

# Striga spp. in Sorghum

*Striga hermonthica* and *Striga asiatica* witchweed (English); akenchera (acantha), yemeher kitigne, atikur (Amharic); deeso (O); metsellem (Tigre)



Purple witchweed infestation. (©USDA APHIS PPQ - Oxford, North Carolina, USDA APHIS PPQ, Bugwood.org)



Purple witchweed on maize. (©USDA APHIS PPQ - Oxford, North Carolina, USDA APHIS PPQ, Bugwood.org)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> <li>Use certified seed to reduce chances of field contamination</li> <li>Seeds are transported by water - Prevent runoff water from infested land to prevent seed introduction</li> <li>Seeds are spread by animals - do not allow livestock into an affected area to avoid spread</li> <li>Seeds travel by vehicles, human beings, animals and on machinery - clean equipment after work in infested areas</li> <li>Control of Striga plants before setting seeds to prevent future spread</li> <li>Control of alternate hosts like wild sorghum and couch grass to prevent spread</li> <li>Use of Striga resistant/tolerant sorghum varieties (Gobiye, Abshir, Birhan, Horat and Gedo in Ethiopia) along with high soil fertility and water conservation measures</li> <li>Crop rotation with non-host crops, legumes and fallows may help to deplete seed bank</li> </ul>	<ul style="list-style-type: none"> <li>Additional relevant crops: maize, finger millet and pearl millet</li> <li>Annual, broadleaved, parasitic herb (30-100cm high); erect, sometimes creeping. Always associated with host in the grass family. Stems are four-sided, branched or unbranched with rough hairs and opposite leaves. Leaves green (2-8cm long), narrow, sparsely covered in rough hairs. Flowers bright pink, rose-red and/or white (1cm long), arranged in spikes (6-10 flowers per spike)</li> <li>Look for yellowish blotches in crop foliage about 1 cm long by 0.5 cm wide, even if the weed has not emerged. Uprooting may confirm the presence of young parasite seedlings on the root</li> <li>Look for stunted crop growth, wilting and chlorosis</li> <li>The problem can be severe under low moisture stress, degraded and infertile soils</li> </ul>	<ul style="list-style-type: none"> <li>Light infestations can usually be controlled by hand pulling or hoeing before seed is produced</li> <li>Uproot Striga before flowering</li> <li>Mechanical methods of control are not generally satisfactory</li> <li>Growing trap-crops (those that stimulate suicidal germination but do not host the parasite) such as cotton, groundnuts, cowpeas, soya beans, Desmodium</li> <li>Improved soil fertility is a vital key to long-term control, whether by organic, inorganic or green manuring</li> <li>Intercropping with legumes or relay cropping with multipurpose trees as in agroforestry techniques is beneficial</li> </ul>	<ul style="list-style-type: none"> <li>Use of chemical herbicides may lead to the development of herbicide resistance.</li> <li>Improved soil fertility is a vital key to long-term control, whether by organic, inorganic or green manuring</li> <li>Post-emergence application of 2,4-D (0.5 - 1.00 kg a.i./ha ) may be used to kill emerged S. hermonthica or to prevent it from maturing and setting seed in sole-crop cereals</li> </ul>	<ul style="list-style-type: none"> <li>2,4-D: WHO Class II (Moderately hazardous) Can not be used in mixed cropping, e.g. in sorghum mixed with legumes</li> </ul>

## Ethiopia

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