

Dear Dr. Mohammed Gagaoua,

It is a pleasure to see that positive feedback. We much appreciate the careful reading of our manuscript. Please find below the response to the reviewer for his minor comments.

As shown in the PCI submission process, we have submitted a revised version in bioRxiv (<https://www.biorxiv.org/content/10.1101/2020.10.22.349985v3>). Moreover, you will find the revised version of the manuscript with the changes highlighted in red in the PCI submission system.

We hope that the manuscript can be considered now acceptable for Peer Community In (PCI) Animal Science.

Yours faithfully,

Manuel Revilla on behalf of all co-authors.

#### ***Review by Ludovic Brossard***

##### **METHODS | Page 3, Line 87**

*Suggest to add with before no reallocation*

**Response** The suggested correction has been made L87.

##### **METHODS | Page 5, Line 128**

*Suggest to add « for » before « weights »*

**Response** The suggestion has been included L128.

##### **METHODS | Page 6, Lines 191-192**

*Cases when ABC parameter results were normalised are not explained. « When required » is not sufficiently explicit.*

**Response** A most detailed explanation has been added L191-192.

##### **RESULTS | Page 8, Line 253**

*Why more measurements in this version than in the first one? Due to verifications of numbers in table 1?*

**Response** You are right. The numbers showed on L252 are according the corrected numbers showed in Table 1.

**RESULTS | Page 10, Figure 1**

*A3 and B3 panels have not the same scale in Y axis (0 to 100 for A3 and 0 to 70 for B3) (idem for all panels in S1 and S2)*

**Response.** The scale for the Y axis of Figure 1, Figure S1 and Figure S2 has been adapted as suggested.

**RESULTS | Page 14, Figure 4**

*No modification done apparently. My initial comment was « it is surprising, regarding data on ABC in Table 2 and plot in figure 3, that ABC distribution for Pie and Pie NN are exactly the same (min, max and 3rd quartile are very different in the table but not in the figure 4). Please check ». The response is « The needed verifications have been done, and the suggested modifications added » but no modification is visible. Perhaps I missed something.*

**Response** Apologies for this mistake, the corrected version of the figure has been added.

**DISCUSSION | Page 18, Lines 387-391**

*I am not sure that the method of Nguyen-Ba requires the identification of the number of the perturbations, and even less their nature. I thought the number of perturbations was a result of the analysis. But perhaps I am wrong.*

**Response** For clarity the sentence has been changed, and a new reference has been added L389-392.

**DISCUSSION | Page 19, Lines 428-431**

*Sentence a bit difficult to read (repetition of need, repetition of include / inclusion)*

**Response** The sentence has been rewritten L428-430.

**DISCUSSION | Page 19, Line 445**

*Elaborate a bit more about relation with carcass quality (in relation with FCR?).*

**Response.** Exactly, FCR. This has been added to the sentence L443-445.

**DISCUSSION | Page 19, Line 453**

*« an economic » instead of « and economic » ?*

**Response** The modification has been done L452.