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## Economic Cost of Occupational Human Health of Pesticides among Agricultural Households in Africa

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### Abstract

Using field data combined with bio-medical and laboratory analysis, this study identifies the specific acute human health problems that are associated with pesticide use among agricultural households in the intensive cotton-rice production system of Côte d'Ivoire, West Africa. The health problems identified by farmers were quantified in economic terms using a methodological framework developed in this study. The results show that the most important acute human health symptoms linked with the use of pesticides are headache, catarrh, cough, skin rash and sneezing (in order of importance). The costs of the health symptoms on farm households are multi-dimensional including damage costs, mitigation cost and avoidance costs. Pesticide applicators face four times greater risk to fall sick than an average member of the same household who lives under the same conditions. Households recognize pesticides as one important cause of ill health, but over the years some of the symptoms have been accepted as 'integrated' part of spraying pesticides. In the making of decisions on field practices, households generally take into consideration only the direct out-of-the-pocket expenses but ignore indirect costs associated with pesticide use. Only in 2% of the cases linked with pesticides do household members visit official health centers to seek formal medical assistance. Policies to protect the health of the rural households through greater awareness of on health issues and documentation of pesticide-related health symptom cases for planning purposes are recommended.

**Keywords:** Cotton, Côte d'Ivoire, health cost, pesticide, pesticide externality