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Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

BROWN ROT IN GRAPES.

IN a bulletin soon to be issued by the Ohio Experiment Station, Dr. C. M. Weed gives the following account of the downy mildew, or brown rot, of grapes :—

For many years the vineyardists of the great fruit belt in northern Ohio along the southern shore of Lake Erie have been troubled by a disease affecting the foliage and fruit of the grape, called "downy mildew," or "brown rot." At times this disease has ruined nearly the entire crop, and has threatened to destroy the vineyard industry over a large area. Fortunately, however, this disaster has been averted by the discovery of a method by which the disease can be largely or entirely prevented at comparatively slight expense.

The downy mildew, or brown rot, of grapes is a fungous disease; that is, it is a diseased condition of the foliage or fruit, due to the presence of a fungus. This fungus is a minute parasitic plant that develops at the expense of the tissues of the grape, thus causing blighting of the leaf, and decay of the fruit. It is distributed over nearly the entire eastern half of the United States, and occurs upon both the wild and cultivated varieties of grapes. It probably lived upon the former before the introduction of the latter. It attacks all the green parts of the vine, including the young shoots, as well as the leaves and berries, and, like other fungi, reproduces by means of spores,— minute bodies corresponding in function to the seeds of flowering plants.

When one of these spores falls upon a leaf where there is sufficient moisture, it germinates by sending out a little tube,— something as a kernel of corn in moist soil sends out its germinating radicle,— and this tube penetrates the epidermis, or skin, of the leaf. Once inside, the tube continues to grow, pushing about between the cells of the leaf, and forming what is called the mycelium or vegetative portion of the fungus, which may be likened to the roots of higher plants. As there is little nourishment to be obtained between the cells, this mycelium develops minute processes, which push through the cell walls and absorb the contents.

After this mycelium has developed in the leaf for some time, it is ready to produce its spores. Consequently it sends out through the breathing-pores, or stomata, of the leaf, its fruiting branches. These bear upon their tips small oval bodies, which are the spores. The "mildew," which is visible to the naked eye, is composed of these fruiting branches and their spores. It only develops under certain atmospheric conditions, so that the mycelium may exist in the affected parts of the vine for some time before this outward manifestation of its presence occurs. This is the reason that a vineyard may apparently be "struck" with mildew in a single night.

Besides the spores above described, which are produced during the summer season, and consequently are called summer spores, there is developed in the fall a different class of spores by which the fungus passes through the winter. Hence these latter are called the winter spores.

A knowledge of the method of development of the fungus makes it evident that it cannot be reached after it has penetrated its host. Consequently remedial treatment must be limited to destroying the spores, and preventing their ingress to the tissues of the plant. The experience of the last few years has shown that this can be successfully accomplished by spraying the vines with dilute solutions of certain salts of copper, particularly sulphate of copper, or blue vitriol.

Experiments with these copper compounds as preventives of the several fungous diseases of the grape have been in progress in France for a number of years, and have been attended with remarkably successful results. The subject was taken up in America about the middle of the last decade, and wonderful progress has since been made. The Ohio station feels largely indebted to the United States Department of Agriculture for the results obtained, especially to Messrs. Scribner and Galloway, who have had the work in charge. In Ohio the first experiments were apparently made by Mr. George M. High, of Ottawa County, who for the last five years has tested the remedies thoroughly, and has triumphed over the unprogressive growers who were content to let the disease destroy their crops rather than try any new-fangled methods of checking it.

THE NAME "AMERICA."

AT the eighth international congress of Americanists, which was held in Paris from Oct. 14 to Oct. 20, 1890, only a certain number of the questions treated were of interest from a geographical point of view. Among these may be mentioned the discussion on the origin of the name "America," which was opened by M. Jules Marcou, who asserted, as we learn from the "Proceedings of the Royal Geographical Society," London, that the name "America" was derived from a range of mountains in Central America, which, in the language of the natives, is called "Amerique;" and that Vespucci never bore the Christian name of "Amerigo," because this latter is not a saint's name in the Italian calendar; and, further, that he changed his name "Alberico" to "Amerigo" for the first time after the name by which the New World is now commonly known began to be used, in order to cause it to be believed that the continent was so named in his honor. But M. Govi proved two years ago that the name "Alberico" is in the Florentine language identical with "Amerigo;" and that Vespucci, before the year 1500, sometimes subscribed himself "Amerigo" appears from a letter recently discovered among the archives of the Duke of Gonzaga at Mantua. This point was corroborated by the Spanish-Americanist, De la Espada, from letters and pamphlets preserved in the Archiv de las Indias at Seville, in which Vespucci sometimes calls himself "Alberico," and sometimes "Amerigo." *En passant*, the Spanish *savant* mentioned the interesting fact that the first of the so-called "quatuor navigationes" was not made by Vespucci at all.

M. Hamy adduced a further interesting proof of the incorrectness of M. Marcou's contention, in the shape of a map of the world prepared in the year 1490 by the cartographer Vallescu of Mallorca, on the back of which is a note to the effect that the map was bought in at an auction by the merchant Amerigo Vespucci for 120 gold ducats. Further, the general secretary of the congress, M. Pector, pointed out, that, according to a communication received from the president of Nicaragua, the range of mountains in question is not called "Amerique" at all, but "Amerisque." After this very thorough discussion of the question, it is to be hoped that the accusations against Vespucci and Hylacomylus may not be heard of again. An important contribution to the cartography of America was furnished by the paper read by M. Marcel upon two globes discovered by him, which date back probably from the year 1513.