



Identification and Antimicrobial Susceptibility Profiles of *Salmonella* spp. Isolated from Chicken Flocks and their Feed and Water in Karbala, Iraq

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Abstract: The objective of study was determining the most prevalent *Salmonella* spp. and their antimicrobial susceptibility in broilers and laying chickens and their feed and drinking water in five chicken farms in Karbala, Iraq over the period from August to October 2020. A total of 289 samples, including 217 cloaca swabs, 46 water and 26 feed samples were collected. *Salmonella* spp. was identified firstly by routine diagnostic methods, followed by applying the API 20E kit, the Vitek2 system, and serology. There was significant differences in *Salmonella* prevalence among different types of samples, mainly cloaca swabs reported a high isolation rate (21.7%). In contrast, feed samples were completely free of contamination. The highest rate of isolation was in September on the 4th to 6th weeks of age. The presence of different *Salmonella* types in the collected samples excludes the possibility of outbreak occurrence among these farms. However, many isolates were diagnosed as *S. paratyphi* B. The tested isolates were 100% resistant to Ampicillin, Amikacin, Gentamicin, and Ciprofloxacin. By contrast, they were susceptible to Ceftazidime, Cefepime, and Ertapenem. The study provides an insight into the distribution and antimicrobial resistance of *Salmonella* spp. circulating in several poultry farms in Karbala, Iraq.

Keywords: *Salmonella* spp, Broiler chicken, Layer chicken, Identification, Serotyping
