

# Bush crickets in Sorghum crops

*Acanthopplus spp.* e.g. *A. speiseri* Armoured ground cricket, Armoured bush cricket



Armoured cricket: wide-bodied, flightless, 3 to 5 cm long; their body is covered in sharp spines. They are wingless (photo: Sonia Soma Wikipedia)



Different armoured ground crickets from Zambia (photo S Toepfer)

Prevention	Monitoring	Direct Control	Direct Control	Restrictions
<ul style="list-style-type: none"> <li>• Sow sorghum early, i.e. in October at the beginning of rainy season.</li> <li>• Plant short duration varieties, such as Kuyuma, or short-medium duration varieties such as NS551 (red var.) (early harvesting also prevents bird damage).</li> <li>• Or at least mix short duration varieties with long duration varieties such as Longo. Note that long duration varieties may suffer from drought.</li> <li>• Clean up weeds in and around field weekly (once per season is not enough)</li> <li>• Dig ½ m deep and ½ m wide trenches around field to prevent crickets walking/ jumping into field (crickets are wingless).</li> <li>• Mix sorghum with cowpea, mung bean or melons to prevent damage in current season. This may increase egg laying and damage in next season.</li> </ul>	<ul style="list-style-type: none"> <li>• Survey for presence of the crickets, they may sit on bushes.</li> <li>• Visit field and nearby sites 1x per week particularly in the dry season:</li> <li>• Note, that cricket eggs will hatch after the first heavy rains, and crickets may then damage the upcoming sorghum</li> <li>• You may consider applying direct control measures when about 10 to 50 crickets are found per 1m3 bush, or 1 to 5 per m2 ground, or 1 per sorghum plant on average.</li> </ul>	<ul style="list-style-type: none"> <li>• Spray neem-based solutions (50 w %), on areas with young crickets every two weeks. Ask your local agro-input suppliers to organise such products if neem trees do not grow in your area.</li> <li>• Spray <i>Tephrosia</i> leaf solution (20 w%) every 2 weeks</li> <li>• Daily handpick crickets from nearby bushes or from infested crop, then crush or kill them in plastic bags (suffocation or sun heat) and then feed them to poultry. All this may be conducted at same time when scaring Quelea birds that also damage sorghum. Do not leave crushed crickets in field as they attract new crickets.</li> </ul>	<ul style="list-style-type: none"> <li>• Spray insecticides on tall shady non-food and non-flowering vegetation where there are many crickets e.g. onto nearby bushes. Or spray only on heavily infested parts of the field. There is often no need to spray the entire field. Apply on a calm day during morning or evening</li> <li>• When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, pre-harvest interval, max number of sprays, restricted re-entry interval. Do not empty into drains.</li> <li>• WHO class II pesticides might not be allowed in local IPM schemes.</li> <li>• Always consult recent list of registered pesticides (ZEMA).</li> <li>• Spray a 2.5m wide strip of fipronil – based products around the field or into the trenches as a barrier. Phenylpyrazole pesticide group.</li> <li>• Mix bran (attracts crickets) with small amount of carbaryl and add small portions into trenches around field. Carbamate group.</li> <li>• Imidacloprid -based products (Confidor 010 ULV, and many others) against adults. Neonicotinoid pesticide group.</li> <li>• Alternatively spray deltamethrin -based products (Decis 0.5ULV, and many others) against adults. Pyrethroid group.</li> </ul>	<ul style="list-style-type: none"> <li>• WHO toxicity class II (moderately hazardous), Restricted re-entry interval (r.e.i.) 1d. Spay max twice with min 7 day interval.</li> <li>• WHO class II (moderately hazardous).</li> <li>• WHO class II (moderately hazardous). Be aware of its bee toxicity. Pre-harvest interval (p.h.i.) min 14 days, r.e.i. 1 day, Min. re-treatment 7 days. Highly bee toxic.</li> <li>• WHO class II (moderately hazardous). P.h.i. at least 7 days for sorghum. R.e.i. 1 day, Min retreatment interval 7 days.</li> </ul>

## Zambia

CREATED/UPDATED: July 2014

AUTHOR(S): Mathews Matimelo, Gilson Chipabika (Zambia Agricultural Research Institute ZARI of Ministry of Agic. & Livestock, Mt. Makulu, Chilanga, Zambia); Stefan Toepfer (CABI), Demian Mabote Ndalamei (ZARI)

EDITED BY: Plantwise