

Article title	Climate Resilient Soil Fertility Management Strategy for Rice Production in Submergence Prone Areas in Northern Ghana.
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Abstract	<p>Frequent flooding occurring in some parts of northern Ghana has negatively affected lowland rainfed rice production. Previous efforts to mitigate the problem focused mainly on varietal improvement. However, there is the need to find a technological fit between genotypes, and nutrient management strategies to ensure sustainable production. Adaptive trials were established in seven communities in northern Ghana to evaluate the effectiveness of the urea deep placement (UDP) technology in improving productivity in submergence prone areas using the submergence-tolerant rice varieties, NERICA L-19 and NERICA L-49 as test varieties. In each trial, the effectiveness of the UDP technology was compared with the microdosing (MD) technology and the locally recommended fertilizer management (LRP). Preliminary results across all seven locations showed that greatest yields and N uptake were observed from the UDP treatment, followed by the MD and the LRP treatments in that order, irrespective of rice variety used. The average grain yield obtained from the UDP treatment was 4 tons/ha and 4.2 tons/ha for the NERICA L-19 and L-49, respectively; those of the MD treatment were 3.1 tons/ha and 3.4 tons/ha; and those of the LRP treatment were 2.4 tons/ha and 2.6 tons/ha for the NERICA L-19 and L-49 respectively. Similarly, average N uptake across all seven locations showed ~65% N recovery from the UDP treatments ~44% for the MD treatment, and ~ 30% for the LRP treatment. Thus, the preliminary results suggest that the UDP technology could be an appropriate soil fertility management technology for submergence-prone areas, using submergence tolerance rice varieties. However, there is a need to repeat this trial for further investigations to validate the results and make appropriate recommendations.</p>
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