

SPRAY CALENDAR.

REVISED UP TO DATE FOR "THE FARMER'S ADVOCATE" BY L. CAESAR, O.A.C., GUELPH.

PLANTS AND PEST.	1st APPLICATION.	2nd APPLICATION.	3rd APPLICATION.	REMARKS.
APPLE. Scab or black spot, canker, leaf spot, codling moth and other biting insects, scale insects, blister mite and aphids.	Shortly before the buds burst. Use A1 or B. Note.—Two early applications are required for bad cases of San Jose Scale.	Just before the blossoms open. Use A2 or D, with 2 or 3 lbs. arsenate of lead to each 40 gals. of the liquid.	Immediately after the blossoms have nearly all fallen, and before the calyces close. Use A3 or D, with 2 lbs. arsenate of lead to each 40 gals. This is the application for codling moth.	Cut out, disinfect and paint or cover with coal tar, cankered areas on trunks and large branches. In moist climates, or if the weather is wet or foggy, give a 4th application with A3 or D for Scab about ten days after 3rd. If late summer is cold and damp, spray again with A3 or D for scab or sooty fungus. If aphids are present spray at once with Black Leaf 40 or kerosene emulsion or whale-oil soap. Black Leaf 40 may be used with lime sulphur. No benefit to spray after leaves are curled.
PEAR. Scab or cracking, blight, codling moth, other biting insects, scale insects, blister mite, psylla and slug.	Shortly before the buds burst. Use A1 or B.	Just before the blossoms open. Use A2 or D, with 2 or 3 lbs. arsenate of lead to 40 gals. of the liquid.	Just after blossoms have fallen. Use A3 or D, with 2 lbs. arsenate of lead to 40 gals.	Cut out and burn blight as soon as seen, cutting always one foot or more below diseased areas. Disinfect tools after each cut. For fungous diseases spray as outlined above for apple. For Psylla, spray thoroughly with A1 or B just after buds burst, or with Black Leaf 40 just after leaves open. For slugs spray with arsenate of lead or dust fresh air-slaked lime over the leaves.
PLUM AND CHERRY. Black-knot, brown rot, leaf blight or shot-hole fungus, curculio, slug and aphids.	Just before the buds burst. Use A1 or B.	Just after fruit is set. Use A2 or D, with 3 lbs. arsenate of lead to 40 gals.	About two weeks later. Use A3 or D, with 3 lbs. arsenate of lead to 40 gals.	Watch for black-knot, cut out at once well below diseased area and burn. For leaf blight give a 4th application with A3 or D as soon as fruit of cherry is picked. Destroy mummied plums in autumn. Look for aphids just before buds burst, and if present spray at once with Black Leaf 40 or kerosene emulsion or whale-oil soap. May use Black Leaf 40 with lime-sulphur. Treat slug as on pear.
PEACH. Leaf-curl, scab or black spot, yellows, little peach, curculio, borer, San Jose scale, shot-hole borer.	Before the buds begin to swell. (All must be done before any sign of bursting of buds.) Use A1 or B. Many give only this application.	Just after fruit is set. Use 2 or 3 lbs. arsenate of lead, and 1 or 2 lbs. freshly slaked lime to 40 gals. of water for curculio.	About one month after fruit is set. Use C, if troubled with black spot or brown rot.	If brown rot is likely to be troublesome use C again about one month before fruit ripens. Destroy mummied fruit in autumn. Remove at once and burn any tree attacked by yellows or little peach and also all suspected trees. Dig out borers at base of tree with knife in May and again in October. For shot-hole borer cut down and burn before April all dead or dying trees or branches, and leave no brush heaps near orchard.
GRAPES. Black rot, powdery mildew, downy mildew, anthracnose, flea-beetle, thrip or leaf hopper.	When 3rd leaf is appearing. Use D.	Just before the blossoms open. Use D.	Just after fruit sets. Use D.	Spray again whenever wet weather threatens. It should always be done before, not after rain. At first sign of powdery mildew dust with sulphur or spray with C. For flea-beetles use poison whenever they appear. For leaf-hoppers or "thrips" use Black Leaf 40 or kerosene emulsion or whale-oil soap in July to destroy nymphs. Clean cultivation is very important, and destruction of all old mummied grapes and prunings.
CURRENT AND GOOSEBERRY. Mildew, leaf-spot, currant worm and aphids.	Shortly before buds burst. Use A1 or B.	Just before blossoms appear. Use A2, with 2 lbs. arsenate of lead to 40 gals.	Just after fruit is formed. Use A2, with 2 lbs. arsenate of lead to each 40 gals.	For worms when fruit is ripening, use hellebore. Look for aphids just before buds burst; if present spray with Black Leaf 40 or kerosene emulsion or whale-oil soap. Of little use to spray for these after leaves curl.
RASPBERRY AND BLACKBERRY. Anthracnose, red rust, crown gall.	Before growth begins. Use D.	When shoots are 6 or 8 inches high. Use D, and add poison if caterpillars are present.		If anthracnose is very severe, set out new plantations of healthy shoots. If disease begins, cut out old canes as soon as fruit is picked, also badly-attacked new ones, and burn. For red rust, remove and burn plants at once. No other remedy. For crown gall set out plants in fresh soil, rejecting any plant with a gall on root or crown.
STRAWBERRY. Leaf-spot and white grub.	For leaf-spot set out only healthy plants with no sign of disease. First season spray with D before blossoms open and keep plants covered with mixture throughout the season. Second year spray before blossoming with D and again soon after picking; or mow and burn over after picking. Do not take more than two crops off. Plow down at once after second crop. For white grubs dig out as soon as injury is noticed. Do not plant on land broken up from old meadow or pasture for at least three years after breaking.			
BEAN. Anthracnose and bacteriosis.	Get seeds from pods showing no signs of disease. Do not work among the plants if they are wet with rain or dew. Spraying scarcely pays as a rule.			
CABBAGE AND TURNIP. Flea-beetles, caterpillars, root maggots, aphids.	For flea-beetle on turnip sow after June 21st, or dust plants as soon as they appear above ground with Paris green, or spray with Bordeaux and a poison and a sticker. Repeat in two or three days. For caterpillars dust with Paris green until heads begin to form on cabbage and cauliflower, then spray with fresh pyrethrum, 1 ounce to 2 gallons water. For root maggots use one-ply tarred felt-paper discs, putting on as soon as plants are set out, or set out plants after July 1st. For aphids use kerosene emulsion as soon as they appear, or 1 lb. common laundry soap dissolved in 4 gallons water.			
POTATO. Tip burn, early blight, late blight, scab, Colorado beetle, flea-beetle.	Keep foliage covered with D from time plants are about 5 inches high. Take special precautions to see this is well done if weather is at all damp after about 15th July, as late blight begins about this time. Add a poison to each application when necessary. For scab, soak tubers before cutting 2 hours in formalin solution, 1 pint of formalin to 30 gallons of water. Spread out on grass to dry. Wash all boxes, bags or other vessels to be used in same liquid. Plant none but perfectly healthy tubers.			
TOMATO. Leaf blight, black rot, flea-beetle.	Spray plants in seed-bed with D. Keep foliage in field covered with D until danger of staining fruit. Add a poison if necessary for flea-beetles.			
ASPARAGUS. Rust, beetles.	For rust, let no plants, not even wild ones, mature during cutting season. Late in fall when growth is about over, cut and burn old plants. For beetles, let poultry run in the plantation. After cutting season is over spray with arsenate of lead; repeat in two weeks. May add sticker and a little lime.			

NOTE.—A1—Concentrated lime-sulphur, strength 1030 specific gravity (1035 for San Jose scale)=commercial 1 gal. to about 8 gals. water.
A2—Concentrated lime-sulphur, strength 1009 specific gravity = commercial 1 gal. to from 32 to 35 gals. water.
A3—Concentrated lime-sulphur, strength 1008 specific gravity = commercial 1 gal. to from 35 to 40 gals. water.
B—The old home-boiled lime-sulphur, 20.15.40 formula.
C—Self-boiled lime-sulphur.
D—Bordeaux mixture, 4.4.40 formula.

Formulae for Insecticides.

I.—POISONS (for biting insects only).

1.—ARSENATE OF LEAD—2 or 3 lbs. to 40 gallons liquid spray; 3½ lbs. for potato beetles.

2.—PARIS GREEN—(a) ¼ to ½ lb. to 40 gals.; 1 lb. for potato beetles. If used with water alone, add 1 or 2 lbs. fresh lime. (b) 1 lb. mixed with 50 lbs. land plaster, air-slaked lime or some similar substance, for dusting on plants. (c) Poisoned bran, mix 1 lb. Paris Green with

50 lbs. bran moistened with sweetened water. Scatter in evening on soil by plants for cut-worms.

3.—ARSENATE OF LIME—Boil 1 lb. white arsenic and 1 lb. sal soda (crystals) with stirring for about 15 minutes in 1 gal. water