




Maize Lethal Necrosis Disease

Co-infection of Maize chlorotic mottle virus (MCMV) and sugarcane mosaic virus (SCMV)

	Prevention	Monitoring	Direct Control
 <p>Chlorotic mottle on leaves and stunting of the plant (Peter Kodwaran, Ministry of Agriculture Livestock and Fisheries (MoALF), Kenya)</p>  <p>Poor grain formation (Peter Kodwaran, Ministry of Agriculture Livestock and Fisheries (MoALF), Kenya)</p>  <p>Necrosis and drying up on a leaf (CABI/Rob Reeder)</p>	<ul style="list-style-type: none"> • Use certified seed and varieties recommended by local extension services and national agricultural bodies. Do not recycle maize seeds from your field • Eliminate host plants (weeds) of thrips, aphids and plant hoppers and clear/burn grasses around the field, both potential sources of the insect vectors • Avoid planting maize if an infected field is less than 500m away • Plant early with fertilizer and manure to enhance crop nutrition and vigour • Synchronize planting date among farmers of the area to break continuous disease spread between fields • Avoid moving plants from infected to non-infected regions to reduce the spread of the disease • Avoid walking through established fields since the virus can be physically transmitted on clothes • Practice strict crop rotation for at least 2 seasons with non-cereal crops like beans, garlic, onions and vegetables 	<ul style="list-style-type: none"> • Inspect the field every 3-4 days for symptoms. Monitor as well vectors (thrips, aphids and plant hoppers) in the morning once per week under the leaves from crop emergence onwards • All stages of plant growth are affected and the earlier the plant becomes infected, the greater the damage <ul style="list-style-type: none"> • First symptoms are a scattering of small yellow areas (mottling) on leaves which eventually merge. The leaves become paler, and then the edges turn brown and dry inwards • In some plants the young leaves die before they have expanded, producing a 'dead heart' • Distorted and shrivelled ears • Little or no grain produced • Dwarfing and premature aging of plants • Death of the plants • The disease can be confused with maize streak virus which has thinner yellow stripes that do not merge and there is no marginal browning and drying up • Act immediately when symptoms are noticed on one plant 	<ul style="list-style-type: none"> • Remove infected plants showing symptoms to reduce the local spread of MLND, burn or bury 1m deep • Collecting and burning of plant remains to reduce the spread of the disease must be done on a large scale to be effective

Note: Pesticides may be available to control this pest. Please check with the Ministry of Agriculture in your country to find out which pesticides are registered in your country and the local restrictions for their use.