shovels. Now let them alone, they will take care of themselves until gathering time, when I will tell you what to do further on.

As the peas are wanted for hogs, sow the whippoorwill variety as they bear much better than other varieties when sown broad cast.

But if from any cause you plant the other pea, plant in drills and cultivate two or three times.

SWEET POTATOES.

Select for this crop sandy land of medium fertility, rather poor, but deep soil. Break land deep in fall or winter; after which lay off rows three and a half to four feet apart, deep furrow; drill heavily in this furrow woods mold, fence corner and barn yard scrapings, or any conceivable decaying vegetable matter to be found on the farm. On this put a light sprinkling of ashes or phosphate, throw on one furrow and let it lie till spring, or about planting time, when run through this mass with bull tongue plow, in order to mix, and complete your beds with turn plow. Do not draw up dirt with hoe, but set your slips on the beds as the plow leaves them, continually drawing up the dirt with the hoe at each working until laid by, when you will find that your beds are high enough, and the cultivation was much easier than if they had been drawn up at first.

GROUND PEAS.

Select medium land. Prepare as for cotton, open beds with small bull tongue plow. Drop two "nugs" twelve to eighteen inches apart, cover lightly and cultivate as sweet potatoes.

If desired for market a light colored sandy soil should be selected, as the color of the soil has much to do with the color of the pea, and the color of the pea much to do with the price. But for hogs any color of soil will do, but a sandy soil preferred for any purpose.

MOLASSES CANE.

Select strong land. Alluvials or bottom lands best. Prepare land and plant just as cotton, covering very lightly with a board. Work with side harrow and thin to hoe width one stock. Last working throw up dirt with double shovel. When seed are ripe prepare the crop for the mill. Let two hands cut cane; one gather a bunch in his hands, and the other with grass or brier scythe cut the bunch off close to the ground and throw on piles.

This done cut off seed heads, and tie the stalks in bundles of convenient size to handle, tying at both ends. The cane is then ready to haul to the mill. If no one in the neighborhood follows the business of making up the cane for the neighbors, let several join in and buy a horse mill and pan, and each make his own molasses, charging disinterested neighbors one eighth for use of mill if they wish to make. Farmers, raise your own molasses. It will grow any where in the south, and is the best paying crop for consumption on the farm that we can raise. The seed is worth about as much as corn would be, grown on the same land, and the molasses a clear profit. Try it.

IRISH POTATOES.

Select medium land, break deep, harrow fine and lay off rows three to three and a half feet apart, deep furrow. Plant good size tubers cut into four pieces, 15 to 18 inches apart, two pieces to the hill. Manure heavily in the drill with well rotted stable, or better still hog pen, manure. Bed on this with one horse turn plow, and let it remain so—middles unbroken till potatoes are near ready to come up, when harrow crosswise with two horse harrow, reducing land to a level. When the plants are all up, cultivate with double shovel working a little dirt to the plants each time, until last working, when throw up pretty well and lay by.

ANOTHER WAY.

Check land three feet apart each way, plant three pieces, and manure in the hill.

A LAZY BED.

This is especially recommended when one is short of land and desires to make a big yield to the acreage. First break very deep with two horse plow and harrow fine, then rebreak with one horse plow planting in every furrow about 15 inches apart as the breaking goes on. When completed the land will be level. Cover the entire patch heavily—the heavier the better—with straw, leaves, pine tops or any available trash to be found on the farm, and let it alone, the potatoes will take care of themselves until digging time. When, go in with a plow and after raking off the trash, plow them up as you planted them, letting the hands follow to pick up the potatoes. By this plan I believe twenty to thirty bushels could be planted on an acre.

But do not conclude from the name that it requires no work to grow them this way, for you will find if you try it that it takes quite as much labor under this plan as it does to cultivate them. The great saving is in the land which of course is very important. Besides this, in extreme drought the crop will be more sure as the covering promotes moisture in the earth.

MELONS.

Select land with a deep sandy soil. After breaking deep lay off rows eight feet apart, then place your hills eight feet apart in the row, by shovelling out a large basin shaped hole some what deeper than the breaking, in which put from a gallon to a peck of well rotted stable manure, on which draw three or four hoe fulls of dirt, and mix thoroughly. On this mass draw up a hill of pure dirt, somewhat higher than the general surface, and shaped like an inverted basin. This should be done some weeks before planting. Drop your seed on the hill near the center and press into the ground with your fin-

ger,—the depth of the first joint, or barely one inch; rake the holes shut, and gently pat to firm the soil. When up commence cultivating, and as soon as out of danger of bugs, thin to two or three vines to the hill. Cultivate frequently until the vines are too large, when lay by. Remember never to cultivate when the dew is on the vines.

THE GARDEN.

Last, but not least comes the garden; the wife's farm. But a mean man is he who makes his wife work the garden. I had rather work a small farm than a garden the ordinary way—all hoe and no plow. Fifty yards square is a very pretty size for a garden; or better still forty by sixty. A garden should occupy an oblong square. Run your walk through the middle lengthwise; and let your rows run with this walk. Plant every thing in rows through the garden. If one thing or crop will not fill out a whole row, fill out with something else that will need work about the same time. Plow every thing—onions, peas, beans, beets, cabbage,—every thing. You will be surprised at the hoe work it will save. Work the garden once a week, or better still, after every rain; never letting a crust form, and your garden will never suffer with drought. As one crop matures and is used up remove the trash, re-plow, manure, and plant in something else. There should be something continually growing in the garden. Onions can be gathered the 1st of July; gather and plant to corn for late “roastneers.” After gathering early roastneers, remove the stalks, break deeply and manure for turnips—first harrow fine. After digging potatoes, prepare and sow to turnips also. Don't be afraid of having too many turnips. They are good hog and cow feed. Now you have two strips through your garden in turnips: leave one of them for “greens” or “sallet” in the spring. After which plant for late “roastneers.”

When you work the garden take all hands, start one

plow on one side, and the other one on the other side, and let the hoe hands brush it up with the hoes. The whole thing can be done before breakfast any morning—and well done. The wife will prepare you a good breakfast, and say thank you sir, and perhaps give you a kiss. Try it.

There is a big living in a garden; or, rather poor living without one. This part of the farm is too often neglected, especially in the country. Our town friends excell us in gardening. This is a result of few acres. The garden must be rich or made so with manure. Each year it must have a heavy application. Vegetables require the richest soil for their growth and will only respond when such is the case. Apply your manure during the fall or winter that it may rot and become more thoroughly incorporated with the soil.

STOCK.

On this farm I would keep two strong brood mares, four good milch cows, a flock of sheep, a brood sow and ten or twelve porkers, and all the poultry I could possibly raise.

From these I would expect to raise two colts a year, four calves, milk and butter in abundance for family, pigs, and market, mutton and wool for family and for market, three thousand pounds of pork and chickens and eggs in abundance.

THE HOG.

For convenience of pasturing a few pannels of portable fence is necessary. Run this across your clover field about the centre, one half to be mowed for winter feed, the other half to pasture. On this turn your pigs when the bloom begins to appear, giving them plenty of salt and a small feed of corn once a day. As soon as the faulty fruit begins to fall in the orchard, let them have the run to this, which alternated with the clover, and small feeds of corn each day, will keep them in fine growing condition until the peas are ripe. After you have

gathered what peas you need for family use and to sow your next year's crop, and when about one third of what remains in the field are ripe, turn your hogs on this. They will eat the ripe peas, never disturbing the green ones, but will eat them as they ripen. When this is eaten out, and after digging or fencing off part of your sweet potato patch for family use, turn your hogs on this; and when they have completed their work here, and after gathering what goobers the family might need, turn them on this. This done you certainly can kill ten or twelve head of hogs weighing three hundred pounds a piece, and that could not have possibly cost over four cents per pound. But if desired to harden and flavor meet, put in close floored pen and feed one or two bushels of corn per head.

Your sows should be managed to farrow about the 1st of July, giving them close attention until the pigs are weaned, and then giving the pigs the run to the orchard, corn field etc.

This will bring them up nice thrifty shoats in fine condition to be carried over the winter. During the winter pasture on rye and feed well on corn, sour slops made of bran etc.

THE COW.

The cows can have the run on the clover with the pigs. But in case it gets short, soil them from the acre near the barn. When this is too old, soil from the pea field, and late in the fall from the drilled corn. In winter feed clover hay, bran, ect., and pasture on rye. Salt well and milk clean.

SHEEP.

Let the sheep have the run to the permanent pasture. A good pasture of short nutritious grass, with plenty of pure water and shade is all they require in summer. Although if possible frequent changes of pasture is recommended. In severe winter weather, shelter them and feed on hay.

CALVES AND COLTS

can also have the run to this pasture, but in case it is not sufficient for all, soil them night and morning. Feed all stock plentifully and keep the young stock growing. The stock on any farm is an important item, but especially on this, as under the system it is intended for a money crop, and one of the best paying departments of this farm, besides the advantages to be derived from the manure.

Stall all stock at night except sheep and keep stalls well littered, and you will be surprised at the amount of manure that can be made on this little farm. Until you get around with your rotation, and get your farm built up and a bountiful supply of humus in the soil, distribute your manure in the drill. After which scatter broadcast, and use commercial fertilizer in the drill.

Manure never was intended to pass through a man's fingers. It requires too much work and makes farming too bunglesome, but in the present condition of the soil we are obliged to apply it thus; our land being too poor to afford the use of commercial fertilizer. But as has been said before, commercial fertilizer is a creature of an advanced age. So it is, and our farms must advance to it. Then we can use it profitably. Then we can not do without it. For it pays well, as all know to use it on rich land judiciously. Our rotation of crops and manure products of the farm will supply the vegetable matter or humus to the soil, and in connection with this we can well afford to buy fertilizer—the chemical parts.

Put your manure out to the land fresh from the stalls. Never throw out to rot on a pile or in a pen and, thereby loose by overheating or leaching by excessive rains its most valuable parts.

While clover is a biennial, and will yield a paying crop on the same land for two years, I believe that it will pay best, especially as an improver of the soil, to turn each year and sow another field; thereby passing it around

more frequently in the rotation and as a result improving your farm the faster. Let it follow in the rotation each year just as any other crop.

THE SYSTEM—HOW TO ADOPT—ITS PROFIT.

Will it enrich the farm? This is the first question to be asked by the intelligent farmer; but the same brain that propounds the question, after a mere glance at its workings, answers: It will. But says one, in the present poor condition of my farm, how can I adopt it? How can I make the start? So few acres will not feed me, much less yield a surplus. This depends largely on the man. There is an old adage that says: "There is more in the man than there is in the land," and it is no less applicable to this case than any other, but rather more so. For now you are entering upon high farming—brain farming. Farming upon business principles—building up the thing that feeds you and thereby increasing her capacity to yield up the rich things so bountifully stored in the bosom of a rich farm.

Then do not think that because your farm is small you will have little to do, and in consequence reap little; for the very first year with a timely start and well directed labor, judiciously applied, your little farm will yield quite as much, if not more, than twice as many acres under the skin system.

Your acres being few you will have time to thoroughly prepare, thoroughly manure, and thoroughly cultivate. For a few years at least your guano bill can be dispensed with altogether. Your attention given to the making of manure, your little crops can all be manured in the drill, and each acre made to produce at least, double what it did before—and that less a guano bill.

Another says I run a two, four, or six horse farm. I have to mortgage my crop for supplies on which to live while I am making it. My supply bill is large. I

must cultivate many acres in order to meet it. To this I say reduce your supply bill by selling some of your stock, and running on the money for a year and get down to your right capacity. If you can't run a six horse farm successfully, trim down to a four horse farm; and if you can't run that trim to two, and if you can't run that trim to one; get down to what you can manage (or rather up) for I had rather run a one horse farm and pay as I go under a system of improvement, than a six horse farm under the old skin and credit system. "A word to the wise is sufficient." The start can be made.

WILL IT PAY?

In the long run it will for it enriches the farm. But can I live and make money on this little farm? Your profits will increase year after year. The only trouble you will have is to get over the first year. Let us see what can be done as regards this.

With a strong team and following the instructions as herein laid down, the products of every acre can be doubled as to the yield under the old system.

Then of corn we may expect 30 bushels per acre, 180 bushels; of wheat we may expect 15 bushels per acre, 90 bushels; of oats we may expect 30 bushels per acre, 180 bushels; of cotton we may expect three fourths of a bale per acre, 4 bales; peas, sweet potatoes, goobers—pork, 3,000 lbs; two colts worth \$50.00 apiece, \$100.; four calves worth \$5.00 apiece, \$20.00; eight hundred pounds of butter worth twenty cents per pound, \$160.;

Now leaving all grain crops, one thousand pounds of pork and four hundred pounds of butter, to run the farm the next year, let us see what is left.

Cotton,.....	\$160.00.
Two thousand lbs of pork @ 7 cents,.....	140.00.
Two colts at \$50.00 each,.....	100.00.
Four calves at \$5.00 each,.....	20.00.

Four hundred lbs of butter @ 20 cents,.....	80.00.
Total.....	\$500.00.

FIVE HUNDRED DOLLARS!!

The very first year, to say nothing of the profits of poultry, eggs, mutton, wool, and four to six hundred pounds of pork that should be made from the waste, slops, etc., from every farmer's kitchen. Besides the improvement of the farm, which in itself is the most important of all as under the system each year these profits will be increased and ultimately our farms will grow rich, our children will be educated and the farming world on the high road to prosperity and intellectual supremacy.

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