EXCELLENT STUDY FOR FARM BOYS DURING WINTER MONTHS

Plant Growth in Its Various Stages Described Especially for the Benefit of Our Youths Who Wish to Make It Object Lesson During Severe Cold Months—Needful Things.

(By MRS. L. GRIMES.)

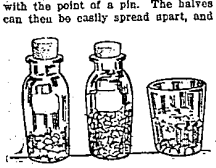
From fall till spring seems like a long time to a boy, especially if he has a choice lot of seeds that he is anxious to put into the ground. But there is a great deal to be done during the time of waiting.

The boy who does not mean to waste his time and labor must learn something about what his plants will need before he is even ready to prepare his ground.

The first thing needful is to understand something about the make-up of the seed itself. As seeds are quite similar in general characteristics, studying one closely will give a fair understanding of others.

The common white bean is easy to get, and to study, so we will take it as an example.

Soak a few beans in water overnight. Then take one and cut the tough outer covering around the edge with the point of a pin. The halves can then be easily spread apart, and



Seeds need air for germination. The beans in both bottles were soaked 24 hours and then were put in dry bottles. Bottle A contained sufficient air to start the few seeds. Bottle B had not enough. The water in the tumbler C did not contain sufficient air for germination.

the tiny plant discovered. It lies snugly cradled in one end of the bean. You will see that it has two parts, a small waxen point, and a tiny, yellowish, folded leaf. The point is the root, and a tender, delicate thing it is.

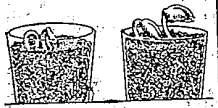
This little root must work its way down into the ground, both to feed and to hold in place the little plant. If the ground is not well prepared, if it is too hard and cloddy, the little root may become so broken and bruised as to hinder, or perhaps entirely check, its growth.

The tiny leaf, too, which must push upward, needs a soil that is soft and loose, if it is not to be injured.

Plant a few seeds in a bed of wet sawdust, and you will soon see branching out from the main root, many little rootlets. A little later, a set of fine hairs, called root-hairs, will appear on the rootlets.

It is through these that the plant gets its nourishment from the soil. They take up all the elements that the plant needs, and send them up through little veins to the stems and leaves, as your food is taken through your body by the veins, in the shape of blood.

The plant's blood is called sap. The tiny mouths can only use the food in the soil when it is "in solution," that is to say, when it is thoroughly dissolved. You can see that it will need considerable moisture to do this. If the ground is too light and loose,



How the Bean Plant Gets Up.

the water will all drain and dry away, and no matter how rich the soil may be, the plant will die for want of food.

So an important thing to keep in mind, when preparing the seed-bed, is that the top soil, to the depth of several inches, should be worked up lightly and loosely enough so that the root can readily push through, and still be pressed firmly enough so that the moisture can not all escape.

All over the stem and leaves are little openings, called "pores." It takes a microscope of quite high power to detect them. These are the plant's lungs. Through them it gets the air it needs to live on.

If you cover a plant so tightly that it cannot get air, it will smother just as surely as you would with a blanket over your head. That is what will happen if you get your seeds in too deep, or if you let the ground get hard above them before they come up.

If you wish to be sure just how deep to plant your seeds, try this little experiment.

Take a tall glass tumbler, or a pint fruit-jar, and fill it with earth. Press down into it, next the glass, three seeds of any kind you wish to test.

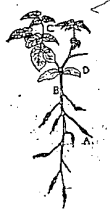
Press the first clear to the bottom, the second about half way to the bottom, and the third leave within an inch of the top. Do not put them directly over one another. Wrap a heavy paper around the glass to keep out the light, and keep the earth in it moist and warm.

Every day slip off the paper, and note how the seeds are doing. Whichever one thrives the best is the one you want to take as your guide in the matter of depth. What do you think will happen to the one at the bottom?

You have noticed that there is a great part of the seed that is not filled up by the baby plant. This part is filled with food upon which the plant lives until it gets roots long enough to feed itself.

After the food in the seed is all used up, there must be other food in the soil ready for it to live on. This is the critical time in a young plant's life. If it is starved and stunted now, it will never make up for it.

Remember, then, that good seed, a well prepared seed-bed, and plenty of



Showing Root Hairs On a Young Plant. A, Root Hair; B, Hypocotyl, Between Seed-Leaves and Root; C, True Leaves; D, Seed-Leaves or Cotyledons.

food in the right shape for the young plant to use, are the first things to look after, if you wish to make a good profit on your season's work.

HANDLE MANURE DIRECT IS BEST

Prof. Gilmore of New York Station Finds Much Loss Where Allowed to Be Exposed to Weather.

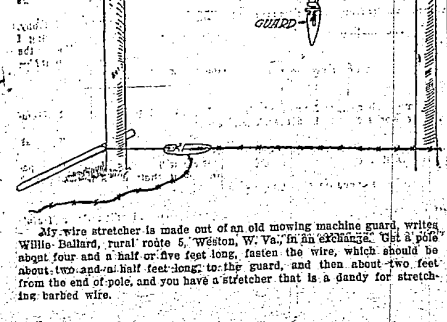
On the subject of hauling manure, Professor Gilmore of the New York experiment station, says:

"We think, all things considered, it is better to haul manure directly from the stable to the fields than it is to pile it up for any length of time.

"If well-rotted manure is desired for trucking purposes or for top dressing for hay lands, then it may be stored, but under ordinary conditions for this purpose losses from 25 to 45 per cent in the fertilizing value of manure occur, and if it is not kept reasonably wet and stirred from time to time, excessive fermentation results, to say nothing of dry burning and leaching. Losses amounting to 37 to 57 per cent have been recorded when manure has been exposed to weather.

"This loss refers mainly to the fertilizing material in the manure. It is still available as humus or organic matter when applied to the soil."

WIRE STRETCHER IS POWERFUL



My wire stretcher is made out of an old mowing machine guard, writes Willie Ballard, rural route 5, Weston, W. Va., in an exchange. Get a pole about four and a half or five feet long, fasten the wire, which should be about two and a half feet long, to the guard, and then about two feet from the end of pole, and you have a stretcher that is a dandy for stretching barbed wire.

KING LEAVES DELHI

Indian Authorities Breathe Easier as Monarch Departs.

Bringing to a close the most magnificent durbar that has ever proclaimed the vassalage of India to Great Britain, King George and Queen Mary, new emperor and empress of India, took their departure from the new Indian capital. The Indian authorities who have charge of the safeguarding of the royal pair during their stay breathed a sigh of relief as the new emperor and empress departed.

Before leaving King George expressed his warm appreciation of the loyal sentiment of the Delhi people.

Simultaneously with the departure of the king and queen, the thousands of visitors who had come to witness the scenes of the investiture also began leaving.

Eighty-four Bodies Taken From Mine.

Twenty-one more bodies were found in the Cross Mountain mine, Briceville, Tenn., in which an explosion occurred a week ago Saturday morning. This brings the death list to 84, and President Stephenson of the Knoxville Iron company, owner of the mine, stated he believed this accounted for every man entombed. Five were rescued.

The company has claimed from the first but 35 men were in the workings when the explosion occurred, but miners say there were more.

Charles F. Brooker, member of the Republican national committee from Connecticut, will resign soon.

THE MARKETS.

LIVE STOCK.

DETROIT—Cattle—Good cattle and canners steady; bulls and other grades of cow stuff 15@25c lower; best steers and heifers, $6@6.40; good to choice butcher steers and heifers, 1,000 to 1,200 lbs., $5@5.75; light to good butcher steers and heifers, 700 to 900 lbs., $3.75@5; mixed butchers' fat cows, $3@4; canners, $2@2.50; common bulls, $2.75@3.50; good shipper bulls, $3.75@4; common feeders, $3.50@4; good well-bred feeders, $4.25@4.50; stockers, $3@4. Veal calves—Receipts, 488; market steady; best grades $8@8.50; others $4@7.50. Milch cows and springers, $25@65. Sheep and lambs—Market strong; best lambs, $5.75@6; fair to good lambs, $5@5.50; light to common lambs, $3@4.50; fair to good butcher sheep, $2.75@3.25; culls and common, $1.50@2.50. Hogs—Market steady. Light to good butchers, $6.05@6.15; pigs, $5.50@5.75; light yorkers, $6@6.05; stags, one-third off.

EAST BUFFALO—Cattle—Market slow and steady; prime steers, $7.50@8.50; butcher grades, $5@7. Calves—Market active, 25c higher; culls to choice, $6@9.50. Sheep and lambs—Lambs active, 15c higher; choice lambs, $6.25@6.50; culls to fair, $4@6; yearlings, $4.50@5; sheep, $2@6. Hogs—Market active and strong; Yorkers, $6.35@6.50; pigs, $6@6.10; mixed, $6.45@6.60; heavy, $6.30@6.60; roughs, $5.50@5.85; stags, $5.25@5.50.

GRAIN, ETC.

Wheat—Cash No. 2 red, 91 1-2c; December opened without change at 95 1-2c and declined to 94 3-4c; May opened at 99 1-4c, lost 1-4c, advanced to 99 3-4c and closed at 98 3-4c; July opened at 94 3-4c and declined to 91 1-4c; No. 1 white, 93 1-2c.

Corn—Cash No. 2, 61 cents; No. 3 yellow, 2 cars at 62c, closing at 62c asked; No. 4 yellow, 1 car at 60c; 2 cars at 60 1-2c; sample, 1 car at 57c, 1 at 55c.

Oats—Standard, 1 car at 50 1-2c; No. 3 white, 50c; No. 4 white, 1 car at 49 1-2c, 1 at 49c.

Rye—Cash No. 2, 95 1-2c.

Beans—Immediate, prompt and December shipment, $2.17; January, $2.22; May, $2.22.

Cloverseed—Prime spot, 20 bags at $12.35, closing at $12.40; March, 60 bags at $12.40; sample, 18 bags at $11.75, 12 at $11.25, 8 at $9.75; prime alsike, $10.50; sample alsike, 10 bags at $9.75.

Timothy Seed—Prime spot, $7.20.

Butter—Best sample, $2.40 per cwt.

Flour—In one-eighth paper sacks, per 196 pounds, jobbing lots: Best patent, $4.75; second patent, $4.50; straight, $4.10; spring patent, $5.30; rye, $4.60.

Feed—In jobbing lots in 100-lb sacks: Bran, $27; coarse middlings, $29; fine middlings, $32; coarse cornmeal, and cracked corn, $30; corn and oat chop, $28 per ton.

FARM PRODUCE.

Cranberries are working a little lower and a decline is quoted in the price of oranges. Apples are steady and other fruits quiet. Plenty of poultry is coming in from day to day and the market is active in the leading lines and little change is made in prices.

Butter—Receipts, 149 packages; market firm; extra creamery, 35c; first creamery, 25c; dairy, 21c, packing, 20c per lb. Eggs—Receipts, 106 cases; market firm; current receipts, cases included, 32c per doz.

Apples—Baldwins, $2.75@3; Greenings, $2.75@3; Snow, $3@3.50; Ben Davis, $2@2.50 per bbl.

Potatoes—Car lots, bulk, 80c; sacks, 85c per bu.

Onions—55c@$1 per bu; Spanish, $1.65 per crate.

Hickory Nuts—Shellbark, 2 1-2@3c per pound.

Dressed Poultry—Chickens, 11@12c; hens, 9@10c; ducks, 14@17c; geese, 12@13c; turkeys, 14@18c per lb.

Dressed calves—Ordinary, 8@9c; fancy, 10@11c per lb.

Dressed Hogs—Light, $7.75; medium, $7.50; heavy, $7 per cwt.

Honey—Choice to fancy comb, 18@19c per lb; amber, 14@15c.

Live Poultry—Spring chickens, 11@11 1-2c; No. 2, 8c; hens, 9@11-2c; No. 2 hens, 8c; ducks, last young ducks, 15c; geese, 11@12c; turkeys, 15@16c.

Cabbage—$12@35 per bbl.

Vegetables—Beets, 65c per bu; carrots, 60c per bu; cucumbers—hothouse, $1.25@1.50 per doz; celery, 20@30c per doz; green onions, $1 1-2@2 per doz; green peppers, 60c bu; head lettuce, $3.25@3.50 per hampers hothouse radishes, 25@30c per doz; turnips, 60c per bu; watercress, 35@40c per doz; green beans, $2.50@3; wax beans, $3@4.50 per bu; rutabagas, 40c per bu.

Provisions—Family pork, $17.50@20.50; mess pork, $18.50; medium clear, $17@18; smoked hams, 14c; picnic hams, 10c; shoulders, 11c; bacon, 12@14 1-2c; briskets, 10 1-2@10 3-4c; lard in tierces, 9 7-8c; kettle rendered, 10 1-4@10 1-2c per lb.

Hay—Car lot prices, track, Detroit: No. 1 timothy, $21.50@22; No. 2 timothy, $19@20; light mixed, $19@20; No. 1 mixed, $18.50@19; rye straw, $9.50@10; wheat and oat straw, $9 per ton.

Former Senator Nelson W. Aldrich of Rhode Island, chairman of the monetary commission, told President Taft the report of the commission will be ready Jan. 8, the date set by congress. "I'll not be sorry when it's done," he said. "Then I'll retire from public life forever."

Only about 35 per cent of Boston school children are physically normal, according to Dr. William J. Gallivan of the board of health. Out of 101,000 children in the public schools, 43,000 have been examined and 28,000 of these found "defective."

JUDGED BY THEIR CLOTHES

Smart Cigar Store Clerk Ready With Apology That by No Means Mended Situation.

Herman Fellner tells this story on himself, according to the New York correspondent of the Cincinnati Times Star. He was in Washington on business recently and met three or four friends on the street. After a moment's chat he beckoned them to come with him. "I'm off the stuff," said he, "but I want to buy you each a cigar."

They happened to be in front of a combination cigar and news stand at the moment. Led by Mr. Fellner, they all trooped in. The clerk hurried to the cigar case to wait upon them. Before Mr. Fellner could indicate his wishes the clerk had slapped a box on the glass case. "Here y' are," said he. "Best dime smoker in town."

Mr. Fellner is sort of fussy about his smokes. He looked at the cigar then pried the box away. "Have you no other price?" he asked.

The clerk shoved the box in the case. "Sure thing," said he. "My mistake and your treat."

Having pulled off this time-worn witticism, he addressed Mr. Fellner confidentially. "Your clothes sort of fooled me," said he. "You fellers are a pretty well-dressed lot, you know." Then he put another box on the counter. "Here," said he, "is the best nickel smoker in the village."

ECZEMA DISFIGURED BABY

"Our little boy Gilbert was troubled with eczema when but a few weeks old. His little face was covered with sores even to back of his ears. The poor little fellow suffered very much. The sores began as pimples, his little face was disfigured very much. We hardly knew what he looked like. The face looked like raw meat. We tied little bags of cloth over his hands to prevent him from scratching. He was very restless at night, his little face itched.

"We consulted two doctors at Chicago, where we resided at that time. After trying all the medicine of the two doctors without any result, we read of the Cuticura Remedies, and at once bought Cuticura Soap and Ointment. Following the directions carefully and promptly we saw the result, and after four weeks, the dear child's face was as fine and clean as any little baby's face. Every one who saw Gilbert after using the Cuticura Remedies was surprised. He has a head of hair which is a pride for any boy of his age, three years. We can only recommend the Cuticura Remedies to everybody." (Signed) Mrs. H. Albrecht, Box 833, West Point, Neb., Oct. 26, 1910. Although Cuticura Soap and Ointment are sold by druggists and dealers everywhere, a sample of each, with 32-page book, will be mailed free on application to "Cuticura," Dept. 14 L, Boston.

What Happened.

"Did he have any assistance in writing that successful play?"

"Assistance? Why, man, the stage carpenter and the head usher wrote it for him."

Important to Mothers

Examine carefully every bottle of CASTORIA, a safe and sure remedy for infants and children, and see that it

Bears the Signature of *Chas. H. Fletcher*

In Use For Over 30 Years.

Children Cry for Fletcher's Castoria

Excitement.

"What's that racket out there?"

"That's Fido. He's chased your fuzzy hat up the hall tree."

Tightness across the chest means a cold on the lungs. That's the danger signal. Cure that cold with Hamlins Wizard Oil before it runs into Consumption or Pneumonia.

A man has reached the age of discretion when he is willing to admit that other men may have opinions different from his without being fools.

Dr. Pierce's Pleasant Pellets regulate and invigorate stomach, liver and bowels. Sugar-coated, tiny granules, easy to take. Do not gripe.

The easiest thing we do is to convince ourselves that we are overworked—but the family is skeptical!

Mrs. Winslow's Soothing Syrup for Children teething, softens the gums, reduces inflammation, allays pain, cures wind colic, 25c a bottle.

A girl can get more by pouting during courtship than she can by shouting after marriage.

Pleasant, Refreshing, Beneficial,

Gentle and Effective.

NOTE THE NAME

CALIFORNIA FIG SYRUP CO.

in the Circle,

on every Package of the Genuine.

DO NOT LET ANY DEALER DECEIVE YOU.

SYRUP OF FIGS AND ELIXIR OF SENNA HAS GIVEN UNIVERSAL SATISFACTION FOR MORE THAN THIRTY YEARS PAST, AND ITS WONDERFUL SUCCESS HAS LED UNSCRUPULOUS MANUFACTURERS OF IMITATIONS TO OFFER INFERIOR PREPARATIONS UNDER SIMILAR NAMES AND COSTING THE DEALER LESS, THEREFORE, WHEN BUYING,

Note the Full Name of the Company

CALIFORNIA FIG SYRUP CO.

PRINTED STRAIGHT ACROSS, NEAR THE BOTTOM, AND IN THE CIRCLE, NEAR THE TOP OF EVERY PACKAGE, OF THE GENUINE. REGULAR PRICE 50c PER BOTTLE, ONE SIZE ONLY, FOR SALE BY ALL LEADING DRUGGISTS.

SYRUP OF FIGS AND ELIXIR OF SENNA IS THE MOST PLEASANT, WHOLESOME, AND EFFECTIVE REMEDY FOR STOMACH TROUBLES, HEADACHES AND BILIOUSNESS DUE TO CONSTIPATION, AND TO GET ITS BENEFICIAL EFFECTS IT IS NECESSARY TO BUY THE ORIGINAL AND ONLY GENUINE, WHICH IS MANUFACTURED BY THE

CALIFORNIA FIG SYRUP CO.

SIGNATURE PICTURE OF PACKAGE

Rayo Lamps and Lanterns

Scientifically constructed to give most light for the oil they burn.

Easy to light, clean and rewick.

In numerous finishes and styles, each the best of its kind.

Ask your dealer to show you his line of Rayo Lamps and Lanterns, or write for illustrated booklets direct to any agency of the

Standard Oil Company (Incorporated)

Be Wise in Time

You cannot keep well unless the bowels are regular. Neglect of this rule of health invites half the sicknesses from which we suffer. Keep the bowels right; otherwise waste matter and poisons which should pass out of the body, find their way into the blood and sicken the whole system. Don't wait until the bowels are constipated; take

BEECHAM'S PILLS

They are the finest natural laxative in the world—gentle, safe, prompt and thorough. They strengthen the stomach muscles, and will not injure the delicate mucous lining of the bowels. Beecham's Pills have a constitutional action. That is, the longer you take them, the less frequently you need them. They help Nature help herself and

Keep the Bowels Healthy Bile Active & Stomach Well

In Boxes 10c, and 25c, with full directions

PERFECTION SMOKELESS OIL HEATER

Always ready for use. Safest and most reliable.

The Perfection Smokeless Oil Heater is just like a portable fireplace.

It gives quick, glowing heat wherever, whenever, you want it. A necessity in fall and spring, when it is not cold enough for the furnace. Invaluable as an auxiliary heater in midwinter.

Drums of blue enamel or plain steel, with nickel trimmings.

Ask your dealer to show you a Perfection Smokeless Oil Heater, or write to any agency of

Standard Oil Company (Incorporated)

Both Sides.

She—Just look at the trouble money can get you into.

He—Yes, but look at the trouble it can get you out of.

Good.

The Father—But what special qualifications has your school that might interest my son?

The Principal—Just tell him that we overlook the Hudson and non-attendance at classes.—Puck.

Housework Drudgery

Housework is drudgery for the weak woman. She brushes, dusts and scrubs, or is on her feet all day attending to the many details of the household, her back aching, her temples throbbing, nerves quivering under the stress of pain, possibly dizzy feelings. Sometimes rest in bed is not refreshing, because the poor tired nerves do not permit of refreshing sleep. The real need of weak, nervous women is satisfied by Dr. Pierce's Favorite Prescription.

It Makes Weak Women Strong and Sick Women Well.

This "Prescription" removes the cause of women's weaknesses, heals inflammation and ulceration, and cures those weaknesses so peculiar to women. It tranquilizes the nerves, encourages the appetite and induces restful sleep.

Dr. Pierce is perfectly willing to let every one know what his "Favorite Prescription" contains, a complete list of ingredients on the bottle-wrapper. Do not let any unscrupulous druggist persuade you that his substitute of unknown composition is "just as good" in order that he may make a bigger profit. Just smile and shake your head!

Dr. Pierce's Pleasant Pellets cures liver ills.

Make the Liver Do its Duty

Nine times in ten when the liver is right the stomach and bowels are right. CARTER'S LITTLE LIVER PILLS gently but firmly compel a lazy liver to do its duty.

Cures Constipation, Indigestion, Sick Headache, and Distress After Eating. SMALL PILL, SMALL DOSE, SMALL PRICE.

Genuine must bear Signature

Brent Good

Readers of this paper desiring to buy anything advertised in its columns should insist upon having what they ask for, refusing all substitutes or imitations.

PARKER'S HAIR BALSAM

Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair troubles. 50c and $1.00 at Druggists.

If afflicted with sore eyes, use Thompson's Eye Water

PUTNAM FADELESS DYES

Color more goods brighter and faster colors than any other dye. One 10c package colors all fibers. They dye in cold water better than any other dye. You can dye any garment without ripping apart. Write for free booklet—How to Dye, Bleach and Mix Colors. MONROE DRUG COMPANY, Quincy, Ill.