

# Termites in maize

*Coptotermes* spp., *Macrotermes* spp., *Odontotermes* spp.



Termites are mostly wingless ant-like 3-5mm long insects. (Source: R. Hanus)



Falling maize attacked by termites (Source: Photo by NARO QAS for Agriculture)



Sheets of soil on the leaf showing termite attack. (Source: David Nonglait, Pritin Sontakke, D M Firake, G T Behere, www.krishisewa.com)

Prevention	Monitoring	Direct Control
<ul style="list-style-type: none"> <li>• Avoid planting in termite infested fields if possible</li> <li>• Plough the field to destroy the termites' nests, runways, and tunnels and to expose them to predators, such as ants, birds, chickens, etc</li> <li>• Manually destroy termite nest with a shovel, hoe or rototiller, bring sure to penetrate deep into the nest where the queen will be. Then you can: pour boiling water on the nest; burn plant residues on the nest; allow chickens and natural predators (e.g. ants, dragonflies, ground beetles, bats, birds/chickens, frogs) to feed on the termites. But this may not work for groups that have the ability to quickly replace the lost queen.</li> <li>• Collect and bury/burn plant debris from the previous harvest, and remove decaying wood, to deplete the food source for termites</li> <li>• Sow seeds at a slightly higher rate to compensate for losses of seedlings through termite damage</li> <li>• Apply wood ashes around the plant in the planting basin/hole or use it as a mulch to repel termites</li> <li>• Use optimal irrigation and fertilization rates. Ensure development of strong healthy plants that can tolerate some termite damage</li> <li>• Avoid importing termite infested materials into fields</li> <li>• Rotate or intercrop maize with leguminous crops (e.g soyabean, groundnut, common bean) which can increase numbers of predatory ants and improve nutrient levels in the soil</li> <li>• iii. Harvest at the right time, as termites often attack maize left in the field after maturity.</li> <li>• To prevent the spread of the pest, avoid rotating or planting near alternative hosts: cassava, yam, rice, sorghum, tomato, peppers, groundnut, wheat, cotton, tea, tobacco, sugarcane</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor the field frequently (e.g. once a week) during dry spells when most termite damage occurs</li> <li>• Examine plants in the early morning or late evening - termites may move deeper into the soil during the day when temperatures are higher</li> <li>• Look out for:                         <ul style="list-style-type: none"> <li>• Termite nests/mounds in the field and galleries in the soil. Termites build nests above and/or below ground depending on the species. Mound structures can vary and can be up to 5 m high.</li> <li>• Wilting of seedlings or mature plants. Some plant may die or fall over (uproot these plants to check for termites)</li> <li>• Hollowed out plant roots and stems. The resulting tunnels may be completely filled with soil</li> <li>• Plants covered with soil runways or soil sheathing under which termites may be found</li> <li>• Adults: ant-like, mostly wingless, 0.5-1 cm long</li> </ul> </li> <li>• The difference between termites and ants is that termites have straight antenna, broad waist, and if wings are present then forewings and hindwings are of the same size and have many veins</li> <li>• Consider taking action when 5-10% of plants are affected and if the crop is still far from maturing</li> </ul>	<ul style="list-style-type: none"> <li>• Physically remove and drop the soil sheets of the termites from the plants during the early stage of infestation                         <ul style="list-style-type: none"> <li>• These methods do not provide long-term control since the queen will probably not die or will be replaced</li> </ul> </li> <li>• Spray crop with extract of neem leaves or neem fruits and apply wood ashes around the plant. Use 1kg crushed neem leaves and/or fruit in 5L water, and 2 handfuls of ash per plant</li> <li>• Spray crop with extract of <i>Lantana camara</i> (Tusepo) leaves. Boil 2 kg crushed leaves in 5L for 30 minutes.</li> <li>• Use <i>Beauveria bassiana</i> as biological control if available in your country. Bring to boil one teacup of mature seeds for 5 minutes. Allow to cool and then strain to get a clear liquid. Add 1 litre of water.</li> <li>• Harvest as soon as possible. Termite damage gets worse the closer it gets to harvest.</li> </ul>

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.