

COMPARATIVE RESISTANCE OF DIFFERENT VARIETIES

During the four seasons 1932-33 to 1935-36, inclusive, different varieties of tomatoes were tested for comparative resistance to *Phoma* infection and other diseases. Results of 1932-33 and 1933-34 tests are shown in Tables 9 and 10.

As with the spray tests, each variety was divided into an equal number of plots; half of them were sprayed with 4-4-50 bordeaux and the remaining half left unsprayed as checks. At each picking all uninjured marketable fruits were taken from both the sprayed and the check plots and stored for readings on *Phoma* rot. As a rule, there were more good fruits at each picking from the sprayed plots than from the check plots, hence the difference in the number of fruits stored from sprayed and check plots of the same variety. Since fruits from these varieties were used only for comparative disease readings, only three replications were the average for sprayed and check plots in each variety.

Although yield data are shown in the tables, the principal objective was to obtain information on the amount of infections developing on the different varieties in the field and in storage. Certain varieties which proved most susceptible in the first tests were not included in succeeding tests because of this and other undesirable characters for local conditions.

The number of fruits examined from each variety for different seasons was determined to a great extent by weather conditions while the experiment was in progress. Because of cold and drought injury during the 1934-35 season and of hurricane and cold injury in 1935-36, the quantities of fruits were too small to yield any significant data.

EFFECT OF FUNGICIDAL WASHES UPON DEVELOPMENT OF ROT

During the 1931-32 season preliminary tests were conducted with several different fungicides and spreaders. Many commercial products tested were discarded along with spreaders and fungicides prepared in the laboratory because of ineffectiveness, objectionable residue or some other objectionable character.

Tests were made also on the effect of time elapsing between picking and treating and period of immersion upon the degree of control of *Phoma* rot. These tests indicated that treatments applied immediately after the fruits were picked were most effective. When applied immediately after picking, variations in the period of immersion seemed to have little effect upon degree of control. All that appeared to be necessary was to