



Diseases of Medicinal Crops and Their Management Techniques

Dr. Thangjam Subhalakshmi



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Crops and Their
Management Techniques

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First Edition, 2023

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Paperback ISBN: 978-81-19221-39-4

eBook ISBN: 978-81-19221-42-4

WebPDF ISBN: 978-81-19221-40-0

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Printed and bound in India by

16Leaves

2/579, Singaravelan Street

Chinna Neelankarai

Chennai – 600 041

India

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www.16Leaves.com

Call: 91-9940638999

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Ashwagandha

Withania Somnifera L.

DISEASES

1. Leaf Spot

Causal organism: *Curvularia lunata* (Fr.) Keissler

Symptoms: Small, circular to oval dark brown necrotic sunken spots appeared on the leaves. As these spots expanded, centre of the lesion became reddish brown to brown color. In the advance stage of infection, spots appeared on both the surfaces of leaf; affected area lost the mucilaginous gel and leads the death of infected leaves.

Epidemiology: Warm and humid climatic conditions favours the disease.

Management: The disease can be effectively controlled by Ridomyl MZ, Mancozeb, biocontrol agents *Trichoderma harzianum* and *Pseudomonas fluorescens*, plant extracts such as ginger oil, garlic oil, tulsi oil, etc.

2. Leaf Blight

Causal organism: *Alternaria alternata*

Symptoms: At the initial stage of infection, symptoms appeared as small, light brown spots, gradually becoming irregular, dark

brown, concentrically zonate with a diffuse margin, frequently surrounded by light yellow haloes, conspicuous brownish concentric rings in the advance stage of infection.

Epidemiology: Disease was found favourable in summer, winter and rainy season. Disease is more severe in rainy season. In rainy season, the highest disease incidence (%) of leaf blight recorded was 92.16%.

Management: Chemicals such as carbendazim, chlorothalonil can completely control the disease.

3. Wilt or Root rot

Causal organism: *Fusarium oxysporum* and *Fusarium solani*.

Symptoms: The infected plants showed drooping and withering in the initial stage and at later stage showed severe wilting and death of the plants. The roots turn brown and the growth of fungus could be seen at the base of infected plants. Young seedlings at nursery stage also showed similar symptoms leading to death of plants (>50%). Foliage infection resulted in reduction of steroids and alkaloids warranting effective control measures. The disease may lead to complete loss of the crop in case of severe infection.

Epidemiology: Cool and warm weather favours the disease. Unclean soil severs the disease. Heavy rainfall increases the disease incidence.

Management: The disease can be controlled effectively by using neem cake, *Trichoderma harzianum*, *Trichoderma viridi* and carbendazim.