

Plant Disease Prediction Report

Disease: Potato___Early_blight

Date: 2025-08-03 00:29

Disease Name: Potato___Early_blight

Affected Crop: Potato

Typical Occurrence:

- Common in temperate and subtropical regions worldwide, especially in fields with repeated potato or tomato cropping.
- Most prevalent mid to late growing season, especially when plants are under stress (e.g., drought, nutrient deficiency).

Conditions Favoring Disease:

- Warm temperatures (24-29°C) and frequent dew, rain, or irrigation that keep leaves wet.
- Older leaves and stressed plants are more susceptible, especially with poor nitrogen supply or other stresses.

Symptoms:

- Brown to black concentric ring lesions (target spots) on older leaves, often with yellow halos.
- Premature leaf drop, starting from the bottom and progressing upward.
- Dark sunken lesions on stems and tubers, reducing quality and storage potential.

Cause:

- Fungal pathogen: *Alternaria solani*
- Survives in plant debris, soil, and infected tubers; spreads via wind, rain, or irrigation splash.

Prevention:

- Crop Rotation: Rotate with non-host crops (like cereals) for at least 2 years to reduce inoculum.
- Resistant Varieties and Proper Nutrition: Use early blight-resistant potato cultivars and avoid plant stress through balanced fertilization.

Treatment:

- Fungicide Application: Apply protective fungicides such as chlorothalonil, mancozeb, or azoxystrobin at regular intervals starting early in the season.
- Field Sanitation: Remove and destroy infected plant debris after harvest to reduce overwintering sources.