

Agricultural.

What Lands Need Drainage.

All lands that contain more water than is needed by the crops growing upon them. If you intend to raise corn or wheat the land will need more draining than if intended for grass. Even grass lands need not be very wet, as, if too wet, the growth of aquatic plants and grasses takes the place of the cultivated grasses and ruins the hay and pastures.

Loose, porous soils, underlaid by sand or gravel, are drained by nature; but all land that is underlaid by clay, rock or other impervious material needs draining.

What is to be gained by underdrainage? The surface of the water in the soil is lowered. The roots of cereals and grasses may penetrate as far as to the surface of the water, but never into it. It is necessary to draw the water off to such a depth as will give the roots of growing crops plenty of room to reach downward for that nourishment that is necessary to their growth. If the water is only one foot from the amount of soil from which to gather nourishment, with the disadvantage of having their feet wet by capillary attraction. Only aquatic plants grow well with their feet in the water.

The lowering the water below the surface prevents a large amount of evaporation, and its effect in cooling the soil. The water being removed, air and warmth are admitted to the soil.

Drained lands are for this reason ready for planting a least one week earlier in the spring. The growth of crops is quickened through the summer by the increased temperature of the soil, which amounts to several degrees, and the injurious effects of early frosts are prevented in the same manner. Crops are therefore given an increased period in which to make their growth of at least two weeks. This is certainly a very important gain.—*Farmers' Magazine.*

Leached Wood Ashes.

Ashes fresh from the stove or furnace, contain all the mineral constituents necessary for plant growth, and are, therefore, very valuable as a fertilizer to a worn-out or naturally poor soil. A large part of the potash is recovered from ashes in leaching, and as this constituent is a leading one, leached ashes are of less value as a plant than when fresh. The owner should save, in a secure place; all the ashes made, and apply them to the land in the spring. A top-dressing of twenty bushels per acre to an old pasture or meadow will give good returns for several years. The leached ashes should be disposed of in the same manner, only they may be applied at the rate of 100 bushels per acre.

Leached ashes have been bought and used for many years by farmers and gardeners on Long Island and near the shore towns in Connecticut. These ashes are brought mainly from Canada. Ashes are especially good for tobacco land, and onion raisers find them profitable. It has been observed that when this fertilizer has been introduced, it retains its hold upon the confidence of those who use it. Fruit growers are glad to get leached ashes for their small fruit gardens, and even orchards of large trees are much benefited by them. Save all the ashes, leached or unleached, and if there is a good opportunity, buy and apply them.—*American Agriculturist.*

Corn for Sitting Hens.

It is claimed that corn is the most suitable food for sitters. The requirements of a sitter differ from those of other hens. Keeping quiet and without much exercise, not much is required to sustain life, and their food should be of such a nature as to digest slowly. For this reason whole grain is preferred and corn is thought to be much the best. Soft food of any kind is soon digested, the hen becomes hungry, and either leaves the nest too frequently or becomes very poor. The advantage of corn over other grain is that it is more oily and not so likely to stimulate the production of eggs, and, being hard and compact, is digested much slower than other grain.

Farm Notes.

—The water that flows over a plowed field washes off the most soluble portions of the soil, and deposits them in the bottom of the ditches. When it percolates through the soil to an under-drain the loss is reduced to the smallest possible amount. There is some loss in under-draining water; but even this is in great part prevented by having a growing crop on the ground all the time.

—Experiments have proved that rusty meal is not wholesome food for any of the domestic animals. Disease and death have been directly traced to its use. When fed to poultry, chicken cholera or some disease resembling it was the result. Cows to which it was fed gave bitter milk, and ceased to thrive as well as those in the same pasture which had no grain. Swine fed upon it failed to grow or fatten. Only

horses were not injured by it, and they escaped because they would not eat it.

—The London *Live Stock Journal* states that diphtheria among fowls made considerable ravages in France this year, and that the most valuable remedy found for its cure is papaine (the active principle of the papaw tree), which dissolves away the false membrane. It is applied with a camel's hair brush to the diphtheric patches three times a day.

—An Australian sheep-breeder recently purchased 173 merino sheep in Vermont, for which he paid the sum of \$30,000. Four of the rams cost \$2000 each. The freight to Australia will amount to nearly \$6000 more, which increases the sum to \$36,000, or about an average of \$200 per sheep. The breeder already has a flock of 92,000 and the Vermont sheep will be used for purposes of improvement.

—Clay soils are generally better for wheat than sandy ones, because they are not subject to such sudden extremes of temperature and moisture, and are more tenacious in their character. Timber land is better than prairie land, because the decaying roots are pretty sure to effect underdrainage; magnesia and lime and silica are more abundant and more abundant and nitrogen is less abundant, and such land being more rolling is better drained and dryer.—*Prairie Farmer.*

—The fatter a breeding sow is kept the more liable she is to destroy her pigs by lying on them or eating them up. Sows left to run wild will make good mothers, and will generally select a warm, dry place to farrow. It is for this reason that there is so much advantage in using full-blooded boars of improved breeds on large, coarse-boned native sows. The progeny secure the good qualities from its sire with a better constitution and more hardness than it could get from a full-blooded pedigree, going back through generations which have always had ample feed and little exercise.

—A gigantic undertaking in the way of fruit growing has been commenced by Lord Sudeley, at Toddington, near Cheltenham, England. Two years ago there were planted 93,000 gooseberry bushes, 20,053 plum trees, 167,000 black currant bushes, 2919 apple tree, 852 pear trees, 8845 damson trees, 532 cherry trees, 10,000 red currant bushes, 25,000 raspberry bushes, 100 cob nut trees and 52 acres of strawberry plants. In addition, 100 Scotch firs and 10,000 poplars have been planted for sheltering purposes. Lord Sudeley is at present erecting a large jam manufactory in the centre of this estate.

—A local paper reports that a farmer in Henry county, Ga., was cutting wheat not long ago, and uncovered a prairie nest with fifteen eggs in it. The mother bird flew off, which left the eggs exposed to the scorching rays of the sun. Returning that way two or three hours later, the farmer was astonished to find that every egg had hatched out and the restless occupants gone. This will be the first intimation to the world that Eli Perkins is spending his vacation in Georgia.

—When cattle chew leather, wood and old bones, remember that it indicates a lack of phosphate of lime in their food, which is required to supply bone material. A teaspoonful of bone meal given daily with their grain will correct the habit and supply the deficiency which induces it. If the disposition to eat bones is indulged in when cows are in grass, the deficiency then evidently exists in the soil, and the pasture will be greatly benefited by a top dressing of bone-dust. Two or three hundred pounds to the acre, sown broadcast, will repay attending expenses in a better yield and in quality of milk and butter.

The Spread of Leprosy.

The attention of prominent physicians is being given to the increase of that terrible scourge, the leprosy. It appears from figures given that this loathsome disease has increased in this country nearly seventy-five per cent. within the last eight years, and is still spreading, while no definite steps have been taken to stop or check it. This disease is the one which the Hebrews considered above all as a terrible plague. All who were afflicted with it were ostracized and banished from the cities or the wilderness. Even houses where he people affected had lived where turned.

The disease has been spread in this country mostly by the Chinese. Though it was known and dreaded in California as far back as 1845, in Mexico it was occasionally met in some out-of-the-way place where the unfortunate sufferer had gone to die. A case was also occasionally encountered by the Southern physicians in their practice, and the utmost care was taken to prevent the spread of the disease. The vast number of Chinese who have been flocking to this country for the last eight

or ten years, have had many lepers among them, and they have mingled freely among their fellows, spreading the disease, which can be disseminated by personal contact or by using anything which the person affected has used or handled. The disease has shown itself to an alarming extent among those who smoke the cigarettes manufactured by Chinese; the disease attacks the lips and tongue, and in a short time shows itself in different parts of the body. This ought to have some effect in stopping the pernicious habit of cigarette smoking, which is assisting to spread the disease.

Fashions for Both Sexes.

—Evening dresses are made with an amplitude almost recalling the days of crinoline. Happily, the fullness established by French decree is confined wholly to the back, the front and sides falling straight enough. Some of the newest white skirts to be worn next the dress have a single embroidered flounce going all the way around the foot of the skirt, but in the back they are flounced nearly to the waist, each ruffle being starched very stiff when laundered.

—Amber is a very fashionable color, and one of the most beautiful importations from Worth is an amber satin reception costume. The court train opens over a petticoat of ruby velvet covered with very deep amber lace flounces. The bodice is pointed and sleeveless, and is trimmed with a magnificent embroidery of gold, ruby and amber beads, which glisten like gems in the gaslight, this embroidery heading a fall of amber lace. The effect of this dress is beautiful beyond description.

—Dancing-dresses, of which softly hanging mervilleux silk forms a competent part, are sometimes arranged with a graceful drapery of the silk crossing the bodice diagonally from shoulder to waist, and then forming a panier, while at the other side a lighter material, like tulle or gauze broche, is draped panier-wise over the surah. It offers a garland of field flowers borders the edge of the tulle panier. It is not easy to describe this new and pretty style, which is remarkably effective.

—Brocade embroidery is very effective, and is made by outlining the various flowers or geometrical designs woven into brocade materials. The patterns are first outlined in stem-stitch, or a double piece of wool or silk is couched along the chief edges of the design. Sometimes a better effect is produced by covering the whole of the brocade design and leaving only the foundation material visible. When so treated, long or satin-stitch is used, as in satin-stitch embroidery, and when well executed in judicious colors the effect is extremely good.

Men's Wear.

In apparel for gentlemen a more staid and conservative feeling is springing up, and, though no radical change will be made, trousers will not be so tight, coats not so long or so pointed in the tails, and patterns for waistcoats and trousers not so pronounced. The regular English fashion of wearing coat and waistcoat of one kind of goods and trousers of another will prevail to a large extent. It is a sensible fashion too, for a coat and waistcoat will outlast two or three pairs of trousers. Frock coats, generally known as Prince Alberts, will be extensively worn and divide the honors with four-button cutaways, sack coats having gone entirely out of fashion, except for country, seaside and clearly informal occasions.

As to the materials to be worn, importations have not yet reached us. Judging by the samples, however, dark small checks and overchecks, varying shades of cork-screws, and fine, dark tweeds, with small, scarcely discernible spots of white or red, will be mostly sought after. Looking farther ahead to the winter, frozies will be the most fashionable material for overcoats, which will be cut as frock coats or double-breasted sacks.

It is a fact worthy of notice that the only article of men's dress in the fashioning of which the wearer's taste plays no part is the hat. The styles of hats are due altogether to the taste and fancy of the manufacturer, so that twenty-four hours before the new style displayed in the hatter's window no one but the "finisher" knows what shape it will assume. According to Mr. Dunlap, therefore, it is impossible now to give an idea of what expanse of curling brim or curve of the bell-crown will adorn the heads of our gilded youth when they drive their dog-carts in the Park in a few weeks. Shoes will follow the fashion of the cloth clothes and be less pointed than heretofore. They will be made as plain and simple as possible, with patent-leather vamps and kid or black silk uppers, laced in front. Collars will still be high "all-rounders," and the neckties will be quiet silk checks tied in a sailor's knot, with no pin or any sort of description.

A Curious Manuscript.

Among the manuscripts left by the Major was the following: One day while roaming with my gun I chanced to go farther than was wont, but when I turned to retrace my steps I discovered that I was completely bewildered as to the proper course. I had been dreaming along as I walked, for the leaves, coloring under the touch of the season's first frost, the bleaching grass, the haze overhead and the soft-sighing air—all had combined to make me forget myself. I walked rapidly in what I thought to be a home direction, but after an hour had passed I found that I was more confused than at first. Arkansas was a wild country in those days—so wild that you could sometimes travel for days without seeing a human habitation. I began to get excited. Any one who is familiar with life in the woods knows that there is no feeling like becoming excited in a forest. It is inexplicable—like the shaking that sometimes seizes a hunter, especially if he be a new one, when a deer approaches. When a man in the woods is convinced that he is lost he feels an almost irresistible impulse to run wild. Children have been lost in the woods, and in half a day's time they are, in some instances, so wild that when found they will bite and scratch and scream, even if their mothers approach them. I felt this excitement coming on me, and I knew that if I did not do something to counteract its influence I would go wild. Then I reflected how often I had been temporarily lost, and how at any other time I would have laughed at the idea of running wild. I thought that I would fire off my gun, that it might afford some relief. I looked around, and my hair stood on end. My gun was gone. "I had it a moment ago," I thoughtfully mused; "what could I have done with it?" and I threw back my head and howled. "I must not encourage such outbreaks," I said to myself, "for a man will go wild even in a city if he howls very much." and I remembered that when I was a boy several of my companions went wild while shouting in admiration of a circus procession, and that the show men caught them and put them in cages, where they remained, even defying the recognition of their parents. One of the boys was named Luke Horn, and when his father came along and looked at Luke the boy held out his paw—he had paws at that time—and the old gentleman jumped back and exclaimed: "Why, that devilish monkey wants to take hold of me."

I laughed at this recollection and I got down and knawed at the root of a tree. Then I arose and howled. I couldn't stand on my hind feet very long—yes, hanged if I didn't have four feet and a tail by this time. The truth is, I had gradually become a wolf. I feel that any one who chooses to read this manuscript will smile incredulously at this, and produce all kinds of arguments to prove the impossibility of a man retrograding into a wolf; and probably the same man, too, may be a believer in the theory of evolution. I shall not argue this point though, for in regard to my own experience I am certain, while any one who opposes me could only protest without proof, and hence his arguments would be mere assertions unsubstantiated by a single fact.

I had not been a fully developed wolf but a few moments until several other wolves came from the valley below and began to sniff around me. When satisfied that I was genuine they sat down, whereupon we all began to discuss the advisability of getting something to eat. It was soon decided that we should go down into the valley, where there was a farm well stocked with sheep. The mention of sheep made my mouth water, for, being a wolf, I was as hungry as myself. We started on our expedition and soon reached the farm. Just as we jumped over the fence to seize the sheep a man sprang from behind a stump and fired upon us. A buckshot wounded one of my hind legs, and, after vainly attempting to leap over the fence, I fell among a lot of bushes, where I lay perfectly still, hoping to escape observation. In this I was disappointed, for the old farmer ran to me, thrust his gun between the bushes and aimed at my head. I whined piteously and shut my eyes, expecting to be blown into atoms, but the farmer did not shoot.

"I wonder what sort of a dog a wolf would make," said the farmer, turning to his son. "This fellow whines so that I don't want to finish him. He must have been led into this thing. Let me see if he wants to bite," and he put his hand on my head. I did not bite him, but licked his hand. He was so well pleased at this that he took me up and carried me to the house. My wound was soon dressed, and after they had given me something to eat I felt pretty comfortable. Still I was a wolf and, although they were so kind to me, yet I meditated revenge. I wanted to do some devilry and then go back to my companions. One day, after I had thoroughly recovered, the old man set

me to watching the sheep in a small pasture. He seemed to have confidence in me, for he did not even look back after he crossed the fence. How I wished for my companions, I howled. The sheep became frightened and huddled together. I howled again, and an answer came from the woods. Another howl and my companions jumped the fence. I selected a young lamb that had ever looked sweet and tender to me, and I made a spring for him, when bang went a gun and I fell over, shot through both fore legs. I looked up and saw the farmer coming. I whined but he frowned and leveled his gun at my head.

I lay in bed at Home. Numerous friends stood around me, and when I told them not to shoot again, they assured me that I was out of danger.

"You have been in a very dangerous condition," said one of my friends. "Several days ago you went out hunting, and as you did not return at your accustomed time several of us went out to look for you, and you may imagine our horror when we saw your body in a pool. We drew you out and were rejoiced to discover that life was not extinct. You had evidently been walking very rapidly and had stepped into the pool before discovering it. Your face wore an expression of alarm, and we could not see that you had made an effort to get out, and I really do not believe that you had."

When I recovered I ask my friend to show me the pool which he did, leaving me as I requested. I did not remember to have ever seen the pool, but I recognized a tree close by. Something had been gnawing the root of the tree, and I could plainly see the print of a wolf's teeth. From this tree I went down into a valley, along no trail but by a way strangely familiar, I soon reached a fence, and looking over I saw a flock of sheep feeding. I went to the farm house not far away where I found a farmer who did not know me but whose face to me was familiar. I talked to him about sheep raising and finally I adroitly turned the conversation upon wolves.

"I had a very strange experience with a wolf," he said. "About two weeks ago I heard wolves howling in the day-time, which is rare. I did not know but that they intended a raid on my sheep, and taking my gun I went out to the sheep pasture and hid behind a stump. I had not been there long when the wolves jumped over the fence. I fired and one of them fell over in the bushes. I loaded my gun, ran to him and was on the eve of shooting when he whined and gave me a look so nearly human that I could not shoot. I put my hand on his head, and he looked at me—by George, sir, no offence intended, but he had an eye very nearly like yours."

"No apology necessary," I replied; "please go on with your story."

"He was wounded in the hind leg, and after it was dressed it healed with wonderful rapidity. Sometimes the animal's eyes would have a human expression, then again it would glare like any other wolf's eye; but, upon the whole, he seemed so intelligent and appeared to be so anxious to do something to repay me that one day I took him down to the pasture and told him to watch the sheep. Well, sir, I hadn't more than reached the house when I heard him howl. I seized my gun, stole around and watched. He kept on howling, and pretty soon I saw several wolves jump over the fence. Just then my wolf made a dash after a lamb and I shot him. He was only wounded, and I ran to him and blew his head off."

"When did this occur?"
"Last Thursday."
"What time?"
"About two o'clock."

I turned and walked away. It was the very time when I regained consciousness and found my friends standing around me.—*Arkansas Traveler.*

MAN'S GRANDEST TREASURE.—The grandest treasure it is possible for man to possess on earth is a good wife. The poorest investment he can ever make is a worthless one. Personal adornment may please the eye of the vulgar, but it will not hide a false heart. Sin may cloak itself for a brief season in the garment of hypocrisy, but sooner or later it shall come to judgment. Pure affection is a priceless jewel, the embodiment of earthly bliss. In the true union of husband and wife money should not enter into the consideration. The happiest homes the world ever knew have been bought and paid for by mutual earnings after marriage. The good and true wife adorns her home and makes it a little heaven. It is the abode of a royal family, and a king and queen dwell within. There are no false gods in such a house.

—Galvanized iron is made by cleaning the sheets with acid and passing them through a bath of molten zinc.

Our Young Folks.

Going to School.

Tis nearly nine, and Tom and Bess, Are on their way to school; They walk along at pace so slow As if they stepped by rule.

"Tis not so nice," said Tom to Bess, "To go to school all day As 'tis to stay at home and read, Or run about and play."

"Why, no, of course 'tis not so nice," Said Bessie, with a sigh; "But we must do our duty, Tom, And never question why!"

"Dear me! how very grand you talk! Perhaps you think like me; But boys can be as brave as girls, As you, dear Bess, will see."

"And side by side we'll go to school, And both together try To do our duty every day, Without a question why."

Some Hints for Boys.

Avoid that which you see amiss in others. Follow the example of only the good. Keep your ears open to all that is worth hearing, closed to all that is not. An older person's experience is of no value to you unless you profit by it. You are not building on the future, but on the past and present. Evil communication corrupts good manners. Nobody wants to deal with a doubleminded boy. Be industrious, the world wants boys who are not afraid of hard steady work. "The empty vessels make the most sound." Some boys inherit good fortunes, but no boy ever inherited scholarship, a good character or a useful life. If you would be capable, cultivate your mind; if you would be loved, your heart. Never excuse a wrong action by saying some one else does the same thing; this is no excuse at all.

A Wise Choice.

A good minister, while sitting at the dinner table with his family, had these words said to him by his son, a lad of eleven years: "Father, I have been thinking, if I could have a single wish of mine, what I would choose." "To give you a better chance," said the father, "suppose the allowance be increased to three wishes; what would they be? Be careful, Charley!" He made his choice thoughtfully, first, of a good conscience; second, of good health; and third, of a good education. His father suggested to him that fame, power, riches and various other things are held in general esteem among mankind. "I have thought of all that," said he; "but if I have a good conscience, and good health, and a good education, I shall be able to earn all the money that will be of any use to me, and everything else will come along in its right place." A wise decision, indeed, for a lad of that age. Let our young readers think of it, and profit by it.

A Very Useful Bird.

What did Captain Walker mean when he told papa he always kept a secretary when he was in south Africa? Did he mean he had so much writing to do? "No," said auntie, laughing softly; "he meant a bird called the secretary." "A bird! What was the good of that? He said he could not do without it." "The secretary-bird is a most useful creature. He is a real blessing to all who live in south Africa; for he destroys a vast quantity of insects and reptiles, which are a great annoyance." "Why is he called 'the secretary'?" "It is such a funny name for a bird." "So it is. I believe he is so called from a long tuft of feathers which hang from the back of his head, and which is supposed, by some people to resemble a writer with his pen stuck behind his ear. He is also called the serpent-eater; but the first is his most usual name."

"Is he a very large bird?" "He is about the size of an eagle, but he has very long, strong legs. The secretary, like other large birds of prey, builds his nest on the tops of the highest trees. He always kills his prey before eating it; and the way he does so is curious. He invariably crushes it with the sole of his foot; and with such skill does he give the blow that he seldom has to strike twice. If the snake is large and makes a strong resistance, the secretary seizes it by the back of the neck and flies up with it to a great height, then drops it to the ground. The snake is stunned by the fall, and the secretary gives it a heavy blow with his foot before it is recovered, which kills it. Is it not a clever way?"

"Yes," said Allen quite interested. "Are they very fierce?" "No, not at all; and they are easily tamed. They are worth making friends of; for they are so useful to man." "Well, auntie, if I go to Africa with an I am a man, I shall try and get a secretary to live with me, like Captain Walker did. I should be frightened at the snakes, and should like some one to kill them for me."

"Yes I have no doubt you would; and you should thank God, too, that he has provided such useful birds."

—First boy: "Say, do you know why those factory chimneys are so high?" Second boy: "Yes, to keep out the water in case of a flood."