OBSERVATIONS ON STRAWBERRY GREEN PETAL IN PRINCE EDWARD ISLAND

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Data obtained from replicated strawberry variety trials being conducted at the Experimental Farm, Charlottetown, indicated high levels of green petal infection in 1966 (Table 1). Notes on clonal infections in first-year bearing plots were taken near the end of the fruiting period. A clone was considered infected if any part of the clone displayed symptoms characteristic of the disease. Infections were generally high and there was a wide variation among varieties. The two varieties which are grown widely on a commercial basis in Prince Edward Island, 'Redcoat' and 'Sparkle', were 28 and 60% infected, respectively. These levels of infection were frequently observed by the authors in commercial strawberry plantings in 1966. Higher levels of infection in the 'Sparkle' variety have been observed over the past several years.

In the early spring of 1966 a number of plants were removed from eight of the plots referred to above and transplanted in replicated plots for a future experiment. In early July notes were taken on green petal infections (Table 1). The percentages of infected plants ranged from 0 to 87. No disease symptoms were evident at the time of transplanting.

Surveys of commercial strawberry plantings which had been transplanted in the spring of 1966 showed that the use of granular Di-Syston applied as a sidedressing was much more effective than malathion sprays in controlling green petal infections in strawberry nurseries from which the plants had been obtained (Table 2).

Summary

The incidence of green petal in strawberries was particularly high in Prince Edward Island in 1966. The data obtained provide evidence that spray programs using malathion are not as effective as systemic insecticides, such as Di-Syston, in the control of green petal infections in the year of transplanting. Evidence is provided which substantiates the desirability of planting nursery stock which has been propagated under a proven disease control program. Further evidence also indicates that the variety 'Sparkle' is more susceptible to green petal than the other varieties currently being grown commercially in Prince Edward Island.

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Table 1. Green petal infections in strawberry varieties, 1966

Variety	1st-yearbearing, 1966 Infected Clones/ Total	1st-yearbearing, 1966 % Mected Clones	Transplanted, 1966(a) Mected Plants/ Total	Transplanted, 1966(a) % Infected Plants
Acadia	12/40(b)	30		
Agassiz	32/36	92	14/37	38
Fletcher	3/35	8	0/39	0
Frontenac	2/2	100		
K-59-8	2/40	5		
K-59-26	15/38	39		
K-59-28	9/40	23		
Midway	30/40	75		
Molalla	26/40	65	34/39	87
Northwest	22/36	61	10/38	26
Puget Beauty	15/40	38	11/33	33
Redcoat	11/40	28		
Red Gauntlet	25/40	63		
Senga Sengana	16/40	40		
Siletz	4/34	12	0/7	0
Sparkle	24/40	60		
Surecrop	17/40	43	4/39	10
Talisman	25/40	63		
Vesper	15/40	38	3/40	8

(a) Plants were dug in early spring from plots on which no insect control program had been followed the previous year.
(b) Totals for 4 replications.

Table 2. Green petal infections in strawberry nursery stock plants

Variety	Green petal vector control program: Foliage spray (a)	Green petal vector control program: Soil systemic (b)
Acadia	8-10 (c)	0
Cavalier	10-12	0
Redcoat	8-10	0
Sparkle	15-20	< 1

(a) Malathion applied at 1 qt./acre from transplanting to late fall at weekly intervals.
(b) Di-Syston applied as a 10% granular formulation at 40 lb./acre immediately following transplanting.
(c) Percentage of nursery stock plants which developed green petal symptoms in 1966.