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PART 1:

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	**MS: 2012_AJEA_2914**
Title of the Manuscript:	**EVIDENCE OF IMPROVING YIELD AND MORPHOLOGICAL ATTRIBUTES VIA HALF-SIB FAMILY RECURRENT SELECTION IN MAIZE.**

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- This form has total 9 parts. Kindly note that you should use all the parts of this review form.

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PART 2: 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	I think that the manuscript reports interesting results, but the Material and methods has to be clearly explained and the heritability and the expected response need to be revised.	
Minor REVISION comments	Line 54: the text says: "The reason for low maize production…", but I suppose that it could be "One of the main reasons…" or a similar sentence Line 55-57: first the verb is "required" (past) and later the verb is "will come", may be it is better "requires" for consistency between verb forms Line 69: recurrent selection is also in line 63 so "(RS)" could be before. Line 79: "Eyherabide and Hallauer (1991) reported a 6.5% cycle^{-1} increase in grain yield in the population cross. In a reciprocal..." I think that the point should be deleted. Lines 84-86, "…where as six cycles…" it is not clear, may be "…where six cycles…" Lines 94-99 (breeding material): More information about the characteristics of Pakistan growing area will be valuable: is it temperate or tropical maize? how many harvest per year? What is the cycle of Pahari: early or late (comparison with some standard hybrid)? Which is the genetic origin of Shaheen and PS-7930 (related to some temperate	

	(BSSS…) or tropical (Tuxpeño…)? Shaheen is a local variety and PS-7930 a hybrid? Lines 100-116 (procedure and field experiment), the procedure is not clearly explained, how the selected families were recombined? I suppose that open pollinated seed of the selected half-sib families were bulked to form the next cycle (ear-to-row selection), but it has been clearly stated in the text. How many ears of each HS were selected, there were only between family selection or also within family selection? How many families were selected? In line 94 the authors say that this experiment comprised 144 and 121 HS lines, but it is not clear if the HS lines were obtained from the first and second cycle, or not. I think it could be more clear if the authors explain the procedure step by step: first the original population was planted, x ears were selected and planted ear-to-row the next season, x HS families were selected based on y (some criteria), from each family w ears were selected and the seed bulked… Line 108, the number of plant of the experimental unit, that is, the number of plants for each HS family in each replication should be included (I suppose that there are 20 plants per experimental unit for the information included for calculating yield). Line 123, could please indicate in the text what is the shelling coefficient? (for example, the percentage of grain in the fresh ear weight).	

	Line 138, VarG=M2-M1. I do not understand this equation, because, M1=VE, M2=VE+rVarG then M2-M1=rVarG. Line 140, why the narrow sense heritability was not calculated? The value of the COV depends on the procedure that needs to be more clearly detailed. If the procedure was ear-to-row selection then COVHS=1/8VA. Line 148, was the expected response calculated with the broad sense heritability? If this is true, I do not understand why the narrow sense heritability was not used. The response could be overestimate by 8 if the procedure was modified ear-to-row selection. May be this is the reason for a high heritability found for yield that usually has lower values of heritability. Lines 155-404, in Results and Discussion may be the structure could be changed to increase the interest of the paper and to avoid the repetition of sentences. For example, it could be discussed first the yield, which is the main objective of the selection, and later the other traits together, instead of a new paragraph for each trait. In Hallauer and Miranda (Quantitative Genetics in Maize Breeding) there is a deep analysis of HS selection with several references that would improve the introduction and the discussion of the present manuscript (see pages 217-221 and Table 7.7). In the experiment a visual scale was used based on	

	grain filling, ear length and good looking cob. Why is important the good looking cob and not good looking ear? Could you please indicate the interest of cobs in your area? The objective of the scale was to obtain an increment in the yield. The authors have to explain why they used a visual scale instead of yield (I suppose for saving money and work). I think that this point deserves some attention in discussion, is it possible with a easy or simple method to obtain a improvement of yield? We have a recent manuscript (Effect of visual selection during the development of inbred lines of maize, Ordas et al., Crop Science 52: 2538-2545) in which we reported results from a selection with a visual scale in which the yield was indirectly improved.	
Optional/General comments		

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