NEW ZEALAND FOOD SAFETY AUTHORITY

Te Pou Oranga Kai O Aotearoa

Control of Campylobacteriosis in New Zealand: a whole-of food-chain approach

Neil Kennington, Steve Hathaway, Judi Lee

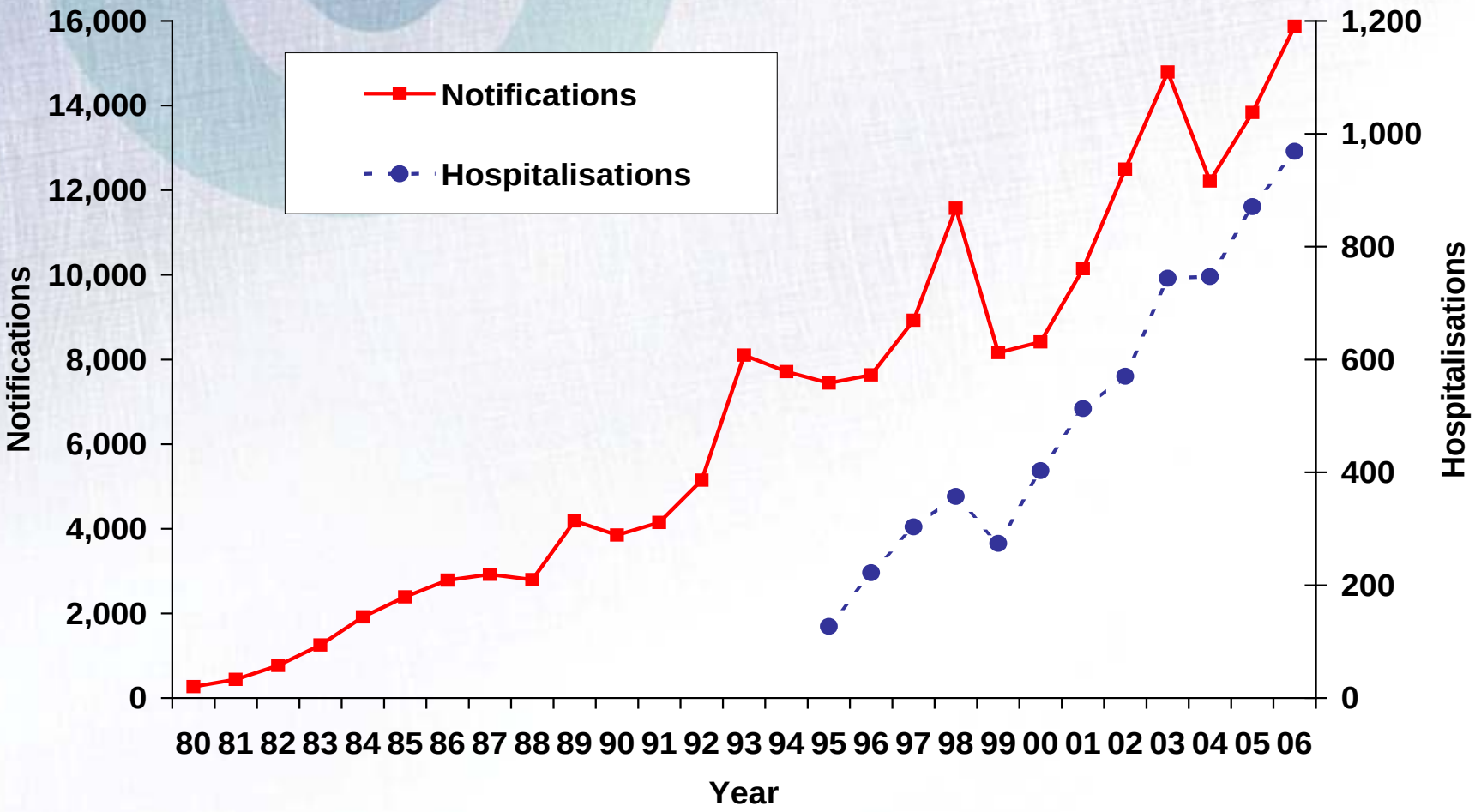
Campylobacteriosis in humans

- A priority foodborne disease world wide – primarily gastroenteritis
- A number of food pathways have been implicated, especially chicken meat, as well as water, animal contact and environmental sources
- Under-reporting in most countries

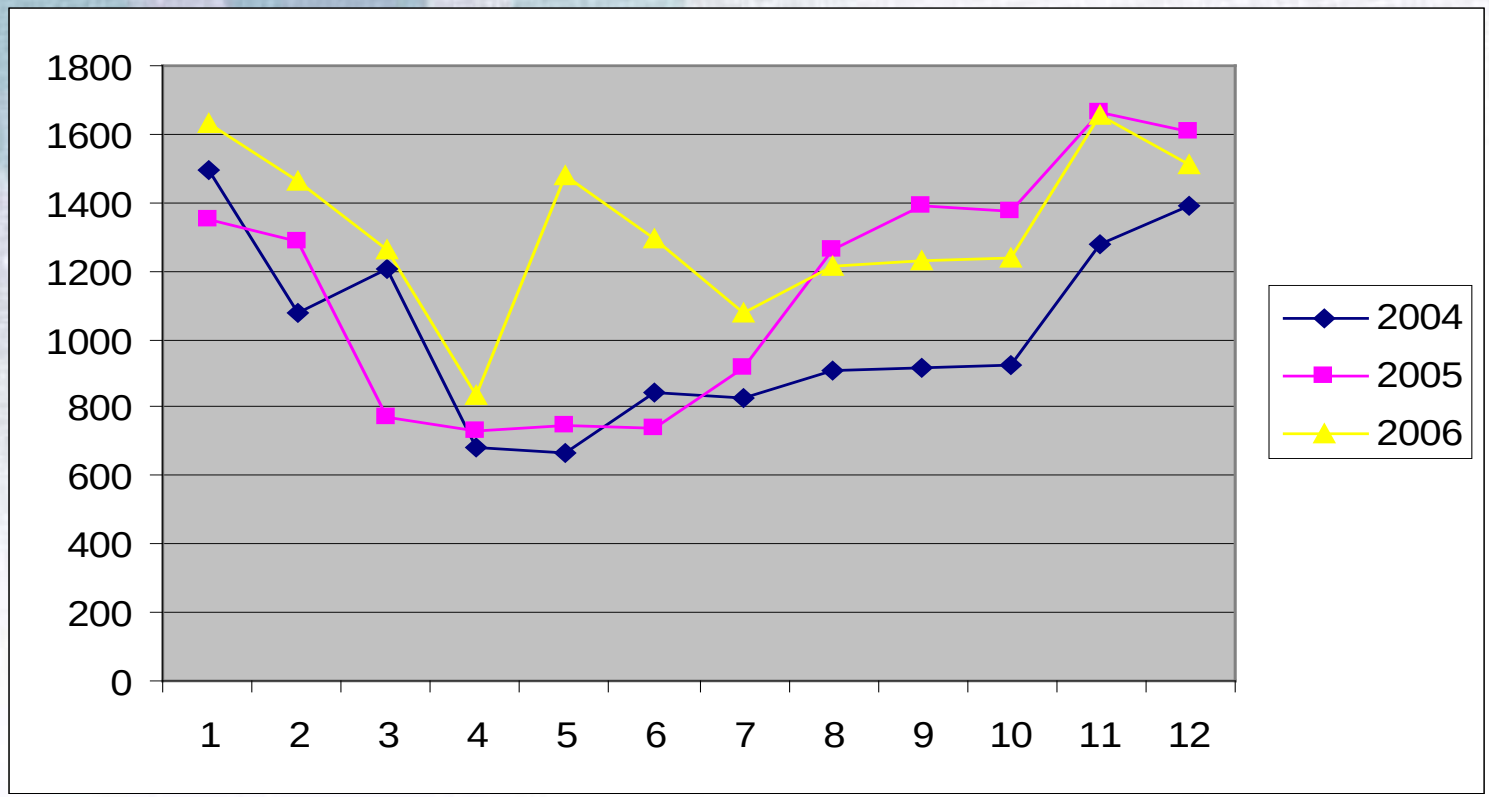
Epidemic of notified cases in NZ

2006: 15,873 notifications (379 / 100,000)

1,179 hospitalisations



Monthly cases trends showing consistent trend



Stakeholder pressure for formal NZFSA response

Epidemic study puts chicken in dog box

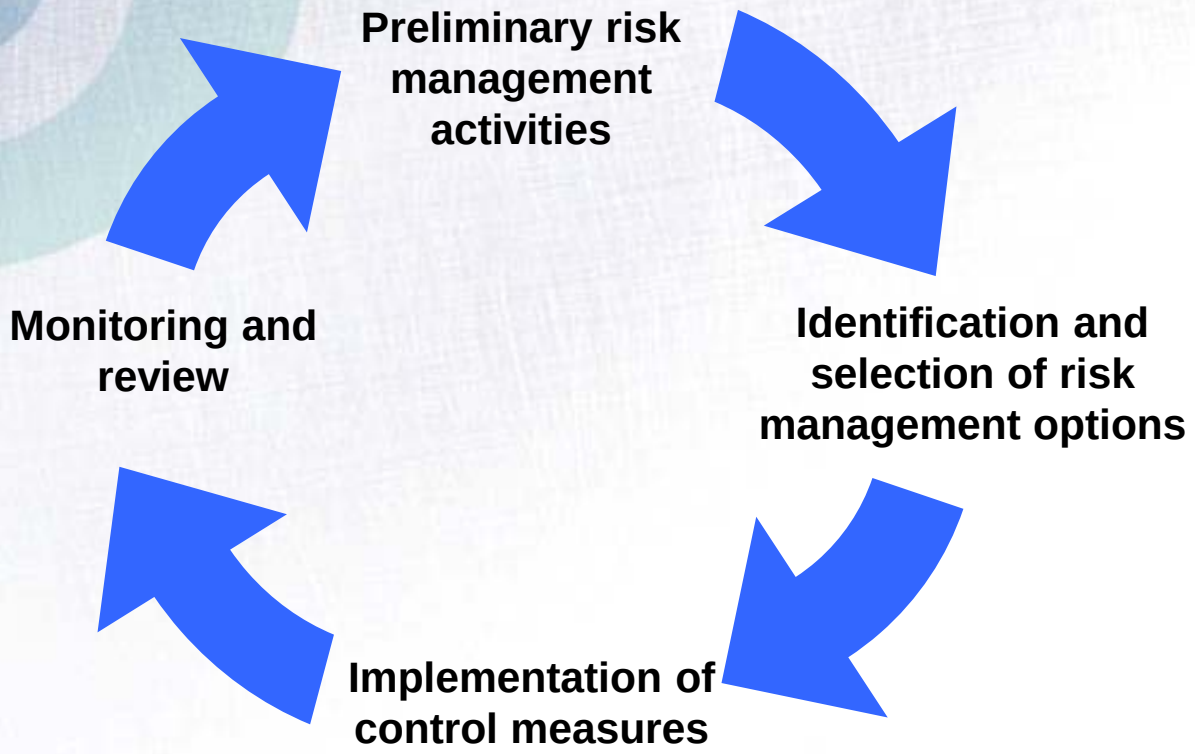
Monday Jul 10, 2006
By Simon O'Rourke

Food Safety Minister Annette King says she is seeking immediate advice from officials on what action can be taken to address New Zealand's spiralling campylobacter epidemic.

NZFSA *Campylobacter* Strategy: 2006

- Formal partnership between NZFSA, industry and other stakeholders
- Strategic farm-to-plate plan
- Operational research
- Ongoing development of control measures; voluntary and regulatory

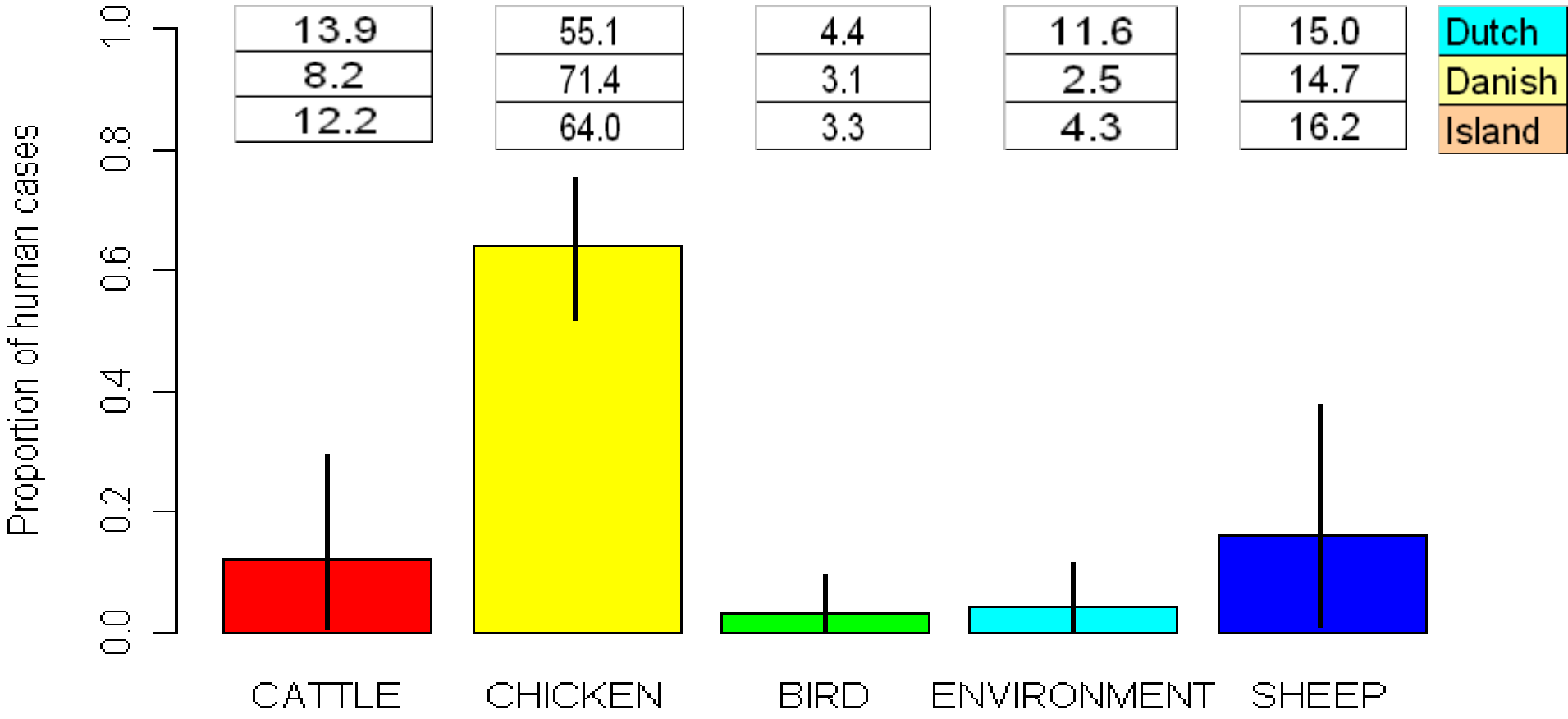
Strategy includes NZFSA Risk Management Framework



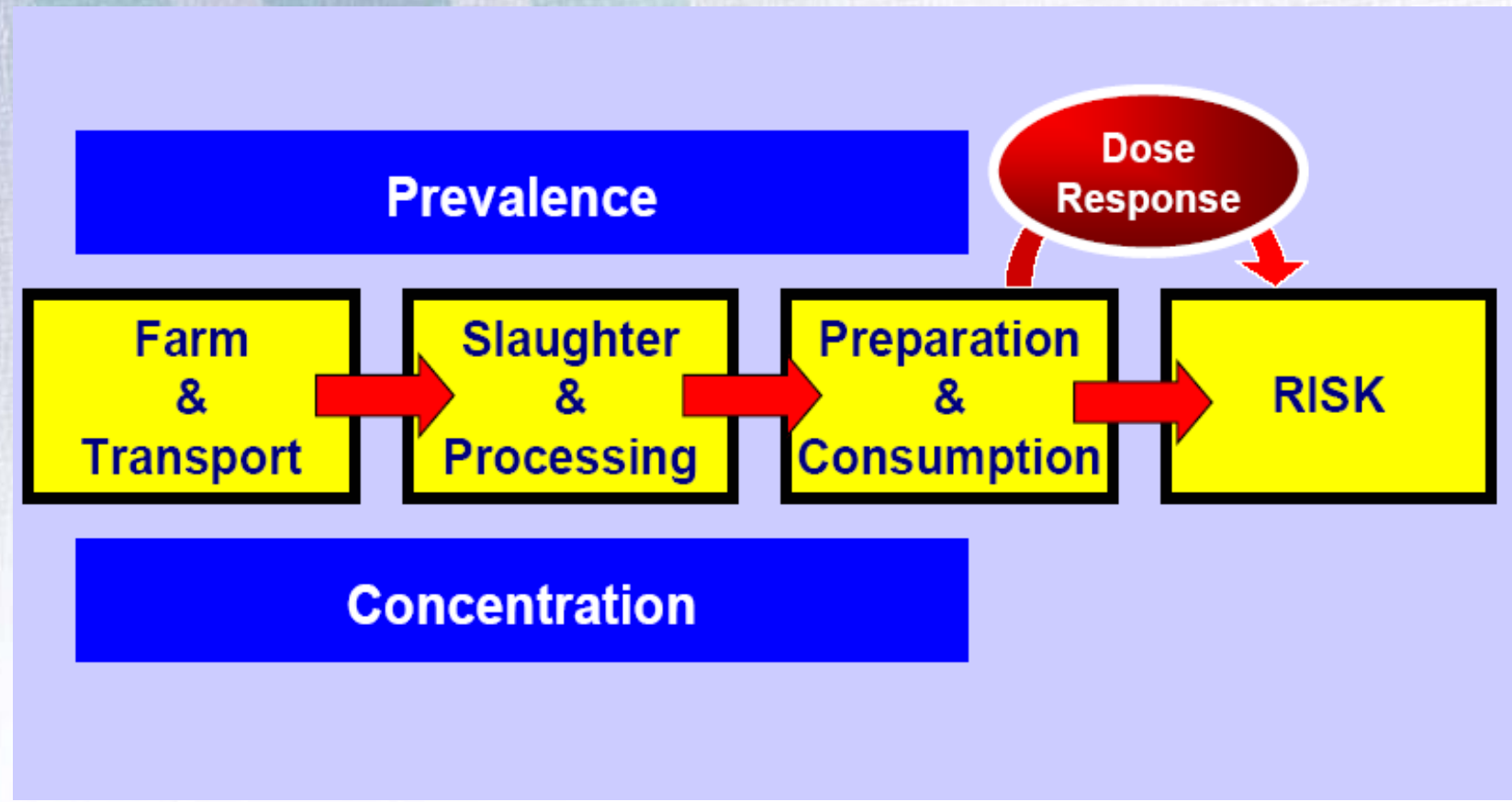
Key objectives of the Strategy

- Significantly reduce cases, with public health goal of 50% reduction over five years
- Invest in detailed food source attribution so as to target control measures
- Research, implement and validate a range of interventions farm-to-plate
- Develop risk model
- Institute monitoring systems (food chain and human) to chart progress

Sophisticated research to determine source of human cases



Farm-to-plate risk-based approach



NZFSA performance target

- Necessary regulatory tool to achieve NZFSA public health goal
- Tested for a year on a voluntary basis to ensure that required level of control on chilled carcasses in all premises was practical and achievable
- Mandated February 2008 and monitored using National Microbiological Database

NZFSA performance target

- Effectively requires a one log reduction in level of contamination from 2007 baseline levels
- Moving window method, with a high count limit (5.88 $\log_{10}$ CFU per carcass) and average carcass count below 3.78 $\log_{10}$ CFU per carcass)

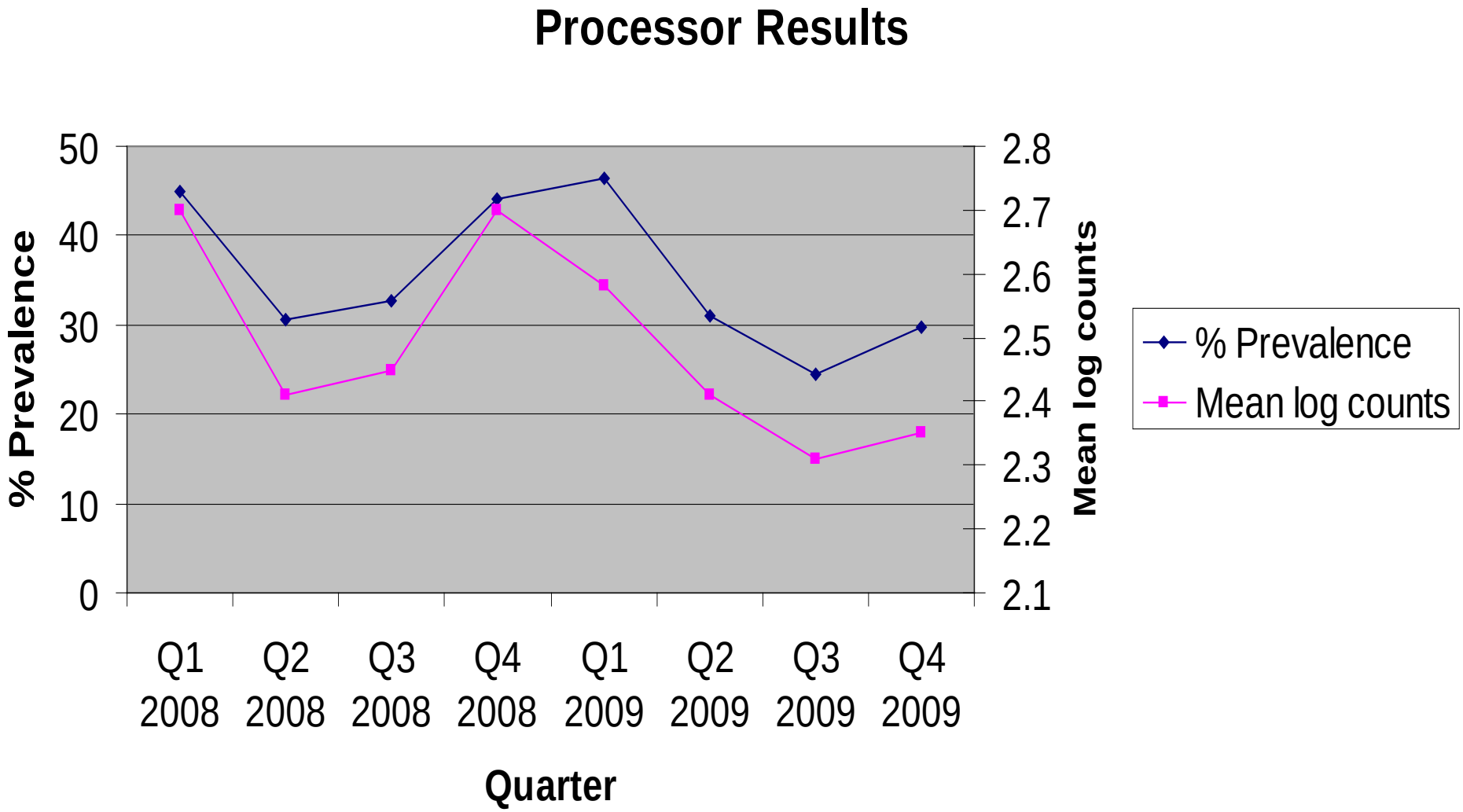
Validated control measures (1)

- Reducing flock prevalence through on-farm controls (biosecurity, boots, crates)
- Reducing cross-contamination in slaughterhouse through improved hygiene
- Better calibration of evisceration equipment
- Spray washing and chlorination of chill water

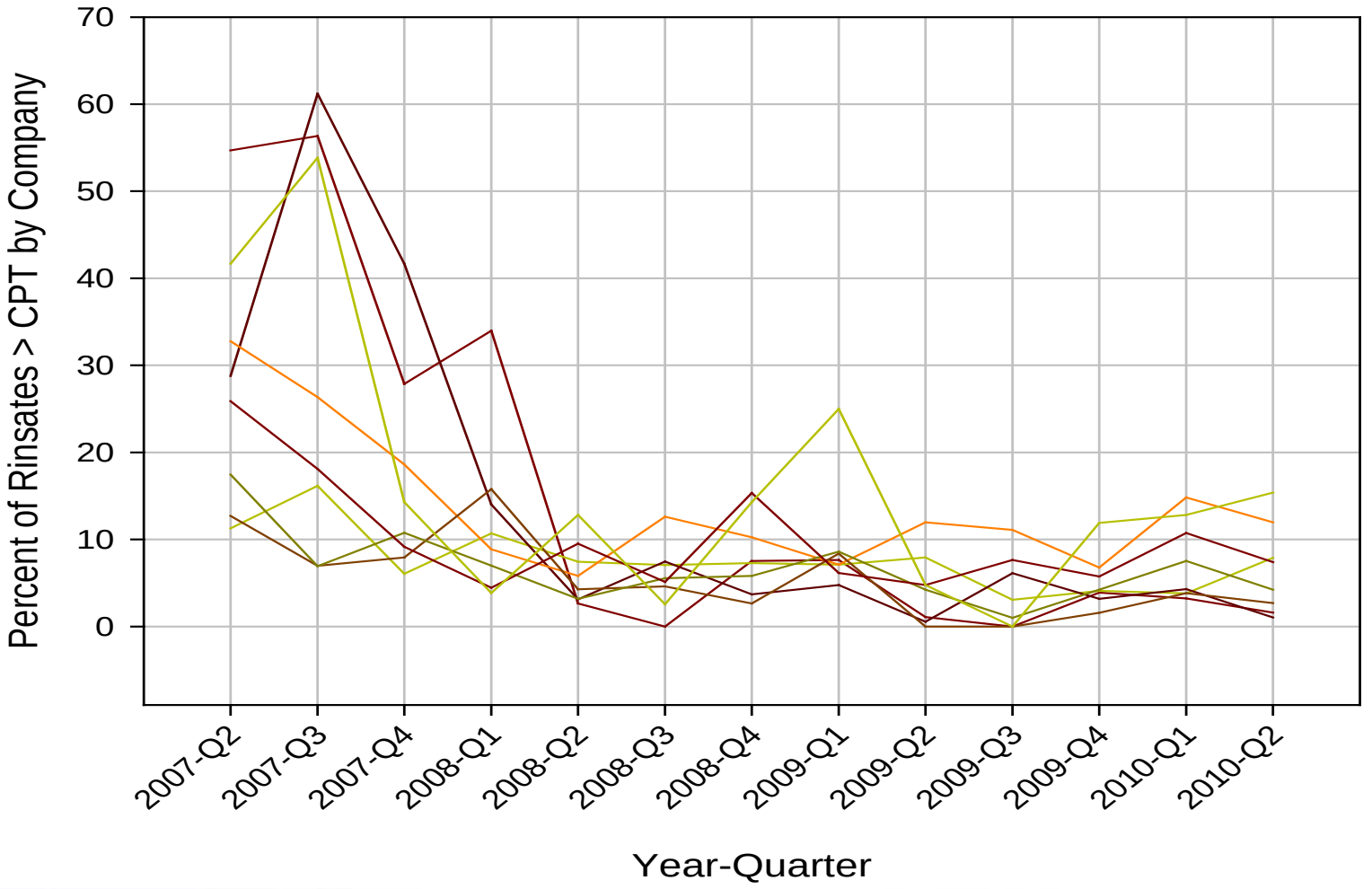
Validated control measures (2)

- Strategic use of chemical decontamination during primary processing (e.g. acidified sodium chlorite)
- Heat treatment of product
- Improving hygiene during packaging and distribution
- Improving consumer handling

Industry progress



Individual processor performance against NZFSA target

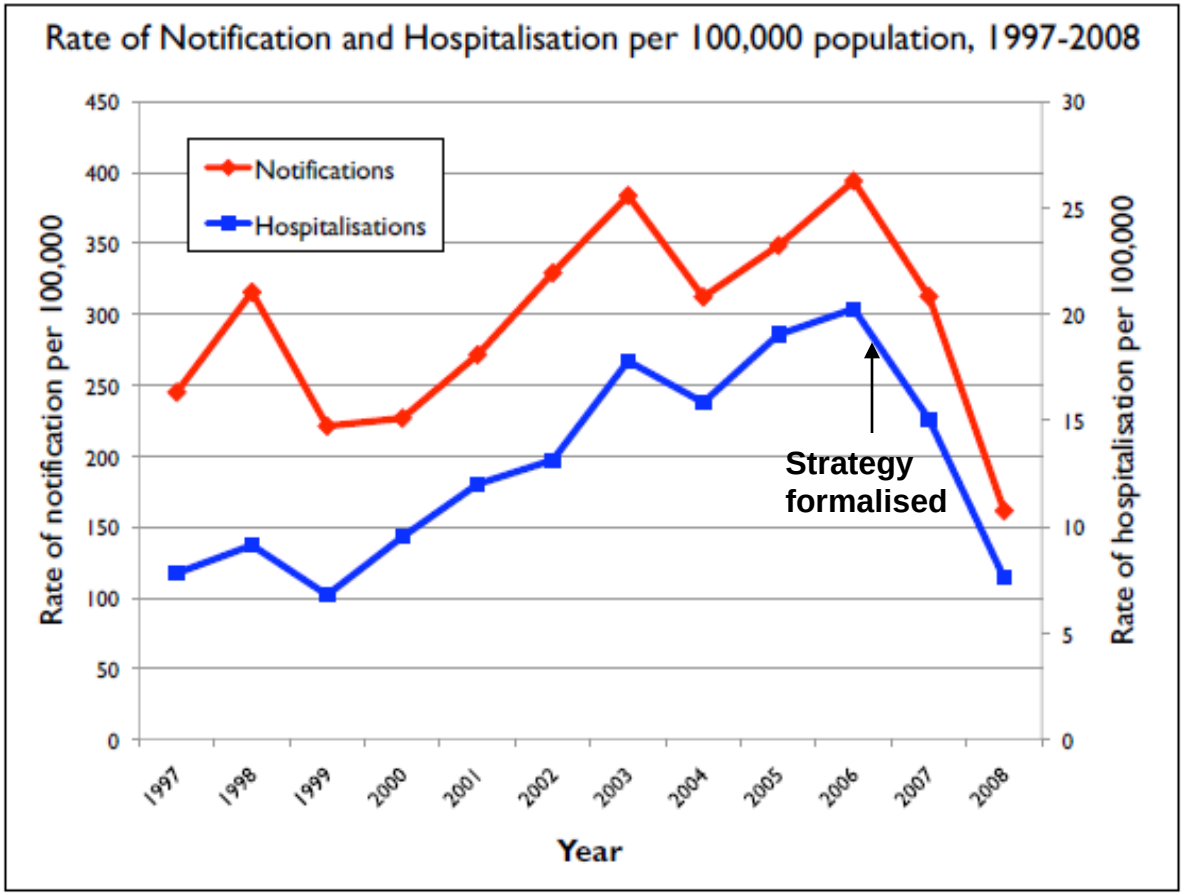


Non compliance with performance target

- NZFSA-led response team
- 5 premises visits in 2008-2009
- Persistent problems with organic processors
- Freezing imposed until compliant with CPT
- No mandatory closures to date

Progress in human health trends

Results: Relationship between notifications and hospitalisations

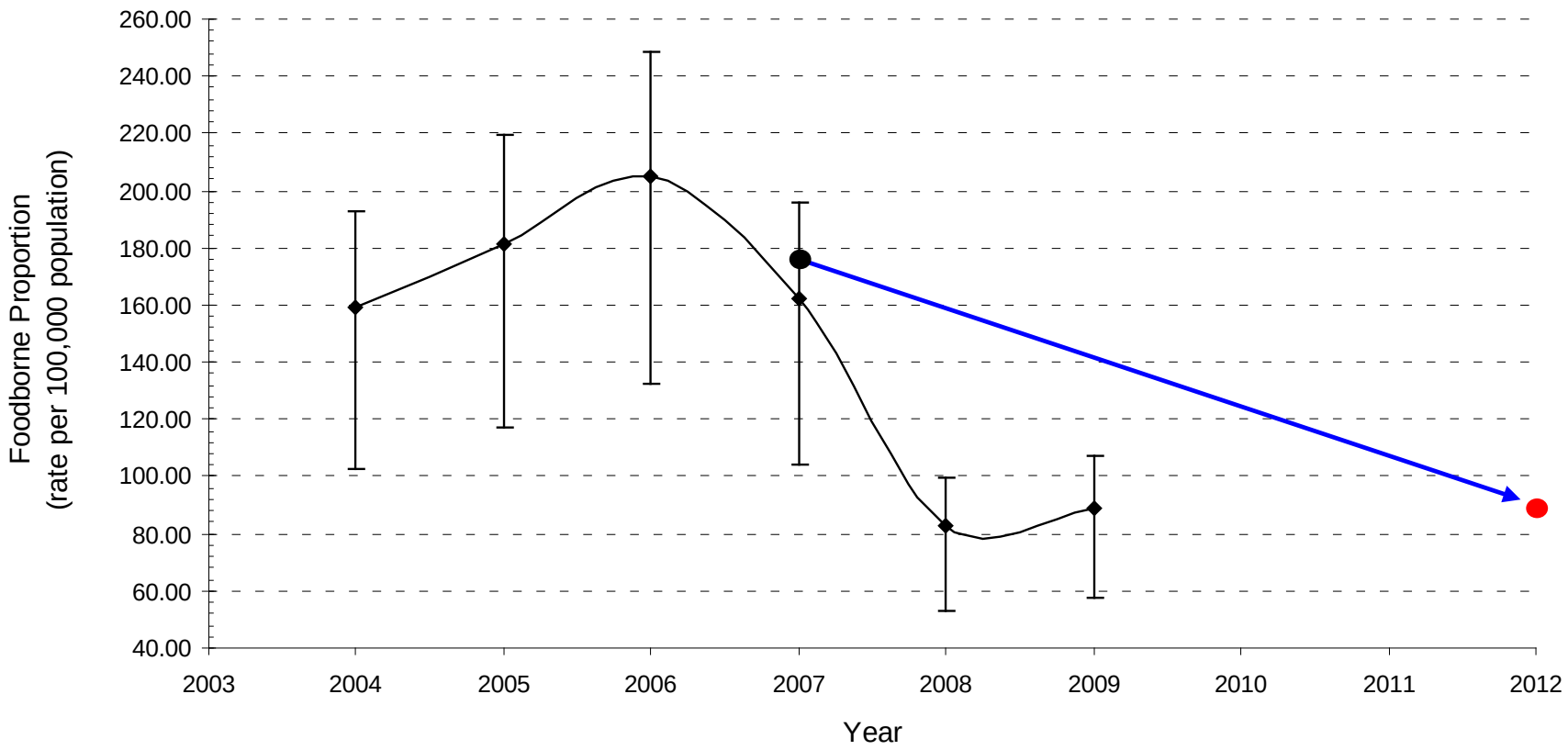


Calculation of food borne component: 2009

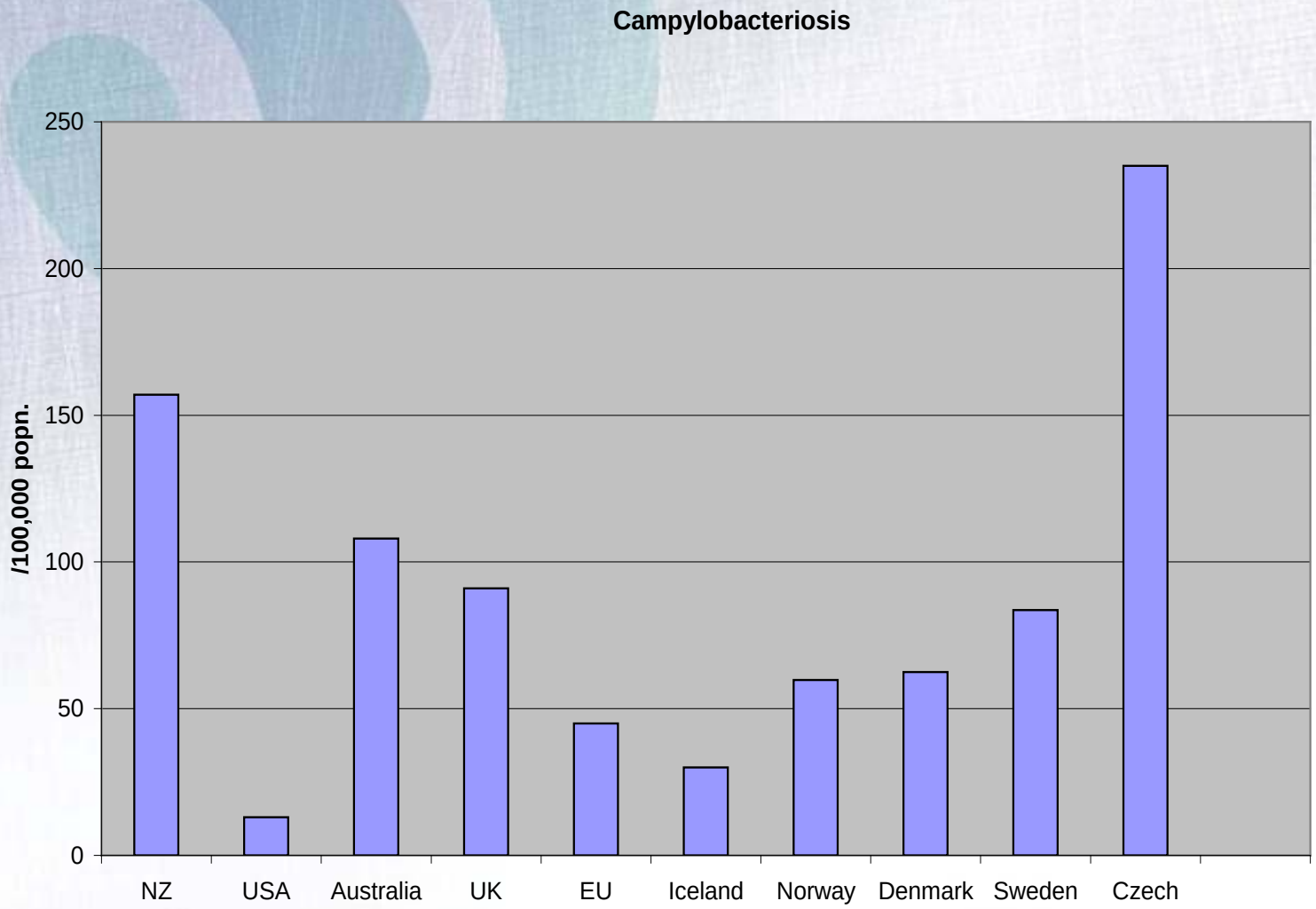
Total cases - 7176 (166.3/100,000)

- 3836 food-related cases
- 505 travel-related cases
- 574 hospitalisations

Charting progress against NZFSA public health goal



Country comparison 2009



Summary

- An integrated farm-to-plate strategic approach has resulted in considerable reduction in campylobacteriosis
- Partnership with industry (funding and operational research) has been critical to progress

Summary

- Continuing work on food source attribution and risk modelling will inform changes to control measures and regulatory performance target (increase stringency?)
- New Zealand and Sweden co-leading a new Codex standard for controlling *Campylobacter* and *Salmonella* in broiler chickens,

Acknowledgements

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