Review Form 1.7

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number	**Ms_JABB_116525**
Title of the Manuscript:	**GENOMIC ADVANCES IN BIOFORTIFICATION OF IRON AND ZINC IN WHEAT (TRITICUM AESTIVUM L.): A COMPREHENSIVE REVIEW**
Type of the Article	**Review Article**

Review Form 1.7

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 **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?**	**1.** **- Dear authors, we approached the design of the review article one-sidedly. Indeed, wheat grain is the main product for a part of the poorest population. During the review of the published works, the chemical composition of wheat grain was not presented. The culture has a great variety of species. Depending on the growing conditions and species, the chemical composition of wheat grain may differ significantly. In general, wheat is divided into two large groups according to quality indicators. The first group – soft wheat – is intended for the production of bakery products. It evaluates the content of vegetable protein and gluten. The second group, durum wheat, is intended for the production of high-quality cereals and pasta. In addition to the protein content in such wheat, the vitreousness, color and grain size are evaluated.** **- The article did not convincingly justify the deficiency of elements such as iron and zinc. After all, wheat grains also contain elements such as boron, copper, molybdenum, manganese, and cobalt in short supply. all of these trace elements are important for humans. I believe that breeding should be aimed at creating varieties with a high content of protein, gluten, vitreous, coarseness, as well as tolerance to fungal diseases. I consider it inappropriate to selectively increase the content of the mesoelement of iron and the trace element of zinc in wheat grain.** **- The esteemed authors of the manuscript mistakenly attributed iron to trace elements. According to the modern classification, chemical elements are divided into macronutrients, trace elements, trace elements and ultramicroelements. According to this classification, iron belongs to mesoelements.** **-The esteemed authors of the manuscript mistakenly attributed iron to trace elements. According to the modern classification, chemical elements are divided into macronutrients, trace elements, trace elements and ultramicroelements. According to this classification, iron belongs to mesoelements.** **2. I think that the title of the article should be replaced with: "GENOMIC ACHIEVEMENTS IN THE CREATION OF TRITICUM AESTIVUM L. VARIETIES WITH IMPROVED QUALITY INDICATORS: A COMPREHENSIVE REVIEW".** **3. Dear editors, if the authors wish to issue a manuscript, supplementing it with material on modern breeding achievements in the field of improving grain quality, the annotation will need to be supplemented with new information. In my opinion, it would be necessary to solve the problem of protein deficiency (including plant origin) through breeding achievements.** **4. The subsections and structure of the manuscript will be appropriate if the authors replace the phrases of trace elements (Fe and Zn) with protein or protein of vegetable origin. If the authors wish to leave the previously stated problem, an additional subsection should be made containing a section on ensuring the optimization of wheat plant nutrition with the mesoelement Fe and the trace element Zn during its cultivation. If the isolated elements in the soil are in short supply during the growing season of the crop, it will not be possible to obtain an accumulation of Fe and Zn in the grain.** **5. The answer to the first question of the review indicates that the material presented in the manuscript, from a scientific point of view, requires a revision of the problem and rethinking!** **6.The authors of the manuscript tried and used 48 sources on the stated topic, which, I think, is quite enough for this publication.** **7. Unfortunately, the manuscript has great theoretical significance. In practice, it will turn out that in the grain of soft wheat, when grown for commercial purposes, there will be much less iron and zinc than will be declared by breeders. Difficulties may arise in improving the technology of wheat cultivation with the possibility of increased accumulation of the mesoelement of iron and the trace element zinc in the grain. It has not been studied whether the quality indicators of the grain of grown wheat will cover the additional costs of**	

5. Do you think the manuscript is scientifically correct? **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**applying fertilizers containing the iron mesoelement in chelated form and the zinc trace element in cationic form.** **8. The manuscript does not specify by reducing which components will accumulate iron and zinc in the commercial grain of soft wheat.** **9. The authors of the manuscript did not report anything about the possible receipt of high-quality food products made from wheat grain enriched with iron and zinc.** **10. I wonder if iron and zinc will be absorbed from foods containing an increased amount? To answer this question, it is necessary to conduct a number of experiments.** **11. Geneticists will have to study how transgenic wheat will be useful or harmful for people who consume food from it.**	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	**1 Yes, the quality of the article in English is suitable for scientific publications.**	
Optional/Generalcomments	**No comments**	

PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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