

PRESS RELEASE

Scientific study implies that responsible egg washing enhances food safety

BRUSSELS, 4 NOVEMBER 2011 – Responsible egg washing does not damage the cuticle, the eggs' natural defence barrier. That is the main finding of a study by the Institute for Agricultural and Fisheries Research (ILVO) in Melle, Belgium, and the University of Glasgow's College of Medical, Veterinary & Life Sciences published in the October 2011 issue of the Journal of Food Protection. "As responsible egg washing leaves the eggs' natural defence system intact and the process' sanitation effect sharply reduces on-shell bacterial loads and removes dirt from the shell; it is safe to conclude that responsible egg washing enhances food safety," says Stijn De Preter, CEO of egg industry consultancy Egnology. Based on a specific egg washer – detergents combination of a Kuhl Corporation egg washer and Diversey detergents, the study removes the last outstanding question on the safety of egg washing and should pave the way for the approval of responsible egg washing in all EU member-states.

Egg washing has been considered a controversial practise by the European Union for decades. In the United States, it is a mandatory component for USDA grading and Sweden also has a long and positive history of professional egg washing. In 2005, a scientific opinion by the European Food Safety Agency, EFSA, confirmed the positive food safety effects of egg washing if performed responsibly. However, the study indicated a lack of data on the effect of egg washing on the eggs' cuticle, the shell's first defence line against bacteria penetration. An undamaged cuticle is one of the EU's requirements for class A eggs, destined for human consumption.

On behalf of Kuhl Corporation, the leading manufacturer of egg washing equipment, the egg industry consultancy Egnology requested two reputable scientific institutions to draft and perform a statistically acceptable double study to determine the effect of egg washing on the eggs' cuticle through a Kuhl washer and a specific set of detergents. ILVO performed a study based on staining the eggs with a dye that only attaches to the cuticle (and not to other shell components). The University of Glasgow's College of Medical, Veterinary & Life Sciences combined several visual assessment methods, including scanning electron microscopy and blind evaluation by an experienced eggshell assessor. Together, they concluded that "no evidence could be found to suggest that the washing procedure used in this investigation, irreversibly changed the quality of the cuticle." The peer reviewed article was published in the Journal of Food Protection's October 2011 issue.

Egnology is preparing a submission requesting the European Commission to amend current legislation in order to enable all EU member-states to authorise responsible egg washing. The request will contain stringent requirements for egg packing stations before they can be allowed to wash eggs, as all care must be given that the practice does not add any new hazards to the food chain. Based on the EFSA egg washing opinion, these requirements will include careful temperature, pH and iron level control. In addition, as egg washing equipment and washing and rinsing detergents may impact differently on the cuticle, any combination of washer and detergents will have to prove that it leaves the cuticle intact. This set of guidelines, to be included in national Guides of Good Hygienic Washing Practices, should enable packing stations to safely process slightly soiled eggs so they may be classified as class A eggs. Egg washing is complementary with the European Union's efforts to improve hygienic standards at production and packing facilities and will further enhance egg food safety, as it substantially reduces bacterial loads on the shell. Egg washing cannot reduce or

remove internal contaminations by *Salmonella* bacteria and, therefore, it cannot replace national *Salmonella* programs at layer facilities.

More information:

Stijn De Preter, CEO, Egnology

Tel: +32 494 26 95 85

Email: stijn.depreter@eggnology.com

NOTE TO EDITORS

The risk of *Salmonella* infections caused by raw or insufficiently heated eggs has for many decades bothered the European authorities. In 2003, the European Commission passed a regulation requiring all member-states to set up national control programmes aimed at reducing *Salmonella* with ia layer hens. Eggs are either infected with *Salmonella* bacteria internally before lay, or they may be infected externally, after lay. Internal *Salmonella* infections can be prevented very efficiently by vaccinating layer hens, as demonstrated by recent statistics. However, controlling on-shell *Salmonella* infections is a much more difficult task. Good Hygienic Practices at layer farm level can reduce on-shell infections, but cannot eliminate the problem. Sanitising egg at egg packing station level is the best way to ensure that all *Salmonella* (and other) bacteria are removed from the shell as closely as possible to consumption. Egg washing can only eliminate bacterial loads from the eggs' shell. *Salmonella* bacteria in eggs that were infected internally cannot be reduced by washing. Therefore, egg washing should be considered as a complementary practice to current national control programmes, especially those that consist of vaccination schemes.