

## Plant Diseases in Guyana -Past, Present and Control Measures

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### Abstract

Plant pathogens are mostly certain microorganisms that can attack plants and cause disease. Plant diseases are caused by the pathogens which are microorganisms, such as certain bacteria, viruses, fungi, nematodes, and protozoa, which cause disease in humans and animals. Plants are also attacked by certain parasitic plants and green algae, and by certain nonliving factors, such as nutrient deficiencies, pollutants, low temperatures, and so on. Pathogens attack plants to obtain nutrients. Some pathogens are obligate parasites and can only live on living plants. Others can live off living or dead plant tissues (G.N. Agrios, 2009).

Agriculture is a major export earner for Guyana and employs roughly 17% of the labor force. In 2020, it contributed approximately 16.8% to the GDP. The Government of Guyana views agriculture as important for the diversification of the economy. (MOA 2021). Guyana's major crops are rice and sugar cane. Both crops are affected by diseases. With the advent of blast resistant varieties of in Guyana Sheath Blight is threatening to become a major problem. Previously, because fungicides were used to control blast, Sheath Blight and other fungal diseases were also controlled. The disease is soil borne and can develop within a week. (GRDB 2020). Major rice diseases include Blast, Brown Spot, Sheath Blight, Sheath Rot, Minor/ New Emerging rice diseases include False Smut, Narrow leaf spot, Panicle blight (GRDB 2020).

In Guyana, 95% farmers rely on chemicals to control plant disease. However, nowadays, there is increasing use of alternative cultural methods such as crop rotation, organic products, Integrated Disease Management (IDM) biological control agents.

**Key words:** Blast, Brown spot, Sheath Blight, Biological control, chemical control