From: Malcolm Caulfield

Sent: Wednesday, 28 August 2019 12:22 PM

To: Use of Battery Cages for Hens in the Egg Production Industry

Cc: Nicol, Christine

**Attachments:** Farmed-Bird-Welfare-Science-Review-Oct-2017.pdf; production different systems.pdf;

Downing AECL 2005.pdf

Categories: Supp/qons

## Dear Elise

During my discussion with the Committee, statements were made to the effect that a lower level of productivity, as occurs in free range, versus cage systems, indicates a lower level of welfare. It was said that higher levels of stress, said to occur in free range systems, reduces productivity. As I said, this is a completely circular argument, for which there is no evidence. The sorts of levels of corticosterone which reduce egg laying (and in this regard I refer the Committee to the unpublished work of Downing on the Eggs Australia website: attached, see page 50) are pharmacological - in other words you have to give the animal huge doses of corticosterone. These levels do not occur in nature. Despite that, I agree that reduced productivity can reflect decreased welfare. But equally it can be the result of changes which are nothing to do with welfare. In any case, it is apparent that some studies have shown that productivity can be very similar in cage and free range systems. I attach a recent paper to that effect.

Furthermore, it appeared to me that there was confusion over what the Nicol Review said concerning mortality in free range systems. The review said, after referring to the fact that average figures indicated higher mortality in free range, than in cage systems: 'Despite these average figures, well-managed and designed free-range systems can produce low-mortality outcomes.' That is what I said in my interview. I attach a copy of the review. I have also copied Professor Nicol on this email.

I should be obliged if you would communicate this to the Committee.

Regards Malcolm Caulfield