



SDI Review Form 1.6

Journal Name:	American Journal of Experimental Agriculture
Manuscript Number:	Ms_AJEA_24292
Title of the Manuscript:	Salt-tolerant triticale (X Triticosecale Witt) cultivation in Jordan as a new forage crop
Type of the Article	Original Research 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.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

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)
<u>Compulsory</u> REVISION comments	Review of Mohunnad et al “Salt-tolerant triticale (X Triticosecale Witt) cultivation in Jordan as a new forage crop” General Comments This manuscript provides an investigation of the potential for particular strains of triticale as an alternate crop in salt affected areas in Jordan. The results appear pertinent to actual farmers, and the main questions—which are very practical in nature—seem clearly presented in the paper. Hence, any lack of novelty/presentation style is easily ignorable as far a publication in AJEA is concerned. However, the manuscript is not acceptable for publication in its current form because of largely methodological issues, many of which may be due to issues of presentation. The manuscript needs considerable work, and assessment of a revision would be needed to determine if there are true solutions to these issues. I provide details of my assessment and potential suggestions where possible.	General Comments 1. In case of the experimental design: it was disciplined that those data taken from field observations which were controlled in the first paragraph of " materials and methods", where cultivars, seeding rates, irrigation rates, and planting depth issued in addition to field size and seasonal replications. 2. For the yield measurements, the yield records approved for the total harvesting of all experimental unit (0.1 ha), the farmers have approved the yields by comparing yield records with profits made by grains and dry matters. Thus, the sampling size considered is the entire crop



SDI Review Form 1.6

	I have two serious, general reservations about this manuscript. First, while the topic is simple and seems adequately introduced, there is not enough detail provided in the Methods section to allow the reader to either (i) understand exactly what was done, (ii) allow for a critical evaluation of the results, or (iii) to allow for other researchers to replicate the methods. Second, and separate from the general lack of content in the methods, is that the current Methods are unclearly presented. After reading the paper a number of time, I find it hard to answer questions like, what was the experimental design (?). What was the sample size? What triticale strains were used and why, and where were they sourced from? How were samples analyzed for various response variables? To be clear, I don't feel that the content of the paper can be evaluated rigorously as it stands. That being said, here are my other general comments for now. The sample size appears to be two samples per site per cereal. If so, this would seem an unacceptable result for publication. I wonder if some figure(s) outlining the experimental design/framework would help make it clearer? Likewise, another suggestion might be to present some of the results as figure(s) with some error measure reported. A quick google scholar search suggests that there	cultivated in 0.1 ha, equals 1000 meter square of land (<i>please look to attachment namely Dan att</i>). - It was mentioned in the abstract that lines were experimented in a trial station and the best one (Syria 1) was introduced to farmers. The lines imported by ICBA institute to test under Jordan conditions. - For the forage quality test, we collect randomly five samples of triticale (full plant) for one season only (2011 -2012) in both regions. Samples were sent to the lab in order to make the tests. The lab engineer had taken kernels and dry matter separately. Each part, grounded to a powder, 2 random samples were taken from the powder to make the test for each parameter (<i>please look to attachment namely Dan att</i>). - Some other references added to enrich the literature situation (according to Asr and Dan reviewers' suggestions) which related salinity in Jordan and
--	--	--



SDI Review Form 1.6

	is considerably more research on salt tolerant tricale than is represented here. Maybe adding a few more references to provide context for why this is a novel research endeavor would help the paper. You mention some comparative studies latter in the paper which is odd given the discussion of novelty in the introduction. Also, the title, is this the first use of tritcale in Jordan? In the Results and Discussion you state that you demonstrate an “influence of saline environment, genotype and their interaction” on plant yield and yield quality. This sounds like a very interesting finding, but where are the statistics to support this statement. There is even a representation of significant differences in the tables and in the text yet there is no discussion of how this was determined. This cannot be assumed. A statistical model with a statistically significant interaction term would be needed to make this claim and I do not see statistics supporting any of the other claims made in the discussion either. Are there controls in this experiment? I see that barley is called a control, which makes sense. However, the methods are not described sufficiently for me to know the experimental design. If there are no controls (i.e., not a complete set of treatments) then this needs to be made clear	tritcale yield in Syria, the closest country to Jordan. Mainly, this is the first introduction, dissemination and adoption of a tritcale in Jordan in a case of a commercial production, Thus the title of paper fostering the proposing of this crop to farmers (this also come in the line with Mai reviewer suggestion) which come in contact of unifying the aim of paper and classifying it as a short communication paper. 6. The statistical analysis done by calculating t – value and comparing it with the tabulated t for each parameter (t-test: two samples assuming equal variances). 7. The claim related interaction was an exaggeration in the expressing of discussion, it was removed. The experimentation concluded the influence and impact of crop type directly on the yield, this results will direct researchers for further tests, mainly for more scientific investigations rather than an exaggeration claim which was
--	---	--



SDI Review Form 1.6

	to the reader and the discussion needs to be clear about what the results actually say and what the limitations are. Just for my own clarity, not having controls would not really change your result qualitatively since the goal is to increase crop yield, but would mean that future researchers could not interpret relative differences in responses or the impact that salt had on the triticale, for example. We also, then, don't know if the results are truly due to salt and to what degree there are other site effects (although I agree with the authors, it can't be rigorously evaluated.). Finally, the Results and Discussion section suffers from a similar degree of vagueness as the Methods (and both also have grammatical issues throughout that contribute to this somewhat). For example, it is often hard to determine if you are discussing your results, the results of another study, or if you are trying to compare and contrast the two. I think there is promise here in the paper and there is a lot of interesting stuff here, and I am not recommending rejection because I bet that many of these issues might be overcome by the authors (e.g., what about combining harvest data from multiple years so that you could run a mixed model?). However, this manuscript needs considerable work on both the writing and the	wrote previously. 8. Two samples with equal variances leads to measure the significance for each parameter between both crops, as well as to calculate the significance for each parameter related forage quality. Thus, the paper may sound good (at least in our opinion as a short communication paper) and as a native work which may lead research to make an extra experimentation to interpret the salinity and genotype interactions, and the degree to which each one has a more impact on yield. 9. Results are clear, and give the conclusion directly, we are trying to promote the data concluded by an approving literature, so we make a comparison and citing our results in the same line of some other documented literature, the main discussion point is to highlight the triticale yield superiority to other crops. 10. Sorry, this crop is new in Jordan, and those are the data collected since onset of adoption which has been taken place in 2011. Thus, no
--	---	---



SDI Review Form 1.6

	analysis in order to be publishable. Specific Comments - Abstract, line 2. “obvious,” suggest simply stating what you mean. - Abstract, line 4. “defrag” probably to “frag.” - Abstract, last line. “part of seed production” to “part of <i>the</i> seed production” ? - Introduction, line 6. Either “ cereals’ ” or “cereal” - 800 million hectare? Maybe it was supposed to say 80? See (Tester, 2003) and related citations. Furthermore, the citation provided does not take me to somewhere that I can easily check what you intended. - Introduction, line 9. “man-breed” to “man-bred.” - Introduction, P2, line 4. “stated” ? unsure	further controlled data found. Specific Comments 11. Obvious was changed to "is reported" 12. Defragmentation changed to fragmentation. 13. The seed... 14. Cereal. 15. This information may cause some confounding conclusion, the overall data removed, with its citation. 16. Bred. 17. Reported
--	---	---



SDI Review Form 1.6

	what is being said here. - Introduction, P2, last sentence. Is there a citation for this idea and the values? What is the range among Triticale lines? - Suggestion: it might help to state why NDF and ADF are important measurements. - NDF is given in parentheses multiple times, and is then typed fully sometimes, and is given as NDF other times. - Methods, line 6. "Mean an annual precipitation" ? - Results and Discussion. "(Josephides 1992/1993)" I doubt this is an acceptable citation format.	18. Kotuby-Amacher et al. (2000) is the reference cited those data, it mentioned previously to the citation in the text. So, we remove the dot at the end of the previous sentence and two final sentences separated by a comma. We tested several cultivars of triticale suitability to local climates, and the best one was recommended within this research. 19. NDF and ADF importance was stated within the results and discussion section. 20. In the corrected draft the full name and abbreviations mentioned a once in the abstract, then the full name repeated all over the paper unless in table 2 where the abbreviation is better. The same done for ADF also. 21. Corrected: Mean annual... 22. The citation was corrected, it was unjust. The correction is by mentioning the year of publishing which was 1993 not 1992/1993.
--	--	---



SDI Review Form 1.6

	- Results and Discussion, line one. Grammar - Methods: irrigations and treatments are unclear, e.g., “treated waste water conditions” ?	23. Results and discussion line one: the sentence was changed according to Dan comment # 7. Now it becomes "Result in (Table 1) showed an influence of genotype on crop yield, a difference was found for tritcale....etc". 24. Each experiment carried out (either tritcale or barley) in the saline area (Azraq) was irrigated by ground water in a rate of 1500 m³/0.1 ha/season. On the other hand, each experiment carried out (either tritcale or barley) under treated waste water (Hashmyahh) was irrigated with TWW in a rate of 810 m³/0.1 ha/season. Please, note that Azraq saline soil need a lot of water to leach salts, in addition to hot climate in this area in comparison to Hashmyahh region. This is the major reason for different irrigation rates, and for politely reasons, we were not comparing same crops together in different regions.
--	---	---



SDI Review Form 1.6

	- Results and Discussion, P1. Which are specific results of this study, and where are the statistics to back up the assertions? - Results and Discussion, P2. This paragraph is an example of where it is unclear what is a result of this study, what is a result of the cited paper, and whether there is something the reader is supposed to take away from the comparison. - Results and Discussion, P3. Is this a different study? Very unclear. - “significantly” implies some statistics were used. - Conclusions, line 2. “forage” maybe further describe what it is forage for?	25. The specific result is (triticale superiority to barley regardless of location). It was indicated by significance measured (t-value) and/or percent of increase. 26. Please, focus on the point of: (triticale yield significantly higher than barley by 5 %). The comparison leads the reader to be approved with this result which was confirmed by others also. 27. Paragraph 3 in results and discussion deals with forage parameters measure in the lab, for both triticale trials conducted on the same season (2011-2012) for two trial regions. 28. It was stated in Ozl # 1 B +Dan # 6 + Dan # 8 + Dan # 28. 29. Forage used for feeding animals mainly sheep and goats. Triticale is not pure wheat used for food either as bread or pasta, so we call it roughly forage wheat. It will be a good alternative to barley as a feed forage crop.
--	--	--



SDI Review Form 1.6

	- Conclusions, line 6. Grammar issues, and then a sentence fragment. - Conclusions, line 7. Grammar. "a further" - Literature Cited and References – one or the other? Literature Tester, M. (2003) Na⁺ Tolerance and Na⁺ Transport in Higher Plants. <i>Annals of Botany</i>, 91, 503–527.	30. Line 6 of conclusion is fragmented to other paragraph." Were based" reduced to "based" clause in the presence of (be pronounced and demonstrated). Please, correct it if you have a further suggestion. 31. "a" was written due to singular word "research". But, may we need the word "more" to widening the scope. 32. APA 6th procedure was followed for literature cited. 33. APA 6th procedure was followed for references list.
--	---	---



SDI Review Form 1.6

		34. We will recommend the editorial office to consider this paper as a short communication rather than an original research article.
Minor REVISION comments		
Optional/General comments		<i>Dear reviewer:</i> Finally, thank you very much for all of your comments which will lead us for further and deep looking. <i>Correspondent author</i>