AGRI MAGAZINE
(International E-Magazine for Agricultural Articles)
Volume: 03, Issue: 05 (May, 2026)
Available online at http://www.agrimagazine.in

Tikka Disease of Groundnut: Symptoms and Management

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Groundnut (*Arachis hypogaea*) is an important oilseed crop widely cultivated in India. Its productivity is often reduced due to various diseases, among which Tikka disease (leaf spot) is one of the most serious. It is caused by fungal pathogens *Cercospora arachidicola* (early leaf spot) and *Cercosporidium personatum* (late leaf spot). The disease affects leaves, stems, and petioles, leading to defoliation and significant yield loss. Proper identification and management are essential to reduce economic losses.

Objectives of the Study

- To understand the causes and types of tikka disease
- To identify symptoms of early and late leaf spots
- To study factors affecting disease development
- To evaluate economic impact
- To suggest effective management practices

Types of Tikka Disease

1. Early Leaf Spot

- Caused by Cercospora arachidicola
- Appears early in the crop growth stage

2. Late Leaf Spot

- Caused by Cercosporidium personatum
- Appears later and is more severe

Symptoms of Tikka Disease

Early Leaf Spot

- Small, brown circular spots on upper leaf surface
- Spots have yellow halo around them
- Lesions enlarge and may merge

Late Leaf Spot

- Dark brown to black spots on lower leaf surface
- No yellow halo
- Severe infection leads to leaf drop

General Symptoms

- Defoliation of leaves
- Reduced photosynthesis
- Poor pod development

Favorable Conditions for Disease Development

- High humidity (above 80%)
- Moderate temperature (20–30°C)
- Continuous rainfall or dew
- Dense crop canopy

Economic Importance

1. Yield Loss: Losses may range from 30% to 70%
2. Reduced Pod Quality: Poor seed development
3. Increased Cost of Cultivation: More spending on fungicides
4. Reduced Farmer Income: Lower marketable yield

Management of Tikka Disease

1. Cultural Practices
- Use disease-free seeds
- Follow crop rotation (avoid continuous groundnut cropping)
- Maintain proper spacing
- Remove infected plant debris

2. Resistant Varieties
- Grow tolerant varieties (if available in your region)

3. Chemical Control" Spray fungicides such as:
- Mancozeb (0.2%)
- Chlorothalonil (0.2%)
- Carbendazim (0.1%)
- Start spraying at early disease appearance and repeat at 10–15 day intervals

4. Biological Control
- Use bio-agents like Trichoderma viride
- Seed treatment with beneficial microbes

5. Integrated Disease Management (IDM)
- Combine all methods for effective control
- Regular field monitoring

Government Support and Awareness

- Promotion of Integrated Pest Management (IPM)
- Farmer training programs
- Supply of quality seeds
- Subsidies on fungicides and bio-agents

Problems in Managing Tikka Disease

- Lack of awareness among farmers
- Improper fungicide use
- Favorable climatic conditions
- Limited resistant varieties

Areas of Improvement

- Development of resistant cultivars
- Better extension services
- Adoption of modern farming practices
- Increased use of biological control

Conclusion

Tikka disease is a major threat to groundnut production, causing significant yield and economic losses. Early identification and adoption of integrated management practices can effectively control the disease. Sustainable and scientific approaches will help improve productivity and farmer income.

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