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Alarming increase in the incidence of *Cucumber mosaic virus* in cowpea (*Vigna unguiculata* (L.) Walp.) in northern Nigeria

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[Angela O. Eni](#)^{a*}, [Patricia Ogunsanya](#)^b, [Taiwo Oviasuyi](#)^b & [Jacqueline d'A Hughes](#)^c

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Abstract

Cowpea plays a key nutritional role in the diet of the Nigerian people. Viral diseases are a major limitation to cowpea production worldwide, and thus, constant viral surveillance is crucial for monitoring and management purposes. In this study, cowpea leaf samples from fields in three northern Nigeria states, Kano, Kaduna and Niger, were tested to determine the status of six common viruses previously reported in these cowpea-producing states following the release of virus-resistant varieties. *Cowpea aphid-borne mosaic virus* (CABMV), *Blackeye cowpea mosaic virus* (BICMV), *Cowpea mottle virus*, *Southern bean mosaic virus* and *Cucumber mosaic virus*

(CMV) were detected. *Cowpea yellow mosaic virus*, which was previously reported in all three states, was not detected in any of the samples tested, while CMV that was previously regarded as unimportant to cowpea production in Nigeria had the highest incidence in all three states, and the overall highest incidence of 58.8%, while CABMV had the lowest incidence (7.5%). CMV was also present in seven of the ten mixed infection combinations detected. Dual infection of CMV and BICMV, which often results in cowpea stunt, the most devastating cowpea disease in the USA, was the most frequently detected mixed infection (28.1%) and was detected in all three states. This observed elevation in CMV infection in cowpea must be closely monitored and swiftly managed to avert possible devastating crop yield losses.

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Keywords

- [cowpea yield](#),
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- [Cowpea aphid-borne mosaic virus](#)

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