

Safe Food, Fair Food for Cambodia

Experiment of *Salmonella* cross-contamination during handling and preparation of chicken salad in Cambodia

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Introduction

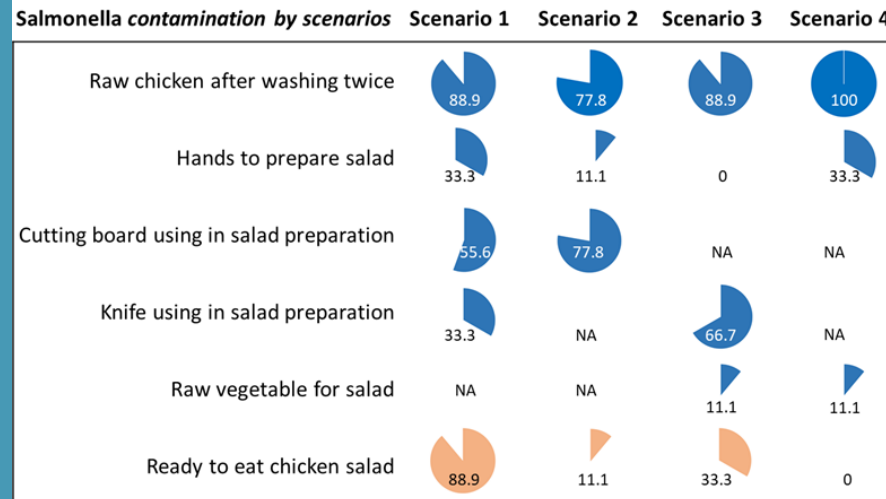
- In Cambodia, chicken salad is a popular meal that is commonly prepared by mixing sliced chicken with raw vegetable.
- To assess the risk of chicken salad, a quantitative microbial risk assessment (QMRA) required a quantitative information on microbial load and cross-contaminate in consumed food.

Methods

- Four cross-contamination scenarios were examined according to common practices and consumption regarding chicken salad (“ngam sach man sroyong chek”).
- A whole chicken carcass (approx. 1 kg) was inoculated with 10 CFU *Salmonella* per gram prior process chicken salad. Each scenarios were performed 9 times.
- Selected specimens (Table 1) in each scenario were quantify *Salmonella* presence and MPN

- Scenario 1:** Washing and preparing the vegetable first, then washing and cutting raw chicken, and when prepare boiled chicken using the same hands, cutting board and knife to make salad.
- Scenario 2:** Washing and preparing the vegetable first, then washing and cutting raw chicken, and when prepare boiled chicken using the same hands, but separate cutting board and knife to make salad
- Scenario 3:** Washing and cutting raw chicken first, put carcass on pot for boiling, then washing and preparing the vegetable. When prepare boiled chicken, using the same hands, cutting board and knife to make salad.
- Scenario 4:** Washing and cutting raw chicken first, put carcass on pot for boiling, then washing and preparing the vegetable. When prepare boiled chicken using the same hands, but separate cutting board and knife to make salad

- Salmonella* cross-contamination occurred during processing the ready to eat chicken salad via using the same bare hands, knife and cutting board.
- The highest and lowest *Salmonella* cross-contamination from raw chicken to salad were the use of the same hands, cutting board and knife (scenario 1) and the use of the same hands, but separate cutting board and knife (scenario 4)



Results



Ready to eat Cambodian chicken salad

Recommendations

- Conduct awareness for cooking to keep clean by properly wash hand and equipment for home cooking to all stakeholders
- Cut source of microbial contamination also needed, including slaughterhouse and market.

Research gaps or future opportunities

- This result will be used in the model of a quantitative microbial risk assessment to estimate the incidence of salmonellosis through consuming chicken salad of Cambodian people.