Agri, Res. J. Kerala, 19 (1) 116—117

INFLUENCE OF AGE OF PLANTS ON CASSAVA BACTERIAL BLIGHT INCIDENCE AND DEVFLOPMENT*

Cassava bacterial blight incited by *Xanthomonas manihotis* (Arthaud-Berthet) Starr. is one of the most serious diseases reported on this crop (Costa, 1940; Lozano 1975). This disease was reported for the first time from Brazil by Bondar (1972) and from Kerala by Paily *et al.* (1975). The influence of the age of the plant in the incidence and development of disease was studied in view of the potentially serious nature of the disease.

Cassava variety H–165 was used for the studies and setts were planted in pots at monthly intervals for 9 months and artificial inoculations were made with a 24 hour old bacteria! culture of 0. D. 0.80. The experiment was laid out in a completely randomised design with 15 plants per treatment. The treatments were cassava plants of age 1 month to 9 months (T_1–T_9). Observations were recorded on the percentage of wilted leaves and disease index.

The results are presented in Table 1. In both the methods of evaluation, it was observed that as the age of the plants increased, the disease incidence and development were decreased. One month old plants were observed to record a significantly higher infection through both the methods of evaluations. According to the evaluation by percentage of wilted leaves, the 2, 3, 5, 7, and 9 month old plants were on par with significantly lower disease incidence and development than in one month old plants. These plants showed higher disease incidence and development than 4,6 and 8 month old plants.

In the evaluation by disease index, one month old plants showed higher rate of infection than plants aged 2, 3, 5, 7 and 9 months. Plants aged 4, 6 and 8 months registered a lower rate of infection than others. Further, the 4, 5, 6, 7, 8 and 9 month old plants formed a group without significant difference amongst them but showing significantly lesser infection than the 1, 2 and 3 month old plants.

An attempt was also made to correlate the age of the plants with disease. The results of the studies indicated that there was a negative correlation between age of plants and disease incidence ($r = -0.6249$) and development ($r = -0.7147$), Maraite and Meyer (1975) obtained infection in cassava plants aged 17 and 5 months consequent on artificial inoculation. It is indicated that eventhough cassava plants of all ages are susceptible to the disease, maximum disease incidence and development occurred in early growth stages of 1 -3 months.

The authors are grateful to the Kerala Agricultural University fot granting permission for publishing the paper which formed part of the M. Sc. (Ag.) thesis of the first author and for the financial assistance.

* Part of the Thesis of the first author, approved by the Kerala Agricultural University for the award of the M. Sc. (Ag.) Degree.

Table 1

Influence of age of cassava plants on the incidence and development of bacterial blight.

Age of the plants in months	* Percentage of leaves wilted.	Disease index
1	82.62	4.53
2	55.19	2.87
3	57.23	2.47
4	29.95	1.73
5	41.36	2.27
6	30.19	1.80
7	51.36	2.33
8	29.75	1.53
9	45.74	2.07
CD (P= 0.01)	21.85	0.816

Values given after angular transformation

സംഗ്രഹം

മരച്ചീനി ചെടികളുടെ പ്രായവും ബാക്ടീരിയൽ ബ്ലൈറ്റ് രോഗത്തിന്റെ ആക്രമണവും തമ്മിലുള്ള ബന്ധത്തെപ്പറ്റിയുള്ള പഠനത്തിൽ നിന്നും എല്ലാ പ്രായത്തിലുമുള്ള ചെടികൾക്കും രോഗമുണ്ടാകുമെന്നും ഇളം പ്രായത്തിൽ (1–3 മാസം) രോഗം താരതമ്യേന കൂടുതലായി വരാൻ സാദ്ധ്യതയുണ്ടെന്നും കണ്ടു.

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(M S Received: 3-6-1980)