

LETTERS

edited by Jennifer Sills

Food Security: Farming Insects

G. VOGEL'S NEWS STORY "FOR MORE PROTEIN, FILET OF CRICKET" (12 FEBRUARY, SPECIAL section on Food Security, p. 811) draws attention to the potential role of insects in food security. Although insects such as mopane worms and termites are widely consumed by some societies, especially in Africa (1–7), globalization and creation of a food culture based largely on Western values has led to their marginalization (1, 5, 6). Unlike steak, such insects are easily accepted only where indigenous knowledge and willingness to consume them exists (1–5, 7).

In addition to overcoming the cultural aversion to eating insects, it will be necessary to address ways to make them available throughout the year. Insects are seasonal, and there are technical difficulties in mass-rearing, processing, and storing them (8, 9). Our experience (8, 9) in Africa points to the need for greater public-private partnership in research and development. Governments could provide incentives to investors that come up with green business ideas on mass-production of edible insects. Currently, insects such as the mopane worm are treated as open-access resources, and their increasing commercialization is raising fears of extinction (10). Unsustainable wild harvesting could be reduced and conservation goals achieved with arrangements that encourage on-farm production of such insects.

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References

1. G. R. DeFoliart, *Annu. Rev. Entomol.* **44**, 21 (1999).
2. K. J. Mbata *et al.*, *J. Insect Conserv.* **6**, 115 (2002).
3. R. A. Hope *et al.*, *Dev. South. Afr.* **26**, 29 (2009).
4. S. M. Muntali, D. E. C. Mughogho, *Biodivers. Conserv.* **1**, 143 (1992).
5. P. Illgner, E. Nel, *Geog. J.* **166**, 336 (2000).
6. F. Malaisse, *Geo-Eco-Trop* **26**, 37 (2002).
7. G. W. Sileshi *et al.*, *Ecol. Soc.* **14**, 48 (2009).
8. K. Kloosterman, "Good grub in Africa," *Emagazine.com* (2006); www.emagazine.com/view/73073&src.
9. M. Kenis *et al.*, "Towards conservation and sustainable utilization of edible caterpillars in the miombo" (CABI, 2006); www.northsouth.ethz.ch/news/past_events/past_events_zil/annualconference06/posterexhibition/Kenis.pdf.
10. W. Akpalu, *Environ. Dev. Econ.* **14**, 587 (2009).



MRI Safety Not Scientifically Proven

WE APPRECIATE THE SIGNIFICANCE OF magnetic resonance imaging (MRI) for patient diagnosis and research, but we are concerned by the tone of the News of the Week story "Fear of MRI scans trips up brain researchers" (Jiao, 19 February, p. 931), in which Anja Villringer (Max Planck Institute, Germany) says, "Millions of people have been examined with MRI so far; thus it seems now very unlikely that there would be a side effect." This statement cannot be advanced as a proof of MRI safety. Large patient groups have never been monitored longitudinally in a standardized FDA-approved study. A further argument for caution lies in the increasing evidence that MRI exposure can have biological effects (1, 2).

The logical fallacy in this statement becomes apparent when we consider that the argument for MRI could also be applied to the risks of x-ray computed tomography (CT) exposure. In the case of x-rays, it may be factually correct to state that no study to date has shown that CT increases cancer risk, but it is incorrect to state that there are no cancer risks from the radiation exposure associated with CT. Absence of evidence is not proof of the absence of risk, and it is widely accepted that there are small but nonzero risks associated with CT (3).

Side effects of these procedures may take decades to detect. One example is the induction of severe side effects in a small fraction of the population years after administration of the MRI contrast agent gadolinium-DTPA (diethylenetriamine penta-acetic acid) (4). Now that this risk has been identified, benefit-risk ratio is known and thus manageable. In

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