APPEARANCE OF A NEW POTATO DISEASE IN NORTHEASTERN COLORADO

A NEW disease, apparently caused by the feeding of the pentatomid (*Chorochroa sayi* Stål), has appeared in the potato fields of northeastern Colorado.

On July 20 calls from farmers in Morgan County, Colorado, brought attention to what seems to be a general condition in the medium-early and late plantings of potatoes. The pentatomids were found associated with the disease in every case of the several hundred plants examined.

Cage experiments at the Greeley Potato Experiment Station begun on July 31 with plants known to be free of psyllids and disease, have demonstrated that the Say's pentatomid, feeding on the plants, is definitely responsible for the condition.

Medium-early plantings show 15 to 20 per cent. of diseased plants, while many late plantings in the Greeley area show 50 to 60 per cent. of pentatomid-affected plants.

The feeding may cause a complete wilting of the leaves or tips of the plants. Where the feeding is confined to the stems of the lower part of the plants, the symptoms become more general. Associated with the feeding is a basal curling of the terminal leaves, a yellowing followed by a reddish discoloration along the margin and an erect condition of the affected foliage. The tubers may be produced in chains or, in the more mature tubers, serious bumpiness and malformation may occur. The number of insects on each plant determines the severity of the disease. In the Morgan County area, an average of eleven adult insects was found on each plant. Plants attacked by three or four insects were only mildly affected, while those on which there were nineteen or twenty adult insects showed extreme symptoms.

The disease is very similar to "psyllid yellows," caused by the tomato psyllid, *Paratrioza cockerelli* (Sulc.).

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REPORTS

THE VULCANIZATION OF RUBBER

THE centenary of the discovery of the vulcanization of rubber by Charles Goodyear was celebrated on Wednesday, September 13, at the ninety-eighth annual meeting of the American Chemical Society. Numerous papers describing the progress of rubber research and manufacture in the United States were read at a general meeting in the afternoon.

At the banquet in the evening, Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, spoke on "Looking Forward in Research"; Dr. James Bryant Conant, president of Harvard University, discussed "Lessons from the Past," and P. W. Litchfield, president of the Goodyear Tire and Rubber Company, Akron, Ohio, described "Rubber's Position in Modern Civilization."

In his address Dr. Compton said:

A good deal has been said about the ways in which science has been applied to make warfare more destructive, just as science has also been applied to bring about a certain compensating degree of protection against new weapons. But there is one possibility in science which seems to me to be far more significant than these, namely, the use of science to remove some of the major causes of war.

In so far as wars are caused by the natural "cussedness" of human nature, science can contribute if at all only very indirectly. It can probably not do much toward removing the desire which some men have for great domination. It can not remove ambition and envy from the human breast. But in so far as wars may be induced by economic considerations, science may do much to remove the causes.

One of the earliest incentives to war was the invasion of one country by another for the purpose of loot. Later, as we became more civilized, this took the form not so much of loot as of the control of population for the purposes of taxation and of exploitaton of labor and of natural resources. This is all part of the old primitive instinct of animals and men to secure the good things of life by taking them from someone else.

Science, however, has given mankind a method of gaining the good things of life without taking them from someone else and without working inordinately long and hard to produce them. Discovery and development of "good things of life" by science, engineering and invention are a far more certain and productive source than organized loot and robbery. To the extent therefore that great groups of people, such as nations, can be induced to support technological development directed toward these ends, to that extent can they satisfy their desires, without recourse to war.

More specifically, many nations have felt the urge to conquest in order to secure to themselves an assured supply of various materials which are necessary to the nation's economy. For example, Great Britain needs oil for her navy and food for her population, which can not be produced in the British Isles. Germany and Japan need rubber, food stuffs and mineral resources. Even the United States, richest of all nations in its mineral resources, is inadequately supplied with such important materials as rubber, tin and tungsten. Does national safety force these nations to conquest in order to assure themselves of these commodities?

The necessities of national economies could be taken care of by scientific research at a cost far less than that of a major war and within a time far less than that in which the effects of a major war could be recovered from. At