

evening when the atmosphere is still. Never fumigate during a high wind.

Condition of Foliage and Fruit.—Do not fumigate vines in the early spring when the foliage is very tender. The fruit should be as large as small marbles, and the shoots should have hardened before the first fumigation. The plants and top soil should be dry; moisture absorbs the gas and renders the atmosphere less poisonous to insect-life. Moisture on the foliage will take up the gas, and, acting as a diluted acid, cause extensive burning of the leaves.

Fumigating-material.—The cyanide to be used must be 98 per cent. pure; lower percentages have occasioned severe burning. For every 100 cubic feet of space in the house use $\frac{1}{3}$ oz. by avoirdupois weight of cyanide of potassium, $\frac{1}{3}$ oz. by measure of commercial sulphuric acid of 1.843 specific gravity, 1 oz. of water by measure.

Method of applying the Chemicals.—Provide earthenware basins that will hold from 6 to 12 quarts according to size of house to be fumigated—a basin for every 10 ft. of the house. Divide the quantity of the chemicals by the number of basins, then place the water and sulphuric acid in the basins and put them in position. Weigh out the cyanide into pieces of paper or saucers and place one at the side of each basin. The cyanide may want breaking up into pieces; it should not be in lumps larger than a filbert nut. When all is ready and all openings closed excepting the door, commence at the far end and put the cyanide into the acid and water, taking care to keep the head away from the gas arising, and work backward and out of the door. When this is accomplished close the door and leave the fumes in one hour. When fumigating in the dormant season—viz., when the leaves are falling—the gas may remain all night. The doors and ventilators should be thrown open at the end of the hour and nobody permitted to enter the house for thirty minutes, and then with caution if the gas can be noticed.

Caution.—When breaking up or handling the cyanide on a warm evening with the hands perspiring, the hands should be washed immediately on finishing. If the quantity to be prepared is large, the hands should be washed more than once and the mouth washed out with water. In handling the sulphuric acid it should be poured into the vessels without splashing, as it will burn the hands if these come in contact with it.

Example of calculating the Cubic Contents of a House for the Quantity of Chemicals required.—Assuming the size of the house is 51 ft. long,