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Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	2014_AJEA_9843
Title of the Manuscript:	EVALUATION OF AFLP MARKERS FOR SCREENING RESISTANCE TO COMMON BEAN ROOT ROT (Pythium spp.)
Type of the Article	Original research Article

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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	The author wrote in the ABSTRACT, "Cluster analysis revealed that resistant bean varieties were genetically different from the susceptible bean varieties', is wrong, because the susceptible variety, Alulu is included in the resistant group of A2 in Fig.1, and susceptible varieties, GKP2 and GLP585 are included in the resistant group of the upper half group of I in Fig. 2. From these observations, I do not accept the author's conclusion, "AFLP marker is an informative, reliable technique for delineating susceptible and resistant Pythium root rot dry bean varieties. The information generated will contribute to the propagation of acceptable market class bean lines with resistance to Pythium root rot." In addition, The author recognizes lack of knowledge on heredity in Pythium root rot resistance by sentence of the ABSTRACT such as, "There is need to subject the non-breeders seed samples to SCAR marker PYAA₈₀₀ and pathogenicity testing to correlate the findings." This recognition strongly requires redesign Material and Methods in the study. I think diversity analysis among varieties should be followed by heredity analysis.	Alulu is actually moderately resistant and not susceptible. We have corrected this in the manuscript. AFLP was concluded as a potential marker for further work in this study. this is a gateway to further work on breeding for Pythium resistant bean samples genetic relatedness to that of market class that are preferred by farmers in Kenya to help advance the step of breeding for bean lines that are of marketable, and preferred by the small scale farmer. Generally, the genetics of inheritance of bean root rot resistance is quite complex and so far no consensus has been reached as explained in paragraph 3 of introduction. Heredity SCAR marker PYAA800 is already designed and targets the resistant gene. Due to lack of publicly available primer sequence of the marker and failure to obtain it despite efforts we were not able to order it.



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<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments	The heredity and pathogenicity tests should be added together with the AFLP experiments and analysis in this manuscript. Or the author should give enough information on them prior to going to the main body. I doubt that <i>Pythium</i> root rot resistance is controlled by a single gene. If so, group of resistant varieties will be simpler, clearer and more compact not like in Fig.1 and 2.	This study was an MSc. Study and involved lab work only using germplasm that had already been tested for pathenogenicity to determine the level of resistance. However, studies conducted by the germplasm donors who happen to be bean scientists in East Africa confirm that the resistance is controlled by a single gene (REF: Namayanja et al. 2014. Genetic Analysis of Resistance to <i>Pythium</i> Root Rot Disease in Common Bean (<i>Phaseolus Vulgaris</i> L.) Genotypes. Journal of Crop Improvement Volume 28, Issue 2, 2014 pp. 184-202) & Otsyula et al. (2003). Inheritance and transfer of root rot (<i>Pythium</i>) resistance to bean genotypes. Afr. Crop Sci. Soc., 6: 295-298.). We have therefore added this resistance information in the introduction as indicated in paragraph 3 of Introduction.