

BROTHER TOLD BROTHER

One Suffered for Fifteen Years, the Other for Thirteen. The convincing powers of a testimonial were never more clearly shown than in the case of Mr. Hugh Brown. A brother, Lemuel Brown, of Avonville, N.B., read in the paper about "Fruit-a-tives." Knowing the Senator would only endorse a medicine which had cured him, Mr. Lemuel Brown tried "Fruit-a-tives." They cured him of Chronic Indigestion and Constipation, so he urged his brother to try them.



Harland, N.B., Oct. 28th, 1907. "Three doctors told me that I had Liver Disease and serious Stomach Trouble. My stomach was very weak. I took their medicines for thirteen years and grew worse. My brother (who was cured of terrible indigestion by 'Fruit-a-tives') after suffering for 15 years, recommended me to try these wonderful tablets. I bought half a dozen boxes and have just finished the sixth. I eat all kinds of hearty foods without distress and am greatly improved in every way. 'Fruit-a-tives' also cured the Chronic Constipation which was so distressing in my case." (Signed) HUGH BROWN. 50c a box, 6 for \$2.50; a trial box, 25c. At dealers or from Fruit-a-tives, Limited, Ottawa.

PAINT wears off floors quickly, and catches dust; carpets wear out, and catch dust. Use neither. Cover your floors with the perfect finish—



Sold by The Stothart Mercantile Co., Ltd.

INTERCOLONIAL RAILWAY

On and after Sunday, Jan. 10th, 1909, trains will run daily, Sun. day excepted.

LEAVE NEWCASTLE		
GOING NORTH.		
No. 30. Mixed for Camph.	4.10	
" 37. Mixed for Camph.	12.50	
" 35. Express for Camph.	14.00	
" 33. Maritime Express for Quebec and Montreal.	21.35	
GOING SOUTH.		
No. 40. Mixed for Moncton.		
" 34. Maritime Express for St. John, Halifax and Moncton.	8.05	
" 38. Express for St. John Moncton and Halifax.	11.25	
" 36. Mixed for Moncton.	13.55	
" 60. Mixed for Derby Jet.	16.00	

All trains run on Atlantic Standard time south of Campbellton, twenty four hour notation; twenty four o'clock is midnight.
Moncton, Oct. 7th, 1908.

HOTEL MIRAMICHI
Opened January 1905.
Most Luxurious and Up-To-Date Hotel in Northern New Brunswick.
JAS. P. WHALEN, Proprietor
Newcastle, Miramichi, N. B.
Features of HOTEL MIRAMICHI
Telephone Connection in each Room
Artistically Furnished Rooms with Private Baths
Building is of Brick with Adequate Protection
Situation—The Heart of the Spotted Region
Best Fishing Privileges on the North Shore
Friede
Imported Chefs
Pine Vamp Rooms
Livery Stable in Connection
Rates \$2.00 and 25c

Home Course in Modern Agriculture

III.—Preparing the Ground

By C. V. GREGORY.

Agricultural Division, Iowa State College

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EVERY growing plant is a little factory. The green coloring matter of the leaves, or chlorophyll, is the engine. The sunlight is the power that makes the engine go, and the air, water and some of the substances in the soil are the raw materials.

Under the stimulating influence of sunlight the chlorophyll takes the carbon dioxide gas of the air and the water, nitrogen and minerals which the roots send up in the form of crude sap and tears them to pieces. Then it puts them together again in hundreds of different ways. It makes them into the starch of the potato or the sugar of the sugar beet. It puts them together in another way and makes the hard, horny glough of a kernel of popcorn. By the tough fiber of a cornstalk. By



FIG. III.—THE GROWTH OF CORN ROOTS.

building them up in still different ways it makes the hard wood of the oak or the delicate petals of a rose. Man, with all his skill and machinery, has never been able to make any products half so wonderful as are being made every day in every field on your farm.

If plants are to grow rapidly and produce large yields, they must be well fed. About half the dry weight of a mature plant is made up of carbon. Practically all of this comes from the carbon dioxide of the air. Every acre of wheat will use a ton of this gas or all that is in a layer of air three miles deep over the acre. The constant mixing of the air by the wind is always bringing fresh supplies within reach of the plant.

The farmer does not need to concern himself with the supply of carbon dioxide, for every time he builds a fire or even breathes he is adding to the store of this material in the air.

The smooth upper surface of a leaf is both air and water tight. On the underside, however, are many small openings, which are really the mouths of the plant. It is through these tiny holes that carbon dioxide is taken into the leaf to be used by the chlorophyll. In making starch and other products out of carbon dioxide and water some oxygen is given off. This passes out through the openings in the leaves. Thus you see that plants breathe in much the same way as animals do, only they give off oxygen, the product which is used by animals, and take up carbon dioxide, the gas which is breathed out by animals. In this way plants make animal life possible. Animals give off carbon dioxide and manure as waste products. Plants tear these waste products to pieces and by rebuilding them make them once more into food for the animals.

Next to carbon hydrogen and oxygen are the foods that the plant uses in largest quantities. Since water is composed of these elements, the supply will be plentiful as long as there is plenty of water in the soil. There is one element, nitrogen, which forms a considerable part of the plant, that is harder to get. While three-fourths of the air is nitrogen, the plant does not seem to be able to use it in this form. The only kind of plants that can use the nitrogen in the air at all are the legumes, such as clover and alfalfa. Certain bacteria that live on the roots of these legumes have the power of changing the atmospheric nitrogen into forms in which the plant can use it. We shall study more about this process later.

Nitrogen is one of the most important plant foods, and it is one that is very often lacking. If the plant cannot get a sufficient supply of nitrogen it will be stunted, will stop growing early, and the yield will be very much reduced. Since all the crops, with the exception of the legumes, must get their nitrogen from the soil, the farmer must see to it that there is a plentiful supply there if he wishes to obtain a large yield.

If you will pour a little rich black soil on a hot shovel some of it will go up in smoke. The part that burns is humus and is made up of vegetable and animal matter which is partly decayed. This humus contains large amounts of nitrogen, and from this source the greater share of this element used by the plant must come. If your soil is black, spongy and well supplied with humus there is little danger that the plant will go hungry for nitrogen. One of the best ways to keep a field in this condition is to apply liberal quantities of barnyard manure. Another way is to plow under green crops, especially clover. Sometimes it is necessary to buy nitrogen for the plant in the form of commercial fertilizers, but this is a very expensive way of obtaining it. Even when the plant is given all the nitrogen it can use it sometimes fails

to do well. This is because it cannot get as much of the mineral elements as it needs.

Too much nitrogen in proportion to the amount of mineral elements causes the plant to "go all to vines." There will be an excessive growth of leaves, but the yield of grain will be small. Take an ear of corn or a bunch of hay and burn it. The ashes that are left are the mineral parts of the plant. These cannot be obtained from air or water, but must come from the soil. Some of the most important of these are iron, which is the substance that helps to build up chlorophyll, and sulphur, which is found in the nitrogenous parts of the plant. There are a number of others also, all of which are present in the soil in such large amounts that there will probably always be all that the crops can use.

Two of these minerals, however, potassium and phosphorus, are not so plentiful. When the plant cannot get enough potassium the grain will not be filled out well. If there is too little phosphorus, especially in the case of fruit trees, the development of fruit is checked. Adding barnyard manure to the soil helps to keep up the supply of these two materials. On farms where little stock is kept or where grain has been raised continually for years and little attention paid to the soil it is sometimes necessary to apply phosphorus and potassium in the form of commercial fertilizers.

In the eastern part of this country there are many farms that have become so run down that crops will not grow at all unless they are fed with commercial fertilizers. These are very expensive, and it often takes nearly all a farmer makes to pay his fertilizer bills. These farms would never have become so worn out if they had been properly cared for. Leaving plowed ground, especially on hill-sides, exposed for several months during the fall and winter allows much plant food to wash away. Growing the same crop year after year wears out the land rapidly. Different crops require different kinds of food. By changing crops from year to year no one food material is used to excess and the others wasted. By keeping as much stock on the farm as possible, saving the manure carefully and spreading it on the fields before it rots or leaches away and by using leguminous plants to gather nitrogen the soil can be kept well supplied with plant food.

It is much more profitable to feed the crops in this way than to buy plant food on the market at excessive prices. Usually, however, the plant is hungry for the mineral elements not because they are not in the soil, but because they are in a form in which it cannot get at them. The roots of the plant spread all through the soil in search of food. If you will look at a little root through a magnifying glass you will see that it is covered with root hairs. It is through these root hairs that the plant takes up food from the soil. There are no openings directly into them, but the walls are so thin that the water can soak through to the inside. Solid substances, of course, cannot get in, so that the plant food must be dissolved in water before it can get into the roots and so up to the chlorophyll, which is waiting to build it into seeds or leaves.

If the soil has been worked until it is fine and loose each little particle

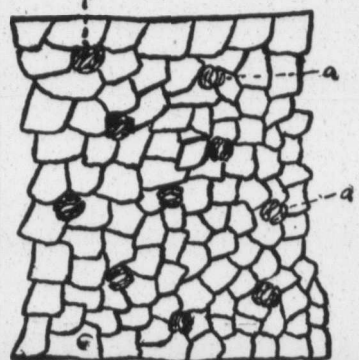


FIG. IV.—MAGNIFIED SECTION OF UNDER-SIDE OF LEAF SHOWING BREATHING PORES—A, A, A.

will become surrounded by water, which will readily dissolve the plant food from it. If, on the other hand, the soil is in the form of clumps and clods very little of the plant food can be dissolved. The plant food that is on the inside of a clod might as well be out in the road or over on one of the neighbors' farms.

Some of the potassium and phosphorus will not dissolve even when brought in contact with water. It takes a long contact with the air to cause chemical actions which will change it into a soluble form. Continual stirring of the soil hastens this change. Thorough stirring also loosens up the ground so that air can get down to the roots. Without air they will stop growing and the entire work of the plant will stop. The yellow appearance of a patch of corn in a low place where the ground is water soaked is due to lack of air about the roots.

Good Digestion.

You are only at your best when your digestion is perfect. When it is faulty, weakness and pain are certain and disease is invited. Mother Seigel's Syrup corrects and stimulates the digestive organs, banishes the many ailments which arise from indigestion and invigorates the whole system. Take it daily after meals.

MOTHER SEIGEL'S SYRUP.

60 cts. per bottle. Sold everywhere. A. J. WHITE & CO., LTD., MONTREAL.

POLITICAL NOTES

(Contributed.)

Sir Wilfrid Laurier and his speaker of the House of Commons prevented the reading in the house of the Mayes affidavit in reference to the McAvity dredging deal on the ground that it contained something offensive to Mr. Pugsley. This is the most wonderful addition to parliamentary laws and practice ever known! Truly, it would be if true. Neither Sir Wilfrid or his speaker prevented Dr. Daniel reading the affidavit. The World man is not an amateur journalist. He has had experience in the Press gallery of the House of Commons. He probably knows the rules as well as any reporter sitting there. The Editor of the World and every Conservative in Parliament knows that Dr. Daniel could not be allowed to read an affidavit in Parliament reflecting on the honesty of a member of the House unless he was prepared to assume the responsibility of preferring a charge against Dr. Pugsley. Dr. Daniel evidently was not prepared to make a charge against the Minister of Public Works. It was the rule of the House which prevented the reading of the false affidavit, and not Sir Wilfrid or his speaker. If Dr. Daniel or any other Conservative member will arise in his place and assume the responsibility of laying a charge against Dr. Pugsley and demand an investigation of his charge, the government cannot refuse it. Why does not Dr. Daniel follow the course pursued by Mr. Huntington in 1873 when he brought his Pacific scandal charges before the House? or of Mr. Tarte when he preferred his charges and demanded an investigation of the McGreevy scandal? or of J. D. Edgar when he preferred his charges against Sir Adolph Caron? All that Dr. Daniel has to do is to formulate his charge and express his belief that he can produce proof to substantiate it. Evidently Dr. Daniel does not wish to jeopardize his seat by basing a charge upon a false affidavit.

Already Mr. Hazen has admitted in the Legislature that the \$430,000 appearing in a report should be \$43,000 a difference of only \$387,000. And another small and insignificant amount of \$500,000 should be \$50,000, a difference of \$450,000 only, or a total difference of \$837,000. Mr. Hazen admitted in the house that the figures were wrong, and on such a report the Tory press base their insinuations against the Lieutenant governor and Dr. Pugsley.

After a girl gets to be about 60 and she prefers kisses to fudge.

A woman gets mad if she hears any one abusing her husband. It's usurping her privilege.

A muskrat, over a foot long, was killed on Main street, Moncton, one day last week.

Horsemen Read This
I have used MINARD'S LINIMENT in my stables for over a year, and consider it the VERY BEST for horse flesh I can get and would strongly recommend it to all horsemen.
GEO. HOUGH,
Livery Stables, Quebec, 95 to 103 Ann St.

Try to get what you are looking for in this world, for you will probably get what you are not looking for in the next.

PILES CURED IN 3 TO 6 NIGHTS.
—One application gives relief. Dr. Agnew's Ointment is a boon for Itch-ing Piles, or Blind, Bleeding Piles. It relieves quickly and permanently. In skin eruptions it stands without a rival. Thousands of testimonials if you want evidence. 35 cents. Sold by A. E. SHAW'S Pharmacy. —16

No, Cordelia, a false witness isn't necessarily a bleached blonde.

Nothing pleases a stingy man more than to hear himself spoken of as being charitably inclined.

Of course your neighbor has his faults, but you should have sufficient self-control not to mention them.

SCHOOL STANDING FOR MARCH.

BUIE SCHOOL

Grade IV.—James Gillis 1, Irene Clance, 2, John Curtis 3.
Grade III.—Nellie Creamer 1, Isadore Tardy 2, Mildred Somers, Roy Creamer 3.

Grade II.—Ethel Crocker 1, Ethel Astles 2, Susie Tardy 3.
Grade I.—Bessie Creamer 1, Arthur Crocker 2, Gertrude Tardy 3.

LYTTLETON.

LYTTLETON, Apr. 21.—The weather for the past week has been very rainy, making the roads in a bad condition.

James Johnston has changed his place of residence, and is now living on the farm he purchased from Leroy White.

Miss Agatha Forsythe of Whitteville, is spending a few weeks with Mrs. Edmund Mutch.

James Somers is spending a few days with his daughter, Mrs. Irvin McAllister.

Miss Mary Whitney, Savogle, spent last week with her friend, Miss Viola Johnston.

A number of young friends gathered at the home of Fred Johnston and a very enjoyable evening was spent.

Mrs. Harry Irving intends returning to her home in St. John the first of May.

Misses Mary Whitney and V. B. Johnston visited friends at Lily Bay on Thursday.

Franklin Matchett is visiting his sister, Mrs. David Mutch, here.

Mrs. Bessie Blackmore with her sister, Gertrude R. Holmes, spent Saturday evening with Viola Johnston.

Alex McKay visited his cousin, Lee A. Johnston on Saturday.

CHATHAM ACCIDENT
WAS THE RESULT OF ATTEMPTED JOKE

CHATHAM, April 22.—In the Dominion Post mill on Saturday, a young man named Creamer set out to have some fun with the little son of James Currie, who had entered the mill on an errand. He held him over the wheel trying to scare him by pretending to put him under the roll of pulp that was forming, and the lad's coat caught under the roll and pulled the poor little fellow in. The machinery was quickly stopped and then it was found that the boy's legs had been badly broken, fairly crushed by the pressure to which it had been subjected. Dr. Marten attended the sufferer, and had him taken to the Hotel Dieu.

DELICATE LITTLE CHILDREN
MADE WELL AND STRONG

The little ones are frail. Their hold on life is slight. A slight disorder may become serious, if not promptly attended to. At the very first symptom of trouble, Baby's Own Tablets should be given. This medicine promptly cures indigestion and all stomach troubles, constipation, diarrhoea, and brings the little teeth through painlessly. You can give the Tablets with equally good results to the new born baby or well grown child. Mrs. R. G. Flewell, Uxbridge, Ont., says: "I have used Baby's Own Tablets and find them a perfect medicine for stomach and bowel troubles." Sold by medicine dealers or by mail at 25 cents a box from the Dr. Williams' Medicine Co., Brockville, Ont.

Synopsis of Canadian Northwest Land Regulations.

Any person who is the sole head of a family, or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties.—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother, or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$3.00 per acre. Duties.—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may take a purchased homestead in certain districts. Price \$3.00 per acre. Duties.—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,
Deputy of the Minister of the Interior
N. B.—Unauthorized publication of his advertisement will not be paid for.

HER PHYSICIAN ADVISED

Taking Lydia E. Pinkham's Vegetable Compound

Columbus, Ohio.—"I have taken Lydia E. Pinkham's Vegetable Compound during a change of life. My doctor told me it was good and since taking it I feel so much better that I can do all my work again. I think Lydia E. Pinkham's Vegetable Compound a fine remedy for all women's troubles, and I never forget to tell my friends what it has done for me."—Mrs. E. HANSON, 304 East Long St., Columbus, Ohio.

Another Woman Helped.
Granville, Vt.—"I was passing through the Change of Life and suffered from nervousness and other annoying symptoms. Lydia E. Pinkham's Vegetable Compound restored my health and strength and proved worth mountains of gold to me. For the sake of other suffering women I am willing you should publish my letter."—Mrs. CHARLES BARRETT, R. F. D., Granville, Vt.

Women who are passing through this critical period of life are suffering from any of these distressing symptoms, peculiar to their sex should be under the sight of the fact that for thirty years Lydia E. Pinkham's Vegetable Compound, which is made from roots and herbs, has been the standard remedy for female ills. In almost every community you will find women who have been restored to health by Lydia E. Pinkham's Vegetable Compound.

IF YOU'VE NEVER WORN
TOWERS SLICKER
you've yet to learn the bodily comfort it gives in the wettest weather
MADE FOR HARD SERVICE AND GUARANTEED WATERPROOF AT ALL GOOD STORES
TOWERS CANADIAN CO. LTD. TORONTO, CAN.

Redbank MILLINERY.

Mrs. Thos. Johnston has just opened a new supply of

Ladies and Children's HATS.

for Spring and Summer. Trimmed and Untrimmed.

Also Flowers and Ribbons please call and inspect before investing elsewhere.



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