OVOSHINE. Ensuring food safety of eggs

EGG COMPANIES AND RESEARCHERS WORK TO IMPROVE EGG SAFETY IN THE EU

Partners from seven EU countries cooperate in OVOSHINE, a 3-year EU funded project to develop innovative technology for the egg sector

Small and medium egg industries will be able to sanitize eggshell effectively at a low cost

The national organizations of egg producers from Spain, Hungary and Portugal (INPROVO, Baromfi Termék Tanács and ANAPO) together with SMEs in the egg sector and research centers are to co-operate on EU-funded project OVOSHINE.

For the next 3 years engineers and scientists at Fraunhofer IGB from Germany, Ateknea Solutions from Spain and Nofima form Norway will work together in developing a system to increase the hygiene of eggshells. Based in hot air and UV lamps (a non-invasive and non-chemical technology) the idea is to treat the entire eggshell surface with a highly energetic UV light that will eliminate germs.

The project has been welcomed by the egg sector industry, most of them small and mediumsized companies that are aware of the relevance of food safety control and the challenge in improving confidence (market/consumer) in basic foods such as eggs.

When the first prototype is built and running, the new system will be tested in the premises of some of the OVOSHINE consortium members. The goal is to have an effective, non-expensive and innovative treatment for the eggshell that is easy to implement (a new module to their existing equipment) for the end users.

To ensure the success of the OVOSHINE project, four private technology-based companies are participating as members to provide expertise and input related to existing systems, industry needs and technology. The members are: Ovobel (based in Belgium); Daro (in the UK), Ibertec and El Canto Agroalimentaria (both in Spain). The EU's Research Executive Agency has funded project OVOSHINE with 2 Million euros over the 3-year period for research, testing and dissemination.

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Food safety control in the egg sector

Reducing the impact of zoonotic diseases is one of the main challenges for EU food and health policies. Based on EU legislation on zoonosis surveillance and control (1), the egg sector has been working in close coordination with the competent national authorities to reduce the risk of food poisoning in humans linked to egg and egg products consumption in the EU, mainly related to Salmonella contamination.

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During the few last years, the EU Food Safety Authority (EFSA) reports have outlined the clear reduction in the number of outbreaks of human cases of salmonellosis (2). It is assumed that this is mainly a result of the successful Salmonella control programs in poultry populations. Salmonella is now the second cause of food poisoning in the EU and the efforts to control its presence in the food chain have been based on the feed and farmed animal controls. The OVOSHINE project starts with a new approach: treating the food; the egg. Fresh eggs for direct human consumption (Category A eggs) cannot be washed or cleaned in the EU, following the egg marketing legislation (3). This project opens an opportunity for the egg industry to improve egg safety while at the same time preserving two important egg quality traits for the consumer: ensuring that eggs are *fresh and natural*.

- (1) Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents and Regulation (EC) No 2160/2003 of the European Parliament and of the Council and Regulation of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agents.
- (2) EFSA (European Food Safety Authority) and ECDC (European Centre for Disease Prevention and Control), 2014. The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic Agents and Food-borne Outbreaks in 2012. EFSA Journal 2014; 12(2):3547, 312 pp. doi:10.2903/j.efsa.2014.3547
- (3) COMMISSION REGULATION (EC) No 589/2008 of 23 June 2008 laying down detailed rules for implementing Council Regulation (EC) No 1234/2007 as regards marketing standards for eggs.