Owing to the difficulty of applying and the cost of making the concentrated Bordeaux mixture as first prepared, many other copper salt compounds have been tested, with the result that many were discarded, while a few were recommended for trial. Copper sulphate, or blue-stone, having entered into all mixtures giving favourable results, the number of formulæ recommended has gradually lessened with each year's experience, till at the present time the fruit grower needs not burden his mind with a bewildering array of receipts or formulæ, almost as numerous as the legion of enemies which attack his orchards and vineyards.

As a result of experiments conducted in 1892, the writer recommended a modified formula for the preparation of *Bordeaux mixture*. This was given to the public by means of a bulletin and by circulars issued during 1892 and 1893. Prof. Green of the Ohio Experimental Station also recommends this formula. The formula is as follows:—4 pounds of copper sulphate, 4 pounds of lime and 50 gallons of water. The cost of this need not exceed one-half cent per gallon, and it admits of the addition and application of Paris green at the same time. *Ammoniacal copper carbonate* was also recommended at that time. This will not be used as freely as Bordeaux mixture on account of its greater cost and the increased labour of preparing it. For spraying late in the season, when stains on the fruit are undesirable, copper carbonate is the most useful agent yet discovered. In copper sulphate we have the base or foundation of both the above mixtures, and a very effective fungicide to apply *before the foliage appears*. With this trio, backed up by intelligence and perseverance, the fruit grower may largely increase the revenue derived from his orchard.

As the treatment is entirely preventive, in order to make spraying effective it must be commenced early. All parts of trees or plants, must be reached with the preventive agent. Drenching is not necessary and is expensive. A thin film or coating of the fungicide deposited upon the foliage in the form of a misty spray will prevent the development of the spores better than a complete soaking which will run off like a shower of rain; but it is important that all the leafy surface should be well covered, and on this thoroughness of the work will depend the ultimate success of the undertaking.

SPRAYING MIXTURES.

The following fungicides are those which experience leads me to recommend:—

Copper sulphate..... 1 lb.
Water.....25 gallons.

This should be used *only before* the foliage appears. It is easily applied and acts as a general germicide and disinfectant. In simple solution Copper Sulphate is very injurious to foliage. When lime is added as in making Bordeaux mixture, its corrosive action is neutralized and injury to the foliage prevented. In this way a larger quantity of blue-stone may be used, and it adheres to the foliage better by the agency of the lime.