



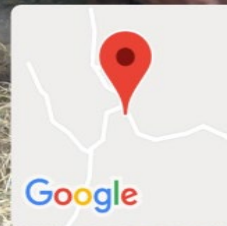
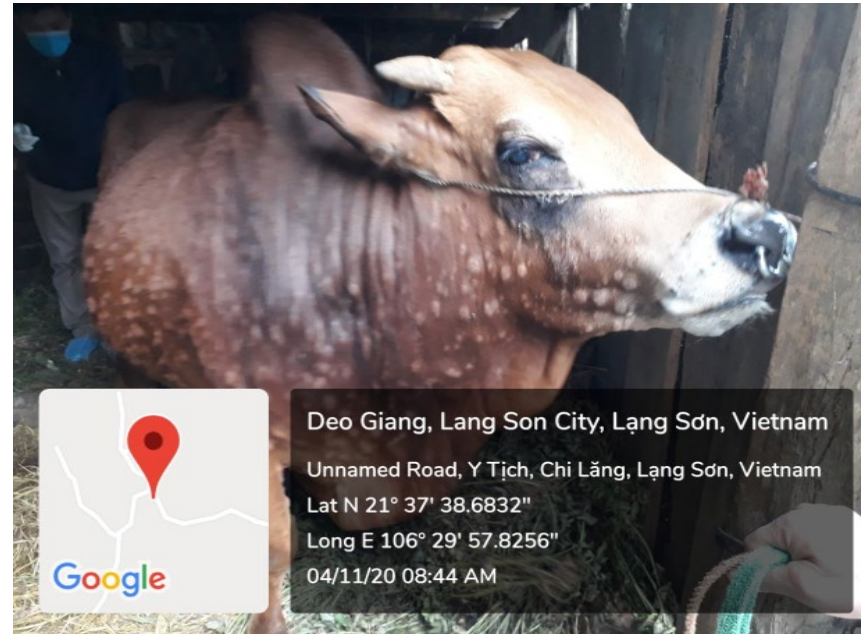
Technical Meeting on Lumpy skin disease (LSD)

LSD SITUATION IN VIET NAM

21 Dec 2020

LSD Situation UPDATE

In the early of Oct 2020, two cow raising households in Quyet Thang commune, Huu Lung district, Lang Son province reported 02 sick cow with many lumps appear under the skin, many sores scab at different locations on the body. DAH staff visited immediately and took samples. **The results confirmed as LSD positive.**



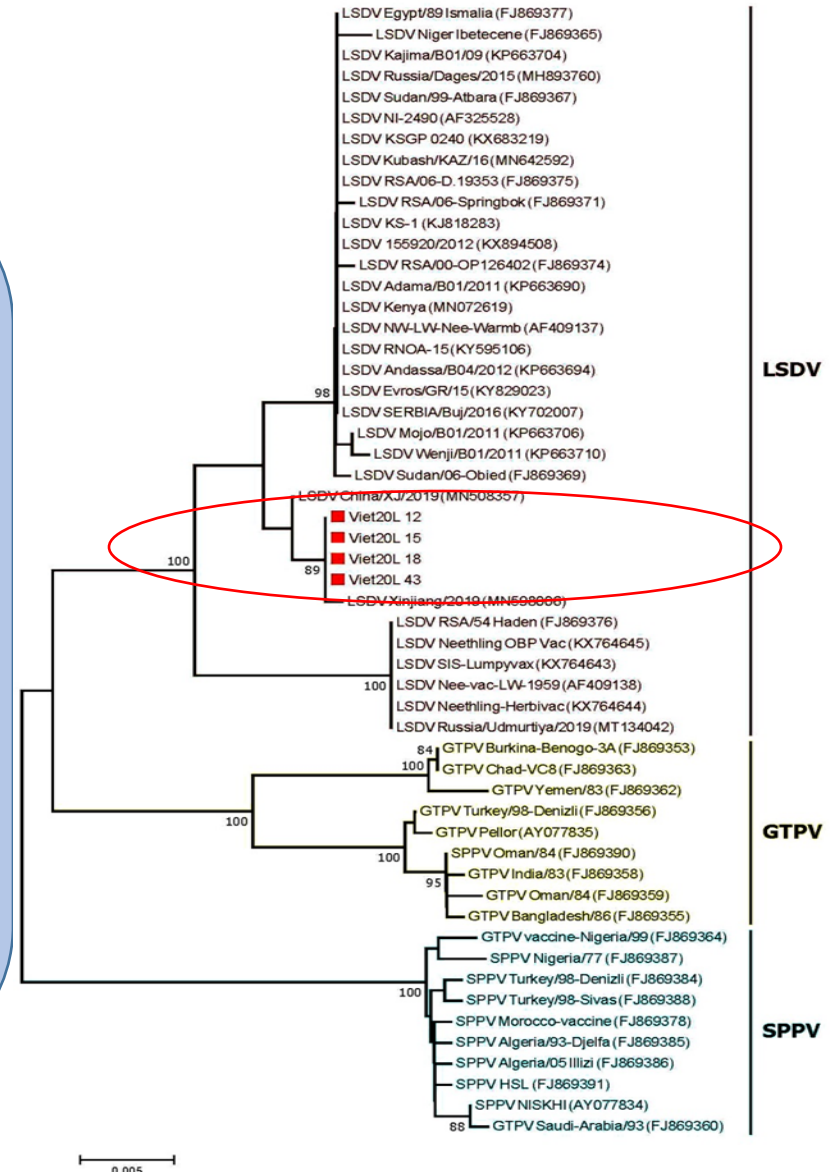
Deo Giang, Lang Son City, Lạng Sơn, Vietnam
Unnamed Road, Y Tịch, Chi Lăng, Lạng Sơn, Vietnam
Lat N 21° 37' 38.6832"
Long E 106° 29' 57.8256"
04/11/20 08:44 AM

SYMPTOMS OF LSD OUTBREAKS IN VIETNAM

(Lang Son & Cao Bang provinces)

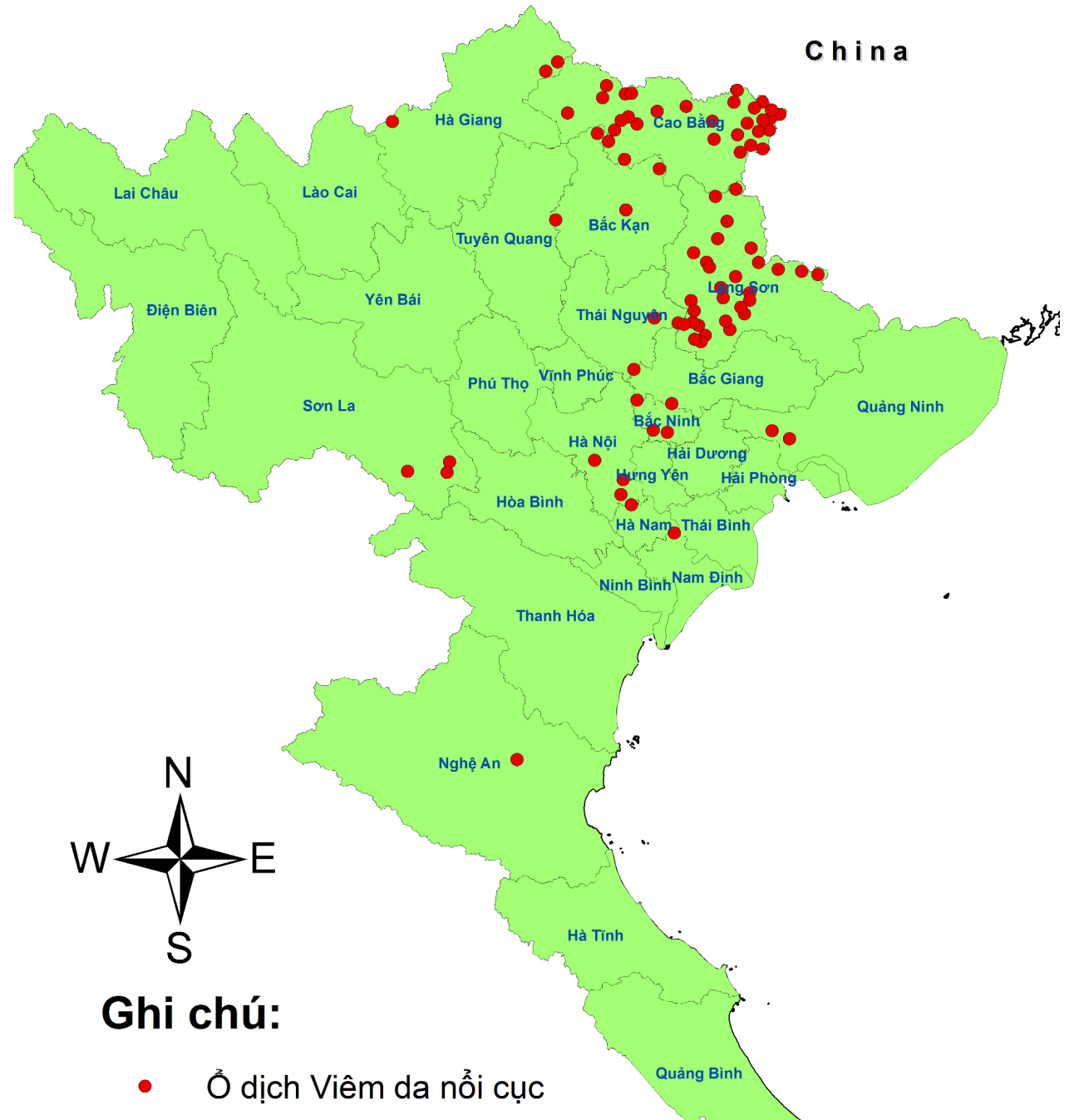
Genetic characterization of LSD viruses circulating in Vietnam

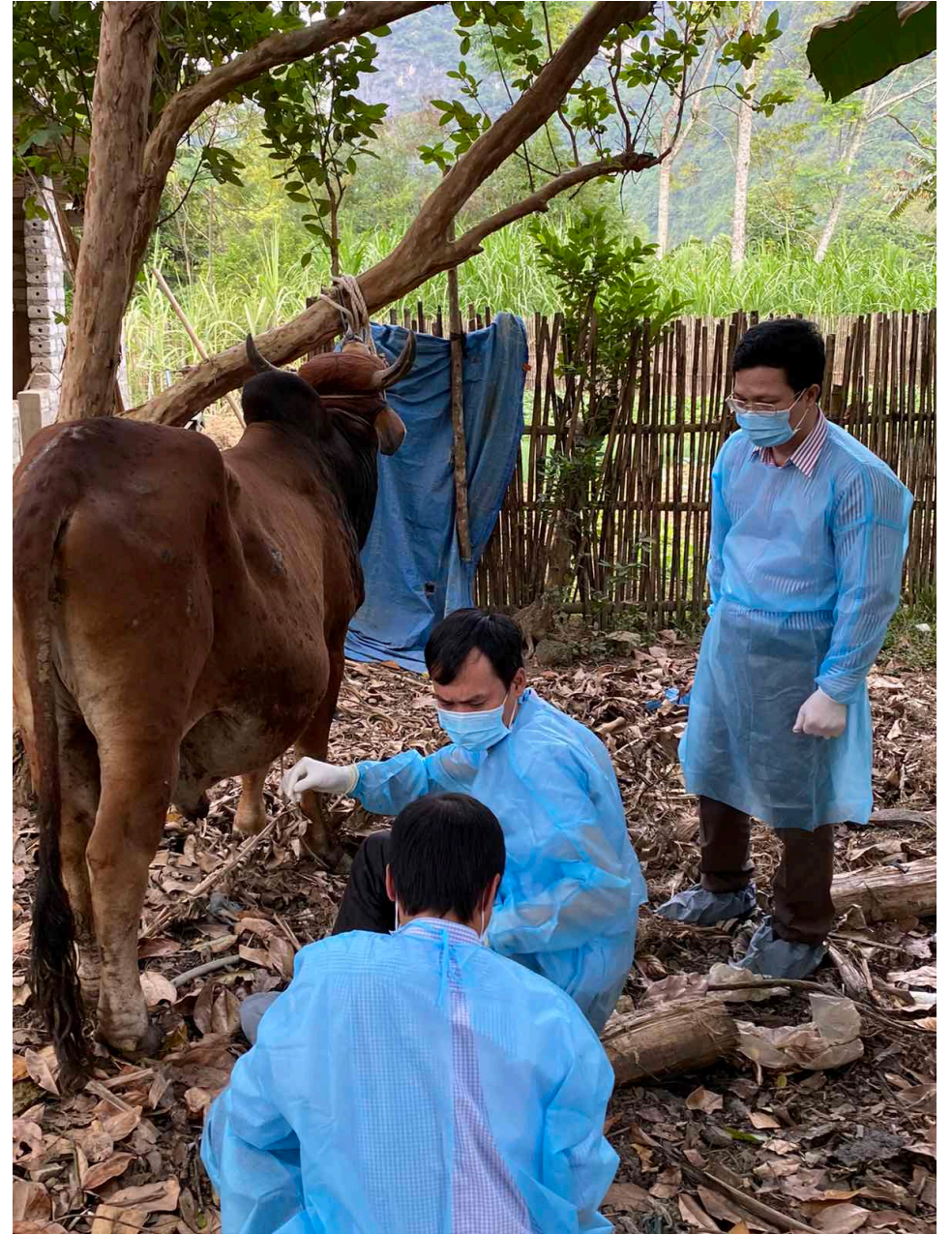
- The analyses of GPCR, RPO30 genes of the 4 Vietnamese LSD samples show a similarity with Neethling virus strains.
- Vietnamese LSD strains shared 100% at both nucleotide and amino acid identity when compared with Chinese LSD strains.
- The analysis of EEV glycoprotein LSDV126 gene of the Vietnamese LSD samples show a similarity with Neethling virus strains and an identity with Chinese and Russian LSD strains.
- The results of a partial B22R gene analysis show a similarity with Neethling virus strains and Russian LSD strains.



Current situation

- From the middle of Oct 2020, **93** LSD outbreaks were reported in 93 communes of 36 district of **12/63** provinces.
- A total of 1.271 cattle were infected, of which 193 were destroyed.









No: 7575 /CD-BNN-TY

Hanoi, 31 October, 2020

**URGENT OFFICIAL TELEGRAPH
Regarding mobilization of resources
and prompt implementation of
measures on prevention and control of
LSD in buffaloes and cows**

**URGENT OFFICIAL TELEGRAPH
Regarding mobilization of resources and prompt implementation of
measures on prevention and control of Lumpy Skin Disease in buffaloes
and cows**

MINISTER OF AGRICULTURE AND RURAL DEVELOPMENT

sends a telegraph as follows:

Chairmen of People's Committees of centrally-run cities and provinces.

As reported by specialized animal health agencies, from mid-October 2020 until now, the Lumpy Skin Disease has occurred in cattle for the first time in 2 communes of Lang Son province (Quyet Thang and Yen Binh commune, Huu Lung district) and 01 commune of Cao Bang province (Ly Quoc commune, Ha Lang district) with a total of over 147 infected cows, of which 11 died.

The **Lumpy Skin Disease** (as it is called in English and abbreviated as LSD) is an infectious disease caused by a virus of the *Poxviridae* family in cattle. This virus does not cause illness in humans. The disease is spread mainly through insect bites such as mosquitoes, flies, ticks; contact between sick and healthy animals; the disease can also be transmitted through transport of buffaloes and cows that carry pathogens and then share drinkers, feeding areas, milk, semen with others; The average disease incubation period is about 4-14 days. The average rate of infected buffaloes and cows is about 10-20%; the mortality is approximately 1-5%; Typical disease symptoms include: high fever (the temperature might exceed 41°C), anorexia, reduced lactation, appearance of nodules of about 2-5 cm in diameter on skin and mucous membranes, especially in the neck, head,



Vietnam have organized 3 national meetings on LSD within November 2020 to lead prevention and control measures

SUMMARY OF CURRENT CONTROL MEASURES

1. For localities where cattle have exhibited disease symptoms and test results are positive for LSD

- **Segregate** all cattle that have not shown LSD signs; keep buffaloes, cows, goats and sheep where disease cases and suspicions have been detected in separate areas.
- **Dispose** all cattle that have shown positive test results for the LSD, or those in the same locality (with positive test results) that have exhibited clinical manifestations of the LSD.
- **Provide financial support** for livestock owners whose cattle are forced to be disposed due to the disease according to norms, procedures and conditions specified in Government's Decree No. 02/2017/ND-CP dated January 9, 2017 on mechanisms and policies to support agricultural production for production restoration in areas affected by natural disasters or diseases/epidemics.

1. For localities where cattle have exhibited disease symptoms and test results are positive for LSD (cont.)

- **Cleaning, disinfection, insecticide spray** to eliminate flies, mosquitoes, ticks, mites for 3 consecutive weeks in those livestock households where cattle have shows signs of being sick or suspected of being sick;
- Cleaning and disinfectant spray in all high-risk areas and around households that have infected cattle.
- **Zone off epidemic areas and communes and set up temporary stations** to control buffalo and cow transportation in and out of epidemic communes; in case of necessity, establish mobile inspection teams to promptly detect, prevent and handle cases of intentional cattle transport in and out of epidemic communes.



1. For localities where cattle have exhibited disease symptoms and test results are positive for LSD (cont.)

- **Inspect and put together statistics** on households raising buffaloes, cows, goats and sheep in all localities that have detected the LSD in which information on the health situation of healthy cattle and cattle showing sick manifestations, timing of disease symptoms' appearance, sale, slaughter, transport of the cattle out of the communal locality should be well documented.
- **Conduct declaration of the number of cattle**, request livestock owners in affected communes to get committed not to exercise distress sale, slaughter of diseased animals and direct disposal of dead animals to the environment.
- **Conduct communication and awareness raising** for people to actively surveil cattle that are showing signs of being sick, suspected of being sick, promptly detect and report disease cases to authorities, animal health agencies, and take necessary prevention and control measures against the disease and epidemic; conduct daily cleaning, disinfectant spray or use of lime powder to disinfect the farming area.
- **Apply proper technical measures** on LSD prevention and control according to the guidance of the Department of Animal Health.

2. For other localities where cattle have not yet exhibited LSD manifestations

- **Gather statistics** on all cattle-raising households (buffaloes, cows, goats, sheep) in the locality.
- **Instruct livestock owners to actively surveil their livestock** to promptly detect animals showing signs of being sick, suspected of being sick and then report those to authorities, animal health agencies and implement preventive and control measures against the disease; frequently conduct overall cleaning, disinfectant spray or use of lime powder to disinfect the farming area.
- **Only import and receive cattle that are of known origins** and have passed quarantine according to regulations.
- **Take preventive and control measures** against diseases and epidemics according to regulations, including vaccination against diseases.
- **Adopt measures on LSD prevent and control** in accordance with the Department of Animal Health's instruction.

3. Direction of local specialized agencies

- **Provide guidance to livestock owners in active surveillance.** If suspected disease cases are detected, proactively take samples and send them to laboratories under the Department of Animal Health for testing; the locality shall allocate the funding to pay for the testing fee according to regulations.
- Based on the actual situation of the locality, formulate and implement specific plans and solutions regarding the LSD.

Information sharing and international collaboration

- Reported to OIE, FAO; work with FAO, OIE, IAEA...
- Frequently communicate with FAO Vietnam for sharing information, outbreak investigation, etc....
- Collaborate with other countries (such as support from the U.S government, Jordan etc.)



VACCINATION

- Trial: Goat pox vaccine



Vaccine options:

Vaccine type	Composition	Advantages	Disadvantages	JOVAC trade names
Homologues	Neethling strain	<ul style="list-style-type: none"> - High efficacy - Good neutralizing antibody response - Good DHI in 2-3 weeks post vaccination - Protect for live 	<ul style="list-style-type: none"> - Produce clinical skin reaction - Reduce milk yield for 2-4 weeks period 	Lumpyshield-N®
Heterologous	Gorgan strain	<ul style="list-style-type: none"> - High efficacy - V. good neutralizing antibody response - Excellent DHI (higher than Neethling) and within 2 weeks - Protect for live - Excellent choice for blanket vaccination 	<ul style="list-style-type: none"> - No clinical reaction - No effect on milk yield 	Lumpyshield-G®
Heterologous	RM65 strain	<ul style="list-style-type: none"> - High efficacy - Good neutralizing antibody response - Good DHI in 2-3 weeks post vaccination - Protect for live 	<ul style="list-style-type: none"> - Produce clinical skin reaction - Reduce milk yield for 1 month period 	Jovivac Strong®

THANK YOU