Ultra-Fast Plant Disease Detection Report

with Explainable AI Analysis

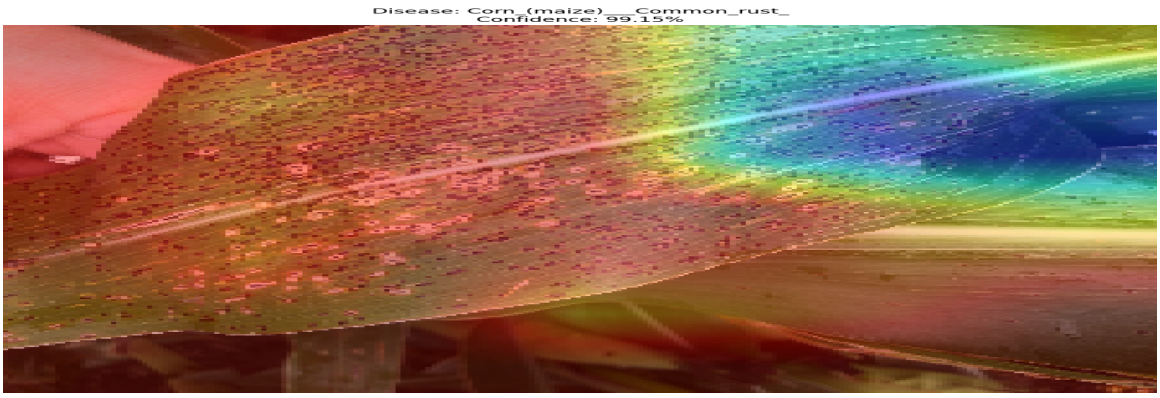
Generated on: 2025-07-12 10:54:22
Image: 20250712_105420_KT-2020052805_input.jpg

■ Diagnosis Results

Detected Disease:	Corn (maize) - Common rust
Confidence Score:	99.15%
Severity Level:	Moderate to High

■ AI Explanation - Grad-CAM Visualization

The visualization shows which parts of the leaf the AI focused on. Red/yellow areas indicate regions that most influenced the diagnosis.



■ Disease Description

Common rust of corn is caused by the fungus Puccinia sorghi. It is one of the most frequently occurring foliar diseases of corn, capable of causing significant yield losses in susceptible hybrids when conditions are favorable for disease development.

■ Causes

- Infection by Puccinia sorghi fungus
- Cool temperatures (60-77°F)
- High humidity (>95%) or extended dew periods
- Frequent rainfall or overhead irrigation
- Wind-blown spores from infected plants
- Presence of alternate host plants
- Susceptible corn hybrids

■ Symptoms

- Small, circular to elongated cinnamon-brown pustules on leaves
- Pustules appear on both leaf surfaces
- Dark brown to black spores as pustules mature
- Chlorotic (yellow) areas around pustules
- Severe infection can cause leaf death
- Reduced photosynthesis and plant vigor

■ Treatment & Remedies

- Apply appropriate fungicides at first sign of disease
- Remove and destroy infected plant debris
- Rotate crops with non-host plants
- Plant resistant corn hybrids
- Avoid overhead irrigation
- Improve air circulation between plants

■ Prevention & Maintenance

- Regular field scouting for early detection
- Monitor weather conditions
- Maintain proper plant spacing
- Control weeds that may serve as alternate hosts
- Ensure balanced soil fertility
- Document disease occurrence for future planning