



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	MS: 2012/AJEA/2483
Title of the Manuscript:	Effect of Nitrogen Supply and Genotypic Variation for Nitrogen Use Efficiency in Maize.

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
Although the authors have made some revision on the manuscript, not many revisions as indicated (as marked on the text) have been addressed! Still, there are some inconsistencies in the terminologies and phrases.	1. We need to clarify that some revisions are not marked on the text, although we have done (in revised manuscript version 1). We made major revisions (added & revised) on: - Abstract: lines 11-21. - Introduction: lines 40-49. - Material & methods: lines 68-70; 72-75; 93; 99; 112-115. - Result & Discussions: lines 156-161; 180-182; 183-186; 214-218; 263-271; 327-331; 374-376; 392-409. - Conclusion: all lines (413-443). - Reference style (on text and reference list). - Revised grammar as marked on the text. - We actually do not know with certainty which part terminologies and phrases are inconsistent as it was intended by the reviewer because we did not receive commented manuscript, but we try to find out by checking our manuscript. Here are the corrections we have made: a. Terminologies. - We used word “cob” (line 92, 96, 144, 333 Table 5) and “ear” (Table1 & 2) as it has the same meaning. For consistent terminology, we <i>replace</i> “ear” with “cob”. - We changed “genetic variation” with “genotypic variation” (line 62) which is consistent with the title of paper. - There are two common definitions that are often used as components of NUE refer to similar meaning, “nitrogen uptake efficiency (NUpE)” or (same as) “crop recovery efficiency of applied N (RE_N)” and “nitrogen utilization efficiency (NUtE)” or (same as) “physiological efficiency of applied N (PE_N)”. Because of the experimental conditions (crop response to N applied, field experiment and one cropping season), it's more appropriate that we use NUE parameters based on agronomic frame work/studies, as RE_N and PE_N (Dobermann, 2005)[9]. b. Key finding of this study that we found potential genotypes as genetic materials for developing N-tolerant maize genotypes in NK-33, DK-979, Pioneer-21 and Bisma (available in abstract, line 21; and conclusion, lines 433-435) and the complexity of genetic variation for NUE traits (available in: lines 422-428). c. The implication of result of this study: The present study is a preliminary basis for us to develop N-efficient maize genotypes, or low-N tolerant genotypes. In this study we gain both agronomic and physiological NUE studies, which is useful for understanding the genetic basis of N efficiency. Furthermore, this study could be used to find traits closely related to NUE, as selection criteria for identifying genotypes with high NUE or low-N tolerant genotypes in maize breeding programs. We suggested the implication of the result of study (in conclusion, lines 435-443) that the use of N-efficient genotypes, such as maize which requires a large quantity of N input, would be advantageous economically, particularly in the developing countries where the high cost of fertilizer is a main constraint in cropping system. In addition, the hazard of environmental pollution caused by excessive fertilization would be reduced by cropping the N-efficient maize genotypes.