AGRICULTURAL

WHEN, HOW AND WHY TO SPRAY.

We give below brief but complete directions, based on the best scientific results and largest practical experience, for spraying the various crops, to protect them against insects, blights, rot, or other fungi. Observe that for best results in some cases, spraying should be done before leaves start. Understand just what you are spraying for, do the work thoroughly and at the right times, and success is almost certain. All this is no longer an experiment, but at best much is to be learned only by actual experience. When bordeaux mixture is advised before or just as leaves start, some prefer to spray with copper sulphate solution.

Apple.—For the round-headed and flat-headed borers, paint trunks and lower branches with a strong solution of soap containing a little carbolic acid, or paint base of trees in fall with linseed oil and white lead. Old oyster-shell bark lice may be brushed off with same solution, but for young lice hatched in May or June, spray with kerosene emulsion. For codlin moth, tent caterpillar, cankerworm, bud moth, apple maggot, curculio scab, or leaf blight, spray 1st with bordeaux A just before leaves unfold; 2d, with bordeaux B, adding 1lb paris green to 100 gals, just before blossoms open; 3d, with same as soon as petals have all fallen; 4th, bordeaux B in 10 to 14 days. Unless weather is moist and warm, favoring scab and blight, above will be sufficient, and if worms and caterpillars are not numerous, No. 2 may be omitted; but if scab or blight is feared, spray with bordeaux B 2 to 4 weeks after No. 4, and 5 with ammoniacal carbonate as fruit approaches maturity.

Pear.—For codlin moth, scab, leaf and fire blight, 1, 2 and 3 spraying same as for apple; 4, bordeaux B in one or two weeks; 5, ammoniacal carbonate when fruit is nearly grown. For pear-tree psylla (the lice or nymphlike little insects that feeds in axil of leaf, secreting a "honey-dew" that soon becomes blackened), 1 kerosene emulsion A when leaves open, or as soon as psylla is detected; 2, repeat in one or two weeks if the young insects begin to appear; 3rd, kerosene B a week or so later.

Peach, Nectarine, Apricot.—For curculio that attacks fruit, for leaf blight and fruit rot: 1, before buds swell, spray with copper sulphate solution of bordeaux A; 2, when fruit has set, bordeaux B with 1 lb paris green to 150 gals; 3, bordeaux B in two to four weeks; 4, when fruit is nearly grown, ammoniacal carbonate of copper; repeat No. 3 in a few days if it seems necessary. The arsenate of lead formula is recommended in place of 1 lb paris green to 150 gal. water; even the latter may burn the tender foliage, while the great advantage of arsenate of lead is that it will not injure even the most delicate foliage.

Plum.—If attacked by scale, spray in fall, after leaves are off, with kerosene emulsion, and again in midwinter. Cut off much below every vestige of black knot, and spray with bordeaux in the first warm days of spring, before the fungous growth starts up; 2, repeat just before flower buds open; 3, when fruit is set, bordeaux A with 1 lb paris green to 100 gal; 4, in about a week or less, bordeaux B with 1 lb paris green to 150 gals; 5, as fruit ripens, ammoniacal carbonate. If the plum scale or San Jose scale hatch out, spray with kerosene emulsion. In addition to all this, many jar the trees every few days for curculios, catching them on sheets or with chickens.

Cherry.—For curculio, black knot, leaf blight and brown rot, spray as for the peach. For black lice or aphides, use kerosene A after the third application of bordeaux, spraying with utmost force into and under the curled leaves, where this insect is sheltered. For birds, tie in tree bright ribbons, shining tins, a windmill, etc.

Currants.—As soon as worms appear, spray with arsenites. If they reappear, repeat in a few days, adding bordeaux for mildew. When berries approach ripening, dust on hellebore or pyrethrum. For borer, cut out and burn infested canes in fall. If yellow-lined currant bug attacks tips of new shoots, spray promptly with kerosene emulsion 1 to 5. For leaf spot, repeat the bordeaux at intervals of two weeks till fruit colors, and again after harvest; five applications applied in proper time, with ordinary rainfall, will surely protect against this disease; if necessary in bad cases to spray as fruit is about ripe, use ammoniacal copper carbonate, as it does not discolor fruit.

Gooseberry.—For worms and mildew, treat like currants; but for the third or fourth sprayings use 3 ozs of liver of sulphur in 10 gal. of water, as this does not discolor the fruit and is perfectly harmless.

Strawberry.—For black paria and leaf blight or rust: 1, Spray with bordeaux B and 1 lb paris green in 100 gals. water as soon as growth begins; 2, bordeaux B with 1 lb of paris green to 150 gal just before the opening of the first flowers; 3, bordeaux B as soon as the fruit is gathered if the bed is to be fruited the second season, although some recommended ammoniacal carbonate as the first fruits are ripening. If rust remains, repeat bordeaux as frequently as necessary, and newly set fields for next year's fruiting should be sprayed with it at intervals of from three to four weeks after they begin to set runners.

Raspberry and Blackberry.—For spring and fall orange rust, anthracnose, and leaf blight, cut out badly diseased canes; 1, spray with bordeaux A just before growth begins; 2, bordeaux B just as the blossoms open; 3, repeat as soon as fruit is gathered, and again at intervals of from two to three weeks if rust appears.

Grapes.—For the rose bug, anthracnose, black rot and downy mildew: 1 Spray with bordeaux A before buds unfold; 2, bordeaux A with 1 lb of paris green to 100 gal just before blossoms open; 3, repeat as soon as grapes have set—in from 5 days to two weeks; 4, bordeaux B in 2 or 4 weeks, according to the weather; 5, ammoniacal carbonate when fruit is nearing first stages of coloring, and earlier if downy mildew appears.

Quince.—For black leaf, fire blight and leaf spot: 1, Spray when blossom buds appear, with bordeaux: 2, when fruit sets, bordeaux with arsenites. Repeat bordeaux at intervals of two or three weeks if blight appears; use ammoniacal carbonate if fruit is ripening.

Nursery Stock.—For fungous diseases, leaf blight, etc: When the first leaves appear, spray with bordeaux, and repeat at intervals of about two weeks from three to six times. This mixture is a specific, especially against the troublesome cherry-leaf blight.

Cabbage.—When worms or lice (aphides) are first seen, spray thoroughly with kerosene emulsion, and again in a week or ten days if they are not heading. After another week, if heading, sprinkle with water, heating it to 130 degrees, repeating the kerosene emulsion in a fortnight if necessary. If the plants are small when the worms first appear, some spray with arsenites, but this should not be repeated a second time, for fear of some poison being left in the head.

Potato.—To prevent scabby tubers, soak the cut seed 1 1-2 to 3 hours in a solution of 2 to 2 1-2 ozs of corrosive sublimate (a deadly poison) in 16 gals of water: avoid stable manure, use fertilizers; on some soils, ashes, lime, etc., seem to promote this scab fungus. Spray with arsenties when beetles first appear, repeat every two or three weeks, and when vines are two-thirds grown combine 100 gals bordeaux B with 1 lb paris green, to protect against blight as well as potato bugs and beetles; make the solution stronger—150 gals—if the pests do not readily quit.

Tomato.—For rot or blight, whether under glass or out of doors, spray with bordeaux A at the first appearance, repeating in a few days if diseases are not checked. When set out in the field, a spraying with bordeaux is always advisable. If the disease persist, use ammoniacal copper carbonate after fruit is well formed.

Bean.—For pod spot, anthracnose, or rust, spray with bordeaux A when third leaf expands, and repeat every 10 days or two weeks about three times.

GERMANY'S WAR TREASURE.

A Fund of $30,000,000 in Gold Stored Away for Emergencies.

The Julius Tower of Spandau, says a recent letter from Berlin, is one of the most interesting structures in Germany, for the reason that it contains the great war fund of the German Empire, consisting of 120,000,000 marks ($30,000,000) in gold coin. The immediate surroundings of the tower are rather lonesome and uninteresting. Nobody is allowed in the neighborhood except those mortals who twice a year have to inspect the treasure. At all other times only the uniform step of the sentries enlivens the dreadful monotony of the place. Every six months a member of the Reichstag, delegated for the purpose, and accompanied by several officials of the Imperial Treasury, approaches the grey old tower to inspect the fund, in order that he may assure the German people through their representatives that the big pile of money is still there.

After long preliminaries the heavy iron door admitting into the tower is at last reached, where a soldier with a loaded gun stands sentry. Only the possessor of the magic pass-word, the "open sesame" which is altered twice a day, can hope to proceed; otherwise an energetic 'Halt,' backed by a menacing movement with the gun, must be expected. This is the last living obstacle, but three more iron gates must be passed, one of them leading through the walls of the tower, which are nine feet thick. The room where the gold is kept is fully thirty feet above ground. Nor is the yellow metal kept so one may wallow in the treasure, as described in the tales of the Thousand and One Nights. The money is all in coined gold pieces, put up in bags, of 10,000 marks each, ten such bags being closed up in a strong oaken case. There are 1,200 of these cases placed in stacks of ten each. There is an even million of marks in each stack. The nails and screws fastening each case are sealed with wax bearing the seal of the Treasury.

Examination is made only of one case each time, and that is selected at random from any pile. Reserve cases are stored below, as a case once opened is never used again. The case which is opened is thoroughly examined, all other cases being weighed only.

THE CZAR'S CORONATION.

Promises to Be on a Scale of Barbaric Splendor.

If the reports of the preparations for the Czar's coronation are true, this great function promises to be on a scale of barbaric splendor never before approached even in Russia. The Moscow municipality is devoting enormous sums for the decoration and illumination of the town, and for the entertainment of the people. On a great open space outside the city one hundred free buffets are in course of erection where food and drink will be dispensed to all comers. Ten circuses and hundreds of swings, and merry-go-rounds will be provided for the children. The interesting old Kremlin will be illuminated by half-a-million electric lamps, and on the walls, gates and towers, colored lights will blaze all night long. The great tower of Ivan the Great will be girdled with 14,000 electric lights. The rich citizens are vying with one another in preparing for a magnificently barbaric display of colored cloth carpets and bunting, to decorate the facades of their houses. Nor is it in Moscow alone that preparations for a great holiday are being pushed forward. Every town in the empire will feed its poor on that day, and illuminate its streets and devote large sums for the purchase of vodka, in which the health of the newly-crowned Czar will be drunk to repletion. But it is to what will happen after May that the keenest attention will be directed. It is well known that the Russian Government are anxious to secure peace and quietness until the coronation is over but the opinion grows, both in Russia and in Germany, that the ceremony once over grave attention will be turned in Russia to the anarchy in the Turkish empire, and especially to the condition of the Armenians.

A WONDERFUL INVENTION.

In Which Railway Trains Can be Run at a High Speed.

To a French-Canadian belongs the credit for having secured from the United States and Canada a patent for some new improvements in railway construction designed responsible authorities declare, to ere long revolutionize the present system of railway travel. Mr. V. A. Emond, of Quebec city, and his son, Mr. O. V. A. Emond, are the joint inventors, and the improvements consist of a new rail, and new trucks, without wheels, for the cars, and have been declared eminently practicable and designed to be universally adopted. Roughly speaking, the invention consists of inverted-V-shaped runners for the car, which slide upon rollers arranged in grooved rails. It is very simple—the track is attached to the car, while the wheels are made to serve as a track.

Among other advantages claimed are that trains can be run at a greatly increased rate of speed—several hundred miles per hour, if required without danger of derailment; that all risk from obstruction on the track is obviated; that as the rail is entirely covered and provided with holes at the base for the escape of water, etc., it offers advantages, hitherto unattained, in contending against frost, snow, rain and dust; that the trucks have no wheels nor shafts, nor bearings, liable to break at any moment, do not require oil nor packing, and will not involve any daily expense in service, while they will also be much cheaper in construction, and the combination will permit of the use of much lighter cars, thus lessening the cost of rolling stock and motive power. Trains may be run by steam or electric engines, trolley or cable.

After careful examination of the drawings and models of this invention, competent railway authorities have admitted and declared that there are millions in it for any company which will have the monopoly of this improved track, and that its many advantages over the present system in speed, safety, lightness and economy will speedily render it indispensable to future railway progress.

HEART DISEASE STRIKES DOWN ALL CLASSES.

The Essential Matter is to be Prepared for any Emergency.

It is painful to pick up the daily papers and observe how people of all classes are being stricken down with heart disease and apoplexy. One day it is the farmer in the field, again the labourer carrying his hod or, as this week a prominent architect in Ottawa. Perhaps it is not too strong a statement, that 80 per cent. of the people of Canada are afflicted with heart disease to some degree. What a blessing it is then, that there exists a medicine like Dr. Agnew's Cure for the Heart which is so quick in producing relief. Instantly the patient obtains that ease that is so longed for when the heart is afflicted. There is absolutely no case of heart disease that it will not help, and with few exceptions, will produce a radical cure.

EASILY ATTENDED TO.

Yes, doctor; it still hurts me to breathe—in fact the only trouble now seems to be with my breath.

Oh, well, I'll give you something that will soon stop that.

QUEBEC HEARD FROM.

Henary G. Carroll, M. P. for Kamourrska, Que., Sounds the Praises of Dr. Agnew's Catarrhal Powder.

It will be noticed by those who have studied the testimonials for this wonderful catarrh remedy, that they are thoroughly unsectional in character. Every province in the Dominion through its members of parliament, and most prominent citizens, has told of the peculiar effectiveness of Dr. Agnew's Catarrhal Powder. It is of a character that overcomes any local or climatic conditions, and as with Mr. Carroll, it is a most effective remedy for catarrhal troubles in whatever shape, not omitting hay fever, where it works like a charm, and in every case is speedy in effect.

Sample bottle and blower sent by S.G. Detchon, 44 Church St., Toronto, on receipt of two 3-cent stamps.

Intense Pain From Sciatica. The Mystic Remedy. South American Rheumatic Cure, Conquers in Two Days.

The following comes from the wealthy lumberman, of Merrickville, Ont., Mr. E. Errett: For a number of years I have suffered intense pain from rheumatism and sciatica in my left hip. It is needless to say I have doctored constantly, but without receiving anything but temporary relief. South American Rheumatic cure was at last tried and its effect was truly magical. In two days the pain was all gone, and two bottles of the remedy cured me completely. I was so bad that for two years I could not lie on my left side if I got the universe for so doing. At present I have not a symptom of sciatica or rheumatism, and hence it is with much pleasure that I recommend this great remedy. I know it will cure.

Sold by W. E. Richardson.

HER ONE MOOD.

Woman, began the corn-fed philosopher, in his generalizing way, is a creature of many moods.

My wife ain't, ventured Mr. N. Peck. She is always in the imperative.

Sir Oliver Mowat afflicted with Kidney Trouble.

The news has been flashed across the wires from the old country that Sir Oliver Mowat, who is there seeking medical advice, is a victim of kidney disease. His friends say that the case is not as alarming as the press reports have stated. But there seems to be no disguising the fact, that with Ontario's Premier, as thousands of others, kidney disease has seized the system. It is laying waste the lives of our best people in all parts of the Dominion. And yet those who have learned to use South American Kidney Cure are finding in it a remedy far surpassing a sea voyage, or even the skill of England's greatest physicians. It is a kidney specific, not a cure-all, but as a specialist in this particular it gives relief within six hours after the first dose, and renewed health to all who use it.

Sold by W. E. Richardson.

THE LONDON DOLL TRADE.

The trade is a curious one, subject to the variations of public taste, like any other, says the Pall Mall Gazette. Take the case of dolls, for instance. The Dutch doll is as dead as Queen Anne. Her square, wooden body, rudely carved legs and arms, enormous head with a patch of tow on the skull and three strokes of red paint for eyes and lips, is now quite prehistoric. Only in the back streets of the town is she to be seen, adorning the shop windows in naked innocence, and then she is no fresh importation, but a job lot from an ancient and unsaleable stock. Though she is practically given away with a packet of sweets, no well-regulated child takes delight in clothing her. She belongs to a past age and in the nurseries of the well-to-do is only to be found—minus legs and arms—in the museum where the dolls of great-grandmothers are preserved. She has been driven from the market by the overwhelming invasion of French and German dolls.

The majority of the dolls one sees in the shops are "made in Germany." The German gives a larger doll for the money than any other maker. His doll is less elegant than that of the Frenchman. She has the moon-faced loveliness of the German peasant-girl, a plumpness of figure and a thickness of calf distinctly Teutonic. Her hair, as a rule, is flaxen; her eyes are blue, her lips full, and her cheeks puffed and pendulous. Whether she stands 6 inches or 3 feet in height, she is the same doll. Her head may be as large as an apple or as small as a cherry, but the features and expression are the same. She is uniformly overfed, whatever be her proprotions, and she is simply a reproduction, in various sizes, of one eternal and monotonous type. To see her by the hundred, with her hair tied up in light blue ribbons and her well-stuffed figure draped in the chemise in which she is put on the market, is to wonder why some one does not break through convention and make a fortune by turning out dolls with aquiline noses and a Greek profile.

The French dolls come next in point of numbers in the English market. They are less obese than their German competitors. They are smarter in look and bearing. They express something of the vivacity of the French temperament, and their hair is of glorious Parisian gold and occasionally of bronze. They run in all sizes of course; and in the making of them there are many "notions" and mysteries. There are dolls that open and shut their eyes; dolls that cry and dolls that remain dumb under any pressure; dolls with legs of china; dolls encased in kid and sewn up by many seams; and dolls which are mere bundles of cotton cloth and stuffing, with wax heads and shoulders and composition feet.

In make and in attributes—such as eye-shutting, walking, ability to stand upright, and to emit sounds between a squeal and a grunt—the German doll-maker seems to be on a level with the French. The difference is apparent in a certain elegance and piquancy on the part of the French doll. She suggests the boulevard, while the German product tells of the farm yard and the dairy. As for the English doll, she still finds a market, but she is "not in it" with her German cousin. Her chief glory is in her apparel. She is not offered for sale in an undergarment but comes on the scene booted, hatted, and cloaked, the better to hide her rag-stuffed form and to tone down the roughness of her composition face—which is a mere mask stuck on a hat-covered ball of rags. She has no tricks. She can not use her eyes like the French doll, or give a remonstrating groan like the German, and if she is put on her feet she will fall down flat. Nor is she sold for next to nothing. Her manufacturers do not seem to care whether they make her or not; and as they put a good price on her, the German and French dolls leave her lagging in the market-place, while they go out into the world of children to be clothed and petted until their hair falls off and their faces melt. That same hair, by the way, is made in England. We export it to the German doll-makers, and yet we can not or do not make the dolls ourselves.

THE MYSTERY OF PAIN.

What Are Its Causes And Why It Is Permitted?

The Great Work That is Being Done by Bright Minds in Alleviating Human Suffering—A Case Affording a Striking Illustration.

From the Erin Advocate.

From the time when man first peopled the earth down to the present day, the mystery of pain has filled all hearts with wonder and terror. What are its causes, why is it permitted, and what its uses are in the great economy of nature? All these questions men have asked of themselves and of one another, but the question has found no solution. All that can be done is to devise ways of relieving physical suffering, and minds have assisted tender hearts in bringing aid to the afflicted.

All the vast resources of nature's laboratory have been pressed into service to the end that tortured bodies might surcease from anguish, and know the peace that only health can bring.

And what more natural than that these poor victims of disease thus released from suffering should desire to aid in the extension of the knowledge of the means whereby they have been benefitted?

Such a one is Miss Druscilla Shingler, of Erin, Ont., who tells a tale of pain endured through weary years, and of final relief and cure through the use of Dr. Williams' Pink Pills, the greatest medicine of the age. Miss Shingler says: Twelve years ago I became afflicted with rheumatism, from which I have suffered greatly. Two years later this trouble was aggravated by a growth which started in the throat, and which each year became larger and larger, until it finally became so bad that I could hardly obtain any sleep, as when I would lie down it would fill my throat, causing a feeling of suffocation. What I suffered is almost beyond description, and all the medical aid I had did me no good, and I was told that I could only hope for relief through the medium of an operation. I dreaded such a course and declined undergoing the operation. All this time the rheumatism was taking a firmer hold upon my system, and I felt like giving up in despair. I lost the power of my limbs and my hands got so bad that I could scarcely hold anything. At this stage a friend, who from personal experience had strong faith in Dr. Williams' Pink Pills, bought me a supply and urged me to try them. I thought I felt an improvement after I had used a little more than a box, and after using them for a few weeks there was no longer room to doubt that they were helping me. I was taking the Pink Pills in the hope of finding relief from the rheumatism, but to my great joy I found that the medicine was not only driving this painful malady from my system, but was also driving away the growth in my throat. The result was that after I had used about a dozen boxes of Pink Pills I was completely cured, and, although a considerable time has now elapsed, I have not had a recurrence of either trouble, and am enjoying the best of health. For the help my statement may be to others, I am only too glad to add my testimony to the long list of wonderful cures, such as mine, that have been wrought by the use of Dr. Williams' Pink Pills.

This greatest of nineteenth century medicines positively cures all troubles arising from a disordered or weak state of the blood, or shattered nerves. If you are feeling weak or depressed, Dr. Williams' Pink Pills act as a prompt tonic, and if seriously ill no other remedy can so promptly restore you to health and strength. The genuine Pink Pills are put up in round wooden boxes, the wrapper round which bears the full trade mark, "Dr. Williams' Pink Pills for Pale People." Do not be persuaded to take some substitute.

INSULTED THE KAISER.

A girl of Metz, 14 years old, has recently been condemned to eight days' imprisonment for having insulted the German emperor. The insult consisted in writing a private letter to one of her little friends in which there was something disrespectful to his majesty. It is said that such sentences are common in Alsace-Lorraine. Herr Liebknecht, the veteran socialist of the reichstag, will have to serve four months' imprisonment also for insulting the emperor after the reichstag adjourns.

She says she can't afford a cab—
Expenses she must curb.
Yet when she walks upon the street
Her carriage is superb.

The Only

Great and thoroughly reliable building-up medicine, nerve tonic, vitalizer and

Blood Purifier

Before the people today, and which stands preeminently above all other medicines, is

HOOD'S Sarsaparilla

It has won its hold upon the hearts of the people by its own absolute intrinsic merit. It is not what we say, but what Hood's Sarsaparilla does, that tells the story:—

Hood's Cures

Even when all other preparations and prescriptions fail.

"The face of my little girl from the time she was three months old, broke out and was covered with scabs. We gave her two bottles of Hood's Sarsaparilla and it completely cured her. We are glad to recommend Hood's Sarsaparilla." THOS. M. CARLING, Clinton, Ontario. Be sure to

Get Hood's

Hood's Pills easy to buy easy to take easy in effect. 25 cents.

FOR TWENTY-SIX YEARS.

DUNN'S BAKING POWDER

THE COOK'S BEST FRIEND

LARGEST SALE IN CANADA.