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AN IMPORTANT DISCOVERY TO APPLE GROWERS.

The Woolly-Aphis or Apple-Root Plant-Louse is believed to be doing more damage to the apple orchards of South Missouri than all other insect pests and diseases combined. This pest has not made its appearance in alarming numbers in the orchards of North Missouri, but is troubling the nurseries to some extent. The Missouri Experiment Station has made a large number of experiments with different methods of combating this insect, and has devised cheap and efficient means for exterminating it. The results of these studies are published in Bulletin No. 35 of the Station, by Prof. J. M. Stedman. These results may be briefly summarized as follows:

The limb form of this insect can be readily killed by one or two thorough sprayings with strong kerosene emulsion. Apple seedlings, buds, and grafts should be planted in a small trench filled with finely powdered tobacco or tobacco dust and lightly covered with earth. This will keep the woolly-aphis away. Apple nursery stock should have a liberal supply of tobacco dust applied to the roots every spring in order to kill the woolly-aphis and prevent it from establishing itself there. It should be applied by re-

nursery stock should have the roots cleaned and dipped for a minute in strong kerosene emulsion in order to kill the woolly-aphis that may be there. In planting apple trees tobacco dust should be freely used among and over all the roots, and close around the trunk, in order to kill and prevent the woolly-aphis from establishing itself there. Every spring, as soon as settled warm weather appears, each tree should have a liberal supply of tobacco dust applied to its roots by removing the earth from around the trunk for a distance of two feet and four inches in depth, evenly filling this with the tobacco dust and covering it with earth. The root form of the woolly-aphis may be cheaply and easily killed and kept away from an apple tree by the liberal use of tobacco dust. About five or six pounds of this substance should be applied as above directed to the roots of every infested tree, and one-half this amount should be applied in a similar manner each succeeding spring. Costing approximately two cents per tree per year. This insect may also be killed by injecting one fluid ounce of carbon bisulphide two feet away from the trunk on two sides of the tree, but the use of this substance is not advised except in extreme cases, since a little carelessness may injure the tree, and it is always better to immediately