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Eradication: Final report for Lumpy Skin Disease 2019

For each approved annual or multi-annual programme Member States shall submit to the Commission by the 30 April each year an annual detailed technical and financial report covering the previous year. That report shall include the results achieved and a detailed account of eligible costs incurred (Art 14 of Regulation (EU) No 652/2014).

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Reporting period

From: 2019**To:** 2019**Year of implementation:** 2019

1. Technical implementation of the programme

1.1 Description and evaluation of the evolution of the epidemiological situation, the technical implementation of the activities foreseen under the programme and the cost-effectiveness of the programme.

.Historical data and Epidemiological evolution

Since 2012, LSD had been spreading on an unusually large scale throughout Middle Eastern countries. Turkey reported its first cases in 2013. First cases in the European part of Turkey were reported in 2015. Due to the outbreaks in Turkey, in February 2015, the Department of Infectious and Parasitic Diseases (Central Competent Authority-CCA) issued a circular (456/13780/04-02-2015) about Lumpy Skin Disease. In this circular, CCA informs the Local Veterinary Authorities about Lumpy Skin Disease symptoms, EU and National Legislation, the current situation in Turkey and urges them to be vigilant about immediate detection and reporting of new outbreaks in Greek territory.

In August 2015, Lumpy Skin Disease (LSD) was confirmed for the first time in two different holdings of cattle, in Evros Prefecture, close to Evros River (natural border between Turkey and Greece). This was also the first time that the disease was confirmed in European territory. On 25 of September, 56 outbreaks had already been confirmed in Regional Units of Evros and Xanthi. Measures described in Directive 32/119/EEC and in Implementing Decision of the Commission (EU) 2015/1500 were applied to all Regional Units which were characterized as Restricted Areas (Surveillance and Protection Zones, Stamping out, Movement Controls, Sanitary Burials on the spot) along with emergency vaccination campaign, as a supplementary measure against LSD, according to Directive 92/119.

Later, in October 2015, new primary outbreaks occurred in Regional Units of Kavala, Chalkidiki, Xanthi,

Rodopi and Limnos (island). In total, 75 outbreaks were confirmed in Greece and 4281 animals were culled until October 2015.

Moreover, additional measures were applied to entire Greek Territory according to 4092/116279/23-10-2015 Circular of Animal Health Directorate (reduction of movements of bovine animals, movement of bovine animals after clinical examination, use of an official certification with a red stamp accompanying the animals, constitution of Local Disease Control Centre in every Regional Unit, enforcement of the surveillance on holdings and controls to dealers, increased biosecurity measures and insects controls). In total, 117 outbreaks (located at the Northern-Eastern part of Greece) were confirmed in seven Regional Units during 2015. The last outbreak of 2015 was confirmed on 15 December of 2015 in Regional Unit of Rodopi.

Bulgaria reported its first outbreak of LSD in April 2016 and several Balkan countries bordering the EU confirmed LSD during 2016. Lumpy Skin Disease re-emerged in Greece in Regional Unit of Serres on 4th April 2016. A suspicion was notified and confirmed on 6th April 2016. LSD outbreak occurred at a holding of unvaccinated free-grazing bovines, located at Northern area of Serres, close to borders with Bulgaria. Two animals exhibited skin nodules, high fever and nasal discharge. Until 28 April 2016, 14 outbreaks were confirmed in Serres. Later, in May, 36 outbreaks were confirmed in Serres and two more outbreaks in Thessaloniki and Kavala. These outbreaks concerned unvaccinated animals or animals vaccinated during incubation period. Apart from that, 22 LSD suspicions occurred during 2016 in Regional Units of Kavala, Thessaloniki, Serres, Kilkis, Pella, Imathia, Kastoria, Ioannina, Argolida, Achaia, Ilia, Chania, Rethimno and Trikala. Up until the end of 2016, 104 outbreaks of LSD were confirmed in 15 Regional Units. The last outbreak was confirmed on 25 November 2016 in Preveza.

During 2017, outbreaks of LSD have been notified via ADNS by Greece, the former Yugoslav Republic of Macedonia, Turkey and Albania. On 27th of February 2017, a suspicion of LSD was reported by the local Veterinary Authorities of the island of Kerkyra to the National Disease Control Centre (NDCC) at the Animal Health Directorate within the Ministry of Rural Development and Food. It concerned a farm of 28 unvaccinated bovines. 12 animals exhibited clinical signs while three died. The laboratory confirmation of the disease was conducted on the 2nd of March 2017. Total stamping out was implemented on 08-03-2017 and then sanitarial burial and disinfection took place. During 2017, an additional outbreak of LSD occurred in the Region of Thessaly in the Regional Unit of Karditsa. Suspicion of the disease was notified on 10 August 2017. Laboratory confirmation with DIVA Real-Time PCR was carried out on 11 August 2017. The farm affected consisted of 206 bovines of local indigenous breed, free grazing in the mountainous area of Karditsa. The animals were culled on 17 and 22 August 2017, due to difficulties gathering the animals in the premises. All the measures according to Council Directive 92/119/EEC and the National Contingency Plan were implemented immediately after the notification of suspicion and extended after confirmation of the disease, as in all precedent cases of 2016 and 2015:

- 1) Zoning: a) protection zone (radius 3 km) and surveillance (radius 25 km)
- 2) Total Stamping Out: of all animals of the herd
- 3) Sanitarial Burial: on the spot
- 4) Animal Movement Control within the zone: according to restrictions of 32/119/EEC.
- 5) Prohibition of dispatch: of live bovine animals and captive wild ruminants as well as semen, ova, embryos, bovine animal by-products, hides and skins outside the Regional Units, according to National Contingency Plan.
- 6) Cleaning and Disinfection: of the farm.
- 7) Surveillance: increased surveillance of all herds within the Surveillance and Protection zone.
- 8) Enforcement of biosecurity measures: farms, abattoirs and commercial activities.

Apart from that, 3 suspicions of LSD were notified to the Department of Infectious and Parasitic Diseases during 2017. The first suspicion occurred in the island of Zakynthos on 29th March 2017 and the measures were lifted on 4th April, following the negative laboratory result. Later on, in October, the Official Veterinarian from the island of Kos investigated a clinical suspicion of Bluetongue and he sent a sample of blood to NRL for LSD and FMD testing. The laboratory result was negative. Finally, in November 2017 there was another clinical suspicion of LSD in the mountainous area of Evritania. Measures were taken on 08 November and they were lifted on 15 November, after the negative laboratory result.

In 2018, there was neither suspicion nor LSD outbreak.

In 2019, there were three suspicions of LSD, which occurred in three different Regional Units of the same Region (Region of Central Macedonia). On 13th March 2019, in the Regional Unit of Thessaloniki, a bovine animal of three co-housed holdings presented clinical symptoms (nodules on the head, neck, udder). These three co-housed holdings included a total of 225 bovine animals. Immediately, measures upon suspicion were taken and samples were sent to the National Reference Laboratory-NRL. In this particular case, it was demonstrated that a post-vaccination response (vaccine side effects) had caused the symptoms to this animal, which was imported to Greece and vaccinated immediately after its arrival. The vaccine strain was detected after testing using the established DIVA PCR method of NRL. The measures were lifted on 15th of March 2019, following the analytical lab results.

On 21st June 2019, in Regional Unit of Pella, another clinical suspicion occurred in a bovine holding. The appropriate measures were taken, samples were sent to NRL, and the results were negative and the measures were lifted on 4th July.

Finally, in August 2019 another clinical suspicion of LSD occurred in Imathia. Measures were taken but they

were lifted, after the negative laboratory result of the tested samples.

The program of Lumpy Skin Disease (LSD) includes:

1) Vaccination

Vaccination for Lumpy Skin Disease is obligatory for all susceptible species (bovines, buffalos), regardless of sex and productive direction throughout the Greek territory. Vaccination is conducted exclusively with a homologous live attenuated vaccine against LSD. It is carried out as a matter of priority by Official Veterinarians of Regional Units and Regions and is assisted by private veterinarians, in case the owner of the establishment wishes and the Local Competent Authority agrees. In that case private veterinarians are under supervision and coordination of the Veterinary Authorities and conduct the vaccination program according to their instructions. Vaccination is carried out only on healthy animals and therefore all animals to be vaccinated are subjected to a thorough clinical examination and in any holding that arises a suspicion of LSD disease, vaccination is postponed until the investigation is completed. In any case the instructions mentioned in the National Contingency Plan are being followed. All animals subjected to vaccination must have an individual labeling (tagging) and must be included in the holding's record. Vaccination data are being obligatory registered in the electronic application, that has specifically been designed for this purpose, with the responsibility of the veterinarian who conducted the vaccination and signed the Vaccination Sheet. Data coming from this application are considered official and validation of vaccination either in farm level or in animal level is being made exclusively by the application.

As far as calves are concerned, two different cases are foreseen according to circular 3056/109945/05-10-2016: A) Any calves originating from unvaccinated cows or cows that have been vaccinated 28 days or less before labor, are being vaccinated from the first day of their life, since passive immunity from the colostrum immunoglobulins may not provide sufficient protection B) Any calves originating from vaccinated cows where vaccination has taken place 28 days or more before labor, are vaccinated after the age of 4 months old according to EE Decision 2015/2055 and not after the age of 6 months, according to manufacturers' instructions. Necessary condition for the successful establishment of passive immunity is the consumption of colostrum within the first 2 hours from labor or maximum 24 hours after birth. In any case immunity lasts up to a year and therefore, annual re-vaccinations are required. It should also be mentioned that vaccination against LSD has gradually started from September 2015, has been extended all over Greece and is continued for 2018. Though, the initial vaccination date is different for each Regional Unit and as a result, today there are areas where vaccination is taking place for second and others for 3rd time or 4th time. Consequently, we are referring to 'vaccination circles' meaning the massive vaccination campaign of the total number of susceptible animals in every Regional Unit. This campaign, usually lasts 2 or 3 months. In the intervals between two circles, vaccination of calves is continued which is conducted as appropriate during the whole year.

Implementation of vaccination against LSD

Since the beginning of the outbreak, Veterinary Authorities informed the European Commission on their intention to proceed to emergency vaccination as a supplementary measure against the disease, according to article Dir 92/119. The vaccination was compulsory of the total population of susceptible species (cattle, buffaloes) within the Evros prefecture (at the beginning). Exceptional import of the vaccines were approved by National Organization for Medicines according to art 9 Joint Ministerial Decision 282371/16-06-2006 in compliance with EC Directive 2001/82.

Vaccination campaign started on 5th of September 2015 in Regional Unit of Evros (South Evros), specifically at the area of Ferres within Evros Delta, where the first outbreaks were located. Priority of the Greek Central Veterinary authorities was to start vaccination from protection zone to continue with the surveillance zone and high risk areas and then to extend vaccination to the entire Prefecture. The total amount of our official veterinarians in the Region of East Macedonia and Thrace, supported by veterinarians of the Region of Macedonia motivated to help the vaccination campaign. Private veterinarians participated voluntarily under the supervision of Veterinary Authorities. Then, emergency vaccination extended to Regional Units of Xanthi (after the confirmation of another outbreak on 25 of September 2015) and Rodopi (as a part of Rodopi Regional Unit was in the surveillance zone). Then, vaccination campaign began in Kavala, following the appearance of the first outbreak in this Regional Unit. In the meanwhile, outbreaks in the island of Limnos and in the Regional Unit of Chalkidiki occurred, leading Greek Veterinary Authorities to take into consideration the enforcement of measures or implementation of vaccination in free areas.

A 28 days standstill of vaccinated animals follows the vaccination (3 weeks to full disease protection and 1 week to cover the maximum disease incubation period). The vaccination begins from the age 0, according to the instructions for animals from unvaccinated cattle. An annual booster vaccination is necessary. A homologous live attenuated virus vaccine (Neethling strain) the "Lumpy Skin Disease Vaccine for Cattle", Onderstepoort Biological Products was used. Later, another homologous vaccine "Lumpyvax" by Intervet, South Africa has been also imported by exception in Greece by the Hellenic National Organization for Medicines, but not used widely up until the end of 2015. The whole procedure of vaccination is under the control of the official veterinary authorities (storage, distribution, vaccination, destroy of residual quantities). An electronic application (online database) has been developed for registration of vaccinated animals and farms (connected with central data base of Reg. 1760/2000). In this database there is a connection between vaccinated cow and calf.

In April 2016, vaccination was completed in Regional Units of Evros, Rodopi, Kavala, Xanthi, Chalkidiki and Drama and almost completed in Kilkis and Serres. In May 2016, vaccination campaign was extended to Regional Units of Pella, Imathia and Pieria. Until Spring 2017, first vaccination cycle had been completed in Regions of Eastern Macedonia and Thrace, Central Macedonia, Western Macedonia as well as in particular Regional Units of Epirus, Central Greece and Peloponnese.

As for 2018 vaccination was carried out with doses of Lumpyvax imported and distributed in various Regional Units so as to proceed with vaccination circles and annual revaccination, while another 100.000 doses of Lumpy Skin Disease vaccine of Onderstepoort were provided by the European Bank and were used. In addition, vaccine doses purchased during the previous years, with expiry date later than the day that of their administration were used in 2018.

In 2019, vaccination campaign was implemented with doses remaining from previous years (with expiration date later than their administration) and mainly with Lumpyvax imported and distributed to Regional Units during this year, in the context of a biannual contract with the supplier company. The CCA has taken provisions for the recruitment of 30 seasonal Veterinarians, at the Local Veterinary Departments of several Regional Units with main responsibility to assist in the conduction of the annual vaccination for LSD.

2) Passive Surveillance

All around the Greek Territory and in all holdings with susceptible to LSD animals, a system of Passive Surveillance is being applied which includes the following:

- a) The vigilance of farmers to detect symptoms and lesions that pose a clinical suspicion of LSD.
- b) In case of suspect symptoms or alterations detection, the farmers, private or official veterinarians or any other person coming in contact with the susceptible animals are obliged to immediately (within 24 hours) inform the Competent Veterinary Authorities (notification is obligatory).
- c) In case of suspicion, Competent Authorities must proceed to the actions determined in the National Contingency Plan.

Responsible to investigate the clinical suspicions are the official veterinarians of the Local Veterinary Authorities while the National Reference Laboratory, Department of Molecular Diagnostic, FMD, Virological, Rickettsial and Exotic Diseases, Directorate of Athens Veterinary Center, Ministry of Rural Development and Food is responsible to carry out the analysis.

All clinical suspicions of bovine animals and buffalos throughout the Country are being tested with molecular techniques in order to verify the presence or the absence of the LSDV (passive surveillance of the disease). In addition a real time PCR method has been developed by the National Reference Laboratory (NRL) which able to differentiate the field strain (wild strain) from the vaccine strain within 2 days.

3) Clinical Surveillance

Given the fact that there aren't easy, practical and cheap laboratory techniques (such as serological), to evaluate the effectiveness of vaccination on one hand, and to confirm the absence of the disease on the other, Active Surveillance of LSD includes the thorough clinical examination of bovine animals.

Surveillance activities are described in the National Contingency Plan in compliance with directive 92/119 and in the circular 4092/116279/23/10/2015 of the CCA.

Surveillance in the affected areas

Protection zone: All the farms within the protection zone should be clinically examined and regular visits should be following the initial one.

Surveillance zone: High risk farms should be clinically examined firstly. The surveillance should be extended to the rest of the zone.

All over Greece surveillance activities and controls should be enhanced and extend to all veterinary activities (slaughter houses, transport, trade, other eradication and control programs etc)

Clinical Surveillance during Vaccination for Lumpy Skin Disease (LSD)

Since August 2015 emergency vaccination against LSD has been started from Evros Area and was partially implemented to the total Greek Territory. Clinical Examination before vaccination of all the bovines in the herd is obligatory. Vaccination against LSD in Greece has been mainly implemented (66%) by official veterinarians of State Veterinary Authorities. Veterinarians are aware of the symptoms of LSD which are characteristic and obvious in bovines.

Clinical Surveillance during Eradication Programs of Bovine Brucellosis, Enzootic Leucosis and Tuberculosis
Clinical examinations for LSD are carried out prior to vaccinations in the entire Greece as well as during the implementation of the Brucellosis/leukosis and TB programmes.

In Greece Eradication Programs of Bovine Brucellosis, Enzootic Leucosis and Tuberculosis are also implemented. According to the common practice, the herds are visited once by local veterinarians and samples are collected for all the diseases (with the exception of the endodermic tuberculosis test where the herd is visited again 72 hours post test). Before, the blood sampling and the endodermic tuberculosis test and in accordance with the guidelines of the Central Authority clinical examination is carried out and epidemiological information on the herd is registered.

Clinical Surveillance during Animal Movements / Dispatches

According to the National Legislation any commodity of live animals (ovines, caprines, swines, bovines)

should be subjected to a clinical examination at the herd by an official veterinarian before the dispatch to the slaughterhouses or to other establishments and should be accompanied by an official certification signed by the official veterinarian of the local veterinary Authority.

Moreover, and due to the LSD epizootic which occurred in our country in 2015, according to a circular issued in October 2015 (circular 4092/116279/23/10/2015) by the Central Veterinary Authority, the obligation of the clinical examination was extended not only to the bovine animals intended to be dispatched but also to the whole herd. A red stamp "no clinical signs of LSD" should be put on the official certification.

The animal movements are registered on the National Data Base of Animal Population.

Clinical Surveillance in Slaughterhouses

According to the National Legislation during the operational hours of the slaughterhouse the presence of an official veterinarian of the State Veterinary Authorities is obligatory. The ante mortem, the postmortem inspection and the controls during slaughter and transport are carried out by the official veterinarians of the State Veterinary Authorities. The findings are registered and submitted to the Competent Authorities at central and local level. The ante mortem inspection includes also clinical examination of each animal arrived at the abattoir. Moreover and according to the previous paragraph all the animals before the dispatch to the slaughterhouse were subjected to clinical examination on the herd by official veterinarian and they were accompanied by an official certification signed by the official veterinarian.

The Official Veterinarian of the slaughterhouse is obliged to examine all animals prior to the slaughter and report any suspicion of LSD (among other diseases).

Ante-mortem clinical examinations in the slaughterhouses included the examination of 132562 animals for 2019.

Active Surveillance within the Program on Exotic Diseases (FMD, LSD, PPS, SGP) in High Risk Areas

In April 2017 a Co-Financed program has been approved by the European Commission. It concerns Serological Surveillance for FMD and PPR in small ruminants and Clinical Surveillance for FMD and LSD in bovines and for SGP in small ruminants. This program concerns High Risk Areas of East Macedonia and Thrace, in Central Macedonia and in the islands opposite of Turkey . Active surveillance in these areas for LSD is more extensive. In parallel to the clinical examination of cattle for LSD, FMD clinical examination also takes place..

Particularly, in the framework of this program 4 Exotic Diseases, TADs program), clinical examinations are conducted every month in a total number of 15 bovine holdings in each one of the above mentioned High Risk Areas where the Program is applied. The aim is to detect lesions and symptoms of LSD and FMD. For the best allocation of the examinations, every Regional Unit has been divided in 3 geographical sub-units and as a result , 5 holdings must be monthly chosen and visited from each one of these subunits. In every holding, 20 bovines are chosen and clinically examined.

In 2019, 36252 clinical tests in bovines were carried out (visits in 2275 farms), in the framework of this program.

Thrace Programme: It is an active surveillance programme which is implemented in the Regional Unit of Evros. 9067 bovine animals have been clinically tested in the context of this programme for the year 2019.

1.2 Details on the level of achievement of the targets set in the approved programme and technical difficulties.

In most of the regional units vaccination levels remain in the same percentages as in 2018. At the same time some of the regional units have increased percentages while others unfortunately have decreased attributed mainly to the lack of veterinary staff.

Our Service (CCA) supervises the implementation of the vaccination programme and regularly contacts with the regional units which have decreased percentages of vaccination. As they informed us there are some reasonable issues and obstacles.

The problems which those regional units are facing are mainly the lack of personnel in Veterinary Services. We should mention that there are a lot of farms in inaccessible places and neither the weather circumstances nor the lack of appropriate cars help veterinarians to manage or complete the vaccination process. In addition, all vaccination data are obtained by the LSD vaccination electronic database. In some cases, there are delays on the process of registration of vaccinations on the database resulting in underestimation of the actual number of vaccinations carried out.

The outcome of this information as known is to find solutions. We have discussed with our colleagues in regional units the possibility of the cooperation with the private veterinarians.. This has been started in some regions. But there are negative reactions from the farmers regarding the cost.

In the attached file named "Immunization coverage 21.4.2020" the immunization coverage up to 21 April 2020 is shown (not all vaccinations have been registered)..

It is positive that no LSD cases are detected since 2017 (the last cases were reported in 2017, in Karditsa and Kerkira Regional Units)..

We consider that vaccination programme in addition to the other measures implemented (clinical examinations, exotic diseases programme, control in animal movements) contribute to the improved

epidemiological status of our country as regards this disease.

A major challenge for the greek veterinary authorities is lack of human resources (veterinarians).

There is a plan for recruitment of permanent staff at both local and central level that could facilitate the implementation of the vaccinations. Seasonal staff recruitment is in process (depending on the RU) and will be completed during the following period.

1.3 Epidemiological maps for infection and other relevant data on the disease/activities (information on serotypes involved,...) (Please attach files of data using the PDF attachment feature) Use the textbox below to provide clarifications for the maps you attach, if needed.

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2. TECHNICAL IMPLEMENTATION ON RUMINANT DISEASES PROGRAMMES

VERY IMPORTANT: Please fill out the following tables with figures corresponding to measures performed during the implementing period (1/1 to 31/12).

Table A - DATA ON HERDS

Region	Animal species	Total number of herds	Total number of herds under the programme	Number of herds to be checked under the programme this year	Number of herds checked	Number of positive herds	Number of new positive herds	Number of herds depopulated
		% of herds depopulated	% of herds coverage		% of positive herds Period herd prevalence		% of positive herds Herd incidence	
East Attica	Cattle	16	16	16	16	0	0	0
		%	100 %		0 %		0 %	
Argolida	Cattle	24	24	24	24	0	0	0
		%	100 %		0 %		0 %	
Arcadia	Cattle	111	111	111	111	0	0	0
		%	100 %		0 %		0 %	
Arta	Cattle	139	139	139	139	0	0	0
		%	100 %		0 %		0 %	
Achaia	Cattle	405	405	405	405	0	0	0
		%	100 %		0 %		0 %	
Voiotia	Cattle	93	93	93	93	0	0	0
		%	100 %		0 %		0 %	
Grevena	Cattle	147	147	147	147	0	0	0
		%	100 %		0 %		0 %	
Drama	Cattle	464	464	464	464	0	0	0
		%	100 %		0 %		0 %	
West Attica	Cattle	31	31	31	31	0	0	0
		%	100 %		0 %		0 %	
Dodekanissa	Cattle	394	394	394	394	0	0	0
		%	100 %		0 %		0 %	
Evros	Cattle	550	550	550	550	0	0	0
		%	100 %		0 %		0 %	
Evoia	Cattle	194	194	194	194	0	0	0
		%	100 %		0 %		0 %	
Evrytania	Cattle	122	122	122	122	0	0	0
		%	100 %		0 %		0 %	
Zakynthos	Cattle	206	206	206	206	0	0	0
		%	100 %		0 %		0 %	
Ilia	Cattle	259	259	259	259	0	0	0
		%	100 %		0 %		0 %	
Imathia	Cattle	401	401	401	401	0	0	0
		%	100 %		0 %		0 %	

Iraklio	Cattle	190	190	190	190	0	0	0
		%		100 %		0 %		0 %
Thesprotia	Cattle	558	558	558	558	0	0	0
		%		100 %		0 %		0 %
Thessaloniki	Cattle	660	660	660	660	0	0	0
		%		100 %		0 %		0 %
Ioannina	Cattle	484	484	484	484	0	0	0
		%		100 %		0 %		0 %
Kavala	Cattle	166	166	166	166	0	0	0
		%		100 %		0 %		0 %
Karditsa	Cattle	342	342	342	342	0	0	0
		%		100 %		0 %		0 %
Kastoria	Cattle	124	124	124	124	0	0	0
		%		100 %		0 %		0 %
Central Attica	Cattle	4	4	4	4	0	0	0
		%		100 %		0 %		0 %
Kerkyra	Cattle	60	60	60	60	0	0	0
		%		100 %		0 %		0 %
Kefallonia	Cattle	109	109	109	109	0	0	0
		%		100 %		0 %		0 %
Kilkis	Cattle	307	307	307	307	0	0	0
		%		100 %		0 %		0 %
Kozani	Cattle	388	388	388	388	0	0	0
		%		100 %		0 %		0 %
Korinthia	Cattle	44	44	44	44	0	0	0
		%		100 %		0 %		0 %
Kyklades	Cattle	1,099	1,099	1,099	1,099	0	0	0
		%		100 %		0 %		0 %
Lakonia	Cattle	278	278	278	278	0	0	0
		%		100 %		0 %		0 %
Larisa	Cattle	923	923	923	923	0	0	0
		%		100 %		0 %		0 %
Lasithiou	Cattle	9	9	9	9	0	0	0
		%		100 %		0 %		0 %
Lesvos	Cattle	612	612	612	612	0	0	0
		%		100 %		0 %		0 %
Lefkada	Cattle	23	23	23	23	0	0	0
		%		100 %		0 %		0 %
Magnisia	Cattle	351	351	351	351	0	0	0
		%		100 %		0 %		0 %
Messinia	Cattle	514	514	514	514	0	0	0
		%		100 %		0 %		0 %
Xanthi	Cattle	651	651	651	651	0	0	0
		%		100 %		0 %		0 %
Pireas	Cattle	13	13	13	13	0	0	0
		%		100 %		0 %		0 %
Pella	Cattle	440	440	440	440	0	0	0
		%		100 %		0 %		0 %
Pieria	Cattle	129	129	129	129	0	0	0
		%		100 %		0 %		0 %

Preveza	Cattle	270	270	270	270	0	0	0
		%		100 %		0 %		0 %
Rethymno	Cattle	80	80	80	80	0	0	0
		%		100 %		0 %		0 %
Rodopi	Cattle	1,095	1,095	1,095	1,095	0	0	0
		%		100 %		0 %		0 %
Samos	Cattle	62	62	62	62	0	0	0
		%		100 %		0 %		0 %
Serres	Cattle	993	993	993	993	0	0	0
		%		100 %		0 %		0 %
Trikala	Cattle	723	723	723	723	0	0	0
		%		100 %		0 %		0 %
Fthiotida	Cattle	317	317	317	317	0	0	0
		%		100 %		0 %		0 %
Florina	Cattle	498	498	498	498	0	0	0
		%		100 %		0 %		0 %
Fokida	Cattle	226	226	226	226	0	0	0
		%		100 %		0 %		0 %
Chalkidiki	Cattle	83	83	83	83	0	0	0
		%		100 %		0 %		0 %
Chania	Cattle	47	47	47	47	0	0	0
		%		100 %		0 %		0 %
Chios	Cattle	123	123	123	123	0	0	0
		%		100 %		0 %		0 %
Aetoliaacarnania	Cattle	1,390	1,390	1,390	1,390	0	0	0
		%		100 %		0 %		0 %
Total		17,941	17,941	17,941	17,941	0	0	0
		%		100 %		0 %		0 %

Table B - DATA ON ANIMALS

Region	Animal species	Total number of animals	Number of animals under the programme	Number of animals to be tested under the programme this year	Number of animals tested	Number of animals tested individually	Number of positive animals	Number of animals with positive result slaughtered or culled	Number of animals slaughtered				
						% coverage at animals level				% positive animals Animal Prevalence			
Aetoliaacarnania	Cattle	78,103	78,103	78,103	78,103	78,103	0	0	0				
						100 %			0 %				
East Attica	Cattle	427	427	427	427	427	0	0	0				
						100 %			0 %				
Argolida	Cattle	1,036	1,036	1,036	1,036	1,036	0	0	0				
						100 %			0 %				
Arcadia	Cattle	2,451	2,451	2,451	2,451	2,451	0	0	0				
						100 %			0 %				
Arta	Cattle	6,225	6,225	6,225	6,225	6,225	0	0	0				
						100 %			0 %				
Achaia	Cattle	10,779	10,779	10,779	10,779	10,779	0	0	0				
						100 %			0 %				
Voiotia	Cattle	9,094	9,094	9,094	9,094	9,094	0	0	0				
						100 %			0 %				
Grevena	Cattle	8,484	8,484	8,484	8,484	8,484	0	0	0				

					100 %				0 %
Drama	Cattle	25,002	25,002	25,002	25,002	25,002	0	0	0
					100 %				0 %
West Attica	Cattle	1,946	1,946	1,946	1,946	1,946	0	0	0
					100 %				0 %
Dodekanissa	Cattle	5,022	5,022	5,022	5,022	5,022	0	0	0
					100 %				0 %
Evros	Cattle	19,680	19,680	19,680	19,680	19,680	0	0	0
					100 %				0 %
Evoia	Cattle	2,585	2,585	2,585	2,585	2,585	0	0	0
					100 %				0 %
Evrytania	Cattle	4,845	4,845	4,845	4,845	4,845	0	0	0
					100 %				0 %
Zakynthos	Cattle	1,495	1,495	1,495	1,495	1,495	0	0	0
					100 %				0 %
Ilia	Cattle	8,755	8,755	8,755	8,755	8,755	0	0	0
					100 %				0 %
Imathia	Cattle	14,912	14,912	14,912	14,912	14,912	0	0	0
					100 %				0 %
Iraklio	Cattle	1,416	1,416	1,416	1,416	1,416	0	0	0
					100 %				0 %
Thesprotia	Cattle	35,994	35,994	35,994	35,994	35,994	0	0	0
					100 %				0 %
Thessaloniki	Cattle	64,030	64,030	64,030	64,030	64,030	0	0	0
					100 %				0 %
Ioannina	Cattle	27,670	27,670	27,670	27,670	27,670	0	0	0
					100 %				0 %
Kavala	Cattle	7,624	7,624	7,624	7,624	7,624	0	0	0
					100 %				0 %
Karditsa	Cattle	12,019	12,019	12,019	12,019	12,019	0	0	0
					100 %				0 %
Kastoria	Cattle	3,893	3,893	3,893	3,893	3,893	0	0	0
					100 %				0 %
Central Attica	Cattle	17	17	17	17	17	0	0	0
					100 %				0 %
Kerkyra	Cattle	490	490	490	490	490	0	0	0
					100 %				0 %
Kefallonia	Cattle	2,862	2,862	2,862	2,862	2,862	0	0	0
					100 %				0 %
Kilkis	Cattle	20,996	20,996	20,996	20,996	20,996	0	0	0
					100 %				0 %
Kozani	Cattle	23,593	23,593	23,593	23,593	23,593	0	0	0
					100 %				0 %
Korinthia	Cattle	1,359	1,359	1,359	1,359	1,359	0	0	0
					100 %				0 %
Kyklades	Cattle	12,965	12,965	12,965	12,965	12,965	0	0	0
					100 %				0 %
Lakonia	Cattle	9,580	9,580	9,580	9,580	9,580	0	0	0
					100 %				0 %
Larisa	Cattle	84,180	84,180	84,180	84,180	84,180	0	0	0

					100 %					0 %
Lasithiou	Cattle	23	23	23	23	23	0	0	0	0
					100 %					0 %
Lesvos	Cattle	7,264	7,264	7,264	7,264	7,264	0	0	0	0
					100 %					0 %
Lefkada	Cattle	654	654	654	654	654	0	0	0	0
					100 %					0 %
Magnisia	Cattle	28,900	28,900	28,900	28,900	28,900	0	0	0	0
					100 %					0 %
Messinia	Cattle	5,437	5,437	5,437	5,437	5,437	0	0	0	0
					100 %					0 %
Xanthi	Cattle	25,937	25,937	25,937	25,937	25,937	0	0	0	0
					100 %					0 %
Pireas	Cattle	774	774	774	774	774	0	0	0	0
					100 %					0 %
Pella	Cattle	21,841	21,841	21,841	21,841	21,841	0	0	0	0
					100 %					0 %
Pieria	Cattle	5,879	5,879	5,879	5,879	5,879	0	0	0	0
					100 %					0 %
Preveza	Cattle	19,290	19,290	19,290	19,290	19,290	0	0	0	0
					100 %					0 %
Rethymno	Cattle	1,221	1,221	1,221	1,221	1,221	0	0	0	0
					100 %					0 %
Rodopi	Cattle	26,833	26,833	26,833	26,833	26,833	0	0	0	0
					100 %					0 %
Samos	Cattle	404	404	404	404	404	0	0	0	0
					100 %					0 %
Serres	Cattle	61,572	61,572	61,572	61,572	61,572	0	0	0	0
					100 %					0 %
Trikala	Cattle	55,947	55,947	55,947	55,947	55,947	0	0	0	0
					100 %					0 %
Fthiotida	Cattle	12,460	12,460	12,460	12,460	12,460	0	0	0	0
					100 %					0 %
Florina	Cattle	13,542	13,542	13,542	13,542	13,542	0	0	0	0
					100 %					0 %
Fokida	Cattle	11,552	11,552	11,552	11,552	11,552	0	0	0	0
					100 %					0 %
Chalkidiki	Cattle	3,909	3,909	3,909	3,909	3,909	0	0	0	0
					100 %					0 %
Chania	Cattle	254	254	254	254	254	0	0	0	0
					100 %					0 %
Chios	Cattle	1,226	1,226	1,226	1,226	1,226	0	0	0	0
					100 %					0 %
Total		814,448	814,448	814,448	814,448	814,448	0	0	0	0
					100 %					0 %

Table C - DATA ON VACCINATION PROGRAMMES

Region	Animal species	Total number of herds	Total number of animals	Number of herds in vaccination programme this year	Number of herds vaccinated	Number of animals vaccinated	Number of doses of vaccine administered	Number of adults vaccinated	Number of young animals vaccinated	Number of animals with primary vaccination (initial+ booster)
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Aetoliaacarnania	Cattle	1,390	78,103	1,390	266	14,788	15,087	13,811	977	3,363
East Attica	Cattle	16	427	16	12	337	373	265	72	91
Argolida	Cattle	24	1,036	24	11	614	617	594	20	64
Arcadia	Cattle	111	2,451	111	29	675	680	288	387	211
Arta	Cattle	139	6,225	139	81	3,699	3,699	3,025	674	1,047
Achaia	Cattle	405	10,779	405	44	1,837	1,899	1,368	469	582
Voiotia	Cattle	93	9,094	93	63	8,036	8,176	6,889	1,147	1,983
Grevena	Cattle	147	8,484	147	87	6,267	6,303	5,099	1,168	1,671
Drama	Cattle	464	25,002	464	352	19,652	20,607	15,277	4,375	5,566
West Attica	Cattle	31	1,946	31	16	1,810	1,810	1,681	129	511
Dodekanissa	Cattle	394	5,022	394	89	1,353	1,361	1,157	196	636
Evros	Cattle	550	19,680	550	235	14,348	14,878	11,397	2,951	3,959
Evoia	Cattle	194	2,585	194	15	958	958	896	62	345
Evrytania	Cattle	122	4,845	122	68	2,682	2,701	2,091	591	685
Zakynthos	Cattle	206	1,495	206	66	1,239	1,293	1,009	230	366
Ilia	Cattle	259	8,755	259	21	2,244	2,250	1,944	300	1,078
Imathia	Cattle	401	14,912	401	233	14,602	14,664	11,702	2,900	6,629
Iraklio	Cattle	190	1,416	190	18	1,093	1,093	984	109	422
Thesprotia	Cattle	558	35,994	558	298	21,986	22,480	19,081	2,905	4,614
Thessaloniki	Cattle	660	64,030	660	602	56,153	60,371	42,361	13,792	16,401
Ioannina	Cattle	484	27,670	484	311	17,776	18,171	14,850	2,926	4,380
Kavala	Cattle	166	7,624	166	145	6,162	6,913	4,871	1,291	2,015
Karditsa	Cattle	342	12,019	342	286	11,104	11,139	9,101	2,003	2,700
Kastoria	Cattle	124	3,893	124	100	4,002	4,011	3,129	873	1,018
Central Attica	Cattle	4	17	4	1	12	12	11	1	2
Kerkyra	Cattle	60	490	60	50	449	449	423	26	47
Kefallonia	Cattle	109	2,862	109	8	539	718	424	115	125
Kilkis	Cattle	307	20,996	307	268	17,162	18,341	14,358	2,804	5,045
Kozani	Cattle	388	23,593	388	225	14,305	14,646	12,038	2,267	4,326
Korinthia	Cattle	44	1,359	44	0	0	0	0	0	0
Kyklades	Cattle	1,099	12,965	1,099	325	5,138	5,181	4,450	688	1,647
Lakonia	Cattle	278	9,580	278	124	5,017	5,150	4,547	470	1,551
Larisa	Cattle	923	84,180	923	455	41,412	42,135	37,866	3,546	10,505
Lasithiou	Cattle	9	23	9	8	20	20	19	1	1
Lesvos	Cattle	612	7,264	612	65	1,059	1,062	973	86	324
Lefkada	Cattle	23	654	23	21	554	554	475	79	178
Magnisia	Cattle	351	28,900	351	204	14,884	15,392	14,162	722	2,928
Messinia	Cattle	514	5,437	514	112	1,717	1,790	1,455	262	670
Xanthi	Cattle	651	25,937	651	585	19,773	21,794	15,151	4,622	6,237
Pireas	Cattle	13	774	13	1	366	366	366	0	1
Pella	Cattle	440	21,841	440	351	17,760	17,967	16,248	1,512	3,979
Pieria	Cattle	129	5,879	129	81	4,734	4,741	4,298	436	1,258
Preveza	Cattle	270	19,290	270	252	16,802	17,061	14,880	1,922	4,277
Rethymno	Cattle	80	1,221	80	7	281	281	279	2	15
Rodopi	Cattle	1,095	26,833	1,095	576	16,043	17,659	12,176	3,867	5,201
Samos	Cattle	62	404	62	51	318	318	289	29	67
Serres	Cattle	993	61,572	993	806	53,083	54,960	42,663	10,420	12,981
Trikala	Cattle	723	55,947	723	576	46,942	49,074	38,511	8,431	12,738
Fthiotida	Cattle	317	12,460	317	96	5,253	5,302	4,675	578	1,224
Florina	Cattle	498	13,542	498	473	12,802	13,397	10,346	2,456	3,494

Fokida	Cattle	226	11,552	226	91	5,279	5,354	4,262	1,017	1,407
Chalkidiki	Cattle	83	3,909	83	73	3,063	3,592	2,544	519	1,009
Chania	Cattle	47	254	47	28	178	190	129	49	35
Chios	Cattle	123	1,226	123	22	260	260	199	61	90
Total		17,941	814,448	17,941	9,383	518,622	539,300	431,087	87,535	141,699

Table D - DATA ON STATUS OF HERDS AT THE END OF THE PERIOD

	Region	Animal species	Total number of herds and animals under the programme	Unknown	Not free or not officially free from disease		Free of officially free-disease status suspended/withdrawn	Free from disease	Officially free from disease
					Last check positive	Last check negative			
herds	Aetoliaacarnania	Cattle	1,390	0	0	0	0	1,390	0
animals	"	"	78,103	0	0	0	0	78,103	0
herds	East Attica	Cattle	16	0	0	0	0	16	0
animals	"	"	427	0	0	0	0	427	0
herds	Argolida	Cattle	24	0	0	0	0	24	0
animals	"	"	1,036	0	0	0	0	1,036	0
herds	Arcadia	Cattle	111	0	0	0	0	111	0
animals	"	"	2,451	0	0	0	0	2,451	0
herds	Arta	Cattle	139	0	0	0	0	139	0
animals	"	"	6,225	0	0	0	0	6,225	0
herds	Achaia	Cattle	405	0	0	0	0	405	0
animals	"	"	10,779	0	0	0	0	10,779	0
herds	Voiotia	Cattle	93	0	0	0	0	93	0
animals	"	"	9,094	0	0	0	0	9,094	0
herds	Grevena	Cattle	147	0	0	0	0	147	0
animals	"	"	8,484	0	0	0	0	8,484	0
herds	Drama	Cattle	464	0	0	0	0	464	0
animals	"	"	25,002	0	0	0	0	25,002	0
herds	West Attica	Cattle	31	0	0	0	0	31	0
animals	"	"	1,946	0	0	0	0	1,946	0
herds	Dodekanissa	Cattle	394	0	0	0	0	394	0
animals	"	"	5,022	0	0	0	0	5,022	0
herds	Evros	Cattle	550	0	0	0	0	550	0
animals	"	"	19,680	0	0	0	0	19,680	0
herds	Evoia	Cattle	194	0	0	0	0	194	0
animals	"	"	2,585	0	0	0	0	2,585	0
herds	Evrytania	Cattle	122	0	0	0	0	122	0
animals	"	"	4,845	0	0	0	0	4,845	0
herds	Zakynthos	Cattle	206	0	0	0	0	206	0
animals	"	"	1,495	0	0	0	0	1,495	0
herds	Ilia	Cattle	259	0	0	0	0	259	0
animals	"	"	8,755	0	0	0	0	8,755	0
herds	Imathia	Cattle	401	0	0	0	0	401	0
animals	"	"	14,912	0	0	0	0	14,912	0
herds	Iraklio	Cattle	190	0	0	0	0	190	0
animals	"	"	1,416	0	0	0	0	1,416	0
herds	Thesprotia	Cattle	558	0	0	0	0	558	0
animals	"	"	35,994	0	0	0	0	35,994	0
herds	Thessaloniki	Cattle	660	0	0	0	0	660	0

animals	"	"	64,030	0	0	0	0	64,030	0
herds	Ioannina	Cattle	484	0	0	0	0	484	0
animals	"	"	27,670	0	0	0	0	27,670	0
herds	Kavala	Cattle	166	0	0	0	0	166	0
animals	"	"	7,624	0	0	0	0	7,624	0
herds	Karditsa	Cattle	342	0	0	0	0	342	0
animals	"	"	12,019	0	0	0	0	12,019	0
herds	Kastoria	Cattle	124	0	0	0	0	124	0
animals	"	"	3,893	0	0	0	0	3,893	0
herds	Central Attica	Cattle	4	0	0	0	0	4	0
animals	"	"	17	0	0	0	0	17	0
herds	Kerkyra	Cattle	60	0	0	0	0	60	0
animals	"	"	490	0	0	0	0	490	0
herds	Kefallonia	Cattle	109	0	0	0	0	109	0
animals	"	"	2,862	0	0	0	0	2,862	0
herds	Kilkis	Cattle	307	0	0	0	0	307	0
animals	"	"	20,996	0	0	0	0	20,996	0
herds	Kozani	Cattle	388	0	0	0	0	388	0
animals	"	"	23,593	0	0	0	0	23,593	0
herds	Korinthia	Cattle	44	0	0	0	0	44	0
animals	"	"	1,359	0	0	0	0	1,359	0
herds	Kyklades	Cattle	1,099	0	0	0	0	1,099	0
animals	"	"	12,965	0	0	0	0	12,965	0
herds	Lakonia	Cattle	278	0	0	0	0	278	0
animals	"	"	9,580	0	0	0	0	9,580	0
herds	Larisa	Cattle	923	0	0	0	0	923	0
animals	"	"	84,180	0	0	0	0	84,180	0
herds	Lasithiou	Cattle	9	0	0	0	0	9	0
animals	"	"	23	0	0	0	0	23	0
herds	Lesvos	Cattle	612	0	0	0	0	612	0
animals	"	"	7,264	0	0	0	0	7,264	0
herds	Lefkada	Cattle	23	0	0	0	0	23	0
animals	"	"	654	0	0	0	0	654	0
herds	Magnisia	Cattle	351	0	0	0	0	351	0
animals	"	"	28,900	0	0	0	0	28,900	0
herds	Messinia	Cattle	514	0	0	0	0	514	0
animals	"	"	5,437	0	0	0	0	5,437	0
herds	Xanthi	Cattle	651	0	0	0	0	651	0
animals	"	"	25,937	0	0	0	0	25,937	0
herds	Pireas	Cattle	13	0	0	0	0	13	0
animals	"	"	774	0	0	0	0	774	0
herds	Pella	Cattle	440	0	0	0	0	440	0
animals	"	"	21,841	0	0	0	0	21,841	0
herds	Pieria	Cattle	129	0	0	0	0	129	0
animals	"	"	5,879	0	0	0	0	5,879	0
herds	Preveza	Cattle	270	0	0	0	0	270	0
animals	"	"	19,290	0	0	0	0	19,290	0
herds	Rethymno	Cattle	80	0	0	0	0	80	0
animals	"	"	1,221	0	0	0	0	1,221	0
herds	Rodopi	Cattle	1,095	0	0	0	0	1,095	0

animals	"	"	26,833	0	0	0	0	26,833	0
herds	Samos	Cattle	62	0	0	0	0	62	0
animals	"	"	404	0	0	0	0	404	0
herds	Serres	Cattle	993	0	0	0	0	993	0
animals	"	"	61,572	0	0	0	0	61,572	0
herds	Trikala	Cattle	723	0	0	0	0	723	0
animals	"	"	55,947	0	0	0	0	55,947	0
herds	Fthiotida	Cattle	317	0	0	0	0	317	0
animals	"	"	12,460	0	0	0	0	12,460	0
herds	Florina	Cattle	498	0	0	0	0	498	0
animals	"	"	13,542	0	0	0	0	13,542	0
herds	Fokida	Cattle	226	0	0	0	0	226	0
animals	"	"	11,552	0	0	0	0	11,552	0
herds	Chalkidiki	Cattle	83	0	0	0	0	83	0
animals	"	"	3,909	0	0	0	0	3,909	0
herds	Chania	Cattle	47	0	0	0	0	47	0
animals	"	"	254	0	0	0	0	254	0
herds	Chios	Cattle	123	0	0	0	0	123	0
animals	"	"	1,226	0	0	0	0	1,226	0
Total - herds			17,941	0	0	0	0	17,941	0
Total - animals			814,448	0	0	0	0	814,448	0

Table E - SUSPENSION/WITHDRAWAL OF THE FREE OR OFFICIALLY FREE STATUS

Region	Animal species	Status	Reason	Number of herds
Total				0

Table F - STRATIFIED DATA ON SURVEILLANCE AND LABORATORY TESTS

Region	Animal species	Test type	Number of samples	Number of tests	Number of positive tests
Thessaloniki Regional Unit	Cattle	PCR test	7	14	13
Pella Regional Unit	Cattle	PCR test	15	15	0
Imathia Regional Unit	Cattle	PCR test	7	14	0
Total			29	43	13
			Methods of laboratory analysis	Total number of tests	
			Total - PCR test	43	

COMMENT / ADDITIONAL CLARIFICATION

1. The third column of Table A (number of herds to be checked under the programme this year) refers to the total number of herds in Greece, as the Programme is implemented to all of them.
2. The number of herds checked or animals checked in both tables A and B coincide with the herds/animals under the programme as these herds/animals are clinically tested both in the framework of LSD vaccination programme, Exotic Diseases Programme, Brucellosis/TB programmes, animal movements etc
3. In the attached files, the invoices for LSD vaccines obtained in 2019 are attached.
4. In the Table F - STRATIFIED DATA ON SURVEILLANCE AND LABORATORY TESTS: All these were suspicions. In Thessaloniki Regional Unit samples obtained by 1 bovine were tested and vaccine strain was detected with DIVA Real Time PCR (vaccine reaction-side effect) (the number of samples refers to the different tissue/blood samples obtained by the same animal). All positive results presented in this table derive from the samples examination of the same animal and is vaccine strain virus (reaction to vaccination). In Pella Regional Unit samples obtained by 9 animals have been tested with negative results. In Imathia Regional Unit, samples obtained by 1 animal were tested with negative results. In the table, the numbers of samples (even if they are obtained by the same animal) as well as the number of tests are presented.
5. Data on LSD vaccination are extracted from the digital LSD Database where delays in vaccinations registration are noticed; a dynamic situation occurs.

