



FOR PROFITABLE VEGETABLES.

A soil may be rich in plant food and yet the plant be unable to make use of it. This is because the physical conditions of the soil are not suitable for the plant's development.

Plants must have food, but there must also be suitable conditions for root development, and a uniform supply of moisture. A soil that is heavy and compact may be rendered suitable in texture by proper working at the right time, or it may, by improper working, be made practically useless.

Through the incorporation of humus or vegetable matter and proper cultivation, it is possible to make a soil that dries out quickly retentive of moisture. Stable manure frequently gives better results than commercial fertilizer for the reason that it improves the physical condition of the soil, and supplies plant food. Plant food only is supplied by commercial fertilizers. Where soils are in good physical condition, and contain a reasonable amount of humus, the best results are secured by commercial fertilizers.

Practice is modified by conditions. What might be suitable for a heavy, compact soil might not do in a light soil. A heavy type of soil might require deep cultivation, but on an open, leachy soil such cultivation would not be advisable. It is harder to change the physical condition of a soil than it is the chemical.

**TOMATOES AND ONIONS.**  
A well-drained, sandy loam is best for the tomato. It also needs a high temperature and a warm, sunny location for best development. The tomato does best when supplied with well-rotted manure, at the rate of ten to fifteen tons to the acre. Then, when applied in spring, should be plowed under to a depth of four inches, and the ground worked by cultivating six inches deep. Commercial fertilizers, at the rate of 500 pounds to the acre, is a good substitute for stable manure.

The onion thrives best in a light loam soil that is rich in plant food. Light loams can be worked to better advantage than heavier loams, and do not dry out so badly during hot weather. It is important that there be plenty of available plant food if profitable crops are to be obtained. If possible, a soil that has been manured for several seasons previous should be selected. The soil should be free from stones and weeds. Onions may be grown year after year in the same land, and it cannot be made too rich. One of the best fertilizers is barnyard manure, well rotted, applied in the fall and plowed in shallow, about four inches deep. A good application is fifteen tons per acre, annually. Where there is a good supply of vegetable matter in the soil, good crops may be grown with commercial fertilizers, applied at the rate of 500 to 1,000 pounds per acre, sown broadcast and harrowed in just before sowing.

**CABBAGE, CAULIFLOWER AND CELERY.**  
Cabbage responds to any good garden soil, but a warm, well-drained, sandy loam, very rich in plant food, is best for early cabbage. For late cabbage a heavy soil and northern exposure is best. As the cabbage is a gross feeder, there is not much danger in having the ground too rich. Twenty tons or more per acre of manure can be used, and this may be supplemented with from 500 to 1,500 pounds of commercial fertilizer for an acre. Where quickly developed, marketable early cabbage is wanted, commercial fertilizer is especially advisable. Ground that was manured and plowed in the fall should be worked again in the spring and thoroughly worked to a depth of six inches.

Cauliflower requires a cool, rich loam, and, if possible, a northern exposure. Dry weather often results in failure, and where watering is possible it may be advisable.

Celery is not so particular about the quality of its soil. Almost any soil from light sandy to clay, and even muck or peaty soil, may be used. The chief requirements are a soil retentive of moisture, but well drained and rich in plant food. However, a rich, sandy loam will produce the firm, crisp heads that keep best in storage, and are superior in quality to the average celery grown on peaty or muck soils.

The objection to peaty or muck soils is that, unless carefully fertilized, a pitiful celery is obtained. A heavy clay is not desirable on account of difficulty in working.

The best fertilizer for celery is barnyard manure, and 20 to 30 tons per acre may be used. Manure that is well rotted is best. Commercial fertilizer, at the rate of 1,000 to 1,500 pounds per acre may be used where the land is fair in fertility and contains plenty of humus.

**FACTS ABOUT OTHER VEGETABLES.**  
All vine crops start a warm situation. Carrots and radishes need a deep, thoroughly prepared soil of loose open texture to admit of even root development.

A heavy, compact soil develops a poorly shaped and rooty parsnip. The ground may be sowing or fall manured, plowed and, and thoroughly worked.

Any good soil will develop good beets, provided uniform growth is maintained. Turnips do best on a good loam retentive of moisture. Parsnips require a deep, loose, rich soil. Garden peas do best in ground that was fall manured with 10 to 15 tons of well-rotted manure per acre, and plowed, and sown in the spring to a depth of five inches.

Beans do best on a fairly rich soil, and, unlike the pea, requires a warm situation and warm soil. While the pea will do well on a fairly heavy soil, the bean likes a loose, friable soil for best development. A warm, friable, rich soil should be selected for sweet corn. Egg plants and peppers require a rich soil. The ground should be too rich for spinach. The richer the soil the less

liable are the plants to go to seed quickly.

Any good garden soil will grow lettuce and radishes. The ground should be rich and fairly friable.

Parsley is not a particular plant as to soil requirements. While sweet herbs are not particular as to soil requirements, a fairly rich, friable soil is best. The best soil for asparagus is a rich, deep loam, well drained. It may be grown on any type of soil, from light to heavy loam. A stony, gravelly or heavy clay soil should be avoided. The ground should be as rich as it is possible to make it. Thirty to forty tons of stable manure per acre may be applied at the start, and the ground plowed deeply and well worked.

Rhubarb does best in a deep, rich, mellow soil. A clay soil or one with a heavy pan should be avoided. The ground should be heavily manured, and worked deeply. It is impossible to overfeed this plant.

**FARM NEWS AND VIEWS.**  
Plowing 15 inches deep, with a sub-soil plow following ordinary plowing, has been found unprofitable on test plots at the Ohio Experiment Station. Sub-soiling has produced an average increase of less than half a bushel to the acre. Corn yields an acre, clover has shown no benefit, while oats have yielded most with ordinary plowing.

A nail can be driven into tough wood much easier if first rubbed with lard.

A stubborn nut is much easier removed from a bolt if both are heated very hot.

An iron bar, with a rather sharp, non-flexible point is a splendid tool with which to remove or pry out refractory staples.

Moistened wood fibre plaster is a splendid thing with which to stop rat holes in bins.

A piece of broken crock makes quite a good whistle when a real one is not at hand.

An ammonia will remove paint from glass or iron quite as effectively as an expensive paint remover.

**IN MEMORIAM.**  
**To the American Soldiers Dead** (Elizabeth Banks, in London Daily News)  
I heard a voice from Heaven saying in France.

unto me, Write, From henceforth blessed are the dead, The agonized cry of Belgium and the appeal of invaded France reached the shores of the United States, and said Miss Banks, who visited Hamilton last year, and hundreds of thousands said:

The suffer greatly over there. Let us collect money and send them food and clothing and hospital supplies. Then because of America's generous millions of dollars came across the water, bringing relief to the sick and homeless, comfort to the aged, and hope to the faces of little children.

There were other Americans at first a few hundred and afterwards many thousands who while hearing the cries of Belgium and France, leaped yet more the call of all humanity, of all peoples threatened of liberty, and all peoples who pierce and so clamorous was this call that it came not only to their ears but to their souls, and, lo and behold, they said, "Yes, Yes." Then a hand beckoned, and, because the hand was so compelling, they followed it.

They were not of any one class, those American men who first saw and followed the vision of a young lady, who naturally looked up from their books and saw the light, mechanics lifted up their eyes and saw it too; preachers were enticed by it in their pulpits; blacksmiths knew it was a different light from that which blazed from their forges; farmers in the remotest fields felt that something more brilliant than the sun was round about them; lawyers, doctors, writers, and patriots beheld the light and followed after the beckoning hand.

Some followed directly over to France and others across the border into Canada, and thence through England to the fighting line, and so they formed the first American Division. Others, they were not all together, but scattered about among the French and the Canadians.

From among this contingent many have fallen. Most especially the new Canadian boys have given their lives, they have the Americans' damp the earth of France with their blood.

How quietly, how unostentatiously, how secretly have they paid the great price, these countrymen of mine. Here is a newspaper, included in a long Roll of Honor, it reads a little notice:

He has scoured forth the trumpet that should have called retreat. He is striking out the hearts of men before. His judgment seat: O he swift my soul to answer Him, he jubilate my feet. Our God is marching on—  
Par Now those voices from the graves in France join us, and we know there is no death, but only life, for those whose souls were so swift to answer, whose feet followed, jubilant at the beginning of that hand in the pathway lighted by the Vision.

**FOR WOMEN MOTORISTS.**  
The good driver of a motorcar never applies brakes swiftly except in an emergency. When crawling up a hill, she should cut off light and allow momentum to carry the car to the stopping place, using the service brake gradually. The good driver thus brakes gradually and wear upon brakes, coasting to a stop with the smoothness of operation of an easy start.

MAKING POULTRY PAY

POULTRY DISEASE INVESTIGATOR.

(Experimental Farms Note.)  
It will be of interest to poultry keepers throughout Canada to know that there is now an expert who devotes all his time to investigating the diseases of poultry. Dr. A. B. Wickware, Assistant Pathologist to the Health of Animals Branch, has been assigned to that work by Dr. Torrance, Veterinary Director-General.

Dr. Wickware is by no means a novice in poultry diseases. For several years, under Dr. Higgins, Dominion Pathologist, he has devoted some of his time to the diseases affecting poultry and has given special attention to Black Head. Realizing the importance of investigations in poultry diseases, Mr. J. H. Grisdale, Director of Experimental Farms, and Dr. Torrance arranged for Dr. Wickware to take up this question exclusively. He is therefore now co-operating with the Poultry Division, Central Experimental Farm, where, since last fall he has been conducting experiments along this much needed and very important line of work.

Continued attention is being given to Black Head in turkeys and many new investigations are being started. These relate to chick diseases as well as to the general disease of poultry, including parasites of all kinds.

The annual losses that occur from poultry diseases and parasites are tremendous. No person knows what the amount is, but it is well into the millions each year. Dr. Wickware's work will no doubt, do something to eliminate part of this, but the co-operation of all poultrymen who have any disease in their flock will be appreciated.

As usual, communications to the Experimental farm re diseases of poultry will be welcomed and with Dr. Wickware now giving all his time to this matter, even more information will be available. Specimens of sick birds should be sent where practicable, and may be expressed collect if addressed to Biological Laboratory, Experimental Farm, Ottawa.

**GREEN FEED FOR POULTRY.**  
If there is a portion of the garden not suited to other garden crops, it may be possible to grow some green feed for the chickens on it. Oats and field peas, if sown thickly, probably will yield cuttings of feed that will be much relished in the small henery.

If the chicken pen is large enough a small sowing made inside and protected by woven wire with one inch meshes stretched about two inches above the ground may be made. This allows the chickens to pick off the

land them safely to the everlasting glory of God. Here was no long journey, occupying painful years; no vanity fair, no slough of despond, no giant's castle, no dungeon of despair. The law of this sublime navigation is, "Come on board, rest, and eat, and joy, and live daily in the smile of the great Commander, and you shall get to port for sure. The plan is His, so is the purpose, the ability, the responsibility and the work.

If a sneering infidel could have taken a look at the scene, he might have said, what is that lazy old hulk doing there, floating aimlessly in the sluggish waters, bound nowhere. A modern know-nothing says: "What is that book you make so much of? It is only printed matter, often abused, and the leaves sometimes used to wrap up soap and candles, if it goes it must be carried. Listen: 'He shall not cry, nor lift up his voice to be heard in the street.' Progress, success, ambition, these are emblazoned on the banners of men. But I heard a whisper, 'Your strength is to sit still on the deck of the only ship of its kind.' The work is His. The arrival sure. 'For so an entrance shall be ministered unto you into the everlasting Kingdom.'

**THE KEY OF DEATH**  
Among the many relics of antiquity preserved in the arsenal at Venice there is one to which a peculiar and gruesome interest is attached. It is a heavy key, which to all outward appearances might have been fashioned for one of the ponderous locks of olden times. Yet, if tradition is to be believed, it was designed for a deadly purpose, and people were slain by it in a swift, subtle and mysterious manner. It is known, in fact, as 'The Key of Death.'

The chronicles of the city tell that in the earlier part of the seventeenth century a certain stranger arrived at Venice, a man of dark and sinister aspect. His name was Tebaldo. He seems to have been a man of truly passionate, of great intellectual power, but one whose talents found their chief outlet in crime. In Venice he established himself as a merchant or trader. For a time his passions lay dormant. They were aroused, however, in a stormy manner, which caused him to sweep from his path all who sought to oppose him.

One day he observed a beautiful girl leave church, attended in a manner which showed that she belonged to a family of high degree. She was, in fact, the daughter of an ancient and noble house, one which had long held foremost rank in Venice. He fell violently in love with her. Though far removed from him in station, his blind passion took no account of this fact, and he determined to sue for her hand. There proved to be, however, a more insuperable obstacle to his suit. The girl was already betrothed to another, a young nobleman of almost equal rank and fortune. The knowledge did not deter Tebaldo, who boldly presented himself before the girl's parents in the capacity of a suitor for her hand. As might have been expected, he met with a curt and unceremonious rebuff.

The repulse rankled in his mind. Enraged beyond measure, he shut himself up in his house and there secretly studied a means of revenge. Profoundly skilled in the mechanical

arts, he allowed himself no rest until he had invented a most formidable and death-dealing weapon. This was a large key, the handle of which was so constructed that it could be turned as will. When it was thus turned a secret spring was disclosed, which, on being pressed, launched from the key head a fine needle or lancet. The latter was of such delicate construction that it penetrated the body of the victim and buried itself deep in the flesh without leaving any external trace.

The marriage of the betrothed couple was fixed to take place in the principal church of Venice on a certain day. Before the ceremony Tebaldo, cunningly disguised, stationed himself at the church door, armed with his diabolical weapon. As the bridegroom was about to enter the building the concealed watcher, pressed the spring and sent the deadly lancet into the breast of his victim. The young nobleman had no suspicion of injury at the moment. In the midst of the ceremony, however, he was seized with a sharp spasm of pain, and sank fainting on the steps of the altar. His illness appeared so alarming that he was hurriedly conveyed to his home, where the leading Venice physicians were summoned to attend him. Despite their unremitting efforts he sank and died, nor were they able to discover the nature of the mysterious and fatal seizure.

With the removal of his rival Tebaldo once more appeared openly on the scene. Again he presented himself before the girl's parents and renewed his request for her hand. Their refusal to listen to him sealed their doom, in what manner he accomplished it is not known, but within a few days both had been done to death in mysterious fashion. The exalted rank of the victims created a profound sensation, and when, on examination of the bodies, a fine steel instrument was found in the flesh, terror became universal. The citizens feared for their lives. An assassin was at large among them, and no one knew upon whom the next blow might fall. The utmost vigilance was exercised on the part of the authorities, but as yet no suspicion fell upon Tebaldo.

The bereaved girl was prostrated by the triple tragedy. Robbed of those who were most dear to her, she retired to a convent, where she passed the first months of mourning in sorrowful seclusion. Tebaldo, however, did not abandon the pursuit. Still hoping to bend her to his will, he sought her out in her retreat and begged to speak to her through the grating.

His dark, evil face had been displeasing to her, but since the death of her betrothed and parents it had become repulsive. Then, therefore, in the course of the interview, he pressed her to fly with him, he met with an instant and indignant refusal. Her scorn stung him to the quick. Beside himself with rage, he brought his deadly weapon once more into play and succeeded in wounding the girl through the grating, the obscurity of the place preventing his action from being observed.

MARKET REPORTS

TORONTO MARKETS.

FARMERS' MARKET. Dairy Produce: Butter, choice dairy... \$2.42 50.43; Eggs, new-laid, doz... 0.40 0.40; Cheese, lb... 0.00 0.25; Do, fancy, lb... 0.00 0.25; Dressed Poultry: Turkeys, lb... 0.30 0.32; Do, small, measure... 0.00 0.15; Beans, new, bush... 0.10 0.12; Corn, new, bush... 0.08 0.10; Cabbages, each... 0.10 0.20; Horseradish, lb... 0.00 0.15; Lettuce, doz, heads... 0.50 1.00; Do, head, doz... 0.20 0.30; Onions, bulk... 0.10 0.15; Do, small, measure... 0.00 0.05; Potatoes, per bag... 4.25 4.45; Do, new, peck... 0.00 0.05; Do, small, measure... 0.00 0.05; Radishes, 2 bunches... 0.00 0.05; Spinach, new, peck... 0.00 0.05; Sage, bunch... 0.05 0.10; Turnips, new, bunch... 0.05 0.10; Tomatoes, lb... 0.00 0.15.

MISCELLANEOUS: Beef forequarters, cut... \$15.00 \$17.00; Do, hindquarters... 18.00 20.00; Carcasses, choice... 17.00 18.00; Do, common... 18.00 19.00; Veals, common, cut... 15.00 16.00; Do, medium... 13.00 14.00; Do, prime... 19.00 21.00; Heavy hogs... 18.00 19.00; Slight hogs... 21.00 22.00; Abattoir hogs... 21.00 22.00; Mutton, heavy... 10.00 11.00; Do, light... 12.00 13.00; Lambs, lb... 0.21 0.23; Do, Spring, each... 9.00 11.00.

TORONTO CATTLE MARKETS. The demand for cattle continued, with a further recovery of price. Export cattle, choice... 11.00 11.75; Butcher cattle, choice... 10.50 11.25; Do, do, medium... 10.00 10.75; Do, do, common... 8.50 9.25; Butcher cows, choice... 9.50 10.25; Do, do, medium... 8.50 9.25; Do, do, common... 6.50 7.25; Do, do, bulls... 10.50 11.25; Feeding steers... 9.00 10.00; Stockers, choice... 7.50 8.00; Do, light... 4.00 4.50; Milk cows, each... 4.00 4.50; Springers... 4.00 4.50; Sheep, common... 7.00 7.50; Bucks and wethers... 17.00 18.00; Lambs, fed and watered... 7.00 15.00.

OTHER MARKETS. WINNIPEG GRAIN EXCHANGE. Wheat—Open, High, Low, Close: 1.98 1.98 1.92 1.93; Oats... 0.70 0.70 0.70 0.70; Flax... 2.34 2.34 2.33 2.33; Corn... 0.67 0.67 0.67 0.67.

MINNEAPOLIS GRAIN MARKET. Minneapolis—Wheat—July, \$2.18 1.2; September, \$1.75; cash—No. 1 hard, \$2.08 1.2; No. 1 Northern, \$2.38 1.2 to \$2.58 1.2; No. 2 Northern, \$2.38 1.2 to \$2.58 1.2; Do, \$2.43 1.2 to \$2.63 1.2; Corn—No. 1 white, \$0.13 to \$0.14 1.2c; Flour—Fancy patent, \$1.25; clear, \$1.20; No. 1, \$1.15; unbleached, Bran—\$2 to \$2.50.

DULUTH GRAIN MARKET. Duluth—Wheat—No. 1 hard, \$2.36; No. 1 Northern, \$2.35; No. 2 do, \$2.30; July, \$2.35; September, \$3.01; October, \$2.80.

BUFFALO LIVE STOCK. East Buffalo, N. Y. Despatch—Cattle receipts 250; sheep 250; active and strong. Veals—Receipts 50; active and strong. Hogs—Receipts 1,000; active and strong; heavy, \$16.00 to \$18.00; mixed, \$16.50 to \$18.00; light, \$16.00 to \$18.00; stags, \$12.00 to \$15.00; roughs, \$14.40 to \$14.60; stags, \$12.00 to \$15.00.

CHICAGO LIVE STOCK. Cattle, receipts 15,000. Market steady. Hogs, receipts 10,000; active and strong. Sheep and lambs—Receipts 200; active, steady, unchanged.

**ROCK OF GIBRALTAR.**  
The "Key of the Mediterranean" Has Had a Stormy History.

England has been in possession of the rocky promontory of Gibraltar since 1704. From that time to this it has been a crown colony under the administration of a governor. By reason of its important strategic position it is called "the key to the Mediterranean."

Gibraltar has had a stormy history. In 711 the rock was taken by the Arab chief Tarik, who called it Jebel-at-Tarik (Hill of Tarik) and built a fortress on the promontory. Part of these ruins is still extant. In 1309 it was taken by the Castilians, only to be recaptured by the Moors in 1333. It was held by them until 1462. Following the taking and sacking of Gibraltar in 1549 by Barbarossa, extensive military works were built there by order of Charles V.

In 1704 the promontory was captured by a combined force under Sir George Rooke and the Prince of Hesse-Darmstadt, fighting for the Archduke Charles of Austria. The moment it fell into their hands the British Admirals drew off the alliance with the Austrians and took complete possession of the works.

British possession since that time has been unbroken, although it was under a Spanish siege for nearly three years and eight months, beginning in 1707. Twice the garrison was on the point of falling because of the starvation of its defenders.

**Watching Sponges Grow.**  
Outside the harbor of Sfax, Tunisia, in the shallow water of the clear Mediterranean, is situated a biological laboratory for the study of sponges. It is one of the most unique in the world and affords opportunity for observing the development of the sponge from a tiny larva, so small that it can only be studied under a microscope, until five years later it has developed into a perfect sponge.

"Does your husband worry about the grocery bill?" "No, he says there's no sense in both himself and the grocer worrying over the same bills." Boston Transcript.



I THANK THEE.

I thank Thee that the sight of sunlit lands, And dipping hills, the breath of evening grass— That wet, dark rocks and flowers in my hands, Can give me daily gladness as I pass.

I thank Thee that I love the things of earth; Ripe fruits and laughter, lying down to sleep; The shine of lighted towns, the graver words, O beating human hearts that laugh and weep.

I thank Thee that as yet I need not know, Yet need not fear, the mystery of the end; But more than all, and though all these should go—

Dear Lord, this on my knees—I thank Thee for my friend, —Julius Wilbur Tompkins.

**CHRIST THE PROPITIATION.**  
Toward the mercy seat shall the faces of the cherubims be. And thou shalt put the mercy seat above upon the ark; and in the ark thou shalt put the testimony that I shall give thee. I will meet with thee, and I will commune with thee.

Surely His salvation is nigh them that fear Him; mercy and truth are mercy together; righteousness and peace have kissed each other.

If thou, Lord, shouldst mark iniquities, O Lord, who shall stand? But there is forgiveness with thee, that thou mayest be feared. Let Israel hope in the Lord; for with the Lord there is mercy, and with Him is plenteous redemption. And He shall redeem Israel from all his iniquities. All have sinned, and come short of the glory of God; in His righteousness through faith in His blood, to declare His righteousness for the remission of sins.

**HEAVING THE LOG.**  
(By the Late Rev. H. T. Miller.)  
Part of the equipment of a ship is the log line on a reel, and every two hours the log is hove and the speed is entered into the log-book. This is done on all ships except one, that is the Ark of Noah. Several essentials are wanting in this great ship. There are no masts, sails, or rudder, no anchors, no pumps, no log line. Why? She was not made to go, but to stay! She was not made for progress, but for repose. Nevertheless, she took in her cargo, carried it in safety, and landed it in good order. What would you have more? The Ark was pre-eminently a ship of salvation; all outside perished, all on board were saved. When they landed they started a new world. Here is a magnificent type of Christ. All outside Him are lost, all within His mighty bulwarks are saved. Look at the original intent; the Ark was built to float over a drowned world. A bridge without abutments, to land her passengers on a purified and well-washed shore. Jesus came to save His people from their sins, to