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Data article

Incidence of cassava mosaic disease and associated whitefly vectors in South West and North Central Nigeria: Data exploration

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ABSTRACT

Cassava mosaic disease (CMD) is one of the most economically important viral diseases of cassava, an important staple food for over 800 million people in the tropics. Although several *Cassava mosaic virus* species associated with CMD have been isolated and characterized over the years, several new super virulent strains of these viruses have evolved due to genetic recombination between diverse species. In this data article, field survey data collected from 184 cassava farms in 12 South Western and North Central States of Nigeria in 2015 are presented and extensively explored. In each State, one cassava farm was randomly selected as the first farm and subsequent farms were selected at 10 km intervals, except in locations where cassava farms are sporadically located. In each selected farm, 30 cassava plants were sampled along two diagonals and all selected plant was scored for the presence or absence of CMD symptoms. Cassava mosaic disease incidence and associated whitefly vectors in South West and North Central Nigeria are explored using relevant descriptive statistics, box plots, bar charts, line graphs, and pie charts. In addition, correlation analysis, Analysis of Variance (ANOVA), and multiple comparison post-hoc tests are performed to understand the relationship between the numbers of

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whiteflies counted, uninfected farms, infected farms, and the mean of symptom severity in and across the States under investigation. The data exploration provided in this data article is considered adequate for objective assessment of the incidence and symptom severity of cassava mosaic disease and associated whitefly vectors in farmers' fields in these parts of Nigeria where cassava is heavily cultivated.

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Specifications Table

Subject area	<i>Biological Science</i>
More specific subject area	<i>Cassava Virus Epidemiology</i>
Type of data	<i>Tables, graphs, figures, and spreadsheet file</i>
How data was acquired	<i>Cassava farms located along major and intermediate roads in all the State in the South West and North Central Nigeria were surveyed. In each State, one cassava farm was randomly selected as the first farm and subsequent farms were selected at 10 km intervals, except in locations where cassava farms are sporadically located. In each selected farm, 30 cassava plants were sampled along two diagonals and all selected plant was scored for the presence or absence of CMD symptoms.</i>
Data format	<i>Raw, analyzed</i>
Experimental factors	<i>Field survey data collected from 184 cassava farms in 12 South Western and North Central States of Nigeria in 2015 are presented and extensively explored</i>
Experimental features	<i>Cassava mosaic disease incidence and associated whitefly vectors in South West and North Central Nigeria are explored using relevant descriptive statistics, box plots, bar charts, line graphs, and pie charts. In addition, correlation analysis, ANOVA, and multiple comparison post-hoc tests are performed.</i>
Data source location	<i>184 cassava farms in 12 South Western and North Central States of Nigeria</i>
Data accessibility	<i>A comprehensive dataset is presented in Microsoft Excel spreadsheet and attached to this data article as supplementary material</i>

Value of the data

- In addition to its significance as source of food and animal feed, cassava is increasingly becoming an important raw material for several industries including biofuel producing industries [1,2]. Therefore, addressing the incidence of cassava mosaic disease and associated whitefly vectors is considered pivotal to the realization of the Sustainable Development Goals (SDGs) numbers 1–3 (i.e. no poverty, zero hunger, and good health and well-being) by 2030 [3,4].
- Nigeria is the highest producer of cassava globally and the plant is heavily cultivated in the South Western and North Central States of Nigeria [5,6]. The data provided in this data article will help in tackling the challenges of cassava mosaic disease and associated whitefly vectors in South West and North Central Nigeria. This solution will help the country to harness the potentials of cassava as an important source of foreign exchange.
- The data exploration and the statistical analyses provided in this data article are considered adequate for objective assessment of the incidence and symptom severity of cassava mosaic disease and associated whitefly vectors in farmers' fields in these parts of Nigeria where cassava is heavily cultivated [7–9].
- The data presented in this article will encourage reproducible research and open new doors of research collaborations towards finding effective solutions to deal with the evolution of new super virulent strains of cassava mosaic viruses.

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