

producing an offensive mass and greatly injuring the value of the whole bunch. When full grown it makes a case out of a portion of a leaf that it cuts for the purpose, and there passes through the chrysalis stage. The tiny moth is slate-blue in color with red-brown markings on the forewings. The winter, so far as known, is spent in the chrysalis stage, and therefore the insect may be destroyed by burning the leaves in the autumn. All fallen fruit should be regularly gathered up and fed to pigs or deeply buried in the earth. Where a few choice vines only are grown it will be quite worth while to cut out all discolored berries as soon as they are noticed and get rid of the worms before they have extended their injuries to others.

FUNGUS DISEASES AFFECTING THE GRAPE.

BLACK ROT (*Guignardia Bidwellii*), Fig. 62. Attacks both leaves and fruit of the Grape, producing conspicuous circular reddish brown spots on the former. The fungus causes the fruit to rot, the color at this stage being brown, but later on the berries become dried up, forming wrinkled, brownish or black, hard mummy-like bodies which adhere to the vine for some time. When the surface of the grape is examined closely it is found studded with innumerable small black dots, the fruiting bodies of the fungus. Spraying with Bordeaux mixture should begin about the first week in June or just before the blossoming period; the second application should be made about three weeks later, and the third about two or three weeks later still. Three thorough sprayings will keep the disease under control



Fig. 62. A cluster of grapes rendered worthless by Black Rot.

DOWNY MILDEW, or BROWN ROT OF THE GRAPE (*Plasmopara viticola*). This fungus attacks the leaves, petioles and young shoots, tendrils and fruit of the Grape. The disease first appears as yellowish spots on the upper surface of the leaves. These increase rapidly in size and number,