

# The Drumstick

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## Welcome to the Autumn/Winter 2014 edition of the Drumstick newsletter.

Some growers tell me that they have never seen so many changes in their industry in such a short amount of time as has been experienced in the last 12 months. From licencing by the NSW Food Authority, to processors adopting RSPCA accreditation, to the announcement of cage eggs being phased out by the end of 2018 in Woolworth's stores, to changes to water sanitation requirements, to the application for ACCC authorisation by NSW Farmers' Association for their members, the list seems to go on and on. Even the Drumstick has had a facelift and comes to you in a brand new format to make it more accessible to online readers.

So, in essence, 2014 is proving to be a significant period of change for both the poultry meat industry as well as the layer industry. Animal welfare continues to be a hot topic and is posing both challenges as well as opportunities for both industries.

This edition of the Drumstick explores some of these challenges and opportunities and highlights some new technologies and innovations, developed by the industry for the industry, to support the continued growth and public acceptance of the poultry industry in NSW as well as the rest of Australia.

Also included in this edition is a story about Eupoul, a new innovation developed by a local poultry grower to humanely euthanize spent hens, culls or any poultry in the event of a disease outbreak. This technology appears to be very promising and has the potential to revolutionise the way euthanasia is conducted on farms. I think you will find the article worth the read.

The Poultry Meat Industry Committee in NSW is currently in the advanced stages of seeking funding support for a training and skills package for growers in NSW. The intention of this training package is to support growers by providing them with access to the skills and tools they need to sustain and grow their businesses. The Drumstick will keep its readers informed about the progress of this initiative.

*Post Script: I have just returned from PIX 2014 held in Queensland on 25 May to 28 May 2014. There were some excellent presentations at PIX this year and for those who were unfortunate not to be able to make it, I will give you a breakdown of the highlights and of some of the key presentations in the next edition of the Drumstick.*

Thank you for your continued support of the Drumstick. As usual, if there is any topic of interest you want me to explore, please send an email and I will do my best to address it in the next edition.

Best wishes



Byron Stein, Editor, The Drumstick

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# Introducing EuPoul – a smart solution to the mass euthanasia of poultry

Mass euthanasia of poultry on farm; be they spent hens, broilers or turkeys is a challenging task at the best of times. Further, the ever increasing scrutiny of the poultry industry by consumers, retailers and animal rights groups means that euthanasia methods need to be as humane and acceptable as possible.

Coming up with a quicker, better and more humane method to euthanize his spent hens has been the passion of Kootingal free range egg farmer, Stuart Howe.

Stuart's answer to this challenge is his invention, called the EuPoul.

"There were several major reasons for coming up with a better solution to managing the spent hens on my farm", said Stuart. "The primary motive was to come up with a more humane method of euthanasia. I wanted to reduce the stress and injury the birds sustain when being caught and removed from the sheds. I also wanted to reduce the stress associated with long journeys to the rendering plant. Finally, access to labour, labour cost and a diminishing market for spent hens were also challenges I was grappling with".

"I wanted to come up with a solution that was better for the birds and better for my piece of mind, and my farm budget" said Stuart.

## So what is EuPoul?

The EuPoul is a purpose-built inflatable module made from commercial grade PVC. The modules are designed in a range of shapes and sizes to cater for free range farms, cage production systems as well as barn systems. The typical module size is 5.5m x 3m, but sizes can be scaled up or down to suit individual production systems and farms.

Another way of explaining the EuPoul modules is to picture an upside down inflatable swimming pool, modified and engineered with doors, flaps and lids. See Figure 1. The modules are simply portable containment vessels in which birds are held and then euthanized using CO<sub>2</sub> or foam.

## How was the system developed?

A team of people were pulled together to manage and develop the project. Amongst these was Greg McMahon, who holds a patent on hypoxic training modules used by athletes to train under low oxygen environments typical of high altitudes. A

vet was also engaged to provide advice and guidance on animal welfare and monitored the birds before, during and after euthanasia.

Figure 1



Figure 2

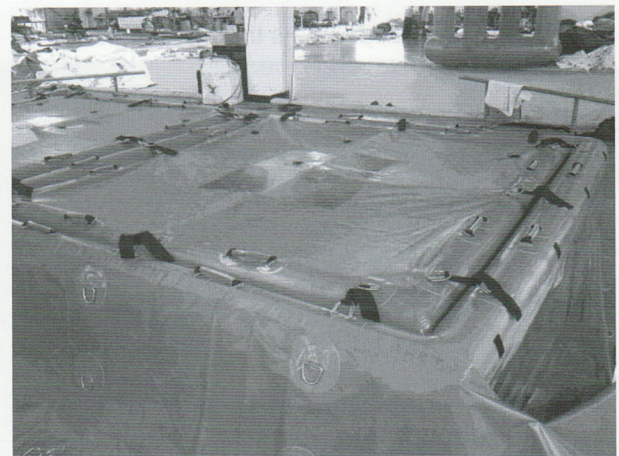


Figure 3





Stuart also sought the advice and assistance of Mr Bud Malone, a renowned poultry consultant associated with the University of Delaware in the United States. Mr Malone provided significant input into the project and has also raised significant interest in the technology in the United States.

## How does it work?

For a free range egg farm:

1. A large funnel shaped module is placed over one of the pop holes leading to the outside range. This unit is then connected to one or several other lower square shaped units (see Figure 4) with the number depending on how many birds you need to deal with or how quickly you want to depopulate the shed.
2. The pop hole is opened allowing the birds to enter the modules and roam freely within them.
3. When the desired numbers of birds have entered the inflatable modules the pop hole door is closed. Each module can accommodate up to 2400 birds.
4. At dusk, when the birds have settled down and are huddled together the lids of the modules are closed.
5. The gas, typically CO<sub>2</sub>, is then turned on, and within 90 seconds the birds are euthanized while they sleep.
6. For the remaining birds inside the shed, an additional 5.5 m x 3 m module is erected in a designated cull area within the shed. The birds are then slowly 'walked' into this area and are gently herded or placed into the module.
7. At nightfall, when the birds are huddled together and calm, the gas is turned on and the birds are euthanized.

## How long does the operation take?

A two person team is able to catch, move and euthanize approximately 4,500 birds in 2.5 hours, equating to a catch and kill rate of 1,800 birds per hour

## What happens to the carcasses?

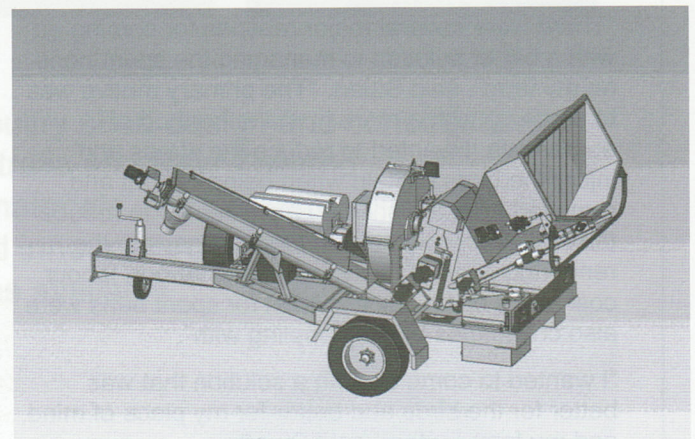
Stuart has developed a conveyor system and end processing machine, which is very similar to a wood chipper, but has been modified to deal with bird carcasses. See Figure 5. The conveyor system moves the bird to the processing machine which minces the carcasses into small pieces. The processed birds can then be readily composted, or

transported to a fertiliser company, pet food or meat and bone meal plant.

Figure 4



Figure 5



## Flexibility and portability

The system is highly flexible and adaptable allowing Stuart to strategically select the birds he wants to cull whilst leaving birds which are still productive. This means that he is able to maintain a level of production during the cull process which he hasn't been able to do in the past.

## What about cage production systems?

Stuart and his team have recently adapted the EuPoul design to suit cage production systems. This system consists of multiple side wall panels that are strapped together and fit snugly over multi-tier cages. The system includes a series of panels and lids which are strapped and zipped together, creating an airtight seal. (See Figure 6.) The lids can be unzipped allowing plenty of air flow for the birds to breathe before starting the culling process.



Free standing 30 kg CO<sub>2</sub> bottles are placed in several smaller purpose-built 1.5 metre square modules/chambers. As the CO<sub>2</sub> is released into the chambers, a pump sucks the floating air from the free standing chambers delivering it multiple feet into the air to the top of each section of cages

## Other applications

I asked Stuart if he thought his system could be adapted to other poultry production systems, for example broilers or turkeys.

“Absolutely. I think both the broiler industry and even the government may be interested in this system in the event of an exotic disease outbreak. Because the system is portable and flexible, it can be quickly, easily and cheaply deployed to a farm which may need to euthanize birds because of an exotic disease outbreak”, said Stuart.

## Where to from here?

Stuart and his team are currently seeking to partner with research organisations to do further testing of the technology under a range of conditions and to further validate the excellent results that have been obtained by tests conducted thus far.

Figure 6



## More information

For anyone who wants further information about the EuPoul system, they can check out their website at [www.eupoul.com](http://www.eupoul.com)



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