Detection of *Salmonella spp*. in Commercial Chicken Eggs from Layer Chicken Farms and Wet Markets in Bali Province

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ABSTRACT

This study aims to detect early *Salmonella spp*. and identification of serotypes in commercial chicken eggs from layer chicken farms and wet markets in Bali Province. Early detection study of *Salmonella spp*. was carried out by conventional bacteriological methods, while serotype identification by duplex Polymerase Chain Reaction (d-PCR) test against the invA gene from *Salmonella spp*. and the sefA gene from *Salmonella enteritidis*. Egg samples in this study were taken from 10 layer chicken farms in Bali Province which included districts of Bangli, Gianyar, Tabanan and Karangasem. Egg samples from traditional markets were taken from 18 traditional markets from the districts of Bangli, Gianyar, Tabanan, Karangasem, Badung, and Denpasar City. Samples were eggshells and egg albumens. Analysis of positive results from *Salmonella spp*. by descriptively. The results showed that eggshells and egg albumens from all of the layer chicken farms are negative contaminated with *Salmonella spp*. (0%). In eggshell samples taken from the wet markets of Taman Bali and Tulikup from the districts of Bangli and Gianyar, positive contaminated of *Salmonella spp*.(11,1%) by conventional bacteriological tests. In the duplex Polymerase Chain Reaction test, enteritidis serotypes were identified. The finding contamination of *Salmonella enteritidis* in commercial chicken eggs from wet markets require periodically detection to prevent the occurrence of salmonellosis due to consumption of contaminated chicken eggs in wet markets in Bali Province.

Keywords: commercial chicken eggs, *Salmonella spp*., *Salmonella enteritidis*, layer chicken farms, wet markets, Bali Province.