

## CANADA-WIDE DISCUSSIONS ABOUT BATTERY CAGES FOR LAYING HENS

By Ian Duncan, Ph.D.<sup>1</sup>

In May 2011, the Animal Welfare Foundation of Canada (AWFC) hosted four regional meetings (video clips at end) on the topic: *Is There a Future for Battery Cages in Canada?* The AWFC is a charity that accepts donations and legacies and uses those funds to support direct services and programs for animals in need. In the past, the Foundation has mainly funded research activities unlikely to receive support from local or provincial sources. However, in 2011 the Foundation decided to devote some funds to humane education and, in particular, education on the welfare problems associated with battery cages for laying hens.

The timing of these meetings was important. The European Union had decided over a decade ago that battery cages for laying hens should be phased out, and the EU ban was due to come into effect in January 2012. In addition, in 2008, California decided to phase out battery cages by 2015 and Michigan had made a similar decision to phase out battery cages by 2019. These US State decisions were the result of the Humane Movement getting propositions on to ballot papers during elections - so it was the voting public who were making the decisions, with heated opposition from egg farmers. In 2010, something similar happened in Canada when Manitoba decided to phase out battery cages by 2018. However, in Manitoba, ***it was the egg farmers themselves*** who made the decision! A notable feature of the Manitoba decision was that battery cages were not actually mentioned. The Manitoba Egg Farmers stated that *“Husbandry systems for hens should provide for the Five Freedoms. After 2018, all new housing facilities for laying hens in Manitoba will be required to meet this policy”*. The Five Freedoms are: (1) freedom from hunger and thirst, (2) freedom from discomfort, (3) freedom from pain, injury or disease, (4) freedom to express behaviour that promotes well-being, and (5) freedom from fear and distress. So the policy effectively bans battery cages without mentioning them! With all these signs appearing, the AWFC decided that 2011 was the ideal time to have a series of meetings across Canada to give some momentum to these initial stirrings against battery cages.

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<sup>1</sup> Dr. Ian Duncan is Professor Emeritus at the University of Guelph where he is also Emeritus Chair in Animal Welfare. He has worked in the field of poultry welfare since 1965, first at the Poultry Research Centre in Edinburgh, Scotland and then at the University of Guelph. He was one of the first people to bring a scientific approach to the study of animal welfare.

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Four afternoon meetings were arranged in Calgary (AB), Abbotsford (B.C.), Truro (NS) and Ottawa (ON). The meetings were widely advertised with the hope of attracting egg producers and all the associated service industries such as egg graders, feed manufacturers, equipment suppliers, poultry advisers, local politicians, and so on. It was expected that members of the egg industry associations would attend together with representatives of local humane societies and any members of the public who might be interested.

Attendance at the first three meetings was excellent with 60-80 people taking part. The Ottawa meeting was a little disappointing with an audience of around 50. The reason for having a meeting in Ottawa was because all the poultry associations have their headquarters there, and it had been expected that the industry “leaders” would wish to attend. This did not happen, nor did any politicians attend in Ottawa.

The program at each meeting was more-or-less the same. Dr. Ian Duncan gave a 10 minute introduction to the topic stating why the time was ripe for everyone to consider the future of battery cages. He gave a brief history of battery cages, pointing out that, when they were introduced in the 1950’s, battery cages were responsible for a large **increase** in welfare. As the egg industry gradually intensified through the first half of the 20<sup>th</sup> century, infectious diseases such as *Salmonella* infections and Avian tuberculosis together with parasitic worms and *Coccidia* devastated the industry. Mortality rates of 15-20% were not uncommon, whereas today, 4-5% is the industry average. Putting birds in cages separated them from their droppings and this cut the cycle of infection. Thus, mortality rates dropped dramatically to single figures.

At first hens were kept one to a cage. However, it was soon realised that barns with cages could be automated and scaled up. Money could be saved by cramming many hens into a cage. Soon the **welfare benefits** of avoiding infectious diseases were outweighed by **welfare costs** of overcrowding and severe restrictions of behaviour.

In his main presentation, Dr. Duncan described all **the welfare costs and benefits of keeping hens in cages**. The **benefits** are the previously-mentioned reduction in infectious diseases. Within each cage the hens are also in fairly small social groups (usually 4-6 hens per cage in Canada) and this tends to lead to social harmony. Surprisingly, the incidence of feather pecking and cannibalism is actually lower in cages. Dr. Duncan explained that this is because in some populations of hens there are a few birds with a very strong tendency to peck the feathers of others. If this starts to happen, all the birds learn to feather peck from a few instigators. This means that if the hens are kept all together in one large flock and one hen starts to feather-peck, very soon there will be a damaging outbreak with almost all the birds pecking each other’s feathers. However, if the birds are kept in cages and one hen starts to feather peck, the pecking is restricted to the cage where it occurs and does not spread between cages. There also tends to be better air quality in battery cage barns. This is because there is no litter which, if it becomes wet can produce a lot of ammonia, and if it is too dry, can produce a lot of dust.

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Compared to these few **welfare benefits**, the **welfare costs** of having hens in cages are immense. Hens are severely frustrated every day they lay an egg because they don't regard the cage as a suitable nesting site. Hens are also frustrated every day when the lights go out because they can't adopt the normal roosting posture; at night they like to get high off the ground, wrap their claws round a perch and fall asleep in that position. They are also kept too crowded together; if given the chance, they space themselves out more than is possible in a cage. In addition, hens normally spend 60-70% of their day foraging for food, but in a battery cage, there is no opportunity to forage. Similarly, because of the lack of a substrate, there is no opportunity for the hens to dust-bathe. Hens dust-bathe about every two days and this keeps their skin and feathers in good health and helps to get rid of parasites. Finally, the lack of exercise that hens get in cages means that over the course of a laying year, they develop osteoporosis and are at grave risk of suffering from broken bones when they are removed from the cages.

After Dr. Duncan's presentation, Dr. Michelle Jendral<sup>2</sup> gave a talk on the alternative husbandry systems to cages. She described the various types of furnished cages that are now available. The **benefits** of furnished cages are that they maintain the hygienic advantages of battery cages while providing a secluded nesting site, perches for roosting and, in some cases, an opportunity for dust-bathing and foraging. Some models of furnished cages seem to work reasonably well, whereas in others, there have been problems with hens laying eggs in the dust-bathing areas and with eggs getting cracked. A further development of the furnished cage is the colony cage, which is much larger and holds as many as 80 hens. These colony cages seem to work fairly well but the reason is a bit of a mystery because it is known that hens actually prefer to be in smaller groups than this. Another worrying aspect of both furnished and colony cages is that the cage manufacturers have cut back on the furnishings that were provided in the original designs. The commercial cages are being produced as cheaply as possible with, for example, flimsy curtains designating the egg laying area.

There are many different types of non-cage husbandry systems. Many of them go by the term "aviary", in which the hens are kept in very large groups of several thousand. Food and water are often supplied from several tiers of raised platforms. These tiers often have wire floors with manure belts running underneath so that the droppings can be removed from the house regularly in an attempt to maintain good air quality. Usually there is an area of litter where the hens can forage and dust-bathe. According to Dr. Jendral, the **strengths** of these non-cage systems are that the birds have much more freedom to engage in foraging, roosting and dust-bathing behaviour. They can also avoid dominant flock mates by going to a different level. The **weaknesses** of non-cage systems are that the hygienic advantages of cages are lost, and so parasites, particularly external parasites, can be a problem. Because

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<sup>2</sup> Dr. Michelle Jendral is an Assistant Professor of Poultry Behaviour and Welfare at Nova Scotia Agricultural College in Truro. She recently finished her PhD at the University of Alberta where she studied alternative husbandry systems for laying hens.

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litter is present, air quality can be poor with high levels of ammonia and dust. Finally, if hens have not been reared in a barn with several levels, they can injure themselves as they try to fly between levels because they may have crash landings.

At each regional meeting, two or three local egg producers who had been using alternative husbandry systems for several years made short presentations. They described the challenges of producing eggs in these systems. One common problem was eggs laid on the floor rather than in the nest boxes. When this happens eggs get broken, cracked and lost and, at the very least, dirty. Another problem was feather pecking: some hens peck and remove the feathers of other hens. With their insulating coat of feathers removed, hens eat more food to keep warm in cold weather, and this reduces profits. On the other hand, non-cage eggs can be labeled and sold at a premium, for example through the *SPCA Certified* labeling scheme.

At every meeting, there was a lively discussion on the pros and cons of all the systems. There were also many questions from battery cage producers in the audience. They recognised that there is a very good chance that battery cages will be banned in Canada in the not-too-distant future. Changing from battery cages to one of the alternative systems involves a high capital outlay and so making the correct choice is extremely important. Dr. Duncan pointed out that almost anyone can operate a battery cage unit successfully. Much greater husbandry skills are required to be successful with the alternative systems - but it can be done, as attested to by the local speakers at each meeting.

The next steps will be to survey producers who have switched away from battery cages and identify both design and management factors that lead to success. The local producers who gave their experiences with these alternative systems described different challenges - some had problems with floor eggs, others had run into feather-pecking problems, and yet others had experienced poor air quality with high levels of ammonia and dust - but all these problems can be overcome with good design and proper management. It is important that problem factors are quickly identified so other producers who wish to switch away from battery cages are assured of success.

**Video clips (see next page)**

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**VIEW CLIPS FROM THE REGIONAL MEETINGS:**

- Dr. Ian Duncan discusses 'History of Battery Cages' (YouTube clip 8:37)  
<http://www.youtube.com/watch?v=9MBjLBWFZ64&feature=relmfu>
- Dr. Ian Duncan discusses 'Advantages of Battery Cages' (YouTube clip 3:24)  
<http://www.youtube.com/watch?v=BQ8O2oU1sOo&feature=relmfu>
- Dr. Ian Duncan discusses 'Space Problems' (YouTube clip 2:19)  
[http://www.youtube.com/watch?v=P\\_JRXj16HWE&feature=relmfu](http://www.youtube.com/watch?v=P_JRXj16HWE&feature=relmfu)
- Dr. Ian Duncan discusses 'Frustrated Nesting' (YouTube clip 5:44)  
<http://www.youtube.com/watch?v=LVD73WiAy9k&feature=relmfu>
- Dr. Ian Duncan discusses 'Other problems' (YouTube clip 8:33)  
[http://www.youtube.com/watch?v=nJh\\_TLg1ZrA](http://www.youtube.com/watch?v=nJh_TLg1ZrA)
- Dr. Michelle Jendral discusses 'Furnished Cages' (YouTube clip - 9:27)  
[http://www.youtube.com/watch?v=GnWV5YAliqq&feature=plcp&context=C475cc30VDvjVQa1PpcFMoFNGZJsWsPCpU\\_3LOCS9bf\\_AimSEalbY=](http://www.youtube.com/watch?v=GnWV5YAliqq&feature=plcp&context=C475cc30VDvjVQa1PpcFMoFNGZJsWsPCpU_3LOCS9bf_AimSEalbY=)
- Dr. Michelle Jendral discusses 'Colony Cages' (YouTube clip - 7:31)  
<http://www.youtube.com/watch?v=FKlBszggGxk&feature=relmfu>
- Dr. Michelle Jendral discusses 'Floor Systems' (YouTube clip - 4:16)  
<http://www.youtube.com/watch?v=Q4-B9XW5rW4&feature=relmfu>
- Dr. Michelle Jendral discusses 'Free Range' systems (YouTube clip - 10:04)  
<http://www.youtube.com/watch?v=jllF6AB09-U&feature=plcp&context=C42456ceVDvjVQa1PpcFMoFNGZJsWsPENCVnr9UoTWACOQ3aYtRmU=>
- Dr. Michelle Jendral discusses 'Optimal Design' (YouTube clip - 2:44)  
<http://www.youtube.com/watch?v=LZMsEzOe-vU&feature=relmfu>
- Egg farmer Steve Easterbrook discusses 'The Challenges of Alternative Systems' (YouTube 7:57)  
<http://www.youtube.com/watch?v=cdsBzRXxgw4&feature=relmfu>
- Dr. Ian Duncan, Dr. Michelle Jendral and Mr. Steve Easterbrook 'Panel Discussion on Battery Cages' (YouTube 7:35)

Part 1 of 2

<http://www.youtube.com/watch?v=1C6VVMfovvo&feature=plcp&context=C43ae445VDvjVQa1PpcFMoFNGZJsWsPNEB3LltZG9SBY05QQqs19A=>

Part 2 of 2

<http://www.youtube.com/watch?v=KOVs-PRDI04&feature=plcp&context=C42ffe60VDvjVQa1PpcFMoFNGZJsWsPH5gv3fgcVGSGeMOckbv1oY=>