

It does appear that with all confidence the use of iron sulphate may be recommended as an antiseptic to pear and kindred blights, but it should be applied to the soil as a fertilizer also.

Next let us briefly consider one or two more of the most important cryptogamous diseases, taking first Black Knot (*Spheria Morbosa*). It is scarcely necessary to occupy space in describing the Black Knot in our day; but for the benefit of some who very properly like to consider the nature of a disease, and the principles of the remedy, I shall call attention to the fact that the old theories of it being a mere disease like gout, or what naturalists term a gall, produced by some unknown insect depositing its egg in the twig have all exploded, but that it is a parasitic plant is proven beyond any doubt.

The remedy generally given for this disease is removing with a knife; but a preventive may reasonably be expected in washing the plum or cherry tree with a solution of iron sulphate, for two reasons at least: 1. The action of this salt upon the cellulose of the cell wall of all these lower cryptogamous or parasitic plants is the same, viz.: destroying the cell wall by perforation, and thereby destroying the life of the plant. 2. The study of the life history of the Black Knot shows that the spores fasten themselves upon the surface bark, and send their hyphæ into the young bark the season previous to their breaking through and forming the "dense psuedo-perenymators tissue" which rapidly grows into the knot-like mass.

Before the iron sulphate is applied as a wash to the trees (plum, cherry, or pear), all dead branches, and in case of the plum and cherry, all limbs bearing the black knot should be removed and burned; for it is not claimed for the remedy that it will raise the dead, but that it is more of a preventive than a curative. Its use has always proven conducive to a healthy, vigorous growth of the pear, and we see no reason why it should not apply equally as well to the plum.

MILDEW.

Perhaps in dealing with this disease I cannot do better than give a synopsis of two articles that appeared on this subject in the rural *New Yorker*, January 30, and February 6, 1886. In these articles two varieties are described and commented upon, and as the nature and life histories of the varieties of mildews dealt with, agree so well with the description given by the best works on plant physiology, such as Bessey, we are induced to give them some consideration.

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