

Research Paper :

Studies on fungal diseases of *Adhatoda zeylanica* Medic

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International Journal of Plant Protection (April, 2010), Vol. 3 No. 1 : 132-134

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SUMMARY

The present investigation deals with the fungal diseases of *Adulsa* (*Adhatoda zeylanica* Medic). *Adulsa* is an important medicinal plant used in traditional as well as modern systems of medicines. Its major biochemical contents especially in leaves are vasicine and vasicinone *i.e.* alkaloids. These are effective in cold, cough, respiratory diseases, hypertensive activity, asthma, dysentery, rheumatic pains and nervous disability. The fungal diseases are responsible for decrease in amount of alkaloids.

Key words :

Adhatoda,
Alkaloids,
Diseases, DSI,
Pathogenicity,
Vasicine,
Vasicinone

Adulsa is an important medicinal plant *i.e.* *Adhatoda zeylanica* Medic belonging to family Acanthaceae. Its leaves are used alone or in combination with other drugs for preparation of expectorants. It is used by Ayurvedic physicians, as it possess important medicinal properties. Leaves are used in rheumatism, gonorrhoea and cough. Dried leaves are used in cigarette preparation, against asthma, diarrhea and dysentery. Flowers improves circulation of blood an useful in bronchitis, ophthalmic and antispasmodic quantities. Roots are diuretic, useful in asthma, vomiting, sore eyes, gonorrhoea and malarial fever. Whole plant is useful in excessive phlegm, snake bite, loss of memory, leucoderma, jaundice, tumors, leprosy, blood impurities, thirsts, heart troubles etc. It is also reported as expectorant (Atal, 1980), abortifacient (Wakhloo *et al.*, 1979) antimicrobial (Doshi *et al.*, 1983) and anticancerous (Kulkarni, 1998). Detailed pharmacological studies were carried out on important biochemical contents of leaves including vasicine and vasicinone as given in Indian Herbal Pharmacopoeia 2002. These are effective in bronchodilatory, respiratory stimulant, hypotensive uterotonic and abortifacient activities. Such commercially important plant is infected by different pathogens *viz.* responsible for decrease in active ingredient *i.e.* vasicine and vasicinone. Hence present investigation has been undertaken to know the fungal diseases.

MATERIALS AND METHODS

The isolation, purification and identification of fungal pathogens was carried out by the method given by Dhingra and Sinclair (1995). Fresh leaves of *Adhatoda* showing typical zonate necrotic brown spots were collected (Plate 1). Leaves were collected from two

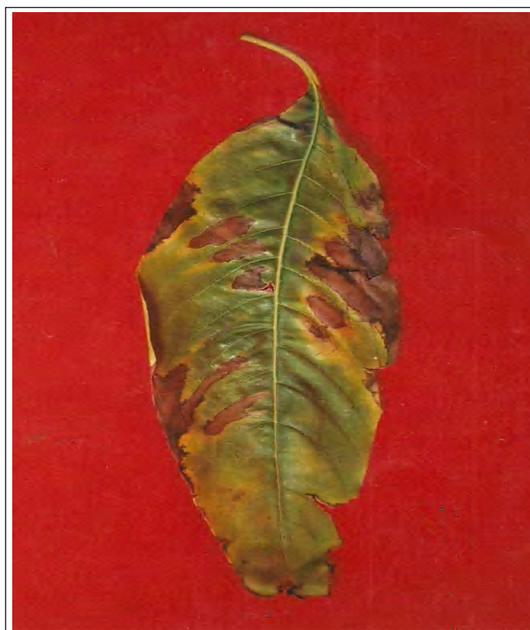


Plate 1 :

districts *i.e.* Parbhani and Nanded in the month of August 2008. Infected leaves were used in the form of bits of 1x2mm from necrotic area for isolation. 20% alcohol and aqueous solution of 0.1% $HgCl_2$ was used for surface sterilization of leaves. Further leaf bits were

Accepted :
March, 2010