SDI Review Form 1.6

Journal Name:	**American Journal of Experimental Agriculture**
Manuscript Number:	**Ms_AJEA_22538**
Title of the Manuscript:	**Impact Of Preceding Legumes And Nitrogen Fertilizer On Soil Fertility And Growth Attribute Of Maize**
Type of the Article	**Original Research Paper**

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)

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PART 1: Review Comments

<table>
<tr><th></th><th>Reviewer's comment</th><th>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)</th></tr>
<tr><td><u>Compulsory</u> REVISION comments</td><td>
Plagiarism report: 31.3% (Introduction, Materials & Methods , Results & Discussion)
<table>
<tr><th>Line No.</th><th>Correction Required
(All with reference)</th></tr>
<tr><td>Title</td><td>Delete Soil fertility and</td></tr>
<tr><td>New title</td><td>Impact of preceding legume and Nitrogen levels on Maize</td></tr>
<tr><td>Abstract</td><td>Provide any conclusion from your findings</td></tr>
<tr><td>31</td><td>Mention production area (ha)</td></tr>
<tr><td>33</td><td>Add N,P & K ratio of utilization</td></tr>
<tr><td>34</td><td>Whether it is partial factor productivity?</td></tr>
<tr><td>35</td><td>these crops= cereals</td></tr>
<tr><td>37-39</td><td>It is copied from Katyal et al ., 2001 hence Rewrite</td></tr>
<tr><td>45</td><td>Reference article which provided not dealt on legumes but specific to Chickpea
Hence, provide new reference which on legumes review article on green manuring</td></tr>
<tr><td>49-51</td><td>After reading of (Singh et al.,1991) Rewrite sentence as per reference</td></tr>
<tr><td>66-67</td><td>Provide variety name (Mung bean, ,Fodder Cowpea , Grain Cowpea, Sesbania), Sowing and harvesting date</td></tr>
<tr><td>66-71</td><td>Three times repated hence delete</td></tr>
<tr><td>72</td><td>How did you calculate biomass of sesbania?</td></tr>
<tr><td>73-74</td><td>Provide clearly Spacing of legumes, Maize?</td></tr>
</table>
</td><td>References are checked. title are modified according to the suggestion. conclusion are rewrite. almost all the suggestion are incorporated.</td></tr>
</table>

	Is there any Space between Subplots? Hence mention clearly
81-82	**Repeated hence delete**
82-83	**When did you observed germination, Plant height?**
88-89	**Provide standard reference for soil analysis.**
96-137	**Rewrite the Results**
96-137	**Not found any discussion. Hence Write your discussion and substantiate that with any previous work**
122	**Lopez et al., 2007 reference missing**
Table 1& 2	**Kindly change as per Split plot Design**
	Provide new table which contain three column **1. Initial Soil Analysis preceding legume** **2. After legume** **3. After Maize**

Overall 68.7% unique

Introduction48% Unique

Cereal based cropping systems are predominantly followed- **Plagiarized**
and for ensuring food security. Previously balanced fertilization- **Unique**
high levels of productivity. However, with the passage of- **Unique**
and increasingly higher doses of nutrients are required- **Plagiarized**
This situation is associated with deteriorating fertility-

	Uniquedeficiencies including those of micronutrients. Organic- **Unique** organic matter build-up also favor sustainable productivity- **Plagiarized** a useful means to sustain organic matter content and thereby- **Plagiarized** and increase nutrient availability. Organic manuring by- **Unique** mulching or green manuring has declined over the years due- **Plagiarized**for seed, fodder or green manure helps in sustaining the- **Plagiarized**soil fertility through nutrient cycling (Herridge et al.,1995).- **Plagiarized** of 70–80 days available after the harvest of wheat till- **Unique**be utilized by short duration legume crops for enhancing- **Unique**manuring. Green manuring with annual leguminous crops like- **Unique** not only for realizing potential yields but also for N economy- **Plagiarized**mungbean as well as cowpea have direct value in human diet- **Plagiarized**when their residues with nodules are incorporated into the- **Plagiarized** quite possible to reduce the reliance on synthetic N fertilizers- **Unique** crop production. In fact, legume-based systems are likely- **Plagiarized**systems. There are few studies quantifying the relative- **Plagiarized**profitability and soil fertility in cereal based cropping- **Plagiarized** the immediate and residual effects of legumes on increasing 65% Unique Materials and method The experiments were conducted at The Agronomy Research- **Plagiarized** Summer legumes-maize cropping pattern was followed for the- **Unique** gap (land available after wheat harvest till maize sowing)- **Plagiarized** used for grain purpose and cowpea was used for fodder purpose.-	

	UniqueA fallow was included in the experiment as control. The**- Unique**Sesbania (green manure) and fallow land. After the harvest**- Unique**cowpea and Sesbania were sown in the first week of May following**- Unique**was incorporated into the field with a disc harrow in early**- Unique** previous legumes experiment was split into four sub plots**- Plagiarized**sown with four levels of N fertilizer (0, 90, 120 and 150**- Plagiarized**urea in two equal splits, half each at sowing and 30 days**- Plagiarized** was applied to maize at sowing. For legume's experiment**- Unique**was used. A plot size of 5 m x 16 m was used. For maize**- Unique**was split into four plots to accommodate four levels of**- Unique**The data was recorded on emergence m-2 81 by counting total**- Unique**randomly selected rows in each sub plot and then converted**- Unique** as the distance from base to the tip of the plant of five**- Plagiarized** of five randomly selected ears was counted and averaged.**- Unique** soil samples were taken from different position in each**- Plagiarized**of different physiochemical properties of soil including**- Plagiarized** sampling was done after the harvest of legumes. Statistical**- Unique**variance technique appropriate for RCB design for legume**- Unique**maize and wheat experiments using Genstat discovery software.**- Unique** 93% Unique Results and Discussion Soil parameters after legumes experiment Soil pH, total**- Unique**were not significantly affected by preceding legumes (Table**- Unique**Similarly, higher soil TSS and EC were recorded in plots**- Unique**in plots previously sown with Sesbania. Emergence m-2 Statistical**- Unique**legumes (L) had nonsignificant effects on emergence m-2103**- Unique**emergence was higher in N treated plots as compared to control.**- Unique**or kept fallow resulted in higher emergence m105 -2 while**- Unique**(Table 2). Plant height (cm) Different nitrogen levels significantly**- Unique**cropping system	

	remained not significant (Table 2). The**- Unique**increased as nitrogen level increased from 0 to 150 kg ha-10**- Unique**was applied at the rate of 150 kg ha-1 followed by N application**- Unique**short stature plants. This increase in plant height could**- Unique**growth the results are in agreement with the finding of**- Unique** with increasing nitrogen fertilizer. Ear weight (g) Ear**- Plagiarized** and legumes (Table 2). The N x L interaction was not significant.**- Unique**level increased. Plots fertilized with high N (150 kg ha-1)**- Unique**par with nitrogen application at the rate of 120 kg ha-1**- Unique** line with Lopez et al. (2007) reported that nitrogen application**- Plagiarized** weight was higher in plots previously sown with cowpea or**- Unique**of preceding legumes which might increase the availability**- Unique**are also reported by Sharma et al., (2009) that Sesbania**- Unique**effect on maize yield and yield attributes. Grains ear-1**- Unique**analysis of the data indicated that nitrogen levels significantly**- Unique**was not significant. Similarly, N x L interaction remained**- Unique**0 to 120 kg ha-1. Higher grains ear-1 were found in ears**- Unique**ha-1 which was at par with plots fertilized with N at the**- Unique**ear-1 . All N amended plots resulted in higher grain ear-1**- Unique**N amended plots increase in dry matter accumulation and**- Unique** 100% Unique Abstract An experiment on maize crop with preceding legumes and**- Unique**Agronomy, the University of Agriculture, Peshawar during**- Unique**The summer legumes were sown in the summer gap (land available**- Unique**and green manure purposes. Mungbean for grain and cowpea**- Unique**using fallow as control. After legumes experiment each plot**- Unique**of N (0, 90, 120 and 150 kg ha-1) for maize. Data was recorded**- Unique**Soil parameters after legumes experiment i.e. pH, total**- Unique**carbonate (CaCo3) were not significantly affected by preceding**- Unique**lower in plots previously	

	cultivated with mungbean. Similarly,**- Unique**sown with mungbean while lower soil TSS, CaCo3 and EC was**- Unique**were significantly affected by nitrogen levels except emergence**- Unique**grain ear-1 and ear weight. Taller plants were produced**- Unique**followed by N application of 120 kg ha-1 while control plots**- Unique**high N (150 kg ha-1) had significantly higher ear weight**- Unique**ha-1. Higher grains ear-1 were found in ear collected from**- Unique**at par with plots fertilized with N at the rate of 150 kg**- Unique** 100% Unique Conclusion It is concluded from the above results that summer legumes**- Unique** losses, reduce fertilizer cost and thus have to improve	
Minor REVISION comments	NA	
Optional/General comments	NA	