

## Fertilizing Land—With Illustrations.

So long as circumstances alter cases it will be utter folly to lay down any cast iron law with regard to fertilizers. Here, if anywhere, a man needs an educated common sense, and needs it to an uncommon degree. I have a friend who owns a large farm, principally devoted to growing stock. He very naturally, and as I believe correctly, spreads nearly all the manure upon the grass land. But how does he do it? His hired men haul it out and spread it at the rate of fifteen to twenty large loads per acre. Much of it can hardly be called spread; it is thrown off, a large forkful, or nearly so, in a place, and left in that position. The result is that there are many spots of say twelve inches square, and often more than that, where no grass can possibly grow. Immediately around this miniature heap there will be an extra growth of large coarse grass or hay that is not agreeable to stock and not profitable to the owner. If there were but now and then such a spot, it would be a small matter; but when there are hundreds of them upon each acre it is really a very serious matter to the farmer, who is almost universally short of manure. It may be said in defense of this, that the manure is there and the land gets the benefit of it; and sooner or later the result will be seen in the crops. All this may be true to a certain extent; but we do not wish to wait two or three years for what we might have this coming season.

Where labor is scarce and high, it is possible that, all things considered, it may be best to haul from the barnyard and spread directly on the land. In such cases, unless I had plenty of it, I would not put more than eight to ten loads per acre, and then would be sure that it is spread as evenly as possible; it costs but little to have a man or boy go over and spread evenly after the teams have left it. Where labor is plenty and reasonably cheap, I am satisfied that it would be a better plan to haul the manure out into a heap, and, if it is not composted, let it decay and then work it over and have it sufficiently fine to handle with a shovel or our six-tined forks. If treated in this manner, six to eight loads per acre, well and evenly spread, will give a much better result, and a more immediate one, than the one above noted. Other, and some very good, farmers think it better to plow all manure under, and my early reading upon this subject was, plow deep and plow your manure under; no matter if it is covered deep, the plants will find it. Near twenty years since, I was breaking up a piece of heavy turf. Upon a portion of it I put some very rich manure, and plowed it under not less than eight and perhaps nearly ten inches deep. The other part of the field had no manure. I am watching yet for some result from the manure so deeply buried, but never expect to see any. This little circumstance set me to thinking and experimenting, with results about as follows:

I am perfectly satisfied that by burying manure too deep it has not been worth as much to me by many hundreds of dollars as it would have been if I had used it as I am now doing. In this I am by no means confined to my own experiments. I have seen the same teaching in many cases. A number of years since a farmer, one of the class of which we unfortunately have too many, had reached the point where he had to move either his manure or his barn, and concluded to move the former. It was dry hot weather. It had been packed for years, and was broken up, hauled out, and thrown upon the ground in large lumps, some of them as large as a peck measure. The land was a heavy clay and very dry. It was plowed while in this condition; and of course broke up in large hard lumps larger than the lumps of manure which they were supposed to cover. The land was sown with wheat, and the crop, of course, a failure. I have watched that piece of land to this day, and it seems to me that the farmer might just as well have had his manure buried under the pyramids. I could if necessary mention other instances where I have seen very rich manure buried so deep that there was no visible effect even when the land was well cultivated. There are some cases where I would plow under coarse manure, in fact I do so more or less every year, but never bury it so deep but what the next season's plowing will bring it all to the surface again.

Upon some soils, remarkable results are produced by plowing under some very coarse manure or even straw. Some years since a merchant remarked to me: "You farmers say that dry wheat straw is worthless as a manure." I replied that chemical analysis showed dry straw to contain but a very small amount of fertilizing matter. "Well," he retorted, "three or four years since I put a stack of dry straw in the furrows of a field that I was having plowed; it did not hold out for the entire piece, but the portion of it where the straw was put has produced very much larger crops than the remainder of the field, and is in very much better condition in all respects. Now how do you account for this if the straw has not acted as a fertilizer?" Fortunately I was well acquainted with that field; it was an exceedingly rich piece of land; a heavy black loam, with a subsoil of stiff clay almost as impervious to water as a stone jug. The loam was generally a bed of black mortar in the spring, and baked like bricks in the summer. Of course it had not been drained. I replied to him: "Your land was very rich, and the effect of that large amount of straw was simply mechanical. It loosened the soil, kept it from baking in summer, and, in short, put the land in such a condition that

the growing crops could draw their necessary supply of food from the abundance the land already contained. It made loose and fine what before was packed and hard." He admitted that I was right. Now suppose I had concluded from this experiment of his that dry wheat straw was the thing for crops, and had collected and plowed under a large coat of it upon some of my land, which is quite sandy with a subsoil of fine white plastering sand. The result instead of a benefit would have been ruin to my crops, from the fact that the soil is already loose and porous, and needs to be made more compact and solid, instead of the opposite.—J. H. Smith, in N. Y. Tribune.

## The Culture of the Potato.

Around all large cities, and indeed near any place which offers a cheap route to market, potato culture is one of the most profitable employments; and though much has been written about it, it is doubtful whether we yet know what is the best way of going about it.

Just now we have before us a statement that our regular farm way of growing them is all wrong, which we very much doubt, though it might be a truth to say that we can do better. But then we are not sure the way proposed is better. We are told that to grow the potato well we should haul the manure out in September and plow it in. In early spring plow again, and put on about three hundred pounds of unleached ashes, ground bones and guano. Then harrow and plant. This requires three plowings, beside the harrowings, and we much doubt whether the increase of the crop, if any, would be enough to cover the difference in cost over our present single plowing system. Here one can take a piece of old sod, manure it well with stable manure, and plant the potatoes at the same plowing, and the best and healthiest crops follow. The ground is well harrowed after planting, and that is all—not half that proposed—while the crops are all that could be expected. The manure for this purpose is generally preferred to be not well rotted—straw manure is the way farmers express it. Often it is so long that a boy follows the plow and rakes it in for the next furrow-slice to cover. Yet our essayist tells us that rough manure is the worst possible for the potato, as one may suppose by the recommendation to use bone dust and guano.

It is probable that different climates will have much to do with what is best in potato culture; and this may be especially true as regards the kind of manure to use. As we have said, here in Pennsylvania we find no better potato fertilizer than half-rotten stable manure, while farther south they raise excellent potatoes by simply covering the potatoes by a deep mass of straw, without any other manure or earth covering; and it may be that farther north or west very well-decayed manure may be better still.

To show how much climate has to do with the best system of potato culture, we need only refer to the recommendation to plow potato ground in the fall of the year. Now, in this part of the world, we find that the best results follow when the potato is planted early; and especially is this likely to be the case since the advent of the potato beetle, which is generally more destructive to the late than to the early crops. But in this part of the world a fall plowing means in most cases two weeks later in the spring, unless the land is very loose, and permits the plowed land to be as close as if there were no furrow slices made. In sod land, where the slices lie at an angle against each other, the frost penetrates to nearly double the depth it does in unplowed land; and these very spaces prevent the warm spring sun's action, which in ordinary cases soon takes the frost out of the ground. It is the experience of every farmer in this region, and especially in sod land, that fall plowing makes at least two weeks' difference in the time at which it can be worked, and this is no mean item in the success of an early planting of the potato crop.

It seems then that in potato culture, equally applicable to all, the proper method of culture takes rank with the question of the proper variety of potato to plant; it is a local question, and one must be guided in the selection by the peculiar circumstances of the case.—Germantown (Pa.) Telegraph.

## Reproducing the Colors of Nature.

They say it has been accomplished at last. French chemists, it is claimed, can take photographs in which are reproduced the colors as well as the form of the object. This has always been one of the possibilities of the photograph. The negative at first does actually reproduce color as well as form, and if it could be kept in a very dark room the shades would not die out. But up to this time it has been impossible to find a mordant that would render the colors permanent.

"Like the snow-flake on the river,  
A moment seen, then gone forever."

What a marvelous change it would make if the camera could give us nature in all its hues. The photographer to-day does sad injustice to many charming women. A classic outline, no matter what the complexion, takes well in an ordinary portrait. But those dear little blonde women with tipped noses, charming complexions, all grace and vivacity, they are crucified by the photographer. Let us hail the French discoverer, and crown him with laurels. The pretty women who look ugly in photographs ought to, in some way, shower benefactions upon him.—*Demorest's Monthly*.

## Our Young Readers.

### A GOOD-BY TO WINTER.

The meadow-brooks are full, and busy  
Getting Winter off to sea;  
His trunks of ice, all packed and ready,  
Are standing under every tree.

His overcoats, well aired and shaken,  
Are dangle from each dripping bough;  
For he has staid till overtaken,  
And spring is right upon him now!

Yes, hurry up, old Winter, hurry!  
Sometime, we hope, you'll come again;  
But here is spring, in such a hurry,  
Keeping back her stores of rain!

Yes, good-by, good-by, old fellow!  
With your moaning, sneezing, fun;  
Bring some more by next December,  
When the Summer days are done.

What's the matter, pretty Spring-time?  
Always weeping? Some would say  
You are vexed, because old Winter  
Always lingers in your way.

Well, he's off! The brooks have started!  
Now the birds can come and sing.  
So come to the happy, happy Spring!  
Laughing, budding, genial Spring!  
—Mrs. S. C. Stone, in *Youth's Companion*.

### GETTING OUT SAW-LOGS.

All boys and girls know that boards are made of sawed logs, and that logs are trunks of trees. Few, however, know with what hardship and difficulty the trees are felled, trimmed and carried from the woods where they grow to the mills where they are made into boards.

In the far West and in the wilds of Maine are acres upon acres, and miles upon miles, of evergreen forests. One wooded tract in Maine is so vast that it takes an army of choppers twenty years to cut it over. By the time it is done a new growth has sprung up, and an intermediate one is large enough to cut; so the chopping goes on year after year. The first or primeval growth is pine. That is most valuable. After the pine are cut, spruce and hemlock spring up and grow.

Most of the men who live in the vicinity of the lake region work in the woods in the winter. They camp in tents and log huts near the tracts where they are felling trees. All day long, day after day, week after week, they chop down such trees as are large enough to cut, lop off the branches and haul the logs to the nearest water. This work is done in winter because the logs are more easily managed over snow and ice. All brooks large enough to carry them, all rivers, ponds and lakes are pressed into service and made to convey the ponderous freight towards civilization. All along the shores and in the woods are busy scenes—men, oxen and horses hard at work, the smoke from the logging camps curling among the trees.

Every log has the initial or mark of the owner chopped deep into the wood to identify it. Then, when the ice breaks up, the logs are sent down the brooks to the rivers and through the rivers to the lakes. The logging camps are disbanded, the loggers return to their homes, and the river-drivers alone are left to begin their duties.

The river-drivers are the men who travel with the logs from the beginning of their journey till they are surrendered to the saw-mills. Each wears shoes the soles of which are thickly studded with iron brads an inch long; and each carries a long pole called a "pick-pole," which has a strong sharp-pointed iron spike in the end. This they drive into the wood, and it supports and steadies them as they spring from log to log.

Their first duty is to collect "the drive." The logs which form "the drive" are packed together and held in place by a chain of guard-logs which stretches entirely around the drive, forming what is called "the boom." The guard-logs are chained together at the ends about two feet apart. The guard is always much larger than the boom of logs, so that the shape of the boom may be changed for wide or narrow waters.

And the head of each boom is a raft which supports two large windlasses, each of which works an anchor. On this head-raft about thirty river-drivers take up their position to direct the course of the boom.

To change its position or shape, ten of the drivers spring into a boat or bateau; one takes a paddle at the bow; eight take oars; and one, at the stern, holds the anchor. They row with quick strokes toward the spot where the anchor is to be dropped, the cable all the time running from the windlass.

"Let go!" shouts the foreman.  
Splash! goes the anchor overboard.  
The boat then darts back to the head-works.

Out spring the men to help turn the windlass to wind the cable in. They sing as they work, and the windlass creaks a monotonous accompaniment as "Meet me by moonlight," or the popular "Away over yonder," comes floating over the rippling water.

Meanwhile another bateau has been out with another anchor; and as both windlasses turn, the boom swings toward the anchorage, and thus is so much further on its way.

Though the men sing as they work, and make the best of their mishaps with jests and laughter, they often carry homesick hearts. In cold and stormy weather their hardships are great, an involuntary bath in the icy water being an event of frequent occurrence. Also their work demands a constant supply of strength which is very trying; frequently a head-wind will drive them back from a position which it has taken several days to gain, and all the toil of fresh anchorages must be repeated.

The most dangerous part of the work is "sluicing" the logs. When the boom reaches the run which connects the lake or river with the dam through the sluice of which the logs must pass, the chain of guard-logs is detached, and fastened in lines along both sides of the run, and the rafts are drawn off to one

side and anchored to trees. The river-drivers, armed with their pick-poles, are then stationed along the run, on the dam, wherever they may be needed. The liberated logs now come sailing along, their speed quickening as they near the sluice. When they reach it they dart through, their dull, rapid, continuous thud mingling with the roar of the water. How they shoot the sluice! log after log—two, six, a dozen together—pitching, tossing, struggling, leaping end over end; finally submitting to destiny and sailing serenely down the river toward another lake.

Meanwhile the river-drivers with their long poles and quick movements, looking not unlike a band of savages, have enough to do, with steady feet, and eyes on the alert. For of all the vast array of logs—and I once saw twenty-four thousand in one drive—not one goes through the sluice but is guided on to it by one or more of the drivers. They often ride standing on the floating logs, conducting this pushing, turning and guiding; and just before the log on which a driver stands reaches the sluice he springs to another.

Woe to him if his foot should slip, or his leap fail! He would be crushed among the logs in the sluice, or dashed among the rocks in the seething water.

After all the logs are safely sluiced, the chains of the guards are slipped, the rafts are broken up, and these, windlasses and all, follow the logs. Then the boats are put through the sluice. Sometimes when the dam is high, some of the river-drivers go through in the boats—a dangerous practice, this; for often the bateaux have gone under water, entirely out of sight, to come up below the falls, and more than once have lives been lost in this foolhardy feat.

A boom generally passes from three to six dams and sometimes takes four months to reach the mills.

Occasionally the logs become jammed in the rivers, and must wait for more water; if this can be supplied from a lake above, the difficulty is easily remedied.

In the Spring of 1880, a jam occurred at Mexico in Maine. The logs were piled forty feet above the water and covered an extent of area as large as an ordinary village. This great jam attracted many visitors from all parts of the country until the spring freshets of the next year could supply the river with water sufficient to loose them and bear them on their way.—Mrs. S. B. C. Samuels, in *Wide Awake*.

## Belief in Spiritualistic Phenomena no Evidence of a Man's Insanity.

A novel case was decided in the Chicago Circuit Court, the other day, in which Judge Tukey held that proof that a man believed in spiritualistic phenomena was no evidence of a man's insanity or incapacity to take care of his own affairs. The undue influence in this case was that exercised by a spiritualistic medium, Mrs. Chamberlain, over Colonel H. W. H. Cushman, now deceased. Cushman held a policy in the Republic Life Insurance Company for \$10,000, which his executor claimed as an asset of the estate. Mrs. Chamberlain claimed it on an equitable assignment, which the executor resisted on the ground that at the time of the assignment Cushman was incapable of making a binding contract, owing to insanity caused by spiritualism. It was proved that for many years Cushman had been a firm believer in communication with departed spirits; that he had been in the habit of consulting spirits daily, and placed much value upon counsel purporting to come from them through mediums, and at one time had invested largely in a worthless mine through their advice.

Judge Tukey said that men who stand high in science, Judges who adorn the bench, attorneys, solicitors, clergymen, physicians, literary men of the highest ability, and, in fact, men in every walk and condition of life honestly believed in these phenomena; and so it would be the sheerest nonsense for him to hold that belief in the phenomena known as spiritualism was *per se* any evidence of unsound mind. It might lead to unsound mind, but not necessarily so. But in the case before the Court it appeared that the assignment to Mrs. Chamberlain was in the nature of a gift, for which there was no money consideration. It appeared that for years Cushman had lived with the medium, and that she was almost constantly in his thoughts, and he claimed to have received communications from spirits through her. In following English decisions in regard to the influence of spiritual mediums, which throw the burden of proof on them that no such influence was exerted, Judge Tukey held that the gift of a policy in this way was procured by undue influence, and decided in favor of the executor.

A pretty servant girl in a Rochester (N. Y.) boarding-house won the ardent love of two boarders. Both desired to marry her. She was puzzled to choose between them, and further complicated the affair by accepting first one and then the other. The rivals at length agreed to meet her in a room together and get her final decision. When the momentous occasion came one tried to influence her by drawing a knife and declaring that he would not survive a refusal. The other, not to be outdone, placed a pistol at his head and swore that he would blow his brains out in case of disappointment. She took the dagger man, however, and the pistol man allowed himself to be disarmed, though he vows he will die on her wedding day.

—Wood is more valuable when seasoned under cover.



## THE GREAT GERMAN REMEDY FOR RHEUMATISM,

Neuralgia, Sciatica, Lumbago, Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frused Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals Dr. Jacobson's *a safe, sure, simple and cheap* External Remedy. A trial entails but the comparatively trifling outlay of 50 Cents, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages. SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO., Baltimore, Md., U. S. A.

## WOMAN'S TRIUMPH!

MRS. LYDIA E. PINKHAM, OF LYNN, MASS.



## LYDIA E. PINKHAM'S VEGETABLE COMPOUND.

The Positive Cure

For all those Painful Complaints and Weaknesses so common to our best female population.

It will cure entirely the worst form of Female Complaints, all ovarian troubles, inflammation and ulceration, Pelling and Displacements, and the consequent Spinal Weakness, and is particularly adapted to the Change of Life.

It will dissolve and expel tumors from the uterus in an early stage of development. The tendency to cancerous humors there is checked very speedily by its use. It removes flatulency, restores the system to its normal condition, and relieves weakness of the stomach. It cures Bloating, Headaches, Nervous Prostration, General Debility, Sleeplessness, Depression and Indigestion.

That feeling of bearing down, causing pain, weight and backache, is always permanently cured by its use. It will at all times and under all circumstances act in harmony with the laws that govern the female system.

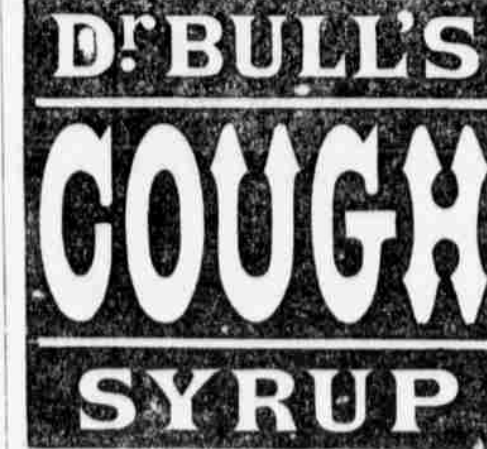
For the cure of Kidney Complaints of either sex this Compound is unsurpassed.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND is prepared at 225 and 225 Western Avenue, Lynn, Mass. Price \$1. Six bottles for \$5. Sent by mail in the form of pills, also in the form of lozenges, on receipt of price, \$1 per box for either. Mrs. Pinkham freely answers all letters of inquiry. Send for pamphlet. Address as above. Mention this paper.

No family should be without LYDIA E. PINKHAM'S LIVER PILLS. They cure constipation, biliousness and torpidity of the liver. 25 cents per box.

Sold by MORRISON, PLUMMER & CO., Chicago, Ill.

FOR SALE BY DRUGGISTS.



For the Cure of Coughs, Colds, Hoarseness, Asthma, Bronchitis, Croup, Influenza, Whooping Cough, Infant Consumption, &c. Price only 25 cents a bottle.

## Do You Wish To Know?

1. DO YOU WISH TO KNOW about Kansas—her people, her homes, her lands, her products, her towns, her counties and her public institutions?

2. DO YOU WISH TO KNOW about the wonderful climate, the no less wonderful scenery, the charming summer resorts, the magnificent mines and the marvelous growth generally of Colorado?

3. DO YOU WISH TO KNOW about New Mexico, which is just developing a climate and a mineral wealth surpassing even that of Colorado?

4. DO YOU WISH TO KNOW about Arizona, without doubt the richest mineral country in the United States, with other advantages of climate and soil?

5. DO YOU WISH TO KNOW about California and the sections of the Golden State, both north and south?

6. DO YOU WISH TO KNOW about Old Mexico and its prospects?

7. DO YOU WISH TO KNOW how to reach these States and Territories easily and cheaply?

If these are the things you wish to know, write to Care G. P. & T. A. C. S. GLEED, A. T. & S. F. R. R. Topeka, Kansas.

## Mammoth CORN

YIELD From 4 to 10 Bushels per Acre.

This is no Fraud

We have seen Mr. Grosley's field of corn, and know the above to be true. N. J. Lawrence, Editor *The Farmer*.

J. Marvin, Attorney J. A. Brown, Clerk Criminal Court, Chicago, South. Marine Insurance Agent, all of Cleveland, O.

—H. F. Plummer, P. M., Rockport, O. Price by mail, postage prepaid, \$1.00 per quart. Liberal discount for wholesale orders. Send your order early as the amount is limited.

M. A. CROSBY, Cleveland, Ohio.