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Towards Reducing Synthetic Pesticide Imports in Favour of Locally Available Botanicals in Kenya

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Abstract

Pests and diseases are responsible for 30–40 % loss in agricultural produce in the tropics. Unfortunately, these pesticides posses inherent toxicities that endanger the health of the farm operator, consumer and the environment. Kenya imports approximately 7,000 metric tones of synthetic pesticides annually, valued at KShs. 4 billion (US$ 50 million). These pesticides are an assortment of different types. Of the total pesticide imports, insecticides account for about 40 % in terms of volume (2,900 metric tones). The current concern is on the health hazards posed by the presence of these chemicals in the environment. The situation in Kenya is aggravated when cases of pesticide misuse occur due to farmers' ignorance and illiteracy. Kenya is the leading producer of a natural pesticide, pyrethrin, which is a broad-spectrum insecticide made from the dried flowers of *Chrysanthemum cinerariaefolium*. Up to 8,000 tonnes of dried flowers are produced annually. 95 % percent of all the crude pyrethrin is exported to developed countries in the west - 60 % to USA and 35 % to Europe. Only 1 % remains in Kenya. Pyrethrin-based insecticides can well replace most of the imported synthetics. This would reduce the health risk that the synthetics pose. The major problem is that the Kenyan pyrethrins earn a premium price in the more environmentally conscious developed countries so that Kenyans are left with no option but to import the cheaper synthetics or pyrethrin analogs. This scenario raises questions on the willingness and ability of developing countries to pay for better environmental health. This paper recognises research challenges and discusses possible ways through which developing countries can adopt more environmentally friendly agricultural protection measures. These include local pyrethrin preparation at farm level, promotion of locally available botanicals like Neem (*Azadirachta indica*), use of by-products from *Pyrethrum* processing industries, awareness campaigns on safe use of pesticides, favourable government policies, and possible support by multinational chemical companies. Data reported was obtained from interviews with key informants drawn from the Kenya Pesticide Control Board, Pyrethrum Board of Kenya, and local firms, which are major consumers of imported pesticides.

Keywords: Chrysanthemum cinerariaefolium, natural pesticides, pyrethrin, synthetic pesticides

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