A FURTHER REPORT ON VARIATIONS IN VARIETAL SUSCEPTIBILITY TO RED STELE IN STRAWBERRY FIELDS OF OF COASTAL BRITISH COLUMBIA

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In 1962, Daubeny and Pepin (1) reported that the incidence of red stele, caused by Phytophthora fragariae Hickman, in strawberry fields of coastal British Columbia was widespread. Since that time, additional outbreaks of the disease have been noted. Particular attention has been paid to incidences of the disease in test plantings of three new varieties, Columbia, Cascade and Molalla, at various locations throughout the area. Two of these varieties, Columbia and Molalla, had been released as showing some resistance to red stele (2). It had been thought that either or both varieties might, show greater resistance to red stele than Siletz, which has been the standard for resistance in the Pacific Northwest (1).

In 1962, the three new varieties were planted in various fields throughout the southwest coastal area of British Columbia. Examinations for red stele were made in 1963 and again in 1964. The reaction of Columbia, Cascade, or Molalla to tho disease was compared to the reaction of Siletz, Northwest, British Sovereign, or Puget Beauty in the various fields (Table 1).

Table 1. Variations in varietal susceptibility to red stele in different strawberry fields of coastal British Columbia

Variety	Field[1]					
	A	B	C	D	E	F
Columbia	R	S	R	S	S	Sl
Cascade	-	S	S	-	S	S
Molalla	R	-	R	-	S	R
Siletz	R	S	R	R	S	R
Northweat	S	S	S	-	S	S
British Sovereign	-	S	S	S	S	S
Puget Beauty	R	S	R	-	S	R

R = Resistant S = Susceptible Sl = Slightly susceptible

[1]Location of fields: A - Bradner; B - Bradner; C - Yarrow; D - Lulu Island; E - Lulu Island; F - Saanichton Experimental Farm.

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Siletz and Molalla showed identical reactions to red stele in the fields where both varieties were grown (Table 1). Columbia was susceptible and slightly susceptible, respectively, in two fields in which Siletz and Molalla were each classed as resistant. Except for field F, Columbia showed a reaction similar to Puget Beauty in each field where the two varieties were tested, Like Northwest and British Sovereign, Cascade was susceptible to red stele in each of the fields in which it was tested,

The presence of different races of P. fragariae is indicated by variations in varietal reaction. It is obvious that fields A and E contain one or more races different from the races in fields B, C, D, or F. It is quite possible that further variations in varietal susaeptibility would be indicated by testing additional varieties or by increased sampling. Work is now underway to determine the actual race or races of P. fragariae present in each of the fields by isolating the organism and subsequently testing its reaction against a standard set of indicator varieties as described by Pepin and Daubeny (2).

Literature Cited

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