

A Note on the Incidence and Severity of Leaf Blight of Arecanut Caused by *Phyllosticta arecae* in Karnataka

Leaf blight of arecanut (*Areca catechu* Linn.) caused by *Phyllosticta arecae* Hohnel, has assumed severity during recent years in the gardens of Uttar Kannada district. The pathogen infects foliage of plants of all age groups including young seedlings and reduces the yield. Rao (1964) and Seshadri *et al.* (1972) have recorded the occurrence of this fungus. However, information is lacking on its incidence and intensity on various age grouped plants. Therefore, extensive survey for disease incidence and severity in the arecanut gardens of Uttar Kannada district was carried out in this study.

Twenty four villages in six taluks of Uttara Kannada district were selected. For the convenience, the plants were grouped into three categories viz., (i) plants below 4 years, (ii) plants 4-10 years and (iii) plants above 10 year. One garden in each village was selected and ten trees of each age group were randomly marked in each garden.

Incidence was calculated by counting total number of plants present in the garden and total number of plants infected with blight. The disease intensity was assessed on all the leaves from the selected plants by following disease assessment key developed by Bhat (1983). One leaflet representing the leaf infection was selected from leaf and they were scored with the help of key. The average infection per leaf and per plant were calculated using Naumoff (1924) formulae. Subsequently the per cent disease index was calculated as per the formula of Wheeler (1969).

The observations indicated that the blight was common irrespective of age of the seedlings. It means all the plants showed susceptibility to the attack of *P. arecae*. The severity of infection varied from garden to garden in a village, village to village in a taluk and taluk to taluk in the district. However, maximum disease index of 16.88, 22.82 and 14.38 per cent was seen on below 4, between

Table 1. Average infection (%) and disease index on arecanut plants.

Sl. No.	Taluk	Infection per leaf			Infection per plant			Per cent disease index		
		Age group (years)			Age group (years)			Age group (years)		
		< 4	4-10	> 10	< 4	4-10	> 10	< 4	4-10	> 10
1.	Kumta	9.93	14.26	10.04	5.43	9.00	4.86	16.88	22.82	14.38
2.	Honnar	6.38	13.17	8.95	4.98	8.09	4.23	15.52	20.80	12.96
3.	Bhatkal	7.58	10.75	8.46	3.19	4.97	2.77	10.49	14.09	8.67
4.	Yellapur	7.25	12.76	9.44	3.83	6.81	3.69	13.95	18.01	11.08
5.	Sirsi	7.20	12.25	9.04	2.93	6.50	3.43	9.84	17.64	10.97
6.	Siddapur	9.68	14.80	10.84	4.30	8.35	3.58	12.80	20.69	10.51

4-10 and above 10 year old palms, respectively in Kumta taluk followed by Honnavar. The same were 10.49, 14.09 and 8.67 per cent, respectively in Bhatkal taluk (Table 1). The percentage of infection per leaf and plant varied considerably from plant to plant in all age groups. Bhat (1983) also observed this kind of variation on arecanut plants and recorded maximum infection on the plants which were 4-10 years old. It is clear from Table 2 that the lower most leaf had maximum infection and gradually decreased from older to younger leaves. The top leaves were free from infection in all the age groups. This indicates that *P. arecae* infects the leaves which are depleted in sugar levels. These findings were supported by Bhat (1983).

Table 2. Leaves infected by *Phyllosticta arecae* on arecanut plants (%)

Position of the leaf from top	Age groups of plants in years		
	Below 4	4-10	Above 10
First	0	0	0
Second	0.17	0	0
Third	1.42	0.75	0
Fourth	5.42	2.58	0
Fifth	10.58	3.75	0.25
Sixth	—	8.67	3.00
Seventh	—	15.67	5.50
Eighth	—	23.92	12.25

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