Spraying Calendar.

Plant.	First Application.	Second Application.	Third Application.	Fourth Application.	Fifth Application.
Apple..... Scab, codling moth, bud moth.	Copper sulphate, about the time buds are swelling.	Bordeaux, just before blossoms open; Paris green for bud moth when buds open.	Bordeaux and Paris green, when blossoms have fallen.	9-12 days after, Bordeaux and Paris green.	Bordeaux, 10-15 days later.
Pear..... Leaf blight, scab, codling moth.	Copper sulphate, when buds are swelling.	Bordeaux, just before blossoms open.	Bordeaux and Paris green, after blossoms have fallen.	9-12 days after, Bordeaux and Paris green.	Bordeaux, 10-15 days later.
Plum..... Rot, etc., and curculio.	Copper sulphate, before buds open.	Bordeaux and Paris green, as soon as blossoms fall.	9-12 days after, Bordeaux and Paris green.	Bordeaux, 10-20 days later.	Ammoniacal copper carbonate, 10-20 days later.
Cherry..... Rot, aphis, slug.	Bordeaux, as the buds are breaking. If aphis appear, kerosene emulsion.	Bordeaux, when fruit has set; for slugs, dust leaves with air-slaked lime. Hellebore also good against slug.	Bordeaux, 10-15 days after, if rot appears.	Ammoniacal copper carbonate, 10-15 days later.	
Peach..... Rot, mildew.	Copper sulphate, before buds swell.	Bordeaux, before flowers open.	Bordeaux, when fruit has set.	Ammoniacal carbonate, when fruit is nearly grown.	Repeat fourth 5-10 days later.
Grape..... Mildews, etc., flea beetle.	Copper sulphate, when buds swell. Paris green for flea beetle.	Bordeaux, when leaves 1½ inches in diameter. Paris green for beetle.	Bordeaux, when flowers have fallen. Paris green for beetle.	Bordeaux, 10-15 days later.	Bordeaux, 10-15 days later if disease still appears.*
Raspberry..... Anthracnose, rust.	Copper sulphate, before buds break.	Bordeaux, if rust appears during summer.	Bordeaux, if the trouble appears to continue.	The only remedy, as yet, for orange rust is to cut out diseased plants.	
Currant..... Worms and mildew.	Paris green or hellebore for worms.	Hellebore, ten days later, for worms. Bordeaux for mildew.	Hellebore, if necessary for worms		
Gooseberry..... Mildew and worms.	For mildew, Bordeaux, as soon as leaves expand. Hellebore for worms.	Bordeaux, ten to fifteen days later. Worms as before.	Ammoniacal copper carbonate, 10-15 days later.	If further treatment is required for mildew, repeat third 10-15 days later.	
Tomato..... Rot, blight.	Bordeaux, as soon as rot or blight appears.	Bordeaux, if trouble continues.	Bordeaux, if necessary.		
Strawberry..... Rust.	Bordeaux, when first fruits are setting.	Ammoniacal copper carbonate, when first fruits are ripening.	Bordeaux, when fruit is taken off.	Bordeaux, if trouble continues.	
Potato..... Blight, beetles.	Paris green, as soon as beetles appear.	Bordeaux, when plants about six inches high.	Bordeaux, 10-15 days later.	Repeat if necessary in 10-15 days.	
Cabbage.....	Pyrethrum may be applied in solution or dusted on, 1 part pyrethrum to 6-8 parts flour.				

*If further applications are necessary, use ammoniacal copper carbonate.

SOLUTIONS RECOMMENDED.

Copper Sulphate Solution.

Copper sulphate.....1 pound.
Water.....20 gallons.

To be used only before the buds burst, and never to be applied on the foliage. When applied to peach trees, use 25 gallons of water instead of 20 gallons.

Bordeaux Mixture.

Copper sulphate.....5 pounds.
Lime (fresh).....4 pounds.
Water.....40 gallons.

Suspend the copper sulphate in five gallons of water. This may be done by putting it in a bag of coarse material and hanging it so as to be covered by the water. Slake the lime in about the same quantity of water. Then mix the two and add the remainder of the 40 gallons of water. Warm water will dissolve the copper sulphate more readily than cold water. If the lime is at all dirty, strain the lime solution. Use wooden vessels.

Ammoniacal Copper Carbonate Solution.

Copper carbonate.....1 ounce.
Ammonia, sufficient to dissolve the copper carbonate.
Water.....9 gallons.

The copper carbonate may be dissolved and kept on hand to dilute when necessary.

Paris Green Mixture.

Paris green.....1 pound.
Water.....200 to 300 gallons.

Use about 200 gallons of water for apple trees, 250 for plum trees, and 300 for peach trees. When used upon peach trees, add 1 pound of lime to the mixture. When Paris green is added to the Bordeaux mixture to form a combined insecticide and fungicide, add four ounces to every 50 gallons of the Bordeaux mixture.

Hellebore.

White hellebore (fresh).....1 ounce.
Water.....3 gallons.

Kerosene Emulsion.

Hard soap.....½ pound.
Boiling water.....1 gallon.
Coal oil.....2 gallons.

After dissolving the soap in the water, add the coal oil and stir well for 5 to 10 minutes. A syringe or pump will assist much in this work. Dilute with from 9 to 15 parts of water.

Pyrethrum.

Pyrethrum powder (fresh).....1 ounce.
Water.....4 gallons.

NOTES.

When there is danger of disfiguring fruit with the Bordeaux mixture, use the ammoniacal copper carbonate solution.

Paris green and Bordeaux mixture may be applied together as well as separately, and thus save time.

Paris green is to be used for insects that *chew* the leaves, and kerosene emulsion for those that *suck* the juices of plants.

Prepare the mixtures well, apply them at the proper time, and be as thorough as possible in the work.

PROF. J. HOYES PANTON, O. A. C., Guelph, Ont.

Nova Scotia Fruit Growers Meet.

[Specially reported.]

The annual spring meeting of the Nova Scotia Fruit Growers' Association was held in the Oddfellows' Hall, Middleton, Wednesday afternoon and evening, March 25th; President J. W. Bigelow in the chair; S. C. Parker, Secretary. Among those in attendance were: Attorney-General Longley, and Prof. E. E. Faville, director of the Nova Scotia School of Horticulture; in addition were a large number of fruit growers from the western part of the Province. The subjects under discussion were thoroughly practical. Important to the commercial side of the fruit industry was the subject of

"*The Best Package for Shipment of Apples.*"—W. H. Chase introduced the subject by claiming the superiority of hardwood barrels, of which he had used 4,000 during the past marketing season, for apples and potatoes. For the latter it made a remarkable difference in price, and he believed the former would be augmented in sales. The barrel is 30-inch stave, 17-inch head, and from 19¼ to 19½ inches inside of bilge. A hardwood-barrel factory was going into operation in Annapolis this season. A lively discussion followed. The meeting stood divided upon the question of hardwood barrels versus soft wood; the cost, however, being only about three cents more per barrel on the hardwood barrel. A difference of opinion existed as to whether round or flat hoops were best. Prof. Faville, of the Horticultural School, who investigated this point when in London, reported that the buyers there favored flat hoops, making a neater package and easier sales. The committee appointed at the annual meeting to recommend suitable packages did not report. A number of resolutions were introduced, but all were lost. The meeting seemed to be favorable towards hardwood barrels.

Transportation.—A resolution was passed by the Association, to be submitted to the promoters of the Fast Line Steamship Co. between Canada and Great Britain, recommending the establishing of said line and requesting that more speedy transit, better ventilation, and cheaper freight rates be accorded than at present, to facilitate the winter shipment of apples, which now amounts to over 300,000 barrels during winter months and will soon reach 1,000,000 barrels, besides other fruits that may be sent earlier in the season.

"*The Kitchen Garden.*"—J. S. Clark, of the Horticultural School, read a paper advocating deep trenching location near the barn, with open cistern for water in times of drought.

"*Cranberry Culture,*" by J. S. Bishop, Aylesford, in which growers were advised to use mature vines. Sanding lightly in early fall before frost protected vines greatly from frosts. Three to four inches of sand in preparing bog was best. Look carefully to drainage; use care in flooding. He advised small growers to unite and ship in carload lots. It paid to clean and pack the berries carefully. It removing turf take away as little turf as possible.

"*Among Our Friends and Enemies*" was the address given by Prof. Faville, in which he treated of insect and fungous pests and their treatment, recommending Paris green and kerosene emulsion for the cigar-case borer, which is the new pest quite prevalent in the Province. In speaking of the marketing of fruit as he saw it in London, the speaker advocated placing thick white paper in the head of barrel to gather dust, in place of layer of excelsior, and spoke against the use of excelsior in either end of barrels. A poor grade of apple should not bear the grower's name. Cold storage would mean an impetus in the pear and tomato trade. Cranberries would for years to come bring a stable price of ten to twelve dollars in Berlin market. A scheme should be inaugurated whereby the sellers would be able to know what price their apples were sold for in the British markets. As it is now they are quite in the power of commission merchants.

Attorney-General Longley addressed the meeting, on

"*The Provincial Exhibition,*" which is to be held in Halifax annually hereafter, the City of Halifax contributing one half the expenses incurred in founding the Exhibition. The Exhibition would be not only an agricultural show, but an industrial one as well. In addition to the Provincial Exhibition, county exhibitions would be held each year. The Western Provincial Exhibition would be held this year in Yarmouth.

The meeting as a whole was most instructive. The summer meeting will probably be held in July—the place not yet decided upon.

Raspberry and Blackberry Culture.

BY ELLIS F. AUGUSTINE, LAMBTON CO., ONT.

Any land that will produce a good grain or root crop is suitable for growing the above-named fruits, although a dark sandy loam is preferable to all other soils. The land should be thoroughly drained and in a good state of tilth, as cold, wet soils are particularly addicted to the development of *anthracnose* and all other forms of fungous disease. A good coat of well-rotted stable manure should be applied, after which the soil should be worked into a deep mellow condition. A liberal top-dressing of wood ashes is also beneficial, as both raspberries and blackberries are large consumers of potash.

The planting should be done as early in spring as the land can be put in good condition. The plants should be procured from some near-by grower and should have the roots carefully protected from wind and sunshine. Spacious holes should be made for the roots, which should be well spread out and have worked amongst them a quantity of fine surface soil, well compacted about the canes. Raspberries should have the rows seven feet apart and blackberries eight feet, with the plants four feet in the rows. Blackberries and the red varieties of raspberries may be allowed to form a new stand of canes between each two plants set, thus making the hills two feet apart in the rows. All others should be treated as weeds and hoed out, as this system of culture will give much finer fruit and better facilities for cultivation than when the canes are allowed to form heavy, continuous rows. The soil should be frequently and shallowly stirred with a cultivator having small, narrow teeth, as a fine earth mulch is a great conserver of moisture. When the raspberry canes have reached a height of thirty inches the tops should be cut off with a sharp, heavy knife. This will cause them to throw out lateral branches, which should be cut back early the following spring to about twenty inches. Blackberries may be allowed to become thirty-six to forty inches high before cutting back. A row of early vegetables may be profitably grown between each two rows of bushes the first season. About the 1st of September, or as soon as the vegetables have been harvested, the ground should be lightly ridged up to the bushes, leaving a furrow for surface drainage between each two rows.

In black caps, Souhegan is one of the earliest and is exceptionally hardy, but the fruit is somewhat inclined to be small. Hilborn is the best medium early. It is of Canadian origin and is a very heavy bearer, while the fruit is of unsurpassed quality. The canes are entirely hardy, and we consider this as our best market variety. Gregg is the standard late variety for this locality. The fruit is of the largest size and the canes are very strong growers, although not entirely hardy in very severe winters. In reds, two good standard varieties are Marlboro, for early, and Cuthbert, for late. The latter seldom winter-kills, and the fruit is very sweet and large, sometimes measuring three inches in circumference. The best canning berry is Shaffer's Colossal. It is a cross between the red and black, is purple in color, and does not sucker like the red varieties. The canes are of strong growth but not entirely hardy, yet it seems to recover from winter-killing better than other sorts. The fruit is somewhat soft, and for shipping should be picked before fully ripe, as it has the quality of ripening after being gathered. Golden Queen is the best yellow berry, and possesses many excellent qualities. In blackberries, three of the best varieties are Lawton, Kittatinny, and Snyder. The latter is the only one we have found sufficiently hardy for our locality.