

## Review Form 1.7

Journal Name:	<b>International Journal of Environment and Climate Change</b>
Manuscript Number:	<b>Ms_IJECC_100379</b>
Title of the Manuscript:	<b>Impact of Front-Line Demonstration on Pulses Productivity and Profitability in Farmers Fields</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.journalijecc.com/index.php/IJECC/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> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><b>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</b></p>	<p>The manuscript "Impact of Front-Line Demonstration on Pulses Productivity and Profitability in Farmers Fields is to a certain extent similar to a previous study entitled Impact of Cluster Frontline Demonstrations on Pulses Productivity and Profitability in Farmer's Field".</p> <p><b>Yes</b></p> <p><b>Yes</b></p> <p><b>Yes</b></p> <p><b>Yes</b></p> <ul style="list-style-type: none"> <li>- <b>The references are insufficient.</b></li> <li>- <b>That following references had not been cited in the text:</b> Sangeetha, R., Ashok, K.R. and Priyanka, P.A. 2020. Scenario of Major Pulse Production in Tamil Nadu: A Growth Decomposition Approach. <i>Eco. Affairs</i>, <b>65</b>(2): 301-307. Singh, P. K. 2002. Impact of participation in planning on adoption of new technology through FLD. <i>MANAGE Extension Research Review</i>, July-Dec. 45-48</li> </ul>																																				
<p><b>Minor</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></li> </ol>	<table border="1"> <thead> <tr> <th>Item</th> <th>Line</th> <th>Word/statement</th> <th>Correction of the Word/statement</th> </tr> </thead> <tbody> <tr> <td rowspan="10" style="text-align: center;"><b>Abstract</b></td> <td>6</td> <td>Front-Line Demonstration (FLD) is the long-term</td> <td>Front-Line Demonstration (FLD) is a long-term</td> </tr> <tr> <td>7</td> <td>new practices/technology</td> <td>new practices/technologies</td> </tr> <tr> <td>8, 9</td> <td>The aim of FLD was to demonstrate the improved technologies of pulses for production potential.</td> <td>The aim of the FLD was to demonstrate improved pulse technologies for production potential.</td> </tr> <tr> <td>9-11</td> <td>The improved technologies consist using of improved varieties, seed treatment with Rhizobium and PSB culture, sowing method,</td> <td>Improved technologies include the use of improved varieties, seed treatment with Rhizobium and PSB culture, sowing methods,</td> </tr> <tr> <td>11-13</td> <td>The results of pulses harvest crop in 2021-2022 showed that improved varieties with improved practice package recorded a higher yield compared to farmers' practice.</td> <td>The results of pulse harvested crop in 2021-2022 showed that improved varieties with improved practice packages recorded a higher yield compared to farmers' practices.</td> </tr> <tr> <td>13</td> <td>percent</td> <td>%</td> </tr> <tr> <td>14</td> <td>Green gram, Chick pea, Pigeon pea and Black gram</td> <td>green gram, chickpea, pigeon pea and black gram</td> </tr> <tr> <td>15,16</td> <td>The average percentage yield increased over farmers' practices of farmers was 24.30 percent.</td> <td>The average percentage yield increased by 24.30% over farmers' practices.</td> </tr> <tr> <td>16-18</td> <td>The mean technological yield gap was highest for Chick pea (3.47 q/ha) followed by Pigeon pea (1.36 q/ha) and Green gram (1.34 q/ha) while for Black gram (1.26 q/ha) was the lowest.</td> <td>The mean technological yield gap was highest for chickpea (3.47 q/ha), followed by pigeon pea (1.36 q/ha), green gram (1.34 q/ha), and black gram (1.26 q/ha).</td> </tr> <tr> <td>18,</td> <td>recorded in Pigeon pea at 11.83</td> <td>The maximum mean extension yield gap in the</td> </tr> </tbody> </table>	Item	Line	Word/statement	Correction of the Word/statement	<b>Abstract</b>	6	Front-Line Demonstration (FLD) is the long-term	Front-Line Demonstration (FLD) is a long-term	7	new practices/technology	new practices/technologies	8, 9	The aim of FLD was to demonstrate the improved technologies of pulses for production potential.	The aim of the FLD was to demonstrate improved pulse technologies for production potential.	9-11	The improved technologies consist using of improved varieties, seed treatment with Rhizobium and PSB culture, sowing method,	Improved technologies include the use of improved varieties, seed treatment with Rhizobium and PSB culture, sowing methods,	11-13	The results of pulses harvest crop in 2021-2022 showed that improved varieties with improved practice package recorded a higher yield compared to farmers' practice.	The results of pulse harvested crop in 2021-2022 showed that improved varieties with improved practice packages recorded a higher yield compared to farmers' practices.	13	percent	%	14	Green gram, Chick pea, Pigeon pea and Black gram	green gram, chickpea, pigeon pea and black gram	15,16	The average percentage yield increased over farmers' practices of farmers was 24.30 percent.	The average percentage yield increased by 24.30% over farmers' practices.	16-18	The mean technological yield gap was highest for Chick pea (3.47 q/ha) followed by Pigeon pea (1.36 q/ha) and Green gram (1.34 q/ha) while for Black gram (1.26 q/ha) was the lowest.	The mean technological yield gap was highest for chickpea (3.47 q/ha), followed by pigeon pea (1.36 q/ha), green gram (1.34 q/ha), and black gram (1.26 q/ha).	18,	recorded in Pigeon pea at 11.83	The maximum mean extension yield gap in the	
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		19	q/ha followed by Black gram (5.22 q/ha) and Green gram (3.57 q/ha) while the lowest extension yield gap was in Chick pea (2.44 q/ha) was recorded.	study was recorded in pigeon pea at 11.83 q/ha followed by black gram (5.22 q/ha) and green gram (3.57 q/ha), while the lowest extension yield gap was observed in chickpea (2.44 q/ha).
		20	recorded with Pigeon pea.	recorded for pigeon peas.
		23,24	cost ratio (2.22) which was markedly higher compared to	cost ratio (2.22), which was markedly higher than
		25,26	a higher gross return, net return with a higher benefit-to-cost ratio compared to farmers' practices.	a higher gross return and, net return with a higher benefit-to-cost ratio than farmers' practices.
	<b>Introduction</b>	32	In terms of quantity and variety, India produces the most pulses in the world.	India produces the most pulses in the world, in terms of quantity and variety.
		32,33	For the impoverished and vegetarians who make up the majority of the Indian population.	Impoverished and vegetarian individuals comprise the majority of the Indian population.
		33	protein.	proteins.
		34	While a pulse crop was almost	While a pulse crop is almost
		35	has favoured	has favored
		37	in the World.	worldwide.
		37	the world's largest pulses	the world's largest pulse
		39-41	The use of ancient varieties, greater seed rates, and disseminating sowing methods, as well as biotic/abiotic challenges in the specific region/area, are all factors that contribute to low pulse productivity.	The use of ancient varieties, greater seed rates, dissemination of sowing methods, and biotic/abiotic challenges in a specific region or area are all factors that contribute to low pulse productivity.
		42,43	varieties in order to boost pulse crop yield and productivity in a certain region/area.	varieties to boost pulse crop yield and productivity in a certain region or area.
		43,44	made many types of initiatives to boost legume production and productivity from time to time.	initiated many initiatives to boost legume production and productivity.
		45	officials and farming community have a significant	officials, and farming communities face a significant
		47	(FLD) of pulses are a unique	Front-line demonstration (FLD) of pulses is a unique
		48	farmers as the scientists	farmers, as scientists
		49,50	farmers field about production	farmers' fields about production
		50	in general and the technology being demonstrated in particular.	in general, and the technology being demonstrated.
		51	mind, an intensive	mind, an intensive
		52	belt in the specific region/area	belt in a specific region or area <del>the specific region/area,</del>
	54	pulses are also discussed in this paper for developing a	pulses are also discussed to develop a	
	<b>Methodology</b>	66	Crop cutting.	The crop <del>Crop</del> cutting
		67	Farmers were educated about proposed	Farmers were educated on the proposed

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		68, 69	In front-line demonstration at various	In front-line demonstrations at various
		70, 71	PSB bio-fertilizer and plant protection management approaches were exhibited on the farmer's field.	PSB biofertilizer, and plant protection management approaches were exhibited in the farmer's field.
		72	were carried out	were conducted
		72, 73	who paid regular visits to the property.	who regularly visited the property.
		73	The information was gathered	Information was gathered
	<b>Results and Discussion</b>	80, 81	suggested practices in the pulses crop, despite the fact that technologies	suggested practice in the pulse crop, despite the technologies
		85	Average 24.30 percent	An average 24.30 %
		86	The result showed	The results showed
		87	demonstration has a good impact	demonstration had a good impact
		88	technologies applied on the FLD plot.	technologies applied to the FLD plot.
		88, 89	The finding is in collaborated with the finding of Singh et al (2020).	This finding agrees with that of Singh et al. (2020).
		91	The yield of the demonstration trails and the potential yield of the crop were compared to	The yield of the demonstration trials and the potential yield of the crop were compared with
		97	disease and pest infestation and annual change of demonstration plot locations' (Kumar et al 2019).	disease, and pest infestation, and annual changes in the demonstration plot locations' (Kumar et al. 2019).
		99, 100	in the 2021-2022 Pigeon pea followed by Black gram (5.22 q/ha), Green gram (3.57 q/ha) and Chick pea (2.44 q/ha).	in the 2021-2022 pigeon pea, followed by black gram (5.22 q/ha), green gram (3.57 /ha), and chickpea (2.44 q/ha).
		102	7.16 to 17.35 percent of Black gram, Green gram, Pigeon pea and Chick pea	7.16 to 17.35 % for black gram, green gram, pigeon pea, and chickpea,
		103	index overall was 12.10 percent	index overall was 12.10%
		104	feasibility is proven where as Poor field	feasibility is proven, where poor field
		106	and insect pests are the possible reason for poor yields causing higher technology index.	and insect pests are possible reasons for poor yields causing higher technology indices.
109	prevailing inputs and outputs prices (Table 5).	prevailing input and output prices (Table 5).		
109, 110	cultivation of pulses crop varied from Rs. 17,877 to Rs. 25,284/ha with an average of Rs. 20,441/ha of demonstration as against	cultivation of pulse crops varied from Rs. 17,877 to Rs. 25,284/ha with an average of Rs. 20,441/ha of demonstration against		
112, 113	The cultivation of pulses crop under demonstration gave average net return 33,014/ha as compared	The cultivation of pulse crops under demonstration gave an average net return of 33,014/ha compared		

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		115	compared to farmers practice.	compared with farmers' practices.	
	<b>Conclusion</b>	119, 120	The result showed convincingly that the yield of pulses can be increased by intervention in recommended practices package.	The results convincingly showed that the pulse yield can be increased by intervention in the recommended practice package.	
		120, 121	and scientists, and built confidence for the	This also improved links between farmers and scientists-built confidence in the adoption of improved technology.	
		121, 122	over pulses growing practices created greater awareness, and motivated other non-pulses growers to	The increase in productivity among FLDs over pulse growing practices created greater awareness, and motivated other nonplused growers to adopt improved technologies.	
		123, 124	fill the extension agency to bridge the larger extension gaps.	fill extension agencies and bridge larger extension gaps.	
<b>Optional/General</b> comments		<ul style="list-style-type: none"> <li>- Some abbreviations have been introduced in the manuscript without being introduced.</li> <li>- The manuscript lacks a valuable discussion.</li> </ul>			

**PART 2:**

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

**Reviewer Details:**

Name:	<b>Faika Ibrahim Mohamed Hassanein</b>
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