**Incubation and Fertility Research Group (IFRG/Working Group 6)**



**2018 Meeting** – **Edinburgh, Scotland**

[*Holiday Inn*](https://www.ihg.com/holidayinn/hotels/gb/en/edinburgh/edbcr/hoteldetail)***, 132 Corstophine Road, Edinburgh***

***EH12 6UA, UK***

 **2018 October 4th and 5th**

**CALL FOR PRESENTATIONS AND ABSTRACTS FORM**

**(Please complete one per presentation)
 NO abstract will be taken after September 15th , 2018**

Please return **this form and abstract** to: **IFRG@pasreform.com** **before September 2018**

# CALL FOR Presentations and Abstracts

If you wish to offer an oral presentation or poster on any topic (Fertility, Egg incubation, Embryonic Development, Commercial Breeder Management) please provide the following details and indicate your form of presentation below.

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| **Preferred presentation format (please tick below)** |
| oral presentation(Powerpoint) |  | Poster | **X** | Oral presentation or Poster |  |
| **TITLE OF PRESENTATION: Laying performances and egg quality in two broiler breeder purelines divergently selected on their meat ultimate pH.** |
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| **Format of abstract: 300-500 words; letter type Arial 11****Title: Arial 12 and bold** **Author/s: Arial 11 and bold (\*A. Name1,2, B. Name1, C.Name2, …..)****Company/Institution:** *1Institution name and address…* **Text:**……………………..text (**Arial 11**) |
| **ABSTRACT** |  |
| The selection of meat-type lines for increased growth and muscle development has been |
| accompanied by significant physiological changes. While considerable gains have been made |
| in production performances, there are limits in terms of product quality but also reproduction. |
| There is therefore a real challenge to better understand and exploit, the elements of the |
| compromise between production, reproduction and meat quality. |
| The study focused on breeder hens at the 11th generation of selection, at which a differential |
| of 0.5 pH unit is observed for the selection criterion (ultimate pH measured in chicken growing |
| in the breast muscle at 6 weeks). Eighty females for the pHu+ and for the pHu- lines were |
| housed in single cages in controlled environment from 20 to 40 weeks of age. During this period, |
| eggs were weighted every week and eggshell mechanical properties (eggshell shape, percent, |
| index, thickness, toughness, elasticity) have been determined to evaluate the egg quality for |
| each line during all the laying period.  |
| Data collected between 23 and 39 weeks of age show a decrease in the laying rate, a first egg |
| delayed and a higher percentage of broken eggs in the high pH line (pHu+, line presenting the |
| lower energy status) by comparison to the low pH line (pHu-). Divergent selection also changed |
| the characteristics of the eggs, resulting in heavier eggs and a higher shape index value (more |
| round shape eggs) in the pHu+ line. |
| In conclusion, these results suggest a deterioration in the reproductive performance studied |
| and changes in the characteristics of eggs in relation to the decrease in energy storage caused |
| by selection for an increase in pHu. These first observations pave the way for future |
| genetic studies to evaluate the contribution of energy status in terms of improving reproductive |
| traits whose degradation penalizes the meat-type sectors. In an original way, they also suggest |
| the possibility of identifying new indicators or biomarkers of the energy status from measures  |
| related to reproduction and the egg. |
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