

Member update on LSD – Republic of Korea

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Member's Profile

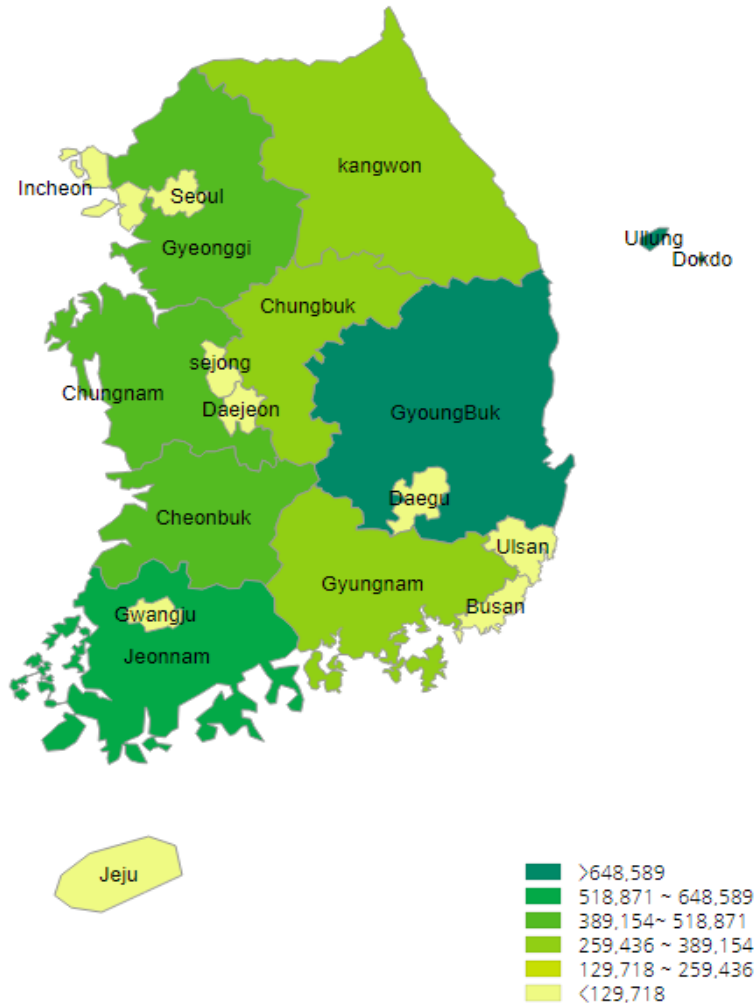
- Cattle population

	2023			2022		
	No. farms	No. animals	Average	No. farms	No. animals	Average
Korean cattle (Hanwoo)	99,492	3,462,379	34.8	102,519	3,306,958	32.2
Beef cattle	7,167	148,814	20.8	7,235	153,133	21.2
Dairy cow	6,038	384,106	63.6	6,172	380,496	61.6
Total	112,697	3,995,299	35.5	115,926	3,840,587	33.1

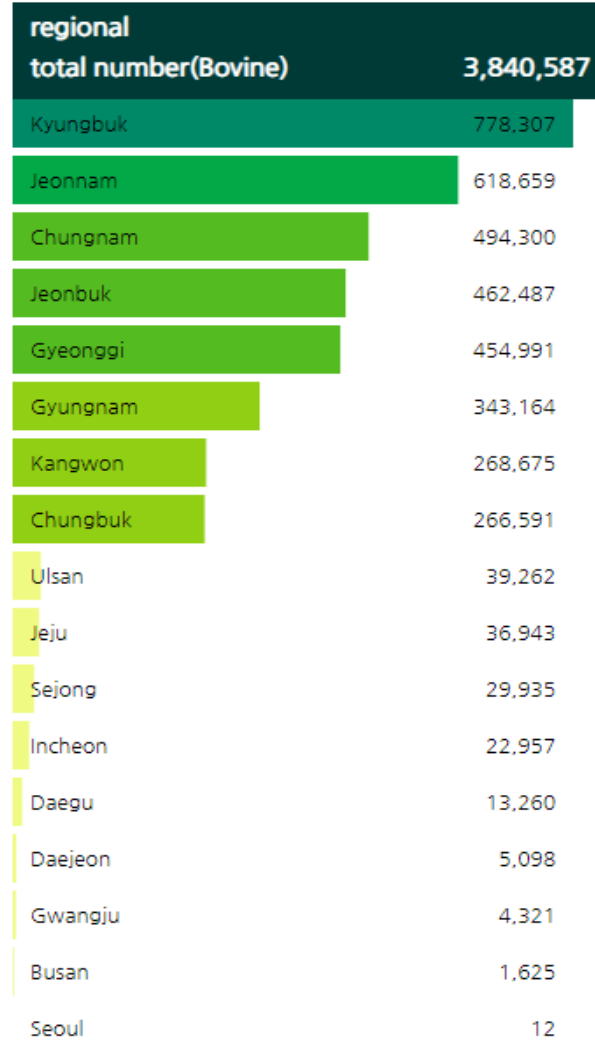




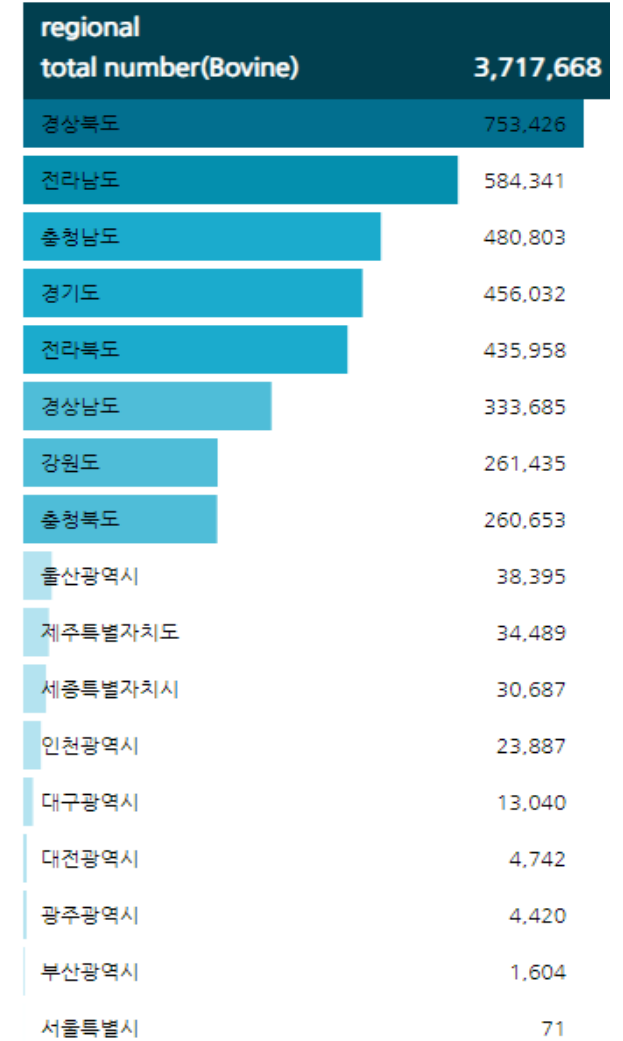
• Cattle population



> 2022



> 2021



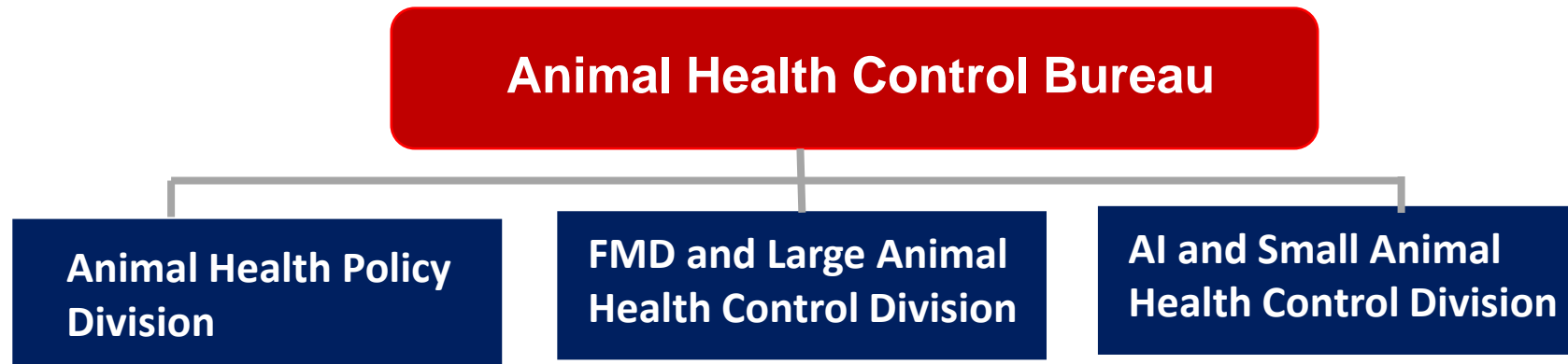
Laws and regulations for animal disease prevention and control system

- 4 laws, 16 regulations, and 7 guidelines

- ACT ON THE PREVENTION OF CONTAGIOUS ANIMAL DISEASES
- ACT ON PUBLIC QUARANTINE VETERINARIANS
- VETERINARIANS ACT
- VETERINARY SERVICES LABORATORIES ACT

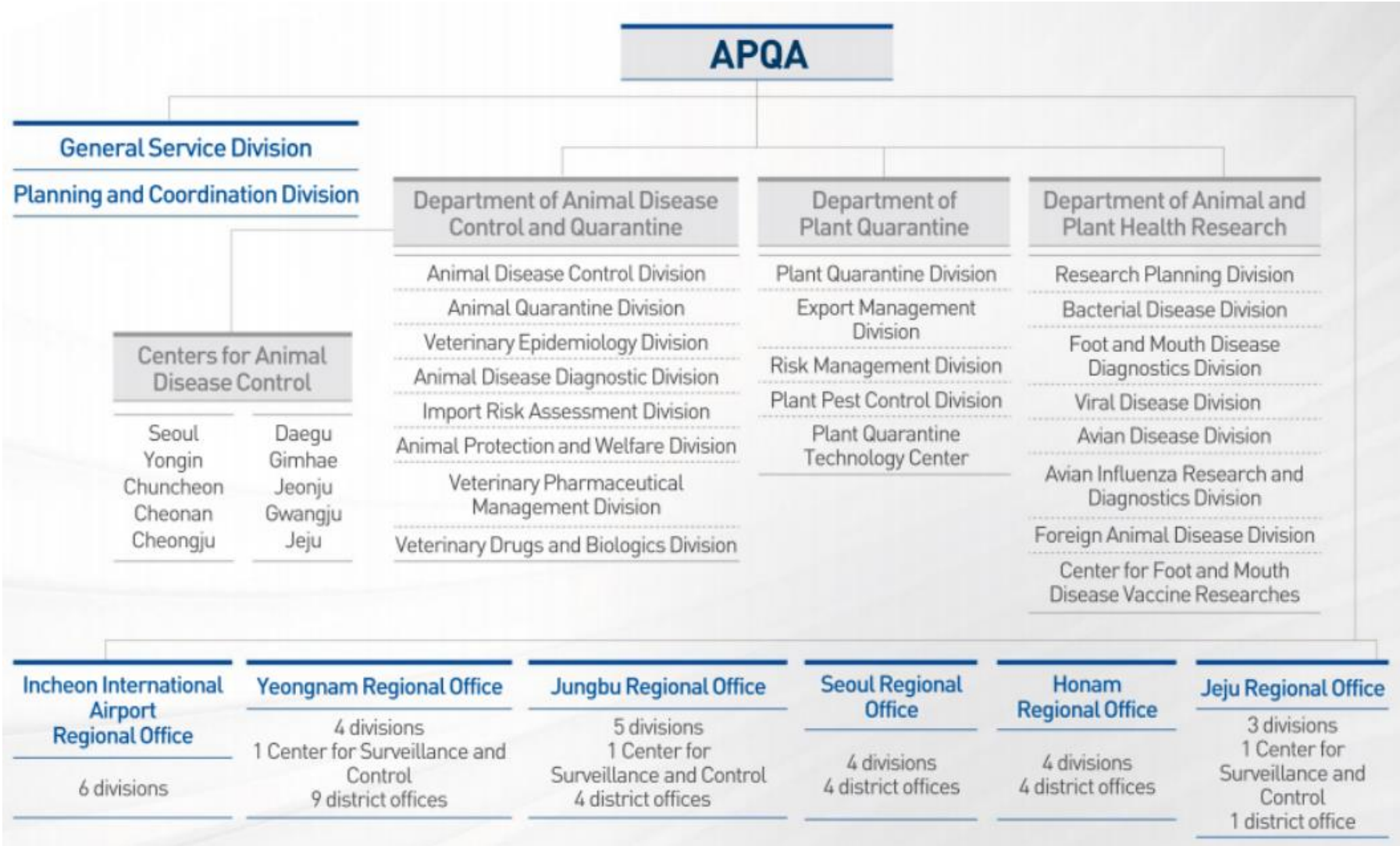
Central government : Policy support and command

- Ministry of agriculture, food and rural affairs (MAFRA)



- Budget (Year 2023) – \$ 487 million
 - Animal disease control : \$ 387 million
 - Compensation of culling, slaughtering : S 50 million
 - Support for livestock health control agency : \$ 50 million

• **Animal and Plant Quarantine Agency (APQA)**



APQA provides

- Technical expertise/input;
- Consultation services
- Deployment of experts;
- Epidemiological investigation
- Laboratory diagnostics;
- Confirmatory testing

Provincial government : Prevention, Surveillance, On-site work, compensation payment, Lab tests

- Provincial government (city, province, county) 234 places
- Provincial government veterinary laboratory – 57 laboratories (9~10 staff)

Private organization

- Livestock Health Control Agency (333) : Early response, movement control, sample collection
- National Agricultural Cooperative Federation (NACF) (680) : vaccine supply, disinfection

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- **Risk pathways for LSD introduction in the Republic of Korea (hereafter Korea)**
 - Southwesternly winds can carry infected vectors
 - Vectors can travel up to 255 km
 - 1,400 km away from outbreak countries
 - Climate change's impact on vector habitats

- **Korea is free from LSD**



• Virus detection

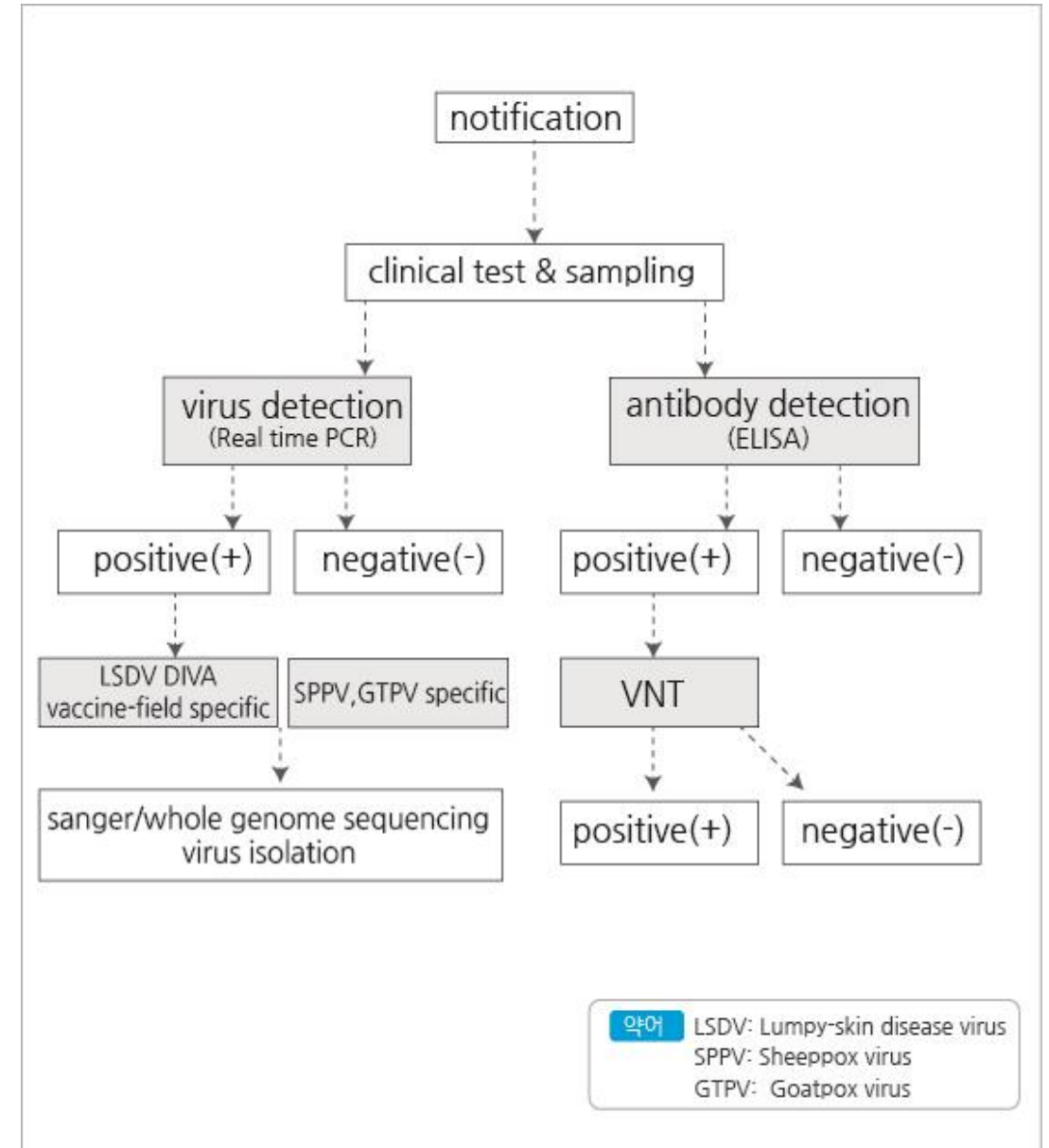
- Realtime PCR (Bowden et al, 2008)
- Virus isolation
- Whole genome sequencing

• Antibody detection

- ELISA (ID-Vet)
- Virus neutralization

• DIVA/differentiation among capripoxvirus

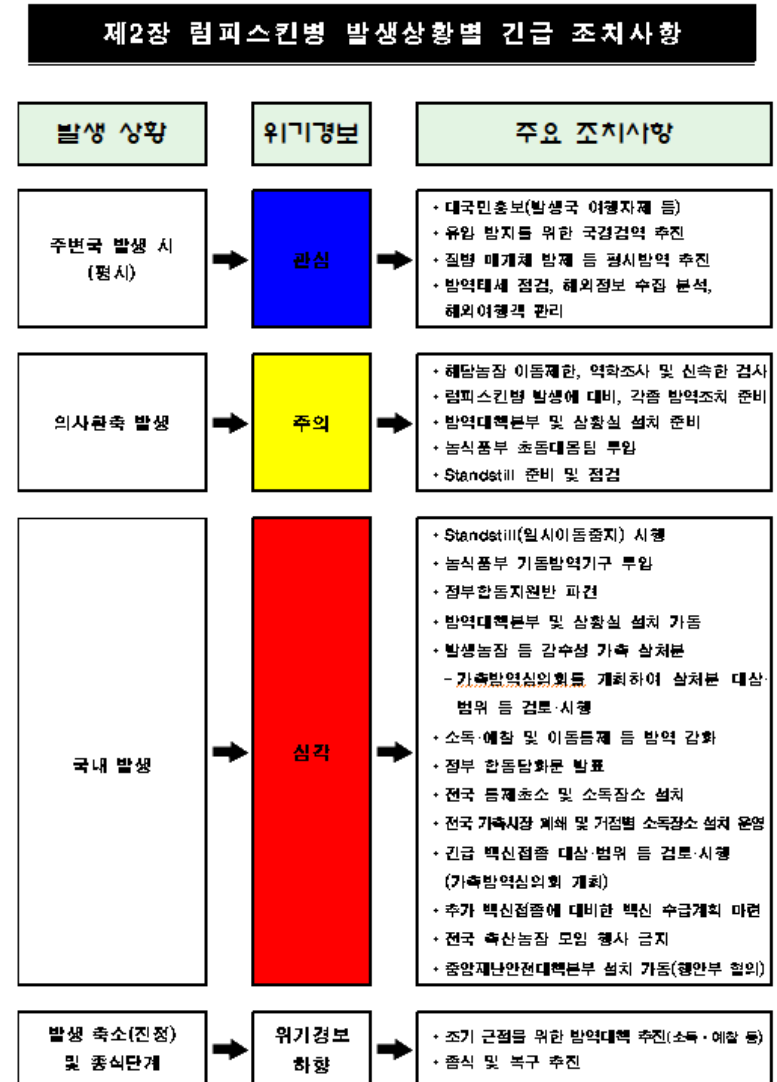
- Realtime PCR (Lamien et al, 2011, Chibssa et al, 2018, Agianniotaki, 2017)
- Whole genome sequencing





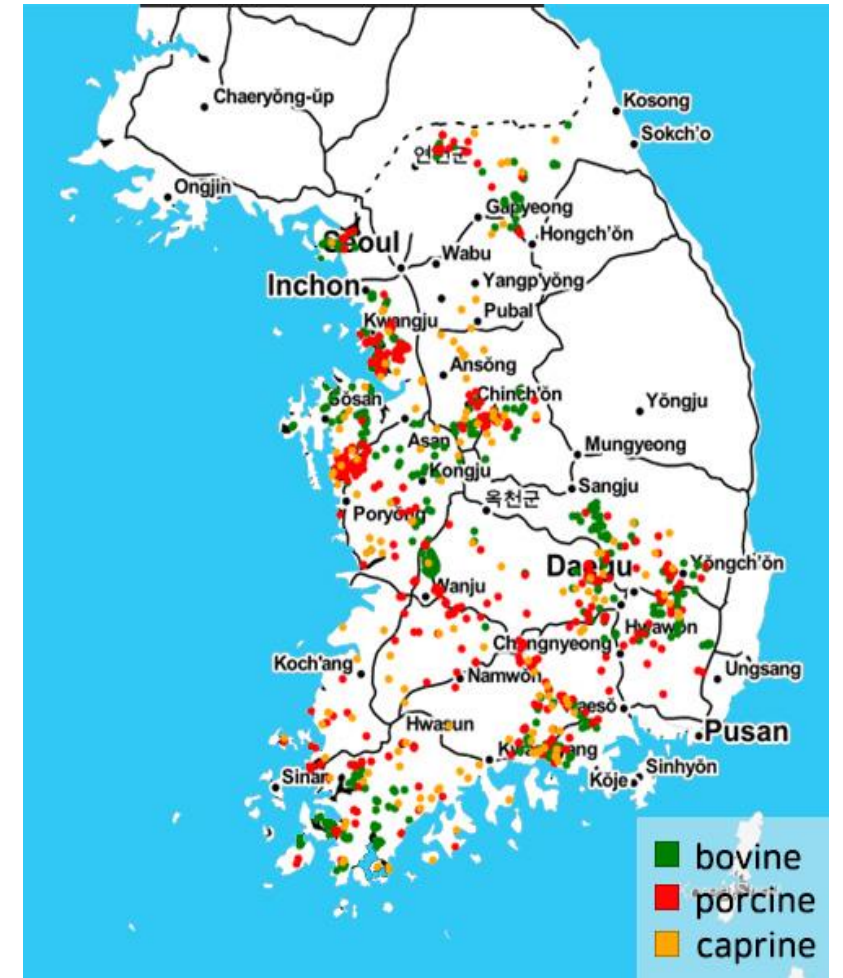
- SOP on Lumpy skin disease response
- Import conditions : LSD-free for 3 years
 - Korea only imports live cattle from Australia and New Zealand
- LSD vaccine bank : 540,000 doses (December 2022~)
- Strengthening public awareness
 - Clinical signs
 - Differential diagnosis

Emergency Management on LSD



• Serosurveillance on LSD in 2023

Area	No. Farms	No. Animals	Plan 2023	
			No. Farms	No. Animals
Daegu-si	462	13,207	1	4
Incheon-si	619	22,903	1	8
Ulsan-si	1,649	38,613	3	13
Sejogn-si	759	30,164	2	10
Gyeonggi	8,191	465,243	38	154
Gangwon	7,105	277,271	22	92
Chungbuk	6,064	271,740	22	90
Chungnam	12,752	523,228	43	173
Jeonbuk	10,240	490,672	40	162
Jeonnam	18,096	656,617	54	217
Gyeongbuk	20,544	828,424	68	273
Gyeongnam	11,305	350,889	28	116
Jeju	791	41,929	3	14
Total	98,577	4,010,900	325	1,324



Challenges

- The existence of recombinant LSD virus in Asia
- Securing enough LSD vaccines with reliable quality

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- Update of LSD SOP
 - Augmenting the amount of LSD vaccine bank
 - Training for LSD diagnosis at provincial government veterinary laboratories
 - Enhancing public awareness efforts
 - Whole genome sequencing and characterization of LSD virus strains detected in Asia

Thank you!

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