

# EXPERIMENTS FOR THE CONTROL OF PHOMA ROT OF TOMATOES

By W. B. TISDALE and STACY O. HAWKINS

## CONTENTS

	Page		Page
Experimental Methods .....	5	Experimental Results .....	10
Management of Seedbeds .....	5	Spraying .....	10
Management of Field Plots .....	6	Effect of Fruit Wraps .....	20
Storage Room .....	7	Picking Fruit While Wet .....	21
Chemical Washes .....	8	Comparative Resistance of Varieties .....	22
Fruit Wraps .....	10	Effect of Fungicidal Washes .....	22
		Summary .....	27
		Literature Cited .....	28

Phoma rot (*Phoma destructiva* Plowr.) of tomatoes (*Lycopersicon esculentum*) was first reported from Florida in 1915 by Jamieson (2)<sup>1</sup>. In that report it was stated that this fruit-spotting caused great loss to tomato growers in Dade County, Florida, in 1912, but no information was given concerning its occurrence and destructiveness on the plants in the field. However, Jamieson determined through inoculation experiments that the fungus would attack leaves and stems of the tomato plant. The experiments also showed that the parasite could attack tomato fruits only through wounds, growth cracks and stem scars and that the spots developed more rapidly on ripe fruits than on green fruits. These points have since been verified by Rosenbaum (6) and Nightingale and Ramsey (3). Nightingale and Ramsey (4) have reported more recently that the fungus grows best at 70° F. and causes most rapid decay of ripe fruit at this temperature. At 45° F. decay developed very slowly, even in ripe fruits. They also stated that slower decay in green fruits was due to a more acid condition than exists in ripe ones.

Since Phoma rot was first reported in Florida, it has been observed in all of the important tomato-growing states (3) and is said to be most destructive on the winter crop in the Southern states (1). Stevens and Nance (8) reported that it is second in importance as a single cause of decay of tomatoes in transit from Mexico and those tomato-shipping states (California, Florida, Mississippi, Tennessee and Texas) having the largest number of market inspection certificates for the nine-year period,

<sup>1</sup>Italic figures in parentheses refer to "Literature Cited" in the back of this bulletin.