



EFFICACY OF SOME LEAF EXTRACT AGAINST FRUIT ROTTING FUNGI

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ABSTRACT

Fruits play a vital role in human nutrition .Fruits are widely distributed in nature .Fruits lose their economic value due to microbial attack. Post harvest losses are more important in accounting food shortage as well as they are perishable. A number of fungi are producing mycotoxins.Unlimited use of chemicals for control of plant diseases have in use for longer period ,Resistance to fungicides is created due to continues use .To overcome this problem some alternative measures such as use of leaf extract may be useful. Growth of fungi like species of *Alternaria*,*Aspergillus* ,*Rhizopus* can be checked with leaf extract of *Annona squamosa*,*Catheranthus roseus* etc.

KEYWORDS: Fig,orange,pathogen.

INTRODUCTION:

In human diet fruits are very important as they are rich in minearls and vitamins.

Fruits are with relatively short shelf life because of high moisture content and nutrient. Handling ,transportation and storage should be proper otherwise fruits get injuries and microbial attack .Fruits like orange and fig are rich source of vitamins and minearls .Oranges are rich source of vit C.Fig are excellent source of vitamins, minearls and antioxidants.Orange and Figs ate fleshy and are attacked by fungi. Present paper deals with efficacy of few leaf extractsxagainst fungal pathogens.

MATERIALS AND METHODS :

The survey of post harvest fungal diseases of some fruits and vegetables in the market was undertaken. Diseased samples Orange and Fig were collected from market and fruit stalls and brought to laboratory ,symptoms were observed.Reapted isolation was carried .Aqueous extract of botanicals namely *Ocimum sanctum*,*Catheranthus roseus*, *Azadiracta indica* ,*Annona squamosa*,were evaluated against fruit rotting fungi applying poisoned food technique.Leaf extract of the test botanicals wrer preapered by grinding with mixture cum grinder.An appropriate quantityof each plant extract was separately mixed thoroughly in autoclaved and cooled PDA medium.Upon solidification of PDA all the plates were inoculated by placing in the center a 5 mm mycelial disc obtained from a week old growing actively growing pure culture of test fungi. These plates were then incubated at 27 C for a week. Observation on radial mycelial growth was recorded and PCE was calculated.

RESULT AND DISCUSSION :**Fungi isolated from Ficus Fruit**

Sr.No.	Fungus	Symptoms
1	<i>Alternaria</i> species	White and brown spots
2	<i>Aspergillus</i> species	Black spots
3	<i>Rhizopus</i> species	White surface and black spots

Fungi isolated from Orange Fruit

Sr.No.	Fungus	Symptoms
1	<i>Aspergillus</i> species	Black to greenish spots
2	<i>Penicillium</i> species	Green to black spots
3	<i>Rhizopus</i> species	White surface ,fleshy creamy spots

Percentage control efficacy of various leaf extract in controlling fungi

Sr No.	Leaf extract	Fungus	PCE
1	<i>Annona squamosa</i>	<i>Aspergillus</i> species	65
		<i>Alternaria</i> species	55
		<i>Penicillium</i> species	44
		<i>Rhizopus</i> species	45
2	<i>Azadiracta indica</i>	<i>Aspergillus</i> species	90
		<i>Alternaria</i> species	80
		<i>Penicillium</i> species	85
		<i>Rhizopus</i> species	86
3	<i>Catharanthus roseus</i>	<i>Aspergillus</i> species	70
		<i>Alternaria</i> species	52
		<i>Penicillium</i> species	50
		<i>Rhizopus</i> species	68
4	<i>Ocimum sanctum</i>	<i>Aspergillus</i> species	71
		<i>Alternaria</i> species	62
		<i>Penicillium</i> species	58
		<i>Rhizopus</i> species	44

Fungi were responsible for the most of decay of fruit during storage .Extract of *Azadiracta* inhibited mycelial growth of *Aspergillus* species up to 90 % , *Rhizopus* species up to 86%, *Ocimum sanctum* inhibited mycelial growth up to 71%etc. The significant inhibitory difference was seen due to different active principle in the different extract.

REFERENCES :

- 1 Jeewa Ram and B.L.Thakore,(2009),Management of storage rot of ginger by using plant extracts and biocontrol agents. J.Mycol.Path 39(3):475-479
- 2 L.R.Rathod et al (2010). Utilization of medicinal plants to control seed borne pathogen of selected legume seed .International J.of Advanced Biotechnology and research vol.1:57-59
- 3 Mare Maurice Cohen (2014) Tulsi *Ocimum sanctum* : A herb for all reasons J.Ayurveda Int ,Med. 5 (4) : 251-259
- 4 M.R.Taware et al (2011) Bioefficacy of fungicides ,bioagents ,and plant extracts against *Alternaria carthami* the causal agent of *Alternaria* blight of safflower ,African Journal of Microbiology research .Vol 8 (13): 1400-1412

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- 5 S.P.Patole and T.K.Narute (2011) In vitro evaluation of different botanical extract against *Rhizoctonia solani* infesting soyabean .International Journal of Plant Protection.Vol.4. :315-320.