

CLARIFICATION OF INFORMATION REQUIRED FOR RECOGNITION OF A REGION

Instruction: please provide detailed information to the following questions (translation into English required).

1. Responsibility, organization and structuring of veterinary services in the region

What is the availability of veterinarians working in the region to undertaken programs to fight against animal disease ?

There are 543 veterinarians in the free zone, in local units, both for administrative and field works, with 477 vehicles.

Also, there are 39 veterinarians of the Federal Veterinary Service specially located in border areas (ports, airports and border posts).

Are they all official veterinarians ?

Yes.

Are there non-veterinarians inspectors under direct supervision of official veterinarians ?

Yes. There are 1220 technicians and 172 administrative assistant under supervision of 501 state veterinarians in local units.

What are the required procedures for sample collection ?

In case a vesicular disease is suspected, a visit is made by an official veterinarian to collect samples (epithelia and sera) for analysis at the Animal Support Laboratory of Recife-PE.

What diagnosis procedures and techniques are usually followed for each disease agent ?

Samples collected of suspected vesicular disease are submitted to diagnosis of foot-and-mouth disease, among others, according to techniques of seroneutralization, ELISA and complement fixation.

What are the laws, regulations and policy into force (copy and translation into English required) ? For example, is it allowed to feed animals with remaining food ? If so, what restrictions are involved (cooking food remains in specific temperature and time) ?

See attached Regulation nº 91.

What security measures are into force in entry points to control importation of material which can carry disease agents ?

See attached Regulation n° 91.

2. Disease status (Is disease agent recognized as an existing agent in the region ? If so, what is its prevalence ? If not, when was it most recently diagnosed ?)

For each disease, indicate if agent is recognized as an existing agent in the region.

No. As for foot-and-mouth disease, there has been no case of disease in the free zone since 1993.

If so, when was it diagnosed for the last time ?

December, 1993.

What kind of livestock or species were affected ?

Calf and swine herds.

How many cases have been diagnosed or reported ?

110 case involving calf herd and 1052 involving swine herd were reported in 1993.

Is notification of disease agent required in the region ?

Yes. Notification of suspected cases is obligatory.

If disease agent has been present and eliminated, what methods have been used for eradication ?

Massive vaccination in calf herd and bubalis; transport control of susceptible species and their products and derivatives; insertion of a concept of a cattle raising area in the Program for Eradication of Foot-and-Mouth Disease; involving producers in the eradication program; timely assistance and wide investigation of cases of suspected vesicular disease; improvement of laboratory diagnosis effectiveness, among others.

What geographical and environmental features of the export region could influence the prevalence of disease agent ?

The disease free zone is located at the Southern Region and encompasses the States of Rio Grande do Sul and Santa Catarina. It takes an area of 378,169, Km² with a bovine cattle population of 14,955,592 in 524,528 herds. Swine population is significant in the area - 6.3

million, as well as sheep herd, which totals 10.6 million, concentrated in the State of Rio Grande do Sul.

Free zone limits are to the North, the State of Parana (Blocking Zone), to the West, the Republic of Argentina, to the South, the Oriental Republic of Uruguay and to the East, the Atlantic Ocean.

Uruguay is a foot-and-mouth disease free country, without vaccination since 1995. Argentina is disease free since 1996, with vaccination. The State of Parana is disease free in its whole area since 1995.

Either states of the free zone or those of the blocking zone are included in the Project for Eradication of Foot-and-Mouth Disease in the River Prata Basin, together with Argentina, Paraguay and Uruguay and recently Bolivia, under coordination of the Pan American Center for Foot-and Mouth Disease/ Pan American Health Organization.

3. Status of surrounding regions with regard to the agent

for each relevant disease, agent is known as an existing agent or as an agent that existed previously in any surrounding region where trade is to be established ?

Uruguay and Argentina, whose borders limit Brazil to the South and to the West, respectively, are disease free countries with a free zone, with no vaccination in Uruguay. The State of Parana, which is the border of the free zone (blocking zone) to the North, has no reported case of foot-and-mouth disease since May, 1995.

If so, which is the prevalence ?

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If not, which is the most recent diagnosis ?

Blocking zone (State of Paraná): May, 1995.

Are there relevant factors about the surrounding regions that must be taken into consideration (for example, size, distance among the limits of surrounding regions) for affected animals or herd ?

The closest and most recent case of foot-and-mouth disease was reported in March, 1998, in the municipality of Porto Murtinho-MS, which is approximately 750 Km far, in a straight line, from the closest point of the Brazilian free zone.

4. The range of a control program for foot-and-mouth disease into action, in case the agent is known as an existing agent in the region.

What is the range of a control program into action for FMD if agent is known as an existing agent in the region or if it has recently existed ?

The program undertaken at present in the free zone is aimed at keeping the achieved condition of disease free.

Which epidemiological investigations are undertaken to track the origin of infection ?

After a case of vesicular disease is reported, the supposedly affected farm is visited by an official veterinarian who starts the case investigation, by taking all available means to establish the origin of a possible infection (study of animals or derived products transport documents in the farm, interview with producers, workers etc).

Are infected or exposed animals submitted to quarantine ? If so, for how long ?

No. In case foot-and-mouth disease occurs, infected and exposed animals are slaughtered.

Are affected farms monitored ? If so, how ? What are the tests undertaken before quarantine is interrupted ?

There has been no reported case of foot-and-mouth disease in the free zone after 1993. Nevertheless, emergency health procedures are described on the Procedure Guide for Eradication of a Focus of Foot-and-Mouth Disease in case agent is reintroduced, which has been elaborated by technicians of member countries of the Prata Basin Convention (Argentina, Uruguay, Paraguay and Bolivia), attached.

Which are the procedures for cleaning and disinfection of affected farms?

See above.

What treatment procedures are followed ?

There is no treatment. Infected and exposed animals are slaughtered.

Which are the observed breeding practices?

If animal population is slaughtered, how do carcasses are eliminated?

Infected animal or exposed population is slaughtered, destroyed and buried in the affected farms, according to procedures stated in the attached Guide for Eradication of Foot and Mouth Disease Focus.

Is any indemnification paid for slaughtered animals ?

Yes, according to the rules set forth in the eradication private fund.

Did any cleaned and disinfected farm turn to be affected latter ?

No case of foot and mouth disease has been reported since 1993.

5. Vaccination status in the region. When was vaccination last provided ? What is the range of vaccination if it is regularly undertaken ? What kind of vaccine is provided ?

Are producers allowed to purchase and provided animal vaccination ?

Yes.

When was vaccination last provided ?

Foot-and-mouth disease vaccination is still regularly carried out through campaigns in the free zone, twice a year, according to a previously set schedule.

What is the vaccination range, if it is regularly provided ?

All Brazilian calf and bubalis herds, including those in the free zone are regularly vaccinated for foot-and-mouth disease.

What kind of vaccine is provided ?

Only inactive vaccines are provided (dead) with oiled adjuvant are approved for commercialization.

Who is allowed to provide vaccination (farmers, veterinarians) ?

Vaccination is often undertaken by farmers in Rio Grande do Sul. In Santa Catarina, vaccination procedures are undertaken by an official service or by trained community vaccinators.

Are there reports for vaccines provided ?

Yes, they are obtained through fiscal notes and must be shown in the local offices after vaccination. Transport documents are only issued upon registration of proved vaccination.

In the State of Santa Catarina, vaccine is provided by vaccinators accredited by an official service and it is not found in the market.

Who are vaccines manufacturers ?

Private industry produces vaccines according to biosafety procedures. A lot by lot basis control is carried out by the Ministry of Agriculture and Supply.

Is sera allowed for use ? If so, who is allowed to use it and under which conditions ?

Use of sera is not applicable.

6. How the region is separated from those surrounding areas of high risk, though physical barriers or others.

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14 assessment units are permanently working at the borders of the free zone with blocking zones (Santa Catarina/ Parana border).

Assessment units at the border of Santa Catarina and Parana States.

	Municipalities of Santa Catarina	Highways
1.	Guarua ***	BR 101
2.	São Bento do Sul (Fragosos)	BR280
3.	Mafra ***	BR116
4.	Três Barras	SC303
5.	Porto União	BR280
6.	Água Doce ***	BR153
7.	Passos Maia	SC466
8.	São Domingos	BR280
9.	Galvão	BR280
10.	Abelardo Luz ***	SC467
11.	São Lourenço do Oeste	SC468
12.	Campo Erê	SC473
13.	Palma Sola	SC471
14.	Dionísio Cerqueira ***	BR163

*** Authorized municipalities for animal entry.

7. Scope of control regarding the circulation of animals and animal products in regions of higher risk and the biosafety level observed in this circulation

From which countries and from which regions does the present region import products that may potentially transmit agents of disease?

The greatest part of products exchanged with the Free Zone is undertaken with other regions of the country according to Regulation SDA n° 91 (attached) or with commercial partners of MERCOSUL countries (Argentine, Uruguay, Paraguay), all free from Foot and Mouth Disease or else, with North-American countries and those belonging to the European Union, also free from FMD.

To which extent is the circulation of higher risk products is controlled and which is the biosafety level observed regarding this circulation?

All entry points of live animals and animal products are regularly inspected by qualified professionals from the Ministry of Agriculture and Supply or by state veterinarians always according to Regulation SDA n° 91 (attached).

Which tests are performed in this case?

There are no tests for products. Products brought into the Free Zone must come from establishments regularly inspected by the Ministry of Agriculture and Supply.

Are the animals that may carry the disease agent kept in quarantine? For how long and where?

Yes, they are kept for a period of 30 days in properties previously certified by the Official Service where they are submitted to serological tests and for 14 more days, in destination sites where tests are repeated.

Are imports allowed? If so, is sanitary certification required?

Yes, imports are allowed only from countries free from the disease. In any case, sanitary certificates are always required.

Which are the other procedures in use?

Other tests and requirements established by sanitary Agreements with countries of origin.

8. Agricultural stocks and market practices within the region

How many herds, poultry exploitation and other important species are there within the region?

The Free Zone has an area of 378.169 km² where we can find about 14,9 million bovines, distributed among 524 thousand establishments. Swine population is important in this area comprising 6.3 million individuals, as well as a sheep population of 10.6 million individuals, this last one concentrated in the State of Rio Grande do Sul. The Free Zone is the main producer of pork, lamb and poultry in the whole country and its meat production is also important.

How are they distributed? (example: herd density, etc.)

a. State of Rio Grande do Sul

Cattle breeding can be organized in three areas identified through social and economic indicators of agricultural production, which reflect the prevalent form of production in each area as described below.

The first area is located at the Southern region of the state, corresponds to cattle breeding for meat, complete cycle, of commercial and semi-commercial kind, together with cattle breeding as a complement to agriculture and co-existing with sheep breeding. In this area, circulation of animals can be identified within the area, as a circulation devoted to complement the agricultural cycle, with prevalence of circulation of animals for slaughtering inside the Free Zone.

The second one, following the coast line, starts at the South region of the state, close to Mirim Lake, and continues to the Northeast until Santa Catarina's border and towards the central part of the state, including some municipalities in its higher lands. In this area, cattle breeding for meat is also prevalent although less intensive than what can be found in the first area.

In this second area we can also find some areas of milk production with wide pastures for fattening and an important number of slaughter houses. In addition, there is significant sheep breeding in lower parts of its territory, although less intensive than what can be found in the first area, as well as swine breeding as subsistence production. Regarding animal circulation in this area, most animals come from the first area.

The third area is located at the North of the state and does not have agricultural production organized in a business basis. Familiar or pre-commercial forms of production do prevail. Cattle herds are small, the majority of which is composed by milk cows. This area excels in agriculture, industrial processing of pork and poultry and in specialized sites for milk and derivatives. This area serves as a passage to other areas mainly as an entrance for animals to be slaughtered and for bovine and swine products or sub-products.

Sheep have an important presence in the state and, in present conditions, do play a revealing role in the study as it can be seen as a population sensible to Foot-and-Mouth Disease and regarding the fact that vaccination against it is not usually undertaken for these animals.

b. State of Santa Catarina

Taking into account social and economic production indicators, agricultural activity in Santa Catarina can be divided into five areas.

The first one, located at the Southern high lands of the state, can be identified by cattle breeding for meat, complete cycle, commercial and non-commercial, with an average rate of 60 individuals/property. This includes 4% of all properties and 18% of all cattle production within the state. Circulation of animals happens between areas in order to complement agricultural cycle, mainly the exit of animals for slaughtering and last phase of termination, to supply consumer centers in the state.

The second area is formed by the South coast, including the state capital, Florianópolis, with mixed cattle breeding and cattle in last phase of termination and slaughtering. This area has small nucleus of swine breeding for pork production that supply both agribusiness and subsistence. The entrance of animals for slaughtering and in last phase of termination from the first area of the state of Rio Grande do Sul prevails, as Santa Catarina needs to import 20% of the necessary meat to complement internal supply. This area is also considered as a consumer center.

The third area, which includes the Middle West and the West of the state, has mixed milk cattle breeding organized in terms of familiar or traditional forms of production. In this area we find 70% of the whole state's swine breeding for pork production and 95% of state's poultry production, both of them organized in industrial basis. In this area are located the greatest storage-houses for pork in the state. Cattle circulation is not important. We can also say that this area serves as an access passage to other areas, specially absorbing swine and poultry, due to the huge number of existing slaughter houses.

In the fourth region, located at the North of the state has a mixed cattle breeding, complete circle, with the smaller bovine density in the state, with inexpressive animal transportation.

In the fifth area, Northeast of the state, milk cattle breeding is predominant although organized as a familiar or traditional production. It is the area of higher demographic density in the state, with great emphasis to secondary and tertiary sectors of state economy and is also considered a strong consumer center. The entrance of animals is restricted to animals for slaughtering (milk cattle) that come, originally, from the first area.

Sheep flock is not expressive in the state, with about 200,000 individuals concentrated in the first area, but it plays a revealing role in the study, as it can be seen as a population sensible to disease. As well as swine population, sheep are not vaccinated and act as sentinels in both second and third areas.

Where are the main centers for animal trading located?

See answer above

Which is the pattern for animal circulation in the region?

In the State of Rio Grande do Sul the greatest part of cattle for slaughtering moves from the South to the center of the region where we find the bigger consumer centers. The State of Santa Catarina has few slaughter houses. The area which produces most animals for slaughtering is located at the Serrano high lands and circulation of these animals and meat goes towards the East part of the state where the biggest consumer centers are located.

How are transportation and management carried out, when animals are traded?

Most of the time transportation is made by road, in appropriate trucks.

9. Kind and scope of health surveillance procedures in the region (active, passive surveillance, quantity and quality of samples and tests)

Are serological tests undertaken? If so, which is the frequency? Which are sample dimensions and which results have been found?

Within the Free Zone serological sampling is performed for viral activity detection. Sampling determinants used in year 1997 are described in detail in Brazilian report for IOE, when the request for recognition of a Free Zone for Foot- and-Mouth Disease was presented. In that occasion, statement was made of no viral activity within the Zone.

Is notification of sick animals obligatory? If so, which procedures are employed (who has to perform them and to whom) and which are the penalties, if these procedures are not fulfilled?

Yes, notification of any suspicion of vesicular diseases is obligatory and must be done by producers, third parties and professionals of official veterinary services through local offices. If notification is not presented, producers will not receive any refund in case that their animals have to be sacrificed to avoid bringing FMD into the herd.

Are laboratory tests performed for suspicious animals? If so, which procedures are to be employed? (example: which proportion of suspicious animals are examined for each specific laboratory procedure?)

Yes. Samples of epithelium and sera are collected from the greatest possible number of clinically suspected animals in the affected properties.

In quarantine imposed to those farms where suspected cases are found while diagnosis is not yet available?

Yes.

Which other procedures are undertaken in suspicious cases?

In suspicious cases, interdiction of properties remains until diagnosis for FMD and other differential diagnosis are completed.

10. Laboratory capacity for diagnosis

Which is the laboratory capacity for diagnosis?

Laboratory capacity for FMD diagnosis is estimated in:

- Tests for isolation, identification, viral typifying and sub-typifying and ELISA for antigens – 60 samples /month
- Serological tests
VIA: 6000 samples/month
EITB: 2600 samples/month

Are there certified laboratories, approved for agent isolation, identification and typifying? (If possible, indicate names and addresses)

Yes.

LAPA/Belém/PA

Av Almirante Barroso, 1234 – Bairro Marco

CEP: 66095-000 – Belém – Pará

LAPA/Recife/PE

Rua Manoel Medeiros, s/nº - Dois Irmãos

CEP: 52171-030 – Recife – Pernambuco

LARA/Porto Alegre/RS

Estrada da Ponta Grossa, 3036

CEP: 91785-340 – Porto Alegre – RS

If laboratories do not exist, where is isolation performed?

Which safety measures are undertaken in existing laboratories inside the region to prevent spread of biological agents?

- Air purifying through special filters
- Use of biological cabinets for maximum safety
- Chemical processing of effluents
- Use of disinfectant solutions, bath and cleaning procedures for personnel involved in activities.

Which training does the personnel who deals with disease diagnosis receive?

Training is offered to personnel working with FMD in development of modern methodologies for virus isolation, typifying and sub-typifying, serology and diagnosis through molecular biology techniques and also laboratory biosafety.

11. Policies and infra-structure to animal disease control within the region (example: emergency, response capability)

Which are the current policies and infra structure to answer to emergencies involving the situation already mentioned?

In a situation of FMD focus, the policy to be followed is sanitary sacrifice and destruction of all carcasses. Other procedures for focus eradication are thoroughly detailed in the

Procedure Guide for Foot-and-Mouth Disease Eradication , mentioned before in this document. Necessary infra-structure is to be requested by the Emergency Group, in each state of the Free Zone.