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Introduction

Brucellosis was first reported in Thailand in 1956 and is now endemic.

In Thailand, brucellosis in cattle and buffalo is primarily due to *Brucella abortus* while *B. melitensis* predominates in sheep and goats.

Brucellosis is a notifiable disease according to Thailand's Animal Epidemics Act B.E. 2499 (1956) and to its revision B.E. 2542 (1999).

In 2010, the country's adult livestock population counted 3.4 million heads of beef cattle (ca. 1 million herds), 0.42 million of dairy cattle (ca. 20,000 herds), 0.59 million of buffaloes (ca. 258,000 herds) and 0.42 million of sheep and goats (ca. 42,000 flocks).

The National Brucellosis Control and Eradication Programme (NBCEP) has been implemented to minimise the economic impact in livestock, to prevent public health risks, and to guarantee the safety of food of animal origin.

This work aims at reviewing and updating the current activities and results of the National Brucellosis Control and Eradication Programme in Thailand.

Methods



NBCEP includes:

- ❖ Animal identification and registration
- ❖ Serological surveillance
- ❖ Culling and compensation
- ❖ Vaccination (S19 strain in cattle and buffalo female calves)
- ❖ Movement control
- ❖ Brucellosis, Tuberculosis and Paratuberculosis Free Farm Project
- ❖ Improving laboratory diagnosis (OIE Lab Twinning Program).

Serological surveillance (2010):

- Blood samples were collected from:
 - adult cattle and buffaloes (> 1 year-old)
 - sheep and goats (> 6 month-old).
- Samples were submitted to NIAH and to 7 Regional Veterinary Research and Development Centres (RVRDCs) (**Fig.1**).
- All tests were performed according to OIE standards.
 - RBT and I-ELISA (in-house) were used for screening
 - CFT was used as a confirmatory test.

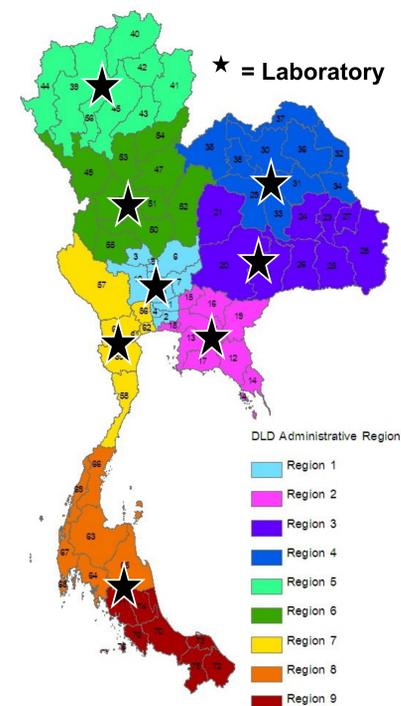


Fig.1: Veterinary regions and laboratories in Thailand

Results & Discussion

In total, 269,676 samples were collected nationwide from 13,598 herds/flocks of cattle, buffaloes and sheep & goats in 2010.

This corresponds to 0.4, 20.2, 0.1 and 11.9 % of herds/flocks and 1.1, 18.6, 1.0 and 34.8% of adult animals in beef cattle, dairy cattle, buffaloes and small ruminants respectively.

Thus, the surveillance coverage remained limited in the respective sectors and species.

Due to limited resources, and because of economic and public health concerns, priority was given to dairy cattle sector, as well as to professional farms (small traditional farms excluded).

Table 1 shows the results of the surveillance in 2010, at herd and animal levels for the respective sectors and species.

At national level, the estimated herd/flock prevalence rates were 5.1, 4.9, 6.1 and 6.9% in beef cattle, dairy cattle, buffaloes and small ruminants respectively, with important variations according to regions.

Beef cattle appears as the most infected sector with herd prevalence rates reaching 40% in at least 2 regions (1 & 7).

In **dairy cattle**, where efforts have been focused in the recent past (including the promotion of AI), the prevalence appears lower than in beef cattle, but is still significant in several regions.

In **buffaloes**, the prevalence is similar in almost all regions and close to or above 5%.

Finally, in **sheep and goats**, 10-20% flocks appear infected in almost all regions where the small ruminant population is important.

Table 1.: Estimated prevalence of brucellosis, at herd and animal levels for beef and dairy cattle, buffaloes, and sheep & goats in Thailand in 2010.

Region	Beef cattle		Dairy cows		Buffaloes		Sheep & goats	
	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds
1	7.82	40	1.09	5.50	0.46	11.11	2.40	22.29
2	1.97	16.25	0.83	1.72	0.83	5.17	2.32	17.92
3	0.72	6.03	0.14	1.57	0.95	5.65	1.93	15.78
4	0.85	8.09	0.33	4.16	0.52	6.9	2.03	21.38
5	1.72	11.63	0	0	1.23	6.67	0	0
6	1.54	4.94	0	0	0	0	2.16	13.01
7	5.26	40.35	0.78	7.7	ND	ND	1.28	12.46
8	2.05	1.81	0	0	0	0	0.52	4.02
9	4.99	2.74	0	0	0	0	0.76	1.58
Total	2.4	5.1	0.6	4.9	0.7	6.1	1.5	6.9

Discussion - Conclusion

These results evidence the significant prevalence of brucellosis in Thailand in all important domestic species in the country.

This is the first time that such high prevalence rates are reported in South-East Asia in ruminants.

An important effort is still needed to improve the surveillance coverage and to increase the epidemiological knowledge of the disease in the country

The control measures and eradication programme should be adapted accordingly.

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