

## Review Form 1.7

Journal Name:	<b>International Journal of Plant &amp; Soil Science</b>
Manuscript Number:	<b>Ms_IJPSS_96630</b>
Title of the Manuscript:	<b>Performance of five varieties of wheat under different tillage systems (conservation and conventional agriculture).</b>
Type of the 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:

(<https://www.journalijpss.com/index.php/IJPSS/editorial-policy> )

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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)
<p><b>Compulsory</b> REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of</p>	<p>Accumulation of precipitation during the year and its rational use is achieved thanks to the implementation of basic tillage systems, which make it possible not to turn over the arable layer every year. The specified tillage systems (flat-cut, surface, Mini-Till, No-till and Strip-till) make it possible to partially store and accumulate mulch on its surface, reduce the speed of movement of the air layer and contribute to better preservation of moisture. That is why the relevance of research on the topic of the article is beyond doubt.</p> <p>The title of the article reflects its content. In my opinion, it would be appropriate here to "establish the influence of tillage systems on the productivity of wheat varieties in the conditions of Balkh ARIA research farm of Dehdadi". It would look more convincing as the results of comparative varietal studies separately according to traditional cultivation technology, separately according to conservation methods. Correct comparison of the results of these studies should preferably be carried out at the level of system analysis of all efficiency components (energy, technological, etc.).</p> <p>The scientific conclusion given in the abstract regarding the influence of cultivation technology (tillage technology) on efficiency (yield) indicators is sufficiently well known. It would be more attractive to present the most significant research results not in linguistic form, but in quantitative and qualitative indicators.</p> <p>The article contains all the necessary sections.</p> <p>The contention of the authors regarding the fact that conservation agriculture is determined by only three principles established by them is debatable. Convincing long-term studies on the prospects of growing cereals (corn) on the principle of corn by corn are quite well known. In the criteria given by the authors, the fundamental principle of the production of agricultural products is missing - the principle of saving energy resources, - energy saving.</p> <p>It is appropriate to cite the predecessors of the crops that were grown on the experimental plots and their cultivation technologies.</p> <p>The wording of the goal needs to be clarified and is generally not quite correct. This is due to the fact that the effect of using energy-saving (conservation) technologies (Mini-Till, No-Till, Strip-till) is possible only after several (5-7) years.</p> <p>It is appropriate to indicate the average land area of farms that specialize in the cultivation of cereals (wheat).</p> <p>The authors cite two factors - conservation tillage (No-Till) and traditional (deep plowing). However, it is well known that the application of No-Till in the first years leads to a decrease in yield. In addition, according to this technology, the fight against weeds is carried out by chemical methods, with all the negative consequences that follow from this.</p> <p>It is advisable to supplement the methodology - what was the grain sown on the experimental plots.</p>	

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<p>additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>Whether the uniformity of seed wrapping was established. What ensured uniformity of seed wrapping by the first and second methods.</p> <p>How was the fertilizer applied: in the furrow, under the furrow, or on the surface.</p> <p>It is appropriate to provide a critical analysis of publications on the topic of research and evaluate the possibilities and prospects of using one or another technology of soil cultivation for a specific soil and climate zone.</p> <p>The authors made most of the references to publications dated at the beginning of 2000. It is natural. It was during that period that research on the specified topic was heard. However, over time, publications on this topic shifted from positions of unconditional approval to cautious optimism. Under the conditions of implementation of the specified soil cultivation technologies, the vital activity of indigenous microorganisms is activated in the places of contact between the surface of plant remains and the soil. The disadvantages include increased activity of pathogens and pests, fixation of nutrients in the upper layer of the soil, slow decomposition of residues and a slight decrease in yield in the first years of technology application. Particular attention is paid to the compaction of the soil, which is observed in many cases in the case of the use of the specified technologies. There is a large number of publications in which specific conclusions are given regarding the increase in soil density and the occurrence of subsoil compaction, which makes water circulation impossible. This leads to the need for periodic use of special tools - chisels, which enable the destruction of soil compactions at a depth of up to 50 cm. That is why the thesis of the authors, regarding the fact that soils under conservation agriculture have a high ability to penetrate water, is controversial.</p> <p>World practice has proven that it is difficult to achieve pure application of the so-called "conservation farming technologies" in real farming conditions. Under such conditions, there is a need to use deep (chisel) tillage regularly (once every 4-5 years).</p>	
<p><b>Minor</b> REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Yes!</p>	
<p><b>Optional/General</b> comments</p>		

**PART 2:**

	<p><b>Reviewer's comment</b></p>	<p><b>Author's comment</b> (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)</p>
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

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