

was also equipped with an inside and outside door with a four-inch space between. On the north side of the building were two small windows, one on either side of the door. The windows were fitted with celotex shutters on the inside so they could be removed whenever necessary to admit light. The building was also equipped with a ventilator system just large enough to effect circulation of air in the room. There were three tiers of shelves on three sides of the room. These were made by fastening six-inch boards to brackets nailed to the wall in such manner that each board was set out about three inches from the wall to permit circulation of air around the fruits on the shelves. The lowest tier of shelves was three feet from the floor, and the space between tiers was 18 inches. The floor of the ripening room was sawdust.

No equipment, other than the construction described above, was used to maintain a constant humidity and temperature in the ripening room. Continuous relative humidity and temperature records were made in the ripening room each season while tomatoes were in storage. These records showed an appreciable fluctuation of temperature and relative humidity from day to night and from one part of the season to another, but the changes inside the room were always smaller than those outside. During warm weather the room temperature was generally 8° to 10° F. cooler than outside, and in cool weather about the same number of degrees warmer. However, in all cases, the temperature and relative humidity were sufficiently high to permit development of *Phoma* rot while tomatoes were in storage.

Chemical Washes:—It was recognized at the beginning of these investigations that if any chemical was to have practical application it must possess fungicidal properties, and be comparatively cheap and non-toxic to human beings. Furthermore, it must not stain or injure the skin of the fruits. The number of chemicals meeting these requirements was limited. Several chemicals used in preliminary tests were later discarded because of one or more undesirable qualities. Preliminary tests also showed the necessity for using a wetting agent in the washes. Investigations with wetting agents also showed limitations in the field for selection. In addition to being non-toxic and causing no stain or injury to the fruit, they must be compatible with the chemical in solution. Certain wetting agents were found which fulfilled these requirements and these are listed in connection with experimental results.