

Survey on sapota diseases in Belgaum district of North Karnataka

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ABSTRACT

An experiment was conducted during 2002-2004 at K.R.C College of Horticulture , Arabhavi . During 2002, the *Phaeophleospora* leaf spot index was the highest (15.07%) in the month of November followed by October(14.25%) and December (12.71%) .In 2003, the disease intensity was highest (24.40%) in the III week of December (28.03%) followed by I week of December (24.40%). During 2004, the highest leaf spot disease intensity was recorded in the III week of December(23.14%) followed by I week of I week of December (22.04%) and III week of October (19.81%). With regards to correlation coefficient determination (R^2 values) was 0.98%. This indicates that 98% of the variation explained by the function of weather parameters. The PDI was positively correlated with maximum temperature , morning relative humidity and evening relative humidity.

Key words : *Phaeophleospora indica* , Sapota, Leaf spot.

Sapota *Manilkara achrus* (Mill) Forberg is one of the delicious fruits of humid tropical and subtropical regions. India is a leading producer of sapota ,where it is commercially grown in the states like Maharashtra, Gujarat, Karnataka, Andhra Pradesh, TamilNadu and West Bengal . The area under sapota in India during 2000-2001 was 69,400 ha with a production of 6.74 lakh tonnes. In Karnataka , it is grown in an area of 20,216 hectares with a production of 1,93,737 tonnes (Anon, 2001). In view of its better adaptability to varied agroclimatic conditions and higher productivity , the area under sapota is increasing at a faster rate .

Sapota is an evergreen tree with luxuriant growth throughout the year and under moist tropical conditions, it attracts many diseases and pests . However ,with intensive cultivation of this crop in various states numerous diseases and pests have been reported to cause economic losses to the crop. The crop is affected by several diseases. Among these, leaf spot caused by *Phaeophleospora indica* is economically important. It was reported by Chinnappa (1968) and since then it is becoming serious disease in Karnataka ,Tamilnadu and Maharashtra . Hence,the present investigation was undertaken to find out the epidemic for the leaf spot disease in tropical climate (Arabhavi conditions)

MATERIALS AND METHODS

Fixed plot survey was conducted during 2002, 2003 and 2004 with respect to sapota diseases .Observations were recorded at I and II week of every month with respect to sapota diseases . The weather parameters viz.,

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maximum temperature , minimum temperature, relative humidity in the morning , in the evening and rainfall (mm) were recorded from Agricultural Research Station, Arabhavi, Tq Gokak .The average of all the weather parameters were considered while calculating their effect on disease index in terms of correlation analysis .

RESULTS AND DISCUSSION

The experimental results revealed that among all the months the *Phaeophleospora* leaf spot index was higher in the month of November (15.07%) followed by October (14.25%), December (12.71%) and January (12.14%). The lowest leaf spot index was recorded in the month of June (1.52%)(Fig. 1). The weather parameter existed during the month of November was maximum temperature of 29.4°C minimum temperature of 21.90°C, relative humidity of 69.48% and rainfall of 14.2 mm. *Pestalotiopsis* leaf spot was noticed in the month of June, November and December. Sooty mould incidence was recorded in the month of January 2002 (Table 1).With regards to multiple regression, the disease positively correlated with rainfall.

During 2003, the *phaeophleospora* leaf spot index was the highest in the III week of December (28.03%) followed by I week of December (24.40%) and III week of November (18.36%) (Fig.2). The weather parameter existed during the month of December was maximum temperature of 30.00°C , minimum temperature of 20.15°C, morning relative humidity of 75.70% and evening relative humidity of 40.11% .The disease was declined from III week of February to I week of June 2003.

With regards to simple correlation , the disease was positively correlated with morning and evening relative humidity and negatively correlated with minimum