

Seeding Wheat.

The most important thing about wheat-growing is getting the seed in the ground. It is a common practice, much to be condemned, of putting off the seeding of wheat until the last moment. The contrary direction should be followed, and, instead of deferring seed-sowing until all other work is done, there should be an endeavor to get the seed in by the first of October.

In the first place plow deeply, not less than six inches, and, if possible, on stiff, clay lands, let the subsoil plow be used. This answers two purposes. It opens the land deeply, letting down the excess of water when we are visited by heavy rains, and allows the roots to penetrate easily to secure a firm hold. Sow early, for then the plants have time to bed themselves and secure a firm foundation against the action of frosts, which throw the plants up when the land thaws in the spring. Wheat that has been in the ground long enough to secure a good foothold is at least over the greatest difficulty, and it is only those who have made the mistake of sowing late that have been the heaviest sufferers.

The seed should be carefully selected. As we prize "fresh blood" in livestock, so should we change our seed in order to get the best results. There have been many new varieties introduced of late that are worthy of a trial, but such should be tried on a small scale before making it general. Certain kinds are adapted to particular localities, and the farmer's experience should guide him in that respect. But under no circumstances should seed be sown that has not passed a complete inspection. In England, when they wish to avoid cockle or other noxious weeds, the seed is brought into the house and the whole family are employed rejecting every unsound or imperfect grain, frequently using a magnifying glass to facilitate the operation. In this country we cultivate on too large a scale to use such means, but, however, as there is considerable time during evenings between now and October the spare time could be profitably spent in overlooking the seed. The utmost care is necessary, and future labor will be saved thereby.

Wheat should follow corn or root crops, as they require clean cultivation, and the wheat will be less liable to competition from weeds. Harrow the wheat as soon as it is well up, and also again in the spring. Drilling is preferable to broadcasting, and the roller can advantageously be used where the land is lumpy or clogged.

Did it ever occur to farmers that wheat can be cultivated with profit? We have the authority of the patent office report on agriculture that an Englishman planted wheat one foot apart each way, manured and used the hoe on it, with a return of over one hundred bushels to the acre. This does not seem credible but there is no doubt that the cultivation of wheat would pay in the increased yield by such a method, as is evinced by the effects of frequent harrowing.

It is recommended, if a good yield is desired, to sow early, select the plump and cleanest seed, harrow as often as possible and manure well. With good preparation of the land, and extra care and judgment in seeding, the farmer need not fear next year's performance with his wheat crop.—*Cor. Burlington Hawkeje.*

State Health Boards.

This is undoubtedly a period of great sanitary activity, with vast possibilities of improvement, and yet with possibility, also, of crude speculation and of not less crude inventions. Even sanitary literature has in it much of the experimental, and there is need that all things proposed be brought to rigid test, lest they become death dealing, instead of life-saving. It is, however, one of the encouraging facts that so many of our States, as well as our cities, have full-formed Boards of Health, composed of men who can be held responsible for their acts and for their advice.

In addition to the twenty-three States already having Boards, Pennsylvania, Arkansas and Indiana are likely to be successful this year. The reports of these are beginning to be rendered, and form a very important addition to our information as to the study of disease. We this year take up, as first in order, the report of the State of New Jersey. It is made especially prominent from the fact that the Board has had to contend with four decided epidemics, all of which will pass into record as important in the history of diseases and its causes. The first was the well-known typhoid fever at Princeton. With all the talks about malaria, all the rumors as to causes and the many contradictory items which found their way to the press, it was quite important that an authentic narrative be given. The Secretary of the Board had the very best opportunities for this work. It required much sifting of statements and close local examination into details. This seems to have been diligently attended to. The result is a clear detail of facts and a discussion of the probable origin of the disease. It seems highly probable that the fever originated from local causes, which had nothing to do with malaria and the remedy for which was an entire change in the system of sewage disposal. One cannot read such a history without perceiving the great importance of a well-devised plan of exactness in all the details of sanitary construction, and of a superintendence which shall be as vigilant as intelligent and see to it that no possibilities of accumulated filth can occur. A comparison of the meteorological table shows how exceptionally warm the months of April and May had been, with an absence of the usual rains.

No doubt, this had much to do with stirring the latent poison into activity, and thus making aerial sewage or contaminated air abundant.

Not less decided and not less typical was the occurrence of malarial fevers at Bound Brook. While malaria was very prevalent in many States and in many localities of New Jersey last year, yet the condition of things at Bound Brook was such as to furnish admirable opportunity for more exact study. The mangrove swamps of Africa give not more decided evidence of special malarial productivity than did this town. The man who has seen several little craters all the more enjoys Vesuvius, because it is so very declarative. A town in which no inhabitant escapes is not to be explained away by any general theory of origin. The debris of a half century had collected in a sluggish water-bed, amid rank vegetation, whose decay had stored away much organic matter. It was near the discharge of two or three small streams, which thus brought down the accumulation of a large, low watershed. The alternation of heat and of water had been unusual, and had furnished all the conditions for fermentative or putrefactive changes. The results were up to the plan. So the people thought; so the courts thought. For the goodness of the thing is this: It gave rise to a trial which will ever be notable in American legislation. It proclaimed drainage for health a necessity as never before. It not only compelled the removal of a mill-dam, but the restoration of a stream-bed. New Jersey justice was as rigorous as if it had caught a culprit, and declared that men, women and children must not have their animation suspended in such manner. The result, too, is a State law which, while it protects owners of water-rights from unfair risks, proclaims the right of pure air and a dry soil to all the land and the inhabitants thereof. About the same time small-pox took on epidemic proportions in Camden. It revealed an inadequacy of provision that startled this city of contentment, and gave it to know that, with all its enterprise, it moved too slowly to keep up with the move of the disease. At one time it bid fair to plant itself in every street of the city. A council held with the State Board of Health resulted in the authorization of vaccination to an extent which fully limited the disease. When will mankind learn that it is not necessary to have a scare and some deaths in order to secure that vaccination which can alone protect from such a scourge?

Later in the season, at Blackwoodtown, some twelve miles from Camden, a fever broke out in the almshouse, which did not cease its deadly work until physician, and nurses, and keeper, and family, as well as some forty inmates, had fallen before the disease. Over-crowding was the great error. In the midst of a motley herd was brought a man sick with fever, who was placed at once in a crowded bedroom. In twelve days there were several cases in adjoining rooms. It is quite possible that the first New York cases arose from the tramps who scattered from this place. The whole course of the fever was that of a well-declared typhus. It is not only contagious, but clings so tenaciously to surfaces that long after it has seemed to cease it will again recur, under favoring circumstances. It is still so persistent in certain parts of New York City that its sanitary authorities may well be on the alert, lest dirty streets and a hot summer should cause it to extend. Thus, in a single small State, wedged in between Philadelphia and New York, we have examples of four preventable epidemics in a single year, and call upon all who read thereof to take heed.—*N. Y. Independent.*

Adulterated Coffee.

Chicory, carrots, caramel and date seeds are the substances commonly used to adulterate ground coffee. A single test will show the housekeeper whether she has purchased pure or adulterated coffee. Take a little of the coffee and press it between the fingers, or give it a squeeze in the paper in which it is bought; if genuine it will not form a coherent mass, as coffee grains are hard and do not readily adhere to each other; but if the grains stick to each other and form a sort of "cake," we may be pretty sure of adulteration in the shape of chicory, for the grains are softer and more open, and adhere without difficulty when squeezed.

Again, if we place a few grains in a saucer and moisten them with a little cold water, chicory will very quickly become soft like bread crumbs, while coffee will take a long time to soften.

A third test: Take a wine-glass or tumblerful of water, and gently drop a pinch of the ground coffee on the surface of the water without stirring or agitating; genuine coffee will float for some time, whilst chicory or any other soft root will sink.

Chicory or caramel will cause a yellowish or brownish color to diffuse rapidly through the water, while pure coffee will give no sensible tint under such circumstances for a considerable length of time.

"Coffee mixtures" or "coffee improvers" should be avoided. They seldom consist of anything but chicory and caramel.

"French coffee," so widely used at present, is generally ground coffee, the beans of which have been roasted with a certain amount of sugar, which, coating over the bean, has retained more of the original aroma than in ordinary coffee; but this, of course, at the expense of the reduced percentage of coffee due to the presence of the caramel.

—England has 100 widows worth over half a million dollars each.

How Hides Are Taken Off and Salted.

In the abattoirs of this city the flayers of cattle use in taking off the hides a knife with a straight back and a keen edge, broad at the haft, but tapering up almost to a point at the end. The hoofs are first taken off at the first joint, a piece of the loose flesh at the throat cut out, an incision made in the neck, and the knife run down through the middle of the belly and the center of the lower side of the hair tail. The animal, which, up to this time, has been lying on its back, is inclined a little to one side, being supported in that position by a prop under the downwardly-inclining fore-quarter. Beginning at the neck, the flayer runs his knife carefully along until the hide is taken nearly off the side which is uppermost, then the animal is rolled over on that side and propped up as at the beginning, and the same flaying operation is repeated on the part which was downward at first. Next a wooden support, about four feet long, six inches deep and two inches wide, having a large iron hook in the middle adapted to be fastened to a rope for hoisting purposes, is run through incisions made in the hind legs just above the first joint; the rope is adjusted to the hook, and the carcass lifted up by a windlass, when the projecting ends of the joint are supported by cross beams about nine feet from the floor, and the body hangs suspended therefrom. One of the workmen now grasps those portions of the hide which have been taken off the sides of the animal near the neck, and another takes a large butcher's cleaver, and, using the back, not the edge of the instrument, by repeated blows frees the skin from the rest of the carcass, while it is pulled off by the first workman. Great care is exercised in the process of flaying, as the workmen are subject to a fine for each cut and score on the hide.

When freshly taken off the hide is worth about eight cents per pound. In this state it is sold to the salters with the pates and tails on. The salters place them in beds of about 600 each. The floor of the salt room is generally cemented, and the bottom layer of hides is laid with the hair side down; the salt is then sprinkled on the flesh side, and another layer is put down in like manner until the bed is complete. The hides are usually left in the salt from ten days to two weeks. The salt used must be of good quality and ground rather fine, as in case a lump of even the size of an egg is left upon the flesh side it will eat into the hair of the hide placed above it and very seriously detract from its value. It takes about 180 bushels of salt, worth from thirty-two to thirty-five cents per bushel, to each pack of 600 hides. When the hides are taken out of salt they are well shaken and folded, first double lengthwise, and then wrapped up in four or five folds. In some cases salters contract their hides to tanners by the month or year, and settlements are made at the end of each month on the basis of the average ruling prices during that period. It is now, however, becoming customary for them to sell each lot to the tanner or dealer who will pay the highest figures at the time of delivery.

In some of the abattoirs where the butchers do not do their own salting the salters hire the pens and make no charge to the slaughterers, but receive the hoofs of all the animals killed in lieu of other compensation. In the Jersey City abattoir the salters pay \$1,000 per annum for each pen affording accommodation for fifteen animals at a time.—*Shoe and Leather Reporter.*

The Restorative Power in Nature.

Equally worthy of admiration, and all but equally complex, is the process by which nature repairs a fractured limb, especially when the injury is such that the broken ends of the bones cannot be brought exactly into their proper positions. It is remarkable, too, how she adapts her process to the different habits of her patients. In the case of a simple fracture, if the parts that have been disjoined are set close together in their normal line, if it be the leg of a dog, for example, there is first a hard sheath called a "callus," formed round the fracture, and this "callus" permits a restricted use of the injured limb, even before the two parts have grown together. It is, however, only a temporary provision, necessitated by the natural restlessness of the lower animals. After the fracture has completely healed the "callus" gradually disappears. A human case is treated differently. Here, unless it be a broken rib (which requires the provision in consequence of an incessant motion in respiration), the healing takes place ordinarily without the formation of any outer "callus." Sometimes the broken ends cannot be, or, at all events, are not, brought into their proper relative positions. Is it possible, it may be asked, that nature can provide the means for meeting such an emergency when, that is to say, the two portions of bones to be joined are all awry, and sometimes quite new—in fact, a kind of bridge, and a bridge not only serving the purpose of a solid connection between opposite banks, but like the bridges which carry the appliances of modern civilization, connecting the nerves which answer to the telegraph wires and the veins and arteries corresponding to our water and other conduits—has to be constructed? Nature's engineering is equal even to this task. Omitting anatomical details, we may simply say that she constructs a new and extraordinary piece of bone, which serves to unite the broken ends, the jagged and sharp projections of which she carefully rounds off. But we must now take leave of the subject and commend it to the thoughtful consideration of the reader, who will recognize in all this the marvelous wisdom of our great Creator.

Our Young Readers.

WHAT MAKES A REALLY CHARMING CHILD.

One time I met a little girl
Whose face was fair to see;
Of all the pretty girls I know,
The prettiest face had she.

"A charming little thing," said I.
Aunt Hannah wisely smiled,
"It takes more than a pretty face
To make a charming child."

I wondered what she meant, Alas!
My eyes were opened soon.
Instead of "such a charming child,"
I sang a different tune.

For she—the girl with pretty face—
Was cross as cross could be,
And snarl or rout from morn till night
Soon disenchanted me.

"You see, my dear," Aunt Hannah said,
That makes the child we're glad to see
In every time and place:

"Not pretty looks alone, my dear,
A child must have, to be
A *lovely* child. It's what they do,
Far more than what we see,

"That makes them lovely in our eyes.
I've seen a homely face,
Through which a pleasant spirit shone,
All luminous with grace—

"The grace of pleasant deeds and words,
Without which there can be
No really charming child, my dear.
It's heart, not face," said she.
—*Edna E. Bedford, in Golden Days.*

HOW SUSY PLANTED HERSELF.

"You are too little, daughter; you must wait till you are a big girl before you can go out evenings." Or—
"No, dear; it is not suitable for little girls! When you are older you can have it."

It seemed to poor little Susy she was always hearing something like this. She was the only child in the family, and was fond of trying to do exactly what big folks did. And she got very tired of being told she was too little to do this thing, or that thing.

Papa said, "You are not quite big enough to ride the pony yet, dear."
Mamma said, "When you are a little taller you can water all the plants on the stand, Susy."

Aunt Susy, "I'd like to take her with me, but she's so little she'd be tired to death."
Grandma said, "That sweetmeat is entirely too rich for the child; she ought not to touch it."

Susy tried everything she had ever heard of to make little girls grow fast. She was told that going to bed early would do it, and one bright, summer afternoon she went to bed at five o'clock. It seemed about a week to her usual bed-time, and, after all, when she looked in the glass in the morning she could not see that she was one bit taller.

She had hoped that when she went down-stairs her mamma would raise her hands and say:

"Dear me! I must set the ruffles of Susy's dresses down; she does grow so fast."

She had heard that rain and sunshine made the flowers grow, and she sat out doors, first in one and then in the other till she came near having the croup and a sunstroke. And still no one ever exclaimed, "How that child does grow!"

One morning in early summer she followed her mamma about the garden. "How wonderfully fast this orange tree grows!" said mamma. "Look, Susy, at those fresh shoots; I do believe they have grown three inches since yesterday morning."

Susy looked, and a new and delightful idea came into her mind. The orange tree was growing in an earthen flower-pot; that must be what made it grow so fast.

She said nothing to mamma, but waited till she gave the tree a good sprinkling and went into the house. Then Susy ran to the root-house and picked out a large flower-pot, which she placed at the end of the back porch steps opposite to which the orange stood.

"I'll be growing at one end and the orange at the other," said Susy. With her little spade she began digging up the soft earth. When she had loosened up what she thought enough she took off her shoes and stockings and stepped into the pot. Her plump little feet hardly had room enough, but she crowded them in side by side and shoveled some earth on them.

It was very hard work. She came near toppling over several times—and then found she had not enough earth dug up, and that she could not dig while standing in the flower-pot. It was too bad to disturb her feet, but she had to get out and then begin over again. By the time that she had filled in nearly to her knees and patted the earth smooth on the top her poor little back was almost broken.

But she stood straight up, feeling very proud and happy, and smiled over at the orange tree.

"Now," she said, "I must wait for mamma to come and sprinkle me, and then I shall begin to grow. She will pour water on my feet, too. Dear me! I wish she'd hurry."

It was not easy standing there. Her feet were cramped and aching, and the sun was getting very hot. The orange tree did not seem to mind it at all; its bright, shining leaves smiled back at Susy, looking as if they had lived on sunshine all their lives and liked it.

"If I only had something to lean against!" said poor Susy. "All the vines lean against the trellis—that's because they get tired of standing alone. I wish I was near a trellis—but plants can't walk. I wish mamma'd come and sprinkle me—I know I'd feel better then." She had been planted only about half an hour, but it seemed like half a day. She wondered how long she would have to stay there before she grew three inches.

"I might sit down, I suppose," she

presently said, looking at the step. "I never saw plants sitting down, but I know they would if their backs ached like mine." She almost toppled over in trying it, but at last managed to seat herself and rest her tired little head on the step next above.

More than an hour later, mamma began to wonder what kept Susy so long, and went into the garden to see.

"Why, Susy!" she cried, as she saw her, "what in the world are you doing, pet?"

Susy rubbed her sleepy eyes and looked around. Then she was wide awake in a minute, and got herself straight up again as quickly as she could.

"I'm growing, mamma! Look, am I any bigger yet? Am I three inches bigger?"

Mamma laughed till Susy's head wilted away down.

"Come, daughter," she said, "take your dear little feet out of that earth; you'll catch cold."

"But I want to grow, mamma. I'm going to be a plant, and I want you to sprinkle me."

"I think you will find it nicer to be a little girl, Susy, and let God make you grow in His own way. It's time to get ready for dinner, dear."

"I'd like to stay here a little longer, please, mamma. Couldn't you let Nora bring me something to eat?"

"Why, Susy, plants never get anything to eat but water and sunshine and earth, you know."

Susy had never thought of this. She was hungry. She had had quite enough sunshine already, and thought water would make a very poor dinner.

She sat down on the step, and, giving her feet a jerk, was a little girl again in a moment, and followed her mamma to the bath-room.—*Youth's Companion.*

Selfish and Unselfish.

Did you ever think that a person may be very selfish and very unselfish at the same time? Ethel is very fond of making presents to her friends. If Edith or Nannie admires a work-box, a book, or a pencil of hers, it is at her service. She delights to surprise her school-mates with little gifts, and often Mattie finds a bunch of violets on her desk, which have come from Ethel's conservatory, or a great golden orange is added to Sadie's luncheon, and it is sure to have been brought from Florida by Ethel's Uncle Tom. Ethel is full of kind thoughts, and is as liberal and generous as possible with things that cost her nothing. But still I do not regard her as unselfish, and I will tell you why.

She is not the least bit obliging. If she is seated in her little rocker by the south window, and mamma or auntie comes in, ever so tired, it does not occur to Ethel to offer her chair, that either of the ladies may rest. Indeed, if you hint it to her, she shakes her head and says: "There are plenty of chairs in the room; why should I give up mine?" Not long since Cousin Polly and little Agnes Lee arrived unexpectedly, and as there were other guests in the house, mamma was compelled to ask Ethel to give up her pretty room, and sleep for the night with her younger sister. Would you believe it, Ethel was so vexed that she pouted and sulked in Cousin Polly's face, would take no notice of the child, and finally cried herself to sleep? Not one of the family ever dreams of asking Ethel to run up stairs or down on an errand, to mend a ripped glove, to carry a message, or to do the slightest thing which will put her out of her usual way. They know that she is not an obliging girl, and, strangely enough, the very school-mates who accept her flowers and oranges, are much more fond of Mary Ann, a plain, dumpy little body, who never has anything to give away, but who is always greeting everybody with kind looks and words, and who, wherever she goes, is helping along.—*Harper's Young People.*

A Theater 2,400 Years Old.

The director of the excavations at Epidaurus reports that he is unearthing a theater in the forest of Asklepios which is, with one exception, the largest of all yet found in Greece which belong to antiquity. It is said to be a masterpiece of the architect and sculptor Polykletus, and there is every reason to believe that it is so, since Pausanias mentions Polykletus as the greatest architect of his age and the builder of the Epidaurian Theater, finer than any in Rome or any other in Greece. It is, therefore, nearly twenty-four hundred year old. The Archaeological Society at Athens will also soon set about the excavation of the Temple of Ceres, having purchased the ground which covers it at Eleusis.

—There has been a brisk demand for oyster shells at New Haven, Conn., lately for use in the oyster-beds, as the spaw adheres to them readily after being bleached on the land. They have become so indispensable that large quantities are being brought from Rhode Island, where they once threatened to cover the State, and the price in Providence has risen from five to seven cents per bushel. The accumulation of shells around New Haven was formerly used to make roads, the "shell roads" being celebrated for their hard, smooth surface. But no more will be made with shells in such demand as at present. Dealers think that next year they will have to bring shells from Baltimore.

—A copy of one of Dickens' earliest and rarest books, "Three Ways of Spending Sunday, by Timothy Sparks," was sold the other day in Manchester, Eng., for about thirty dollars.