



SDI Review Form 1.6

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2013_AJEA_7868
Title of the Manuscript:	Potassium Nutrition and Translocation in Cassava (<i>Manihot esculenta</i> Crantz) intercropped with Soybean
Type of the Article	

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	In lines 83/84 stated that K + in the cassava tuber and leaves were analysed using AAS. But in the result plus discussion parts reported and discussed only the exchange in the leaf. One can understand in a better way if the exchange discussed both in tuber and leaves part based on the result of K uptake	Duplicate plant samples were dry-ashed and dissolved with 10ml. 6M HCl. The K content of the digest was determined by flame photometric method, using flame photometer (Aarnio et al, 2003) according to the standard analytical method for potassium determination in plants. Flame photometry was used not AAS
	Material and methods 1. Data analysis method not mentioned and to be specified 1. Line 91 - the abbreviated word to be fully written then the abbreviation can follow then after. 2. Line 93 - the percentage 204% to be recalculated. 3. Line 99 - How the significance level determined, if the stat method is not mentioned and the experiment were run to my understanding without replication 4. Line 103 - 65.8% need recalculation 5. Line 139/141 statement - table 1 with N₄₅K₅₀	1. Data Analysis Data collected were analysed using procedures outlined by Obi (1980) for split plot in RCBD. Differences among treatment means were determined by the use of Fisher's least significant difference at 5% probability procedure outlined by Obi (1995) Combined analysis of variance (ANOVA) was done using the general linear model procedure (GLM) to determine differences and effects between cropping system, soil amendment effect, crop yield and system efficiency. Linear additive model of the system: $X_{ijk} = \mu + \beta_1 + T_j + (BT)_{ij} + \alpha K + (T\alpha)_{jk} + \sum_{ijk}$ Where: X_{ijk} = Any observation; μ = Overall mean; β_1 = Block effect; T_j = Factor A ; $(BT)_{ij}$ = Error (a); αK = Factor B; $(T\alpha)_{jk}$ = A x B Interaction; $\sum_{ijk}$ = Error



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	is lower than with $N_{45}K_0$ whereas K accumulation in the leaf of these two treatments was higher. So the conclusion made in these lines seems wrong! 6. Table 1 - the average calculation has to be reworked, and if rounding off values intended to be done uniformly and following the mathematical procedures. (example: $N_{45}K_{50}$ not 28% is 27.4	(b). Results 1. Effect of potassium rate and cropping system on cassava tuber yield ($t\cdot ha^{-1}$) at 12 months after planting (MAP) was presented in table 1. 2. Percentages not used. 3. Statistical method is outlined in comment 1 and the experiment was run with replication as mentioned in comment 1. 4. Sole crops did not differ significantly among themselves. Intercrops of TGX 1448-2E with either varieties of cassava were similar (2.33%), while the intercrops of NR 8230 (2.45%) was significantly ($P < 0.05$) higher than TMS 30572 intercropped with Samsoy-2 (2.40%), (early maturing variety) TGX 1894-3E (2.55%) and TGX 1805-31F (2.30%), (medium maturing varieties) and at late maturing varieties, intercrops of TMS 30572 with both soybean varieties out yielded intercrops of NR 8230 5. An increase in the supply of K^+ in
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		the plant root zone by fertilization (N_0K_{50} and $N_{45}K_{50}$) increased K^+ accumulation in source leaves and caused increase in cassava tuber yield. 6. Percentage corrected from 28% to 27.4%
<u>Minor</u> REVISION comments	Lacks uniformity in data presentation and discussion. Line 93-113 present yield of cassava, and line 115-129 discussing on average base of the K^+ exchange. The author(s) has/have to show his/their result in connection one with the other, otherwise it become difficult to understand for readers finding the relation.	Data presentation and discussion has been rearranged for clearer reading.
<u>Optional/General</u> comments	The data were not statistically analysed, as it is not replicated. The design is to minimize the effect of soil variation on the yield. Generally the paper is presented well.	Statistical Analyses of the data collected has been highlighted.