



SDI Review Form 1.6

Journal Name:	International Journal of Plant & Soil Science
Manuscript Number:	Ms_IJPSS_30318
Title of the Manuscript:	Soil moisture stress and nitrogen supply affect the growth characteristics and yield of upland rice cultivars
Type of the Article	Original Research Paper

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>Line 47 – Your objective is to determine the effect of N fertilizer application on growth & yield of upland cultivars grown in Uganda.</p> <p>You concluded that the combination of 15% moisture stress level and 120Kg N/ha levels are best for optimal production.</p> <ol style="list-style-type: none"> 1. No. of tillers & plant height at 120kg.N level are significantly lower at 15% moisture. 2. No. of days to maturity at 120kg. N levels are similar at 15% & 25% moisture levels. 3. No. of panicles at 120kg N are gradually reduced than control i.e 25% moisture. 4. Grain yield at 120kg. N levels are gradually reduced than control moisture i.e. 25%. 5. Biological yield at 120kg.N levels are similar both at 15% & control moisture (25%) levels. 6. Harvest index at 120kg.N levels is similar at 25% i.e. control, 15%, & 10% moisture levels. <p>All the parameters that you studied are shown best results at control moisture i.e at 25%. Then why you are suggested 15% moisture levels at 120kg.N levels.</p>	<p>Objective adjusted to include moisture stress</p> <p>Soil that was used in this study was sandy loam with field capacity 20-25% moisture content. This was the basis of taking 25% soil moisture content as a control. Purpose of the study was to determine the moisture stress level that upland rice would endure and perform optimally when the nitrogen content of the soil is improved. The findings were that at 120 kg N/ha level:</p> <ol style="list-style-type: none"> 1. Number of tillers produced at the 25% soil moisture level (control) did not differ from those produced at the 15% soil moisture stress level (Table 2). 2. Days to maturity were shorter and similar for the control & 15% moisture stress level. 3. Grain yields for moisture stress treatments (15, 10 & 5%) significantly reduced when compared with the control (Table 3). But the reduction was less at 15% moisture stress level than at 10 & 5%. Thus, grain yield was better at 15% stress level than at 10 & 5% stress levels. 4. Biological yield (BY) for the 15% moisture stress level was similar to that of the control. But for the 10 & 5% moisture stress levels, BY significantly reduced. Harvest index almost followed the same trend (Table 3). <p>In conclusion, these results indicate is that at 120 kg N/ha application rate, a reduction in soil moisture content to 15% does not severely affect the</p>



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	<p>When you are taking the combination of two factors at a time to study, How you can say which factor is influencing the result without knowing the influence of individual factor.</p>	<p>performance of upland rice cultivars as to when it drops to 10 & 5%. Thus, upland rice would perform equally well as at normal soil moisture conditions (the control) when the drop in soil moisture content is not more than 15%.</p> <p>Thus, the 120 kg N and 15% soil moisture level was recommended basing on (1) tiller numbers being similar as the control, (2) days to maturity (shorter maturity period) as the control, (3) high grain yield which is second to that of the control and higher than grain yields of 10 & 5% moisture stress levels and, (4) harvest index being similar to that of the control.</p> <p>The influence of individual factors was determined using the following results in Tables 2 & 3. For the effect of soil moisture alone, we considered the results obtained at 0 kg N/ha. For the effect of fertilizer alone, we considered fertilizer rates (0, 40, 80 & 120 kg N/ha at the 25% soil moisture level (the control, or field capacity of soil that was used in the study).</p>
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		