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It is a pleasure to show them in detail, and our prices will interest you.

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The "PRISM" Brand READY MIXED PAINTS

Pure Linseed Oil Paints. Latest Artistic Shades in HOUSE and WILIA Paints, prepared for immediate use.

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M'LENNAN & CO

A HAMILTON LADY Finds Laxa-Liver Pills a perfect cure for Sick Headache.

Fully ninety per cent. of the women of this country suffer from sick headache. Liver disorder and constipation are at the bottom of the trouble.

Laxa-Liver Pills cure the headache by correcting the cause. And they do their work easily and perfectly without any gripe, pain or sickening.

But the Hamilton lady we referred to—Her name is Mrs. John Tomlinson. Her address is 107 Steven St. North. This is what she says:

"Being troubled with severe headaches, I was advised by a friend to try Laxa-Liver Pills. I only required to take half a bottle when the headache vanished and I have not been troubled with it since."

Laxa-Liver Pills 25c., all druggists. Dr. Wood's Norway Pine Syrup is the simplest, safest, quickest cure for all coughs and colds of children or adults. Price 25c.

The Watchman-Warder

THURSDAY, MAY 11th, 1899

G.T.R. LOCAL TIME-TABLE

DEPARTURES. Belleville Mixed..... 5 50 a.m. Port Hope Mixed via Bethany..... 6 15 a.m. Toronto Express via Whitby and Port Perry 5 50 a.m.

ARRIVALS. Belleville Mixed..... 8 40 a.m. Toronto Express from Port Hope..... 8 50 a.m. Port Hope Mail from Toronto..... 11 00 a.m.

I. E. & O. RAILWAY. G. T. R. SERVICE. Leave Lindsay..... 11 30 a.m. Arrive at Port Hope..... 2 30 p.m. Arrive at L. E. & O. Junction..... 2 00 p.m.

I. E. & O. SERVICE. Leave Bancroft..... 11 00 a.m. Arrive at Junction..... 1 30 p.m. Arrive at Lindsay..... 1 45 p.m. Arrive at Bancroft..... 5 15 p.m.

District Happenings

—The electors of Roach township will vote on local option on the 21st inst.

—Rev. Father O'Malley of Port Perry will hold his annual picnic in that town on May 24th.

—The Canadian Bank of Commerce is about to commence the erection of fine bank premises at Port Perry.

—The Rathbun Company are erecting a sawmill on the Esterbrook property at Deseronto. They will cut out railroad ties and saw small logs that have heretofore been floated to Deseronto.

—After a long-continued illness John Gilbert of Draper township, near the Macanlay town line, died on Sunday, April 28th, aged 70 years. Mr. Gilbert was an old and highly respected settler.

—About four million dollars have been expended on the Trent canal so far, and it is estimated that it will cost three million more to make a navigable waterway from Midland to Trenton. It seems certain that the work will be pushed on to completion at once.

—Ralph Weese, aged 12 years, speared a pike in the river at Belleville a few days ago which weighed fifteen pounds. It was 3 feet 6 inches in length. He was unable to lift it from the water and had to get assistance. Old fishermen say it was the largest pike they have ever seen in these parts.

—The Norwood Register says: Mr. W. H. Tucker showed us a twig which he pulled off a rock elm tree on his premises last Saturday on which the leaves were out full size and the stem showed 10 inches of new growth this season. Farmers and others who saw it say that it is the most wonderful growth they have observed this year.

—Mat. Black, of Kinnmount was one of the innumerable peg legs who was arrested last year, as a consequence of the shooting of the London policeman by a man with a peg leg. Black sued McMann and the Kinnmount constable for arresting him as a vagrant, without a warrant. He claimed \$60, and at a recent sitting of the division court in Fenelon Falls obtained a judgment for \$10.

—Monday of last week George Blashill was seriously injured while rolling logs off a skidway into South River. He was in front of the dump pinching the logs to get them to roll. He jumped back and let it go, but the logs also rolled down striking him on the back of neck and shoulders, doubling him forward and pinning his head between his legs, the logs being prevented from crushing his life out by the skids on which they rolled. The only injury sustained was the awful strain of the muscles rendering the patient unable to move himself in bed.

—There was a lively time in Magistrate Flint's office in Belleville on Monday of last week. A lawyer and a county constable engaged in a rather warm argument, when the guardian of the peace declared the barrister to be a liar. Before the constable had realized what had happened, one of his eyes were closed, and his nasal organ badly smashed. The lawyer was dancing around him, dropping in the blows, and in the pauses sarcastically inquiring, "Call me a liar, will you?" In the meantime the Magistrate was lustily crying "Peace! peace!" when there was no peace, and threatening the combatants with the rigours of the law. It was not until the constable was soundly thrashed that the insulted lawyer desisted, and as he shouldered his blue bag and sauntered up the street he was heard to utter, "Call me a liar, will he? Well!"

—Severe electric storms accompanied by heavy rain visited Barrie and district on Sunday and Monday. On Monday noon the lightning struck and killed two cows belonging to Mr. Wm. Ainley in the northern part of the town. The current passed along the wire clothes line and gave Mrs. Ainley, who was taking in some clothes, a slight shock in the arm. Other havoc caused by lightning was as follows: John McDevitt, aged 82, Mono Road, was killed instantly on Monday while fishing; his hat and boots were torn into fragments. The end of Mr. Robert Orok's barn, near Midhurst, was struck and partly wrecked; there was no fire. James Wood's barn and outbuildings, near Bradford, were burned on Monday; loss \$4000; insurance \$3000. Mr. Sage's house in Midland was burned on Sunday night; the family escaped. The rain did much good to vegetation.

—The body of Thomas Snell, who was supposed to have dropped off the railroad bridge near Parry Sound last November was found on Friday evening last floating in the water near Rose Point. An inquest has been held, the post-mortem examination revealing the fact that Snell was not drowned, but that his death was caused by a blow on the side of his head inflicted by a pointed instrument, as a hole was found over the right ear, penetrating to the base of the brain. It might have been inflicted with a piece of wood with a nail driven through it. Snell was a railway fireman, and was in the company of two others, whose whereabouts are now unknown. The night of his disappearance they had all been drinking. His wages had not been drawn from the railway company, and nothing pointed to anything but accidental drowning. The relatives of the deceased live at Brockville. It looks like murder, but the inquest was adjourned for further evidence.

—The Bob. Independent says: A short but sharp storm blew up on Monday, just before the noon bell rang. It lasted only a few minutes, but left us minus one of our old land marks. A few fairly lively cracks of lightning indicated that the electrical agitation was sufficiently close for all spectacular purposes, then there was a sizzling crack that made most persons in the village jump, the impression of each being that it must have struck in the back yard. Mr. Wm. Junkin happened to witness the exact spot, and it was Mr. Petrie's saw mill, that has been closed for the past few years. The vivid streak appeared to strike about the middle of the roof, on the west side, and instantly a

cloud of dust streamed from the old building. It was only a few minutes later when smoke was seen to rise from the roof, then with a burst the entire building was a mass of flame. The boiler and engine were in the building, and Mr. Petrie's loss will be heavy, for there was no insurance. The building was erected about 29 years ago, by Mr. Wm. Kennedy, and was run with considerable success by Mr. Petrie, who closed it when he removed to Ottawa.

Farmers, Put up Your Own Lightning Rods.

The severe electric storms of last week have reminded the people of this of the large number of barns, etc., that were burned last year as the result of being struck by lightning. The subject of lightning protection is therefore receiving much attention. It is long since the lightning rod proved more ornamental than useful, its great defect being the conducting of the electric current to the ground instead of to water.

In the last issue of the Scientific American there is described a simple contrivance that has proved perfectly effectual in protecting barns and houses from lightning. It is as follows:

"A protection fulfilling all the indications may be very cheaply arranged on a country house by nailing a few lengths of common barbed wire to the roof and bringing the ends to a point where they can be twisted around the iron pump of a driven well. This gives an enormous number of points and a perfectly adequate water connection."

In case where the farmer has a wooden well, all he has to do is to extend the wire down the well into the water; or in case of a townsmen the wire should be connected with the water pipes.

GROWING PROTEIN. Dairyman Urged to Raise What Grain They Need.

In an interesting letter to The National Stockman F. A. Converse of New York expresses the belief that more than half the money put into grain for our dairy cows can be and should be saved by raising the grain on the farm. A farmer with a silo never needs to buy any cornmeal, as his feed already has enough starch. What is wanted, then, is some feeds to take the place of the bran, gluten, middlings, etc. What, then, can be raised to best take the place of these feeds and balance up the silage or the other coarse fodder we may happen to have, such as mixed hay, cornstalks and straw? The answer to the question, it seems to me, is to raise oats and peas.

I have tried several ways of raising this crop and will describe the one most successful. Our rotation of crops is (1) clover, (2) corn for the silo, (3) potatoes, (4) oats and peas. After the potatoes are dug rye should be sown to keep the ground covered during the winter with a growing crop. As early as possible in the spring plow this rye under and fit the land thoroughly for the oats and peas.

Mix the seed, one bushel of White Canada peas to two bushels of oats, and put on 2 1/2 to 3 bushels of the mixture per acre, drilling it in rather deeply. Three bushels of seed per acre should be used only where the land is very fertile and well cultivated. After the grain is sowed roll the field or go over it with a "clod crusher," followed with a weeder or smoothing harrow. Never leave a piece of grain just as the roller leaves it; always "roughen" it to hold the moisture. Go through the oats and peas once a week with the weeder until they get so high you must stop. This will hasten the ripening of the grain, keep down the weeds, especially wild mustard, besides increasing the fertility by cultivation.

Just as the top oat begins to turn out the crop with a mowing machine and cure as you would hay. The advantages of the early cutting are: The straw is worth as much as timothy hay to feed, the peas will not shell in mowing and raking, and the grain cut thus early will fill out and be as plump and weigh more pounds to the bushel than it will if allowed to stand and mature before harvesting. The grain is cut so green it cannot be cured out if cut with a binder, but with a mower it can be treated exactly as you would treat hay. When dry, it is ready to be thrashed, and we will get grain enough from one acre to feed a dairy cow one year. In other words, on good land we can raise 50 bushels per acre, which will weigh 2,200 pounds, about the amount ordinarily fed to a dairy cow in 12 months, or an average of six pounds per day. The analysis shows that oats and peas have a nutritive ratio of about one to five. Of course this is more or less variable as the two crops mix.

On some land a person can sow more peas per acre. As a rule, I would say sow as many peas with the oats as will stand up and not lodge. Some years I have mixed them half and half with good results, but cannot depend on it. As a basis of a grain ration for a dairy cow no grain is better or cheaper than oats and peas. To this cream gluten or cottonseed or linseed meal can be added in small quantities to suit the needs of the animal fed. As soon as this crop of oats and peas is taken off seed to clover. The land will be in a mellow, loose condition and can be fitted with a spring tooth harrow without plowing. Sow on the clover seed eight quarts to the acre and harrow in lightly. I seeded this last year the first week in August and have good results. I heartily commend this plan of growing protein to the dairyman to stop that everlasting feed bill. When a farmer draws \$6 worth of milk to the creamery and draws back \$5 worth of grain, he has to do a lot of business to get much money from his dairy. Let our motto be to raise more and buy less.



SOIL MOISTURE.

Methods of Conserving It—Subsoiling, Plowing and Tillage.

Next to temperature moisture is probably the controlling factor in the growth of plants. The importance of a supply of moisture is most strikingly demonstrated in regions of deficient rainfall, where irrigation is necessary for the growth of crops (arid regions), but it is no less important in regions where the rainfall is usually considered sufficient for the needs of the crops (humid re-



gions). For this reason the following report of the department of agriculture on the conservation of moisture in the soil, as studied at various stations, is of general interest: Subsoiling is one of the important means. The Wisconsin station describes this influence substantially as follows:

Subsoiling increases the storage capacity of the soil for moisture and increases the rate at which water will sink into the soil, but decreases the rate at which it may be brought back to the surface. Subsoiling also increases the amount of moisture available to crops, since plants are capable of utilizing a larger proportion of the moisture present in loose, coarse grained soils than of that in fine grained and compact soils.

In humid regions, as a recent bulletin of the California station points out, the soil as a rule is underlain at a comparatively short distance below the surface by a subsoil, which the roots of plants penetrate with difficulty and from which they can draw little nourishment. The roots, therefore, spread out near the surface, and the plants require frequent rains or irrigation to sustain life. A suspension of either rain or irrigation for ten days or two weeks under these conditions usually results in injury to the plant. Under such circumstances subsoiling encourages deep rooting and thus enlarges the stock of water as well as plant food at the command of the plant.

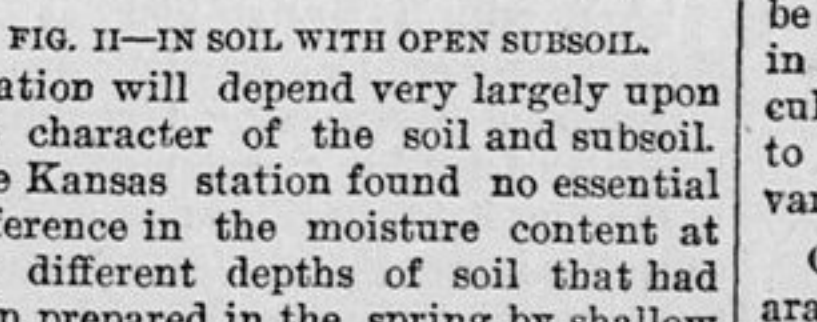
In many parts of the region of deficient rainfall, as in southern California, plants, especially fruit trees, are capable of withstanding months of drought. This is claimed to be due to the fact that "in the arid region, as a rule, subsoils in the eastern sense do not exist. The soil is readily penetrable to great depths." This difference in the root systems of plants in humid and arid regions is illustrated in the accompanying figures. A glance at the figures suffices to show that, while a root system like Fig. 1 will stand in need of frequent rains or irrigation to sustain its vitality, such a one as Fig. 2 may have prolonged drought with impunity, being independent of surface conditions and able to perform all its functions out of reach of stress from lack of moisture. It is equally clear that it is to the farmer's interest to favor to the utmost this deep penetration of the roots. This can be done in humid regions, to some extent at least, by thorough preparation and tillage of the soil and, in case of fruit trees, by guarding against excessive surface fertilization. In arid regions frequent irrigation, it is claimed, encourages shallow rooting.

To prevent loss of water from the soil by evaporation it is necessary to check the rise of water by capillarity to the surface of the soil. This is accomplished to some extent by subsoiling, but in order that the work partly accomplished by the subsoiling may be completed and continued the surface of the soil must be kept covered with a mulch of loose, well tilled soil by means of frequent tillage.

Whether the best results in preventing loss of moisture from the soil in humid regions will be obtained by subsoiling, shallow cultivation or deep cultivation will depend very largely upon the character of the soil and subsoil. The Kansas station found no essential difference in the moisture content at the different depths of soil that had been prepared in the spring by shallow plowing, by deep plowing and by subsoiling. In experiments at the North Dakota station on different methods of preparing soil and tillage for wheat the largest yield was obtained from land subsoiled eight inches below a six inch furrow.

The Niter Nuisance in Sugar Making.

An Ohio maple sugar maker writes to The New England Homestead that in taking care of the niter nuisance he knows nothing better than the use of muriatic acid diluted as occasion demands. Another method in vogue by him is a thorough cleansing of pans and evaporators in the fall with the sorrest of whey. "The difficulties in making nice maple goods," he writes, "are as nothing compared to those of getting the product to the consumer for what it really is and is worth."



News and Notes. To all agriculturists the toad renders conspicuous service, but gardeners and greenhouse owners may make this animal of especial value. Every gardener should aim to keep a colony of toads among his growing crops, and the practice of collecting and transferring them to the gardens is a commendable one.

The twenty-fifth biennial session of the American Pomological society is to be held in Philadelphia Sept. 7 and 8 in the hall of the Pennsylvania Horticultural society. Already it promises to be largely participated in by the various state societies. On account of the limited amount of arable land in Japan, as Dr. Knapp of the department of agriculture tells, the field crops are all managed upon garden methods. The seed for all the wheat, rice, rye and barley produced is first sown in highly fertilized beds, and when the plant is of sufficient size it is transplanted into the fields, much like cabbages.

PEACH LEAF CURL.

An Increasing Wave of It in the North the Past Few Seasons.

Peach leaf curl has been long known to the orchardist, but the seasons of 1897 and 1898 have brought it into a prominence by no means pleasing to any peach growing sections. This year everybody will be on the alert for its first appearance, and it is important that all should be prepared to combat it. The disease can often be detected when the leaf buds have but slightly opened. The usual early indications are a roughening of the surface on the young leaves and heightened color. B. M. Duggar of the Cornell university station, has given, in bulletin 164, a brief and clear account of the fungus which causes leaf curl, and he has outlined a treatment which has proved most satisfactory. With the present knowledge of peach leaf curl he makes the following special recommendations:

First.—Spray thoroughly with strong bordeaux mixture just previous to the swelling of the buds, late in March, or very early in April seems desirable in this latitude.

Second.—Spray again with weaker bordeaux as soon as the petals of the flower have fallen or after the work of the bees is over.

Third.—Spray again with weak bordeaux when the first leaves are just full grown or at just about the time that the spores of the fungus are developing.

Professor Duggar next discusses his recommendations thus:

First.—Why not spray in midwinter? Midwinter spraying may be quite effective, but there is every reason to believe that the April spraying will be better, for if that is near the time that the buds are infected the spores will then be more readily killed. If a time when other work is not pressing is of first importance, spray earlier. Why not use copper sulphate solution? It may be quite as effective, but bordeaux adheres better and would be more likely to prevent infections throughout a period.

Second.—Why? Late infections by spores from the ground or from neighboring fields may be thus guarded against.

Third.—This spraying is to cover the leaves with bordeaux at about the time the fungus is fruiting, hoping not only to prevent summer infection, but to cover places where the spores may lodge in order to pass the winter.

Professor Duggar further says: In making the first spraying, the all important one, strong bordeaux mixture may be used, and every twig should be so well covered that the blue color appears as a distinct coating after the application has dried. However, under certain conditions the foliage of the peach seems to be easily injured by spraying with bordeaux mixture. With weak bordeaux mixture properly made I have not been able to produce any injury on the trees experimented upon.

The customary formula for bordeaux mixture is: Copper sulphate (blue vitriol), 6 pounds; unslaked lime (good quality), 4 pounds; water, 50 gallons.

In spraying the foliage of peach trees reduce the copper sulphate to four pounds. Even this may seem strong. It should not, however, be condemned until tried, and when tried the mixture should be made by the one method which has been most successful. To dissolve the copper sulphate suspend it in a coarse sack in a barrel containing 25 gallons of water. Slack the lime (use only the best) slowly and then dilute it to 25 gallons. Pour the two together in this dilute form, stirring for a few minutes. Stir before using. If large quantities of the mixture are desired, stock solutions may be made as usual. Dissolve, say, 50 pounds of the copper sulphate in a barrel containing as many gallons of water. The stock solution of lime may be made of the same strength. Then each gallon means a pound of the substance wanted. When the mixture is made, dilute each solution separately before pouring them together.

Taking Bees Out of the Cellar.

Taking bees out of the cellar was discussed at the Brantford convention, the prevailing opinion being that they should be put out early—in March or April; some preferring to take out all at once, others by instalments; no uniformity of opinion as to whether they should be put on the old stands.—Canadian Bee Journal.

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