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International News on Fats, Oils,
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Insects:
New source of oil?
Insect oils:
Nutritional and industrial applications

In searching for new sources of oils, many researchers have investigated wild plants, but our research group took a different approach: We looked at insects as an oil source for both nutritional and industrial applications.

According to Sudanese indigenous knowledge, many insects have food and medicinal uses. We targeted two of these insects for our research: *Aspongopus vidiuatus* (melon bug) and *Agonoscelis pubescens* (sorghum bug). The melon bug (Pentatomidae) is about 20 mm long. It is found in most African countries, where it causes damage to watermelon and other cucurbit shoots. The adult bugs can usually be found by lifting the young melon plants from the ground and inspecting the undersides of the leaves. The nymphs pierce the leaves, stems, and young fruits and suck the sap, resulting in wilting, fruit drop, and the death of the plant. Melon bugs are considered to be edible in Namibia, where the last nymph stage is called "nakapunda." In this soft stage, the bug is cooked and eaten. Melon bugs are widely distributed in Kordofan and Darfor states of Sudan (locally known as Um-buga), where field watermelons are one of the most important crops for the traditional rain-fed agriculture. There, tons of melon bug adults can be collected in infested fields. Elobied Agricultural Research Station (North Kordofan state of Sudan) designed a handpicking program for melon bug adults in plots of about 5,000 hectares in four different areas of the state, for two seasons. A total of 15 tons of melon bug adults were collected in the first season and 226 tons in the second one (Bashir *et al*., 2002). The adult sorghum bug (Pentatomidae), commonly known in Sudan as Dura andat, is shield-shaped, about 11–13 mm long, and 6–7 mm wide. Both the upper- and undersides of its body are covered with a fine silvery pubescence after which it is named. *Agonoscelis pubescens* is found in a number of African countries south of the Sahara. In Sudan, the Dura andat has a wide distribution throughout the country. The adults infest sorghum during the plant's milky stage. In Western Sudan, adult sorghum bugs are collected, fried, and eaten. Additionally, in some areas of Sudan the collected bugs are pressed, and the expressed oil is used for cooking and some medicinal purposes. In the Botana area of central Sudan, nomads use the tar obtained from high-temperature rendering of the bugs to protect their camels against dermatological infections (Mariod *et al*., 2004).