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The mishandling of pesticidal plants by small-scale farmers in the Eastern Cape Province and its possible impact on food safety and security

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Humans have used pesticidal plants since before the time of ancient Romans, a practice that has continued to the present time in many rural communities worldwide. In Africa, many pesticidal plants are found without difficulty. They grow in the wild, open areas, at homesteads and within farm boundaries. In this case, there is almost no cost of growing the plants. Africans in general are reported to believe that knowledge on indigenous plant pest control is their heritage and as a result, there is a general assumption that pesticidal plants are not toxic to humans, animals and the environment. A study conducted in the Eastern Cape Province of South Africa, using the convenient and stratified purposive sampling techniques revealed that small-scale farmers do not follow acceptable good agricultural practices when dealing with pesticidal plants. There were generally no protocols developed for formulations and combinations, as a result plants were mixed with various other ingredients such as synthetic chemical insecticides, disinfectants and manures. In addition, there were no standardized methodologies for preparation, application and no withholding periods. Farmers also had a tendency of neglecting the recommended safety gear that should be worn when pesticides are being handled and applied because they believed that pesticidal plants were safe to handle. The equipment used for mixing, soaking, boiling and storing plant extracts was also being used for storing food and water for human and animal consumption. Farmers' practices and handling of pesticidal plants are concerning, since even if the plant itself is not toxic; the combination with other substances may be toxic. The frequent use of kitchen containers and animal troughs for preparing and storing extracts may result in residue contaminating the food and water kept for humans and animals. There needs to be an intentional and concerted effort by government and all stakeholders involved to educate and spread awareness on acceptable good agricultural practices for food safety and security purposes in the small scale-farming sector.

Biography

Nolitha L Skenjana is currently pursuing her PhD in Botany with University of Fort Hare in the Eastern Cape, South Africa. She is working for the Eastern Cape Department of Rural Development and Agrarian Reform and is based at the Döhne Agricultural Development Institute. She is a recipient of two prestigious awards for delegency and profesionalism from the Eastern Cape Premier. She was a Visiting Scientist at the Julius Kuhn Institute and Goetingen University in Germany. She has published three papers and has presented in national and international conferences.

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