

# Lumpy skin disease (LSD)

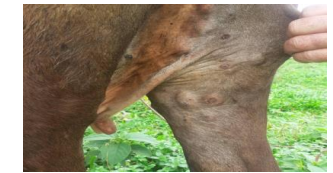
## An update on LSD Prevention & Control with focus on LSD Vaccination

Thailand

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Affiliation: Department of Livestock Development

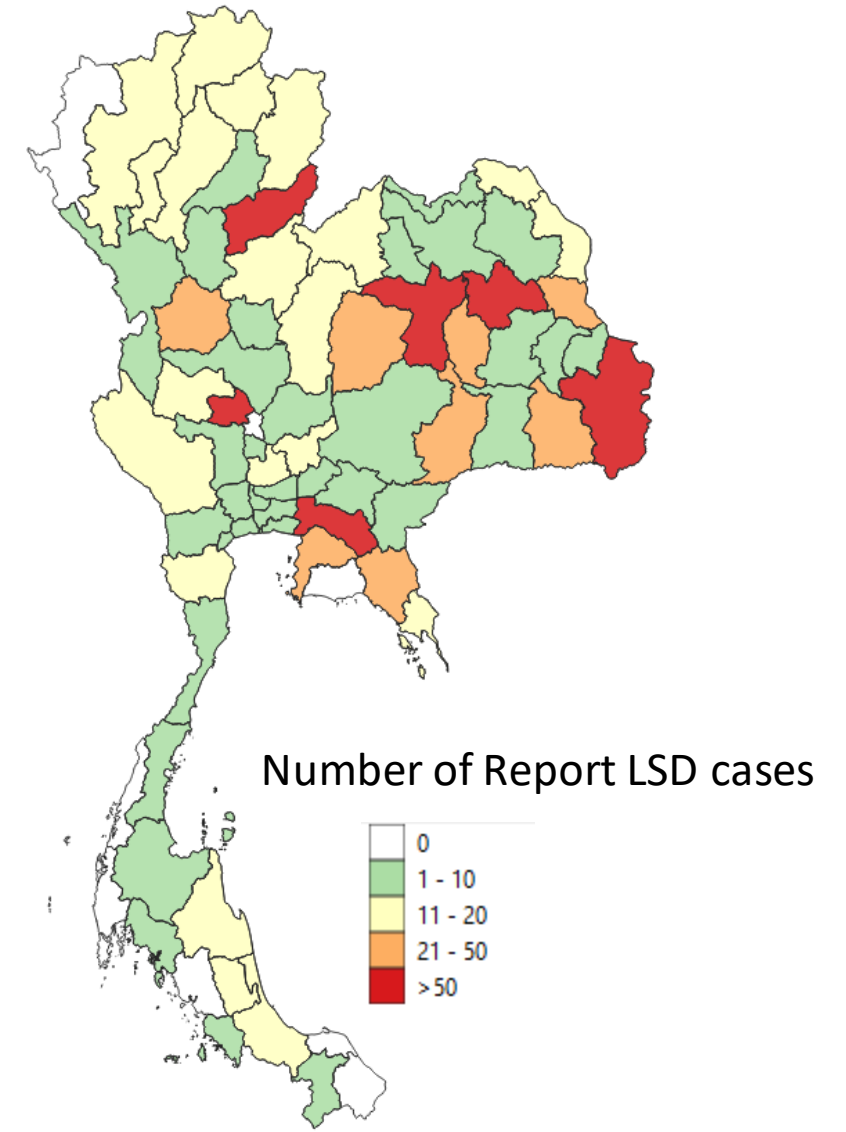
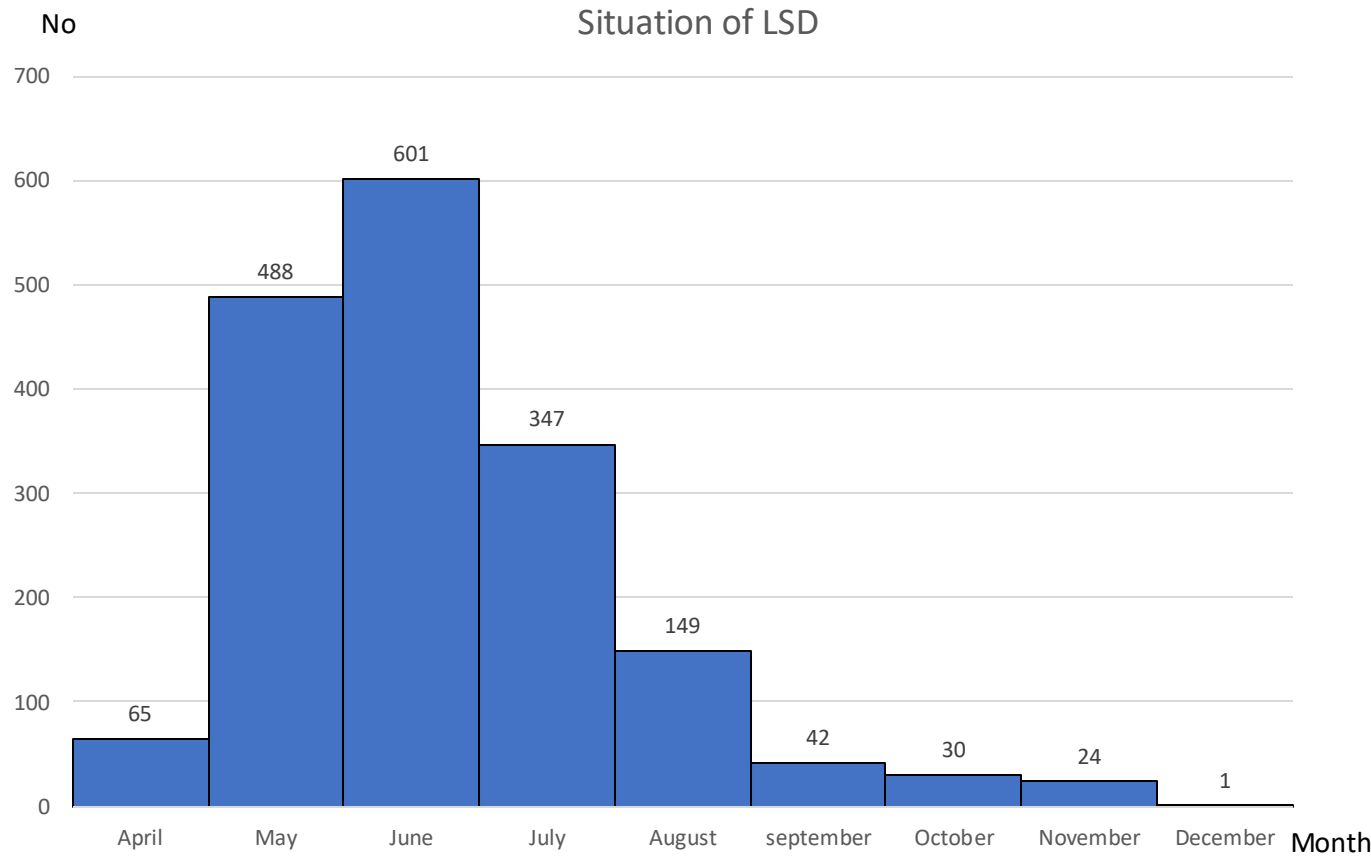


# Outbreak Updates

Date of first report	5 April 2021
Date of report to OIE	9 April 2021
Total Number of Province affected out of total province	68 of 77
Number of farm affected	273,298
Number of animals affected (Cattle/ Buffalo)	596,506
Number of death (Cattle/ Buffalo)	59,509
Virus type (confirmed by which Laboratory)	Lumpy skin virus
Total number of outbreaks:	1,747
Total number of outbreaks resolved:	1,722
Ongoing outbreaks:	25



# LSD situation in Thailand



Data source: Esmart-surveillance, 7 Dec 2021



# Control measures – Vaccines and Vaccination

- Objectives of Vaccination : Control and prevention

- Vaccine types used

- Live attenuated vaccine
- Neethling strain
- DLD support cost of vaccine
- Total doses imported:

- 360,000 doses : LUMPYVAX<sup>®</sup> from South Africa
- 5 millions doses : MEVAC<sup>®</sup> from Egypt



- Any legislation on LSD

- According to Animal Epidemics Act B.E.2558 (2015), if the animals with LSD clinical sign are found, the farmer must notify in 12 hours.
- Regulation and guild line of vaccination measure for DLD staff



# Control measures – Vaccines and Vaccination

- Vaccination strategy
  - 1 phase 360,000 doses : for control the outbreak by ring vaccination
  - 2 phase 5 millions doses : for prevention depend on this priority
    - Areas without outbreaks report : Coverage more than 80 % of cattle population
    - Areas around forest park or natural park : Coverage more than 80 % of cattle population
    - Other areas depend on situation
- Targeted animals
  - dairy/beef cow
  - buffaloes



# Control measures – Vaccination

- Encourage the farmer to join LSD vaccination campaign by launching support activity
  - Treatment unit
  - Disinfection and vector control unit
  - Distribute insecticide for farmer
  - Public relation about Lumpy skin disease and how to control
- The local veterinarian officer played the main role to carry out the LSD vaccination.





# Control measures – Vaccination

- DLD provided training to the Vaccinators before initiation of vaccination.
- Post Vaccination Monitoring and evaluation of Vaccination Program
  - Vaccination coverage
    - About 3 millions vaccinated animal out of 5.3 millions
  - No outbreak among vaccinated population
  - Adverse reaction
    - less than 1% from vaccinated animal
    - sign of adverse reaction
      - Anorexia/Depress
      - Lacrimal/nasal discharge
      - Nodules/swelling at injection area
      - Nodules on skin
      - Swelling lymph node

# Vector control

As discussed in earlier modules, the natural mode of transmission, any biting or blood-feeding insect or tick that changes its host between species.

For efficient transmission, the number of vectors needs to be high.

of transmission  
vectors  
*es to find out more:*



Vector catching devices



of insect  
repe

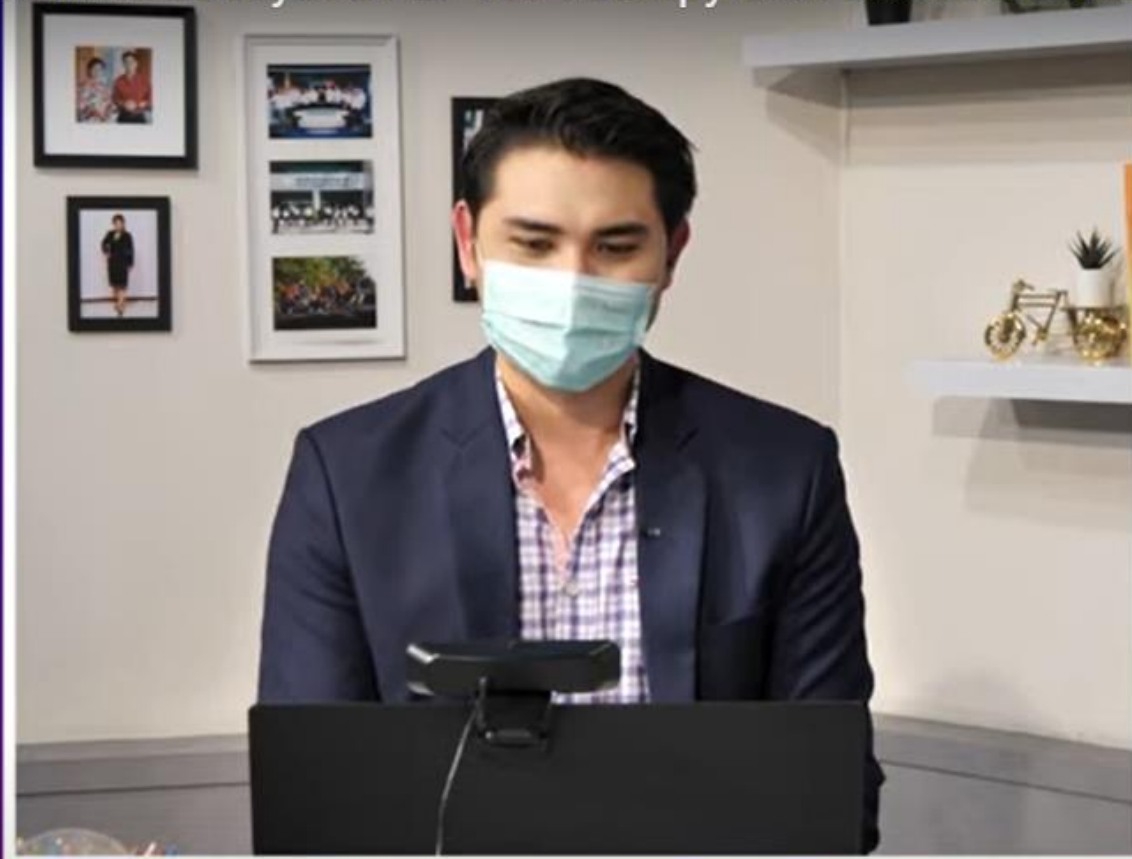


Reducing breeding









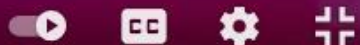
**THAILAND  
TODAY**

## Lumpy Skin Disease Outbreak

Tuesday - Friday 9.00 P.M.

NBT  
WORLD

▶ ⏪ 🔊 1:41 / 21:10





# Way Forward to improve LSD control and vaccination

- Develop and produce vaccine models of Lumpy skin disease virus
- Testing effective and efficiency of LSD vaccine
- Improve LSD surveillance system including slaughterhouse
- Study gene mutation of LSD virus
- Study of LSD vector
- Study of joint vaccinations: FMD and LSD



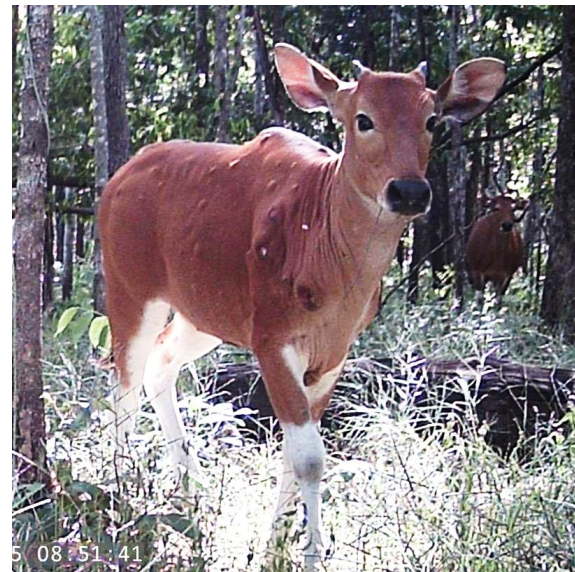
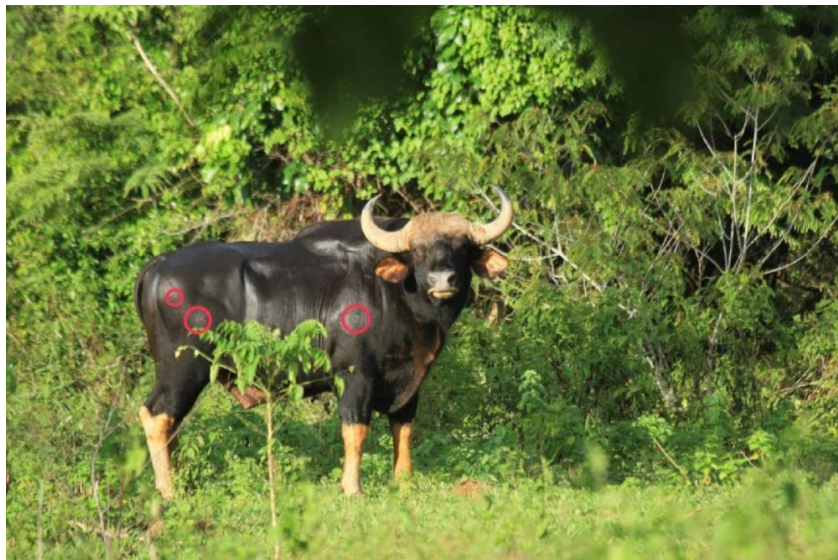
# List challenges in LSD Control including vaccination

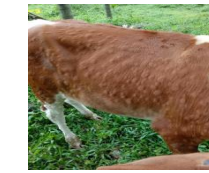
- Vector control
- Illegal movement
- Vaccine efficiency



# LSD outbreak in wildlife

- On 16 June 2021, Dead Guar (*Bos gaurus*) was found at Prachuap Khiri Khan province.
  - The wound from fight were found on carcass. The result of sample collection was positive. After investigation, the dead guar was weak from LSD infection and dead from animal fight
- On 12 September 2021, LSDV was found in Mainland serow (*Capricornis sumtraensis*) at Chonburi province
- On 25 September 2021 LSDV was found in Banteng (*Bos javanicus*) Chachoengsao province
- On 8 October 2021, LSDV was found in Banteng (*Bos javanicus*) Uthaitхани Province





# Wildlife LSD prevention measure

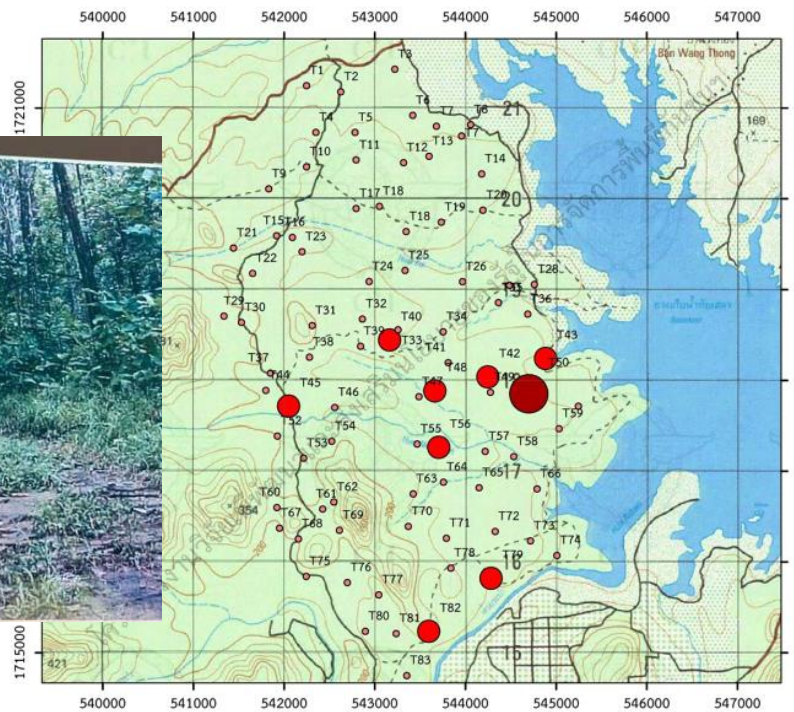
- Setting wild patrol team called “Smart Patrol” that roamed in the woods. When sick, death wildlife was found, the lesions will be recorded.





# Wildlife LSD prevention measure

- Setting 85 camera traps within the Huai Thap Salao-Huai Rabam Non-Hunting Area which can cover 26.4 km<sup>3</sup> in Uthaitхани Province



สวทช. RISTOA  
KASETSART UNIVERSITY

โครงการวิจัยเพื่อพัฒนาและส่งเสริมนโยบายของ  
ในการจัดการพื้นที่กั้นชนา

สัญลักษณ์  
ตำแหน่งกล้องดักถ่ายภาพสัตว์ป่า  
ความถี่การพบโรคในวัวแดง  
รอบ 3 เดือน (พ.ค.-ก.ค.)  
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\*ข้อมูลการปรากฏของวัวแดงเดือนพ.ค.-ก.ค. 2  
พบวัวแดงติดโรคครั้งแรกเดือน มิถุนายน





# Wildlife LSD prevention measure

- Biosecurity measures were conducted in DNP : Department of National Parks, Wildlife and Plant Conservation for prevention and limit the spreading of disease from outside the wild
  - Disinfectant the car wheel at entrance of DNP and also spraying wood vinegar (pyroligneous acid) on the car.







# Way forwards for LSD Control in wildlife

- One Health approach
- Outbreak investigation
- Camera trap
- Management on using of invasive space between livestock and wildlife
- Understanding the nature, situation and thoughts of people in the community