

Plant disease -- more than a crop killer

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The devastating consequences of emerging infectious diseases on crops in developing countries and their economic and social impacts are often underestimated, according to a new study by Maurizio Vurro and his colleagues from the Institute of the Science of Food Production in Italy. The authors call for local governments and international communities to establish better mechanisms for monitoring and managing emerging infectious diseases in developing countries, mirroring those already in place in developed countries. Their findings (1) are published in Springer's journal, *Food Security*.

Emerging [infectious diseases](#) caused by plant pathogens can develop into unexpected and very serious epidemics. Although today the ability to diagnose and control them is far greater than in the past, they still cause important crop losses leading to major economic and social consequences, particularly in developing countries.

In order to highlight the scale of the threat posed by emerging infectious crop diseases in the developing world, the authors take an in-depth look at four of the most important plant pathogens in Sub-Saharan Africa: African Cassava [Mosaic Virus](#), which has devastated cassava in East African countries, the parasitic weed, *Striga hermonthica*, which affects cereals, a species of the bacterial genus *Xanthomonas*, causing wilt of banana and a virulent variant of the fungus causing [stem rust](#) of wheat, which originated in Uganda - Ug99.

Unlike developing countries, developed countries have monitoring and management mechanisms in place to mitigate the consequences of

harmful diseases of [crop plants](#): safety nets to support those most affected; food reserves that limit the risk of famine; research capacity and technical support services to manage diseases; and warning systems that allow prompt application of control measures.

The authors believe that the way forward requires the involvement and collaboration of all agricultural sectors: government agencies, universities and the agricultural industry. They conclude: "In the so-called developed countries, agriculture is not without risks of pandemics. But management systems are in place that mitigate the economic and social effects of such extremely harmful diseases. Similar systems must be established urgently in developing countries to avert socio-economic disaster due to plant disease."

More information: Vurro M et al (2010). Emerging infectious diseases of crop plants in developing countries: impact on agriculture and socio-economic consequences. Food Security. [DOI 10.1007/s12571-010-0062-7](#)

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