**Corn Disease Information**

1. **Corn Blight**

* **Common Name**

Maize leaf blight, maize northern leaf blight

* **Scientific Name**

Setosphaeria turcica

* **Impact**

An important disease causing loss of grain and also animal fodder, but one that can be controlled by growing resistant varieties. If not controlled, spots occur on the ear leaf and above and there is significant loss of green leaf area, and consequently loss of yield.

* **Management**

CULTURAL CONTROL

Before planting:

* Choose hybrid varieties with known resistance to maize northern leaf blight; this is the most important way of managing the disease.

During growth:

* Make sure that the plants have adequate nutrients. Do not over supply nitrogen, but make sure phosphorus and potassium are at optimal levels.
* Control weeds, especially grasses that might be alternative hosts of the fungus.

After harvest:

* Collect the remains of the crop and destroy by burning or burying.
* Practice crop rotation; rotate with non-grass crops.

RESISTANT VARIETIES

There are resistant hybrid varieties to this disease; check those available from retailers in your country.

CHEMICAL CONTROL

Chemical control should not be necessary for the management of this disease, and its use is unlikely to bring economic returns. However, if fungicides are needed, use chlorothalonil or mancozeb.

1. **Common Rust**

* **Common Name**

Common rust

* **Scientific Name**

Puccinia sorghi (also known as Puccinia maydis)

* **Impact**

This plant disease has caused severe damage to susceptible maize varieties in the past, limiting production in tropical countries, but the threat has largely been overcome by resistant varieties. Puccinia sorghi is not now considered a problem on maize, but it is on sweet corn, especially in temperate countries where plantings throughout spring and summer overlap, and late season plantings are severely affected. In the tropics, Puccinia sorghi occurs more commonly above 1000 masl.

* **Management**

CULTURAL CONTROL

Maize rusts are generally controlled by the use of resistant maize hybrids, and by foliar applications of fungicides on sweet corn. Cultural practices may be effective in areas where rust spores can overwinter on debris or where infected Oxalis species are a source of spores. Therefore, collect the remains of the crop and destroy by burning or burying, and weed around maize plots if Oxalis is common. Destroy 'volunteer' maize plants before planting new crops.

RESISTANT VARIETIES

The use of resistant varieties is the best way of managing rust diseases. Two types of resistance exist: partial resistant and qualitative resistance. Partial resistance (or tolerance) results in fewer pustules, reduced sporulation, and lower germination rates. Disease spread and the development of epidemics are slower. Qualitative resistance is based on single genes providing total resistance. The trouble with this kind of resistance is that it may encourage the selection of new strains of the rust that can overcome varietal resistance.

CHEMICAL CONTROL

Fungicides have been used against both common and southern rust, but they are usually not needed in maize because of the resistance bred into commercial varieties. However, foliar fungicides may have a use on sweet corn. A number of protectant fungicides have been recommended: e.g., chlorothalonil and mancozeb. Plants are monitored and sprays commence when there are on average six pustules per leaf.

1. **Grey leaf spot (GLS)**

* **Common Name**

Grey leaf spot (GLS)

* **Scientific Name**

Cercospora zeae-maydis

* **Impact**
* **Management**

In order to best prevent and manage corn gray leaf spot, the overall approach is to reduce the rate of disease growth and expansion. This is done by limiting the amount of secondary disease cycles and protecting leaf area from damage until after corn grain formation.

Some methods to prevent GLS:

* Work with resistant varieties: Some hybrids exhibit more tolerance and resistance than other hybrids.
* Crop rotation: In fields that have a history of gray leaf spot occurrences, a 1-2 year rotation helps to reduce the amount of diseases in future growing seasons.
* Tillage practices: Burying the present season’s residues will help reduce the risk of an infestation in the next season.
* Monitoring: It’s easier and more cost effective to control and overcome gray leaf spot during its initial infestation stage. Make it a routine to monitor the field regularly and search plants for the presence of gray leaf spots on a weekly basis.