



## KARI/e-Mimi Factsheets No. 2/2014

**Disease name:** Maize streak virus (MSV)

		
Healthy plants	Stunting of severely infected maize plant	Pale spots form on the leaf that become longer streaks that eventually coalesce.
<b>Description</b>	<p>Maize streak virus (MSV) disease is transmitted mainly by <i>Cicadulina mbila</i> (maize leaf hopper) but other leafhopper species such as <i>C. storeyi</i>, <i>C. arachidis</i> and <i>C. dabrowski</i> have also been found to transmit the virus. Leaf hopper have sucking mouth parts that enable them penetrate the plant cells by use of salivary and gut enzymes or mechanical force. Yield loss is caused by plant stunting and the termination of ear formation, development and grain filling in infected plants. With severe infection, plants can die prematurely.</p>	
<b>Disease/Pest category</b>	Continuous	

<p><b>Diagnosis/Identification</b></p>	<ul style="list-style-type: none"> <li>• Early disease symptoms begin within a week after infection and consist of very small, round, scattered spots in the youngest leaves. The number of spots increases with plant growth and they enlarge parallel to the leaf veins. Fully elongated leaves develop a chlorosis with broken yellow streaks along the veins, contrasting with the dark green color of normal foliage.</li> <li>• Stunting of severely infected maize is observed.</li> </ul>
<p><b>Conditions prevailing that contribute to success</b></p>	<ul style="list-style-type: none"> <li>• When susceptible crops or alternate hosts are continuously available at high rainfall and temperatures.</li> <li>• Presence of insect vectors for transmission between host plants.</li> </ul>
	<p>Cicadulina species are the only insects known to transmit maize streak virus from one maize plant to another.</p> <p>Overwintering of the virus and vectors occur primarily in grasses (<i>Setaria barbata</i> and <i>Brachiaria lata</i>) and areas with irrigation where maize can be grown during the dry season.</p>
<p><b>Control Strategy</b></p>	<ol style="list-style-type: none"> <li>1. Remove previous crop residues.</li> <li>2. Avoid downwind planting of the crop.</li> <li>3. Plant maize in an open area to avoid shade as leafhoppers prefer shade.</li> <li>4. Minimize weeds that can harbour MSV vectors, particularly grasses.</li> <li>5. Plant early to avoid the optimal temperature for vector multiplication and subsequent transmission of the virus.</li> <li>6. Chemical insecticides can be effective in control of the vector, for instance Gaucho FS 350 (imidacloprid), Bulldock (betacyfuthrin), etc. Use certified seed that is dressed against the MSV vectors</li> </ol> <p><b>Note: Agro-chemicals should be used in consultation with professional practitioners and considering existing cautionary/safety measures, particularly the manufacturer's instructions.</b></p>
<p><b>Reference Links</b></p>	<p>Crop compendium global module 2<sup>nd</sup> edition ISSN:1365-9065 ISBN:0 85199 482 2</p> <p><a href="http://en.wikipedia.org/wiki/maizestreak_virus">En.wikipedia.org/wiki/maizestreak_virus</a>(maize streak)</p>
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