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Bulking Rate of Cassava Genotypes and Their Root Yield Relationship at Guinea Savannah and Forest Transition Agroecological Zone of Nigeria

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Abstract : Farmers are faced with varying production challenges ranging from unstable weather due to climate change, low yield, malnutrition, cattle invasion, and bush fires that have always affected their livelihood. Research effort must therefore be centered on improving farmers' livelihood, nutrition, and health by providing early bulking biofortified cassava varieties that could be harvested earlier with reasonable root yield and thereby preventing long stay of the crop on their farmland. This study evaluated cassava genotypes at different harvesting months of 3, 6, 9, and 12 months after planting in order to evaluate their bulking rate at different agroecology of Mokwa and Ubiaja. Data were collected on fresh storage root yield, Harvest index, and Dry matter content. It was shown from the study that traits FSRY, HI, and DM were significant for genotype and months after planting and variable among the genotype while location had no effect on the yield traits. Early bulking genotypes were not high yielding and showed discontinuity at some point across the months. The retrogression in yield performance across months had no effect on the highest yielding. Also, for all the genotypes and across evaluated months, FSRY reduces at 9 MAP due to a reduction in dry matter content during the same month, and the best performing genotype was the genotype IBA90581, followed by IBA120036, IBA130896, and IBA980581 while the least performing was genotype IBA130818.

Keywords : early bulking, dry mater, harvest index, high yielding, root yield
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