The outbreak of the Maize Lethal Necrotic disease is a serious threat to food security in the country. Maize is Kenya’s staple food on which the entire country relies on. Any shortages in maize production has major implications on the economy, because the government has to use huge amounts of the country’s foreign exchange to bridge the production gap.

Many farmers especially in maize growing areas may not harvest anything because the disease has wiped out the entire maize crop. This will not only be a loss to farmers. Consumers will have to pay for maize due to the imminent shortage of the commodity next year. Whenever there is a shortage, maize price rise considerably affecting all consumers.

Although our research institutions were quick to act by identifying the disease and even advising on the necessary control measures, not much information was passed on to the farmers on how they could have stopped it from spreading.

The preoccupation of many Kenyan farmers with maize is the other big problem. Very few farmers are willing to practice crop rotation or growing other crops, a practice that can easily control the disease. If farmers in the affected areas can go for such crops as Sorghum, millet, beans, potatoes, bananas or Cassava, the Maize Lethal disease would be easily contained.

The least the Government and other stakeholders can do for now is to launch a big campaign to create awareness among farmers across the country for crop diversification and disease control measures.

Dear farmers,

The early symptoms of the MLN disease developing from the leaves downwards.

The disease is advancing to a greater stage.

In some cases the disease sets in through the cob and kills the cob before killing the whole plant.

The farm is fully infested by the disease.

At an advanced stage of disease progression, all plants die.

Maize plants infected by MLN disease.
Introduction

It is important for farmers to be informed that Maize Lethal Necrosis Disease (MLND) is not a seed borne disease. Maize, Kenya’s main staple food crop is now facing an uncertain future following a fast spreading mystery disease that threatens its production across the country.

The maize disease now identified as Maize Lethal Necrotic (MLN) disease is caused by a combination of viruses, was first reported in Lower Longisa division of Bomet district in September 2011. Later it spread to the neighbouring districts of Sotik, Konoin, Chepalungu, Trans mara, Kisii, Bureti, and Kericho.

The disease has now moved to other parts of the country where it has attacked the maize crops in Nakuru, Naivasha, Rumuruti, Imenti South, Embu and Kibwezi.

Cause of the disease

The disease is caused by a combination of viruses, the main ones being the Maize Chlorotic Mottle Virus (MCMV), a virus that has not been reported in Kenya before and the Sugarcane Mosaic Virus (SCMV) which combine to cause Maize Lethal Necrotic (MLN) disease.

Transmission of Maize Chlorotic Mottle Virus (MCMV)

The disease is transmitted through pests such as thrips, stem borer, rootworms, flea beetles and other insects.

Disease Symptoms

- At knee height, the upper maize leaves start yellowing and later on start drying turning brown from the mid-rib towards the leaf margins.
- The drying progresses to the lower maize leaves.
- The stem and the nodes turn brown.
- In some cases the maize produces many shoots (excessive tillering)
- At the beginning it is only the upper leaves that appear brown.
- Towards maturity the cobs shrink and do not put in any grains.
  In some cases the maize plants appear stunted.

How farmers can control the disease

The Maize Lethal Necrosis (MLN) disease has no cure. Once your maize crop has been affected by the disease, the only option left for the farmer is to cut, put it in a heap in an isolated part of the farm and burn it.

Other measures farmers can take are outlined below:

- Farmers are advised to do scouting in their maize farms for signs of the disease as indicated above. If they notice a maize plant with any of the symptoms, it should be uprooted, burnt or buried deep in the soil to stop the disease from spreading.
- Practice crop rotation for at least two or three seasons by planting non-cereals such as potatoes, beans, onions as well as vegetables to ensure the field is free of all the disease-causing pathogens and viruses.
- Use of clean certified seed is very important; Farmers using maize seed from unknown sources can easily introduce disease into their farms.
- Regular spraying of the maize crop with pesticides and plant extracts is a good practice because pests such as aphids, stem borer, maize beetles and thrips are the main vectors that transfer the disease from one area or farm to the next.
- Ensure the maize field is clean and free of any weeds that act as hosts to some of the pests that transfer the disease to the maize.
- Farmers also need to apply manure, basal and top dressing fertilizers to strengthen the plants’ resistance to disease and pests.
- Even in subsequent planting, farmers need to spray the maize crop before knee high or at the emergence of the 6th leaf.