

and is here reproduced* for the further information of orchardists and others. It will be seen that the stomach poisons are arranged about the upper left segment of the circle, the fungicides about the upper right segment, and the tracheal poisons (contact insecticides, gaseous, liquid, and solid) about the lower segment. Lime-sulphur solution, sulphur, and the alkali sulphides have important uses both as insecticides and fungicides, consequently (explains Mr. Gray) the segments upon which they are arranged are made to overlap, in order to indicate their double utility, and to avoid duplication and an unnecessary number of lines. The materials named have been confined to the standard remedies in use in orchard and spray practice.

* In the original the various lines are distinguished by different colours. Lineal variations are here substituted for such colours.

THE HOME ORCHARD.

SIMPLE DIRECTIONS FOR DEALING WITH THE COMMONER PESTS AND BLIGHTS.

BY THE HORTICULTURE DIVISION.

THE information which follows is published in response to numerous inquiries from occupiers of the smaller farm and suburban orchards. The directions are given in an elementary form to suit requirements for the control of codlin-moth, scale insects, woolly aphis (American blight), red mite, black-spot of apples and pears, and peach-curl in such orchards.

The accepted method of effectively dealing with these orchard pests and blights is that of spraying, different sprays being used as required. For instance, the codlin-moth grub, which directly feeds upon the fruit, is destroyed by keeping the fruit covered with a film of arsenate of lead during the few months when this pest is active. It has been found that this compound renders the skin, when eaten, noxious to the insect, which is thus destroyed. On the other hand, scale insects, woolly aphis, and red mite feed upon the juices of the fruit, stem, and foliage by means of a beak which penetrates the surface and sucks up the natural juices of the plant. For such pests, it will be readily seen, arsenate of lead would be useless as a remedy. The present method is to destroy them with a contact spray, which is effective as soon as they receive a coating of the mixture, this being generally of a caustic or oily nature.

Black-spot on the apple and pear is a deformity of the surface of the fruit, which is not due to insects at all, but a parasitic fungus, for the prevention of which a different spray, again, must be used. During the period of the year when this blight is prevalent it is customary to cover the surface of the fruit-tree with a spray, which prevents the almost invisible spores of the fungus from germinating and establishing themselves in the fruit or leaves.