A LESSON IN TILLAGE.

Department of Agriculture.

The texture or physical condition of the soil is nearly always more important than its mere richness in plant food. Every farmer knows, or should know, that a hard and lumpy soil will not grow good crops, no matter how much plant food it may contain. A clay soil, which has been producing crops for any number of years may be so seriously injured by one injudicious ploughing in a wet time as to ruin it for the growing of crops for two or three years. The injury lies in the modification of its physical texture, not in the lessening of its fertility. A sandy soil may also be seriously impaired for the growing of any crop if the humus, or decaying organic matter, be allowed to burn out of it. It becomes leachy, it quickly loses its moisture, and it becomes excessively hot in bright sunny weather.

A finely divided, mellow, friable soil is more productive than a hard lumpy soil of the same chemical composition. Why? Because it holds and retains the moisture; it holds more air; it presents greater surface to the roots; it promotes fertility; it hastens the decomposition of the mineral elements; it has less variable extremes of temperature, and it allows a better root-hold to the plant. In all these and other ways the mellowness of the soil renders the plant food more available, and affords a congenial and comfortable place in which the plant may grow.

First Prepare the Soil.

It is useless to apply commercial fertilizers to lands which are not in proper physical condition for the very best growth of crops. How, then, can the texture of lands be improved? By judicious ploughing and tillage, and mulches; by the incorporation of humus; by the use of under drains, wind breaks, applications of lime, salt and adaptation of crop to soil.

A number of experiments have been carried out on our own experimental farms, as well as at Ithaca, N. Y., and elsewhere, and the results point generally to the necessity of preserving moisture in the soil, the first step towards which is to put the soil in such a physical condition that it will be pervious to water; that is, that it will afford a reservoir for it.

Free water within eighteen inches of the surface of the soil is injurious to the growth of cultivated plants. Capillary water, that is, water retained in the minute-like empty spaces or tubes existing throughout a well-worked soil, is the

Direct Source of Their Supply

and should by all means be conserved. Capillary action of the soil depends upon the fineness of its particles. The finer the particles the greater will be the number of capillary tubes in the soil; and the finer and more numerous these capillary tubes the greater will be the quantity of water retained in the soil. In coarse, loose, sandy or gravelly soils the action will be weak, while in fine compacted soils it will be strong. But should the capillary pores in the soil remain continuous from the moist under-soil to the surface, the moisture would rise to the surface, and pass off into the atmosphere by evaporation. By making these pores very much larger near the surface, the moisture is arrested in its upward movement, and this result can be accomplished by light surface cultivation, which produces a "soil mulch." This mulch of loose soil answers about the same purpose as a board would in cutting off the direct connection of the capillary soil with the atmosphere. As soon as the soil becomes baked or encrusted, the capillary connection with the atmosphere is renewed, and another tillage is required to re-establish the "soil-mulch."

It should always be remembered that a large amount of water is necessary for a plant, because its food is in a very dilute solution, and that water is, also, used in building plant tissue.

Moisture is Necessary in the Soil,

for without it the action by which the roots are able to corrode the solid particles of mineral matter and set free plant food cannot take place.

As the distribution of rainfall is beyond any known control the farmer must place his dependence under ordinary conditions on the conservation of soil moisture.

Surface tillage should commence early in the spring so as to conserve moisture, for every day's delay after the soil is in a fit condition means the loss of tons of valuable water.

As an implement with which to establish and maintain a surface "mulch," the harrow is valuable; frequent harrowing of an orchard will greatly lessen the evaporation from the surface. Where cultivators are used as conservers of moisture many fine teeth are preferable to a few coarse teeth.

Ridge culture undoubtedly promotes evaporation; therefore practise level culture except in cases where the soil suffers from an excess of free water.

The roller, by compressing the soil, brings moisture to the surface. On loose sandy soils it is very useful, because it compacts the particles; but avoid it on clay, for it will prove disastrous if succeeded by heavy rains. Where possible follow the roller with a smoothing harrow to

The use of underdrains renders soils porous above them, and, in removing the free water, allows access of air, which is as essential as moisture.

Lime has a beneficial effect on heavy clay and on light sand, and acts favorably on marchy, sour lands. Lime, gypsum, and salt are good conservors of moisture.

Grasses and grains do best on clay and loamy soils, leaving sandy and gravelly lands for cultivated crops. The humus of tilled lands can be kept up by barn manures and by green manuring.

The soil will respond in a large measure according to the treatment it receives. If neglected it will fail to yield a liberal increase; but if cultivated intelligently and thoroughly it will well reward the owner for his diligence.

It doesn't pay to advertise for lost opportunities.

AT SMITH'S FALLS.

A Wonderful Cure of Bright's Disease.

So Weak He Couldn't Stand—Terribly Broken Up and Unable to Find a Cure—Dodd's Kidney Pills Made Him Well.

Smith's Falls, July 28.—(Special).—The cure of Mr. Theodore Young, of this place, is a wonderful example of the progress that medical science has made in the last few years.

Up till a short time ago the doctors claimed that Bright's Disease was absolutely incurable, and in fact there are a few who still adhere to this theory.

But Bright's Disease is not incurable. Dodd's Kidney Pills will cure this terrible malady and have done so in thousands of cases.

Those who are skeptical need not go farther than this town to find proof. Mr. Young makes this statement:

"I was afflicted for about two years with Kidney Trouble and chronic Bright's Disease. My urine was very dark and I lost considerable blood, making me so weak I could scarcely stand.

"After using the first box of Dodd's Kidney Pills, I was much better, and when I had used four boxes I was able to resume work which I had not done for some time previous.

"I can conscientiously recommend Dodd's Kidney Pills to any one afflicted as I was."

Mr. Young's case is only one of a great many where Dodd's Kidney Pills came to the rescue after everything else had failed. They have conquered Bright's Disease and restored to life and health men and women who had not expected to ever again enjoy this great blessing.

Dodd's Kidney Pills having demonstrated their ability to grapple with Kidney Disease in its very worst form—Bright's Disease—can certainly be depended on to cure any of the lesser forms.

Dodd's Kidney Pills are the only medicine that has ever cured Bright's Disease.

JOKE ON THE CANADIANS

A good story on themselves is being told by two well-known young men who were with the coronation contingent in England.

The twain were strolling about the city taking in the sights when the desire for a bath became so strong that they went in search of some place in which they could have a dip. They came to a large building on which were inscribed the words "Bath House" and they were overjoyed that their search was so soon over.

They proceeded to the entrance and rang the bell. They were met by a servant in livery, but at that moment one of the Canucks concluded that a change of underwear would be the right thing. Instead of entering they went and made the purchase. On returning to the building they proceeded to a side entrance and were greeted by another man in livery who called:

"What are you fellows doing here?"

They replied that they desired to have a bath. The servant gazed with a surprised look for a moment and then gave them the merry Ha! Ha!

They were incensed at this and asked in angry tones to be taken where they could have their dip. Their tormentor instead of replying called some others in the same uniform as himself, and all appeared to enjoy the joke immensely.

Afterwards the servant told the Canadians that the building was not a bath house.

"Well," said one of the khaki heroes, "what does b-a-t-h-house spell if it does not spell Bath House?"

The servant explained the building was not a place for bathing but the city home of the Baroness Burdett-Coutts.

The Canadians were considerably taken down, but after being directed to the place they wanted to reach they soon recovered their good humor and laughed heartily over their mistake.

No substitute for "The D. & L." Menthol Plaster, although some unscrupulous dealers may say there is. Recommended by doctors, by hospitals, by the clergy, by everybody, for stiffness, pleurisy, &c. Made by Davis & Lawrence Co., Ltd.

Heine and His Wife.

In connection with the monument that is to be placed on Heine's grave in the cemetery of Montmartre, Paris, says the Chicago Post, it is interesting to recall the early life of the poet in the French capital. He fell in love with a poor, unlettered girl who served in a glove establishment, and after keeping house together they married. Heine frequently beat his wife, always declaring that it was for her own good. These thrashings, however, did not impair her conjugal fidelity. On the day after his wedding Heine drew up a will, in which he bequeathed everything to his wife on condition that she married again. He wished, he said, that at least one man should regret his death.

Minard's Liniment Cures Garget in Cows.

Shattered Illusions.

They had recently been married and the young wife's biscuits were reposing on the breakfast table.

The wife watched him intently, expectation on every lineament.

No indeed, gentle reader, he made no unkind remarks about getting a crowbar, a nut cracker, or a stick of dynamite to help him eat them.

"I suppose those are not like what your mother used to make?" she asked.

"Well, I should say not!" he exclaims, eating with hearty good will. "I suppose you know my father died of dyspepsia."

Then love's dream meandered on.—Boston Herald.

Finer than daintiest silk is the membrane lining the bowels. A little irritation of it produces griping and diarrhoea. Stop the trouble with Perry Davis' Painkiller. No honest druggist will deceive you with a substitute.

Famous Tower Demolished.

The famous "Tower of Remembrance," which was erected at Gravelotte, by the Germans, in 1895, at a cost of more than $200,000, has been blown up by the military engineers. Originally intended as a post of observation over the neighboring country it was afterward found that the existence of such a watch tower was incompatible with the safety of the new fort outside Metz, which it completely dominated.

New York Central and Hudson River Railroad.

The above name is a household word and the superior excellence of the road should be sufficient to attract most people, but now that the rate is the same to New York and points east as by other lines no further recommendation should be sought. Everybody will tell you it is the best.

No Trouble to Help to Search.

(Philadelphia Times.)

A woman stopped at a cloth counter in one of the large department stores recently and, asked to be shown some dress patterns suitable for early autumn wear. The salesman began on the lowest row of shelved compartments and pulled out and opened box after box until the counter on either side of him was piled as high as his head with goods. Three times he climbed a ladder to the upper rows and staggered down under a weight of box patterns until when the woman took a survey of the shelves but two patterns remained unopened. Then she said very sweetly:

"I don't think I'll buy any to-day, I'm sorry to have troubled you; but you see I only came in to look for a friend."

"No trouble whatever, madam," he replied politely. "Indeed, if you think your friend is in either of the remaining two boxes, I don't mind opening them too."

The first requisite, when you have a good idea, is to stick to it like grim death.—Success.

Mr. Redmond received a cable from Melbourne announcing the subscription of £700 to aid the cause of home rule.

The Raw Material.

A little girl had listened during the last few weeks while her parents discussed the high prices of meats and vegetables. It had been the customary topic at the table, and the child had been heard to speak about the high price to her playmates while "playing house" with them. Yesterday the mother presented the family with a bouncing baby boy, and the other child was well pleased. In telling about her new brother to a neighbor last night she exclaimed: "The doctor brought him this morning. He's awful big. Wasn't mamma good to buy such a big baby when meat is so high?"—Boston Herald.

A BOON TO HORSEMEN—One bottle of English Spavin Liniment completely removed a curb from my horse. I take pleasure in recommending the remedy, as it acts with mysterious promptness in the removal from horses of hard, soft or calloused lumps, blood spavin, splints, curbs, sweeny, stifles and sprains.

GEORGE ROBB, Farmer,
Markham, Ont.

Sold by all druggists.

Gray Lines Rewritten.

(Philadelphia Press.)

Full many a flower is born to blush unseen
And waste its sweetness on the desert air,
And many a social bud so fresh and green
Will waste her sweetness on a millionaire.

Minard's Liniment Cures Colds, etc.

Her System.

(Life.)

He—Mrs. Wise seems to understand how to manage her husband pretty well.

She—Yes, she lets him have her own way in everything.

Lever's Y-Z (Wise Head) Disinfectant Soap Powder dusted in the bath softens the water at the same time that it disinfects. 16

Matrimony Has Ten Commandants.

These commandments studied out by Theodore Parker shortly before the day of his wedding cannot fail to be interesting to our readers, especially to those contemplating marriage. They took the form of ten beautiful resolutions, which he inscribed in his journal. They are as follows: 1. Never for the best reasons, to oppose my wife's will. 2. To discharge all duties for her sake freely. 3. Never to scold. 4. Never to look cross at her. 5. Never to worry her with commandments. 6. To promote her piety. 7. To bear her burdens. 8. To overlook her foibles. 9. To save, cherish and forever defend her. 10. To remember her in my prayers. Thus, God willing, we shall be blessed.

Stops the Cough and Works Off the Cold.

Laxative Bromo Quinine Tablets cure a cold in one day. No cure, No pay. Price 25 cents.

The Two Crushes.

(Town Topics.)

May—What a crush there was at the wedding!

Belle—But it is nothing to the crush there was at her acceptance of him. He is an athlete, you know.

I bought a horse with a supposedly incurable ringbone for $30, cured him with $1 worth of MINARD'S LINIMENT, and sold him in four months for $85. Profit on Liniment, $54.

MOISE DEROSCE,
Hotel Keeper.
St. Phillip's, Que., Nov. 1st, 1901.

All in the Family.

(Stray Stories.)

"I deeply regret it, sir, but honor and my altered circumstances compel me to release your daughter from her engagement. I cannot enter your family a beggar. In the recent deal in North End stocks I lost my entire fortune."

"Not another word, my boy—not another word. I got it."

Minard's Liniment cures Diphtheria.

A Poet's Epitaph.

Last week the Channing lot in famous old Sleepy Hollow Cemetery at Concord, Mass., received the ashes of the poet, Ellery Channing, whose remains were cremated, at his request, last January, but not committed to earth till July 15th. The only service was the reading above the grave of a Greek epitaph, written for him, of which this is the translation:

In this small urn we bury all of thee,
Dear Poet! that our sacred grove may hold;
Thou art escaped; yet blossom fair and free
Thy songs that stirred us young, and soothe us old.

Piles To prove to you that Dr. Chase's Ointment is a certain and absolute cure for each and every form of itching, bleeding and protruding piles, the manufacturers have guaranteed it. See testimonials in the daily press and ask your neighbors what they think of it. You can use it and get your money back if not cured. 60c a box, at all dealers or EDMANSON, BATES & CO., Toronto.

Dr. Chase's Ointment

WILSON'S FLY PAD POISON
THE BEST FLY KILLER

The time

to fight consumption, with Scott's Emulsion of cod-liver oil, is long in advance. If it threatens, you can resist; and you may overcome it. Don't be afraid; be brave. But tackle it; don't waste time.

SEND FOR FREE SAMPLE AND TRY IT.
SCOTT & BOWNE, CHEMISTS, TORONTO.
50c. and $1.00, all druggists.

What He Did Not Understand.

The professor of mechanics at a certain college once gave a lecture upon the locomotive, and was particularly struck by the absorption of one juvenile listener. He spoke to the student after the lecture, and asked him: "Well, I suppose you understand all about the locomotive now?" "Yes," was the reply. "All but one thing." "And what is that?" said the professor, kindly. "I can't imagine what makes the locomotive move without horses."

TO CURE A COLD IN ONE DAY

Take Laxative Bromo Quinine Tablets. All druggists refund the money if it fails to cure. E. W. Grove's signature is on each box. 25c.

THE CZAR HOPES FOR A SON NOW

The accouchement of the Empress of Russia is looked for towards the end of next month, and will take place at Tzarskoe Szelo, near St. Petersburg. As soon as possible afterwards the Emperor and Empress will proceed to the Crimea, and take up their residence at their beautiful place on the shoes of the Black sea, known as Lividia.

The palaces and grounds at Lividia have undergone a complete reorganization in a sanitary sense—of which they were badly in need—and the most eminent sanitary experts have assured the Emperor and Empress that they need have no fear whatsoever of any recurrence of that typhoid fever by which the Czar was prostrated when last at Lividia. This year, therefore, the Emperor and Empress will make no stay at either of their places in Poland, and their customary hunting parties at Spala will not take place this year.

Meanwhile prayers are offered up all over Russia that the Imperial infant may prove a boy, the Czar having already four daughters. Should the infant prove to be of the male sex the effect thereof from a political point of view would prove incalculable, and would enormously increase the power of the Czar. For at present he finds it very difficult to get his orders obeyed or his views put into execution, as no one has any assurance that his policy will be continued by his brother and present heir. Indeed, there is every reason to believe that Grand Duke Michael's political views are diametrically opposed to those of the Czar and that if he were to succeed to the throne at the present moment he would reverse much that the Czar has done, and frown upon those who had made themselves the instruments of methods and views which, although dear to the present Emperor, are objected to by his brother and possible successor.

The birth of a prince next month would give to the people, and especially to the officials, an assurance of the continuity of the policy inaugurated by the present Czar, and would enable the latter to invest his consort with the powers of regent in the event of his own illness, or in the case of his death before his son attains his majority.

Minard's Liniment Cures Distemper.

Do Not Note the Speed.

It is one of the peculiarities of travel by balloon that you do not feel anything: all is still with you, no matter how fast you may be going. You see, you are riding with the wind: you move as fast as it moves; you are part and parcel of it, whether you wish to be or not. It takes you in its embrace so firmly yet so softly you do not know it is there. You may be in the teeth of a hurricane, but you never know it; all is calm and placid with you.

$100 REWARD, $100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh, being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address F. J. CHENEY & CO., Toledo, O.
Sold by druggists, 75c.
Hall's Family Pills are the best.

IMPERIAL MAPLE SYRUP.

The quality standard from Ocean to Ocean. Your money back if not satisfactory.

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WANT RELIABLE AGENTS to sell teas, coffees, baking powders, spices, extracts, etc., to consumers. You can make money. Novelties wanted. Excellent territory vacant now.

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An education that will thus fit them is to be obtained at this residential school. Address A. L. McCrimmon, M. A., Principal, for calendar.

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AGENTS WANTED IN UNOCCUPIED TERRITORY

ALBERT COLLEGE,
BELLEVILLE, ONT.

302 students enrolled last year—172 young ladies and 130 young men. Two matriculation Scholarships value $150 and $130 won at departmental exams, 1901. New Pipe-organ, Domestic Science Rooms and Art Gallery recently added. Superior facilities in Bookkeeping, Shorthand, Telegraphy, Elocution and Physical Culture. College buildings, "Massey Hall," gymnasium and residence heated by steam and lighted throughout by electricity.

Will open Sept. 9, 1902.
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Alma Ladies' College,
ST. THOMAS, ONT.

Preparatory and Collegiate studies; university music course; fine art; elocution; domestic science; commercial. Superior buildings, strong staff, healthiest location, pleasant home life.

Mrs. Winslow's Soothing Syrup should always be used for Children Teething. It soothes the child, softens the gums, cures wind colic and is the best remedy for Diarrhœa.

FRUIT FARM FOR SALE—ONE OF THE finest in the Niagara Peninsula, at Winona, 10 miles Hamilton on two railways, 130 acres in [illegible] 35 of which is in fruit, mostly peaches. Will be sold in one parcel or divided into lots of 15 to 20 acres to suit purchasers. This is a decided bargain. Address Jonathan Carpenter, P. O. box 409, Winona Ontario

NO HUMBUG 5 PERFECT INSTRUMENTS in 1 Humane Swine V, Stock Marker and Calf Dehorner. Stops swine of all ages from rooting. Makes 48 different ear marks, all sizes, with same blade. Extracts Horns. Testimonials free. Price $1.50 or send $1 for trial; if it works, send balance. Pat'd U.S. May 6, '02 for 17 yrs; Canada Dec. 17, '01, 15 yrs. FARMER BRIGHTON, Fairfield, Iowa, U. S.

CONTINENTAL LIFE INSURANCE COMPANY

HON. JOHN DRYDEN.....PRESIDENT

The report for 1901 showed remarkable increases over 1900, in the following items:

New business increased by....	$ 350,705
Premium income increased by	39,312
Total income increased by.....	42,575
Assets increased by.....	43,959
Insurance in force increased by	1,399,466

Continental Life Policies are unexcelled for simplicity and liberality. Agents wanted.

GEO. B. WOODS, General Manager
CHAS. H. FULLER, Secretary.

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or your other bright metals with anything but

"ELECTRIC POLISHING FIBRE"

the new chemically prepared self polishing cloth. Nothing to use but the cloth. No soiled hands; saves time and labor; easiest on the silver. Price 25 cents at drug and notion dealers. By mail from MONARCH MFG. CO., St. Catharines, Ont. Write for free samples.

Always insist on your dealer supplying you with **E. B. EDDY'S WOODENWARE PAILS and TUBS**

They are manufactured from the BEST of MATERIALS by the MOST SKILLED workmen.

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