

## Spent Hen Disposal - Research Providing Solutions

Disposing of spent laying hens is increasingly a challenge. In some areas of Canada, layers are not accepted at plants, as there is a lack of market demand for the meat. This has led some egg producers to use on-farm disposal options, with most carcasses being rendered to produce by-products such as meat meal and bone meal. The new Code of Practice for layers encourages humane on-farm disposal as an option for improving the welfare of spent fowl.

Transportation of laying hens, that are older and physically more fragile, is considered a welfare concern due to the stress of transportation, and the potential for injury, pain and suffering en route. Farm animal welfare is increasingly recognized as a social issue, with the public wanting assurances that animals are treated humanely and market forces moving to provide those assurances. It makes good business sense, as well as ethical sense; to ensure that spent laying hens have a quick and painless end with no unnecessary suffering.

Dr. Church, Livestock Welfare Unit Leader with Alberta Agriculture Food and Rural Development, is the head researcher in a project to address the relative efficiency and humaneness of mobile electrocution versus modified atmosphere chamber (MAC) units, for euthanizing spent laying hens. The MAC units tested use CO<sub>2</sub> gas for euthanasia. “New technologies require evaluation, improvement and refinement, as they are being developed to ensure that, of those that prove to be economically feasible, only the most humane systems are being adopted”, says Dr. John Church.

Interim results of the project include:

- ◆ Mobile electrocution units had unacceptably high failure rates in terms of killing efficiency (8.86% survival rate).
- ◆ The exceptional insulation capacity of the birds’ feathers was the cause of the electrocution unit’s failures (to such an extent that it is unlikely the unit could be redesigned adequately to deal with well-feathered birds).
- ◆ With appropriate flow rates, no birds survived gassing in the MAC unit.
- ◆ Fractures (likely resulting in pain) were very high in birds processed in the electrocution unit, (see Figure 2). There were no apparent fractures in birds euthanized in the MAC unit.

In tandem with this research project, a large MAC unit is being employed on-farm by a rendering company. The research team has evaluated the unit and is very pleased with the results - instant death, lack of suffering and no broken bones.

The development of a Humane and Efficient Spent Hen Disposal Unit project is supported by the Alberta Egg Producers, Canadian Egg Marketing Agency, and AFAC, through the Alberta-Canada Livestock Welfare Research Partnership. The Partnership recognizes that animal care has a direct impact on productivity, meat quality and producer profitability.