

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Agriculture and Forestry
Department of Livestock and Fisheries

Ref No0313/MAF
Ref No 0036/DLF

Technical norms
on
livestock management in Lao PDR

- Referring to the law of agriculture.
- Referring to the PM decree on livestock management in Lao PDR No 85/PMO dated 31/05/1993.
- Referring to the Ministry of Agriculture and Forestry regulation on livestock management in Lao PDR No : 0004/MAF and its instructions No: 0005/MAF both dated 02/01/1997.

Section 1

-Purpose and areas for the application of the technical norms.

Article 1: Purposes

For having technical norms on monitoring of the implementation of PM Decree and the MAF regulation on livestock management in Lao PDR.

Article 2: Scope for the application.

This technical norms on livestock management in Lao PDR is effective for every organization ,state agency ,ministry, state committee, local administrative authority, enterprise, individual person or juridical person who carries out business regarding Livestock, Livestock productions, feed and veterinary drug in Lao PDR.

Section 2

Identification and Registration of animals

Article 3: Registration of animals

Should practice following Article 3 of section 2 of the regulation on livestock management in Lao PDR N°0004/ MAF and N°2 of its instructions N°0005/ MAF both dated 02/01/1997.

1. Identifying marks or numbers

Identifying marks should be plastic or aluminium cartags or branded at the upper backlegs of animal following the locality conditions. The identifying numbers branded to each animal have two types of numbers as follow

- Indicative number for origin of animal should be the official number of Province, District and Village. It will be branded in the

- ♦ Identification number for individual animal will be branded in the right of animal. In the registration card should have identification numbers as follow:

N°1	meaning	Cattle
N°2	meaning	Buuffalo
N°3	meaning	Elephant
N°4	meaning	Hors
N°5	meaning	mule
N°6	meaning	Donkey

- ♦ Animal identification numbers of state station, farm, private enterprise and individual person, who carries out livestock business should design the own number which will be approved by Livestock and Fisheries Center or appointed officer, there identifying numbers should not be confused with the identifying marks of livestock households.

2. Observations of special marks

It is determining individual special phenotype characters as follow:

β	Horns
β	Fore head (coloures crest, ..others)
β	Crest (locality of crest in forehead)
β	Legs
β	Feet
β	Tail (long, short,....)
β	Colour (yellow, red, black, white....)

3. Transfer of ownership

The transfers of ownership should be done with VVW, certified by chief of the village. VVW or appointed person report it to Livestock and Fisheries Center.

After removal of animals to new place, the new owner could notify VVW and authority destination than VVW further notify to Livestock and Fisheries Center with in 15 days.

Article 4

- σ Animals owner could notify the number of his/her animals to chief of the village or appointed person for statistic data collecting 3 to 7 days before district livestock and fisheries officer or appointed officer is coming to do the registratin of animals
- σ The certification and approval of animals registrations should be followed Article 5, section 2 of the MAF regulation on Livestock management in LAO PDR N°0004 dated 02/01/1997

Section 3: The movement of Livestock and Fisheries products, animal feed and veterinary drugs with in the country.

Article 5 Necessary document for movement of Livestock and its products, animal feed and veterinary drugs.
DLF has designed several forms

- ◆ Registration card is followed the approval form C001 specified in the article 3 of this technical norms.
- ◆ Health certificate is followed the approval form C002 specified in the article 5 of this technical norms
- ◆ Zoo-sanitary certificate is followed the approval form C003 specified in the article 5 of this technical norms
- ◆ Vaccinations certificate is followed the approval form C004 specified in the article 18 of this technical norms.
- ◆ Transfer of ownership is followed the form of each village head.
- ◆ Movement permit of Livestock and its products is followed the approval form C005 specified in the article 5 of this technical norms.

Article 6: Measures for the violator in Regulation on movement of livestock and its products, animal feed and veterinary drugs.

When removing livestock, its products and veterinary drugs Through veterinary check post or Livestock and Fisheries centre, the animal owner shall present the documents as specified in article 6 of the MAF regulation on Livestock management N: 0004 dated 02/01/97.

If animals owner violate the rules of movement of livestock its products and veterinary drugs, the veterinary officer should practice following the cases as below:

1. If the document are incomplete during movement of livestock its products veterinary drugs Through veterinary check post or livestock and Fisheries centre.
- ◆ Detain livestock, its products and veterinary drugs
- ◆ Animal owner should submit complete documents or several evidences from origin district for further movement permission.
2. In case of complete document, but do not follow routes plan and check post, veterinarian can do as follow:
 - ◆ Detain Livestock, its products and veterinary drugs
 - ◆ To investigate and report taking in detail causes
 - ◆ Education or fine taking following lighter severe violation
 - ◆ Permission of continue removal following plan routes
3. In case of incomplete or improper documents and do not follow plan routes and veterinary check post, it is violation in Article 8 of MAF regulation N: 0004 dated 02/01/97, veterinarian should do:

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 - ◆ Education or fine taking following lighter severe violation
 - ◆ Permission of continue removal following plan routes
3. In case of incomplete or improper documents and do not follow plan routes and veterinary check post, it is violation in Article 8 of MAF regulation N: 0004 dated 02/01/97, veterinarian should do:

◆ Before transport veterinary officer or concerned authority could well examine such as: inspection of animal health, real number of animals and accompanying documents completed and followed the article 5 of this technical norms.

◆ Animal owner or transporter should follow animal transport routes determined by the appointed veterinary officer.

2. Practices during transport

◆ The transport of live animals should be made in the morning or the weather is cold. It is for bidden to transport if the temperature is higher than 38°.

◆ During the transport will be ensured that no any animal wastes such as manure, urine or other wastes fall off from the vehicle. It is for bidden to transfer livestock and their products for prevention of the spread of infection disease.

◆ If transfer is needed should be permitted and examined under supervision of veterinary officer than allow continue removal.

◆ In case of sick or died of animal during transport, the movement of animals should strictly follow article 9 of the MAF regulation on Livestock management N: 0004, dated 02/01/1997.

Importation of Livestock, its products, animal feeds and veterinary products.

Article 8: Procedures of Regulation for import permission

◆ Should submit official application form R001 at least 15 days before importation

◆ Should follow import regulation of Ministry of Trade and tourism, Ministry of Finance and submit necessary documents specified in article 9 of this technical norms

◆ Every animal should be detained not more the 15 days in official place for control before selling, rearing or slaughtering (Rules of detention for control shall be specified in role of quarantine station). The poultry import for selling, rearing in the country should indicate the places (farm, center, station), it is easier monitoring for veterinary authority, if needed after.

◆ In case of animals imported for breeding should follow article 12.3 of the MAF regulation on Livestock management N° 0004 dated 02/01/1997.

Article 9:

Necessary documents for importation

Person, who has intention to import livestock, its products, animal feed and veterinary drugs, should submit necessary document such as:

a.) For Livestock and its products

* In case of animals imported for breeding after complete documents of article 8 of the technical norms should request additionally import permit from DLF.

* In case of animals imported for fattening purpose should have import permit from Provincial, Municipality or Special Zone Agriculture Forestry Department. But could report officially to DLF not more than 7 days after each arrival.

* Should submit animal health and zoo-sanitary certificates certified by a reliable veterinary authority from the exporting country and these document should be written in French or English.

* Should submit vaccinations certificate from the country of origin specified in article 16 of this technical norms.

* Should have genetic record book or animal pedigree certified by authority concern from the country of origin.

b.) For animal feed and veterinary drugs

1. For animal feed.

* Should submit import application form R.004 outline by DLF before importation

* Should have quality certificate issued by the concerned authority from the country of origin or manufacture. The document should present feed ingredient (protein, fat, minerals and vitamins), moisture, fibers, date of manufacture and expire. Feed importer should submit feed samples to animal feed laboratory for analyze at least 15 days before each importation.

* The import animal feed should meet standards defined in the technical requirement book for animal feed production 1996 of National animal feed laboratory.

* It is prohibited to import low quality feed.

2. For veterinary drugs

Should submit import application form R.005 outlined by DLF and product license from authority of exporting or manufacturing country. The document should present clearly the name of medicine, containing substance, uses, size of contain, dosage, color of medicine and date of manufacture and expire.

Veterinary drugs importer should submit drug samples to laboratory of Food and Drugs Center for analysis at least 15 days before each importation.

c.) Person who has intention to import livestock, its products, animal feed and veterinary drugs after complete the above documents should apply additional necessary documents relating other sector such as: Investment permit from PMO, business operation permit from Ministry of Trade and other documents.

Article 10: Role and duties of the veterinarians at the check post.

Their main duties are perform veterinary measures in prevention and limit of epidemic diseases by controlling the movement of livestock, its products, animal feed and veterinary drugs divided in detail as follow:

η In case of sick or showed clinical symptoms of any infected disease and died should follow article 9 and article 13 of the MAF regulation on livestock management N° 004 dated 02/01/1997.

η In case the sick animals are proven to be effected by infectious disease, all other animals from the group should be detained in quarantine for at least 15 days for examination, treatment and vaccination. After animals are in good health, the head of the check post will issue health certificate and allow animals continue to move.

η Control strictly the status of epidemic diseases in their responsible locality by regular coordinating with the concerned DAFO or Provincial, Municipality or Special Zone agriculture and forestry department. Search data of epidemic disease from other region in the country and abroad.

η Control the illegal movement of livestock, its products, animal feed and veterinary drugs in violation of section 3 of the MAF regulation on livestock management in LAO PDR head of the check post the right to detain the proof and submit the wrong doing matters to the authority concerned in accordance with the rules of law and procedures of the country.

η Evaluate all activities and report regularly to their concerned authority in accordance with the rules and principle

Article 11 Determination of animal transport routes the head of the animal check post should determine the transport route referring to the status of epidemic disease and routes in those areas.

Article 12 cancellation of animal importation the DG of DLF may order total ban on importation of livestock, its products, animal feed and veterinary drugs, if in his opinion importation would expose an excessive risk for animal herd and the consumers in the country.

β In case there is any epidemic disease in the exporter country during the transport of those animals and the problem is not yet resolved as satisfaction or approval.

β In case the head of the animal check post has reported that symptoms lesion infectious disease are found with import animals

β For animal feed and veterinary drugs, if their quality is not met the standard specified in certificate of country origin or manufacture.

Article 13 Import requirement for animal products the DLF issue the rules on the importation of livestock products such as: meats, skins, bones, milk and others as follow:

a.) import meat for consumption.

1) Raw meat or their products.

✱ Observe and examine livestock, its products, animal feed and veterinary drugs during transportation or at the check post following section 3 of the MAF regulation on Livestock management N° 004 dated 02/01/1997.

✱ In case of sick or showed clinical symptoms of any infected disease and died should follow article 9 and article 13 of the MAF regulation on livestock management N° 004 dated 02/01/1997.

✱ In case the sick animals are proven to be effected by infectious disease, all other animals from the group should be detained in quarantine for at least 15 days for examination, treatment and vaccination. After animals are in good health, the head of the check post will issue health certificate and allow animals continue to move.

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Article 13 Import requirement for animal products the DLF issue the rules on the importation of livestock products such as: meats, skins, bones, milk and others as follow:

a.) import meat for consumption.

1) Raw meat or their products.

β Meat prior to import could be whole carcass, half or quarterly carcass. In case of cutter in small pieces should be packed following hygienic principle, labeling indicated weight, price type of meat, plant, date of packaging.

β Should have zoo-sanitary certificate examined by Food and drugs center and certified products free from infectious disease dangerous for consumers.

b). Import meat products not for consumption such as: bones, hooves, skins and others.

β Should be disinfected by formal 10-15%

β Should have zoo-sanitary certificate examined by diagnostic laboratory and certified products free from infectious disease transmitted from animal to human

c). DLF will determine the other meat products which will be outline for each period of time.

Exportation of Livestock and Livestock products

Article 14: Exportation of livestock, its products, animal feed and veterinary drugs from LAO PDR.

DLF is outlined the rules and procedures of permission to export livestock, its products, animal feed and veterinary drugs from LAO PDR as follow:

- β Should submit complete necessary documents of Ministry of Finance, Trade and tourism and country of origin.
- β Exporter should submit the export application form R 002. to DLF or provincial, Municipality or special zone Agriculture and Forestry department at least 15 days before exportation.
- β Before packaging, livestock products could be inspected closely by appointed veterinarian and the exporter could present document at the export check post.
- β DLF or Provincial, Municipality or special zone Agriculture and Forestry department may order cancellation of animal exportation from LAO PDR, if it is violated section 6 rules of the MAF regulation on livestock management N^o 0004 dated 02/01/1997.

Transit of livestock, its products, animal feed and veterinary drugs

Article 15 : Transit of livestock, its products, animal feed and veterinary drugs through LAO PDR.

Permission for transportation of livestock, its products, animal feed and veterinary drugs via LAO PDR to the 3rd country should be done as follow:

β After submitted application to ministry of Finance and ministry of trade and tourism, application should be submitted to the Ministry of Agriculture and Forestry at least 15 days before transportation with the form R 003.

β Should follow article 18 of the MAF regulation on livestock management N° 0004 dated 02/01/1997.

β During transport through LAO PDR should follow the rules of transportation article 7 of this technical norm.

β The head of animal check post may order cancellation of transport in case symptoms of severe infectious disease are found.

Section 4

Animal epidemic disease prevention and vaccination

Article 16: Determination of vaccine types.

Referring to the data of epidemiology and strategy of the control and prevention of epidemic disease or reduce and eradicate severe infectious disease in the future, DLF determines the necessary vaccine types for specie of animals and for several provinces in the table below.

Types of vaccines	Specy of animals	Provinces
-Haemorrhagic septicemia	Cattle / Buffalo	All the country
-Swine fever	Pigs	
-Rabies	Dogs	
-Duckplaque and Fowl chorela	Duck, Goose	
-Newcastle, Fowlchorela	Poultry, Turkey	

Remarks:

1. Vientiane Municipality, Vientiane, Champasack< Savannakhet and Khammouane provinces could be vaccinated against Anthrax.
2. Savannakhet, Khammouane, Xiengkhouang and Houaphanh provinces could be vaccinated against Blackleg.
3. This article will be modified following the status of epidemic diseases for each period of time

Article 17: Responsibilities of the animal owners.

β Animals owner could pay for each animal vaccination fee to the veterinarian.

β Department of Agriculture and Forestry of provincial, Municipality or special zone will determine vaccination fees for each type of vaccine compliance with the socio-economic status of the locality and could report to DLF.

Article 18: Animal vaccinatio certificate.

β DLF design the form of vaccination certificate using in the whole country following form C004>

β In each vaccination certificate should have place for official stamp of DAFO.

Article 19: General principles for the control of the spread of epidemic diseases.

DLF is outlined the technical norms as measures for the prevention, treatment or destruction of animal corpse as below:

1. It is forbidden to move sick or died animal from his place and to dress animal corpse for consumption.
2. Should separate sick animal to suitable place for treatment and vaccinate the remaining healthy animals in the surrounding of epidemic zone within 5km of radius.
3. It is strictly forbidden to move livestock and their products in or out of the epidemic zone.
4. Burn or bury the animal corpse in the pit with the upper part of corpse is at least 1m deep from soil level and covered 0.5m up from it. It is strictly forbidden to disease the corpse in river, lakes and stream.
5. Destroy infective microorganisms by disinfectants such as : lime, formol or other disinfectants.
6. If related veterinarian can not examine animal corpse within 24 hours after animal died, animal owner should follow article N° 4.
7. In case of a dead animal from unknown owner should follow article 24 N° 3 of the MAF regulation on livestock management in LAO PDR N° 0004 dated 02/01/1997.

I. Surveillance period of some infectious diseases

N°	Name of disease	incubation period	Observation and examination for cancellation of epidemic zone
1	haemorrhagic septicemia	2-5 days	30 days
2	Anthrax	2-3 days	14 days
3	Black leg	1-5 days	14 days
4	F M D	2-8 days	21 days
5	Swine fever	2-4 days	12 days
6	Newcastle	2-5 days	12 days
7	Fowl chorela	2-5 days	14 days

Article 20: Reporting system of epidemic diseases.

For having measures to stop the spread of epidemic diseases in time, DLF is outlined principle in the reporting of epidemic diseases additionally as follow:

- β In case of animal died or sick show similar clinical symptoms but do not know clear or affected by one of the epidemic diseases specified in article 21 of this technical norms, animal owner or persons witnessing the events shall notify the village veterinary worker (VWW) or chief of the village not more than 48 hours after observation of sick or died animal.
- β VWW or chief of the village will notify the case to the whole village and the closer locality, in the same time he will coordinate with livestock and fisheries center for determining measures in controlling, treatment or destruction of animal corpses.

Article 21: Declaration of epidemic zone.

Should following article 24 of the MAF regulation on livestock management in LAO PDR N° 0004 dated 02/01/1997. This technical norms presents some additional measure as follow:

- γ Declaration of epidemic zone when getting report of animals died by severe infectious diseases such as: Anthrax, Blackleg, Haemorrhagic septicemia, MFD and Swine fever.
- γ Determination of epidemic zone which radius is not more than 5km of place, where disease outbreak is found and it is clear report about specy of animals and name of infectious disease.

Article 22 : Cancellation of epidemic zone.

The provincial government shall declare the status of epidemic zone cancelled referring to the request submitted by director of provincial, Municipality or special zone Agriculture and Forestry department.

- κ After the status of epidemic is stopped, it's meaning the last sick animal is in good health reading 30 days and there is no any sick animal.
- κ The remaining animals are both treated and vaccinated.
- κ The animal corpses and its wasted are destroyed by burning or burial.
- κ Animal pens or places where animals got sick or died are already disinfected.

Article 23: Principle for controlling some infectious diseases.

1. Anthrax

- α Animal are proven to be affected by anthrax are those show clearly all clinical symptoms of anthrax.
- α Suspicious sick animals affected by anthrax are these infected in incubation period, but do not show apparent clinical symptoms, after autopsy and

examination the lesions of anthrax are found and confirmed by diagnostic laboratory.

- α Suspicious animals affected by anthrax are those in the same group of affected animals or are not yet vaccinated and introduced in the epidemic zone.

λ Duties of the concerned authorities

- α Animal owner or persons witnessing the events shall notify to the VVW or chief of the village within 24 hours.
- α VVW or chief to the village could report the case to Livestock and Fisheries Center for controlling, coordinating with VVW and chief of the village examine, evaluate the status of epidemic disease separate sick animal for treatment, destroy animal corpses and its wastes.
- α Livestock and Fisheries center further notify to the provincial Livestock and Fisheries section and to DLF for determining measures of prevention and stop the spread of epidemic disease outbreak.
- α Provincial Livestock and Fisheries report the case to the provincial governor to request declaration of epidemic zone.

λ Restriction and ban

1. It is strictly forbidden to move sick or died animal from the rearing area and to dress animal corpse
2. It is strictly forbidden to move livestock and its product in or out the epidemic zone.
3. It is strictly forbidden to dispose animal corpse in lake, stream and rivers. It should be burned or buried in deep pit with the upper of corpse being at least 1m deep from the soil level and it should covered the pit 0.5m up from soil level.

α Area of restrictions

Epidemic zone determining should have the dius no more than 5km in the locality, when Anthrax is found

α Prevention and treatment

1. Treatment

Should use type of antibiotics as below:

- Penicillin injection IM 20,000-40,000 unit/kg animal weight
- Streptomycin injection IM 20mg/kg animal weight
- Oxytetracyclin injection IM 10ml/kg animal weight
- Chloramphenicol injection IM 15ml/kg animal weight

2. Prevention

- Separate sick animals from the herd for treatment and restrains of movements
- Observe and examine the health of animals regularly

- For animals rearing in the surrounding of epidemic zone within 5km of radius should be vaccinated against anthrax disease
- In the locality where anthrax is exposed.

The cattle, buffalo at least 6 months olds should be vaccinated against anthrax. Do not vaccinate pregnant animals.

1 Cancellation of restrictions

After the last sick animal is in good health reading 14 days and there is no any sick animal could be cancelled epidemic zone.

2. Haemorrhagic septicemia (H.S)

- 1 Animals are proven to be affected by H.S are those show clearly all clinical symptoms of H.S
- 1 Suspicious sick animals affected by H.S are those infected in incubation period, but do not show apparent clinical symptoms, after died and autopsy and examination the lesions of H.S are found and confirmed by diagnostic lab.
- 1 Suspicious animals affected by H.S are those in the same group of affected animals or not yet vaccinated and introduced in the epidemic zone.

λ Duties of the concerned authorities

- 1 Animal owner or person witnessing the events shall notify to the VVW or chief of the village within 24 hours.

3. Black leg

- 1 Animals are proven to be affected by Black leg are those show clearly all clinical symptoms of Black leg.
- 1 Suspicious sick animals infected by Black leg are those in incubation period, but do not show apparent clinical symptoms, after died and autopsy and examination the lesions of Black leg are found and confirmed by diagnostic laboratory.
- 1 Suspicious animals affected by Black leg are those in the group of affected animals or not yet vaccinated and introduced in the epidemic place newly exposed.

λ Duties of the concerned authorities

- 1 Animal owner or persons witnessing the events shall notify to the VVW or chief of the village within 24 hours.
- 1 VVW or chief of the village could report the case to District Livestock and Fisheries Center for controlling, coordinating with VVW and chief of the village to examine, evaluate the status of epidemic disease, separate sick animal for treatment, destroy animal corpse and its wastes.
- 1 Livestock and Fisheries Center further notify to the provincial livestock and fisheries section and to DLF for determining measures of prevention and stop the spread of epidemic diseases outbreak.

- 1 Provincial livestock and fisheries report the case to the provincial government to request declaration of epidemic zone.

- Restricting

Should follow the H S's restrictions

- Areas of restrictions

Determining of epidemic zone could have radius no more than 5 km in the locality where Blackleg is found.

- Treatment and prevention

1. Treatment:

After animals should die quickly, the treatment is mostly so late. In case animal owner report urgently, the treatment should be penicillin injection with dosage 3 millions unit IM in the swollen area and repeat each 6 to 8 hours within 24 hours.

2. Prevention

- Separate sick animal from the herd for treatment and restraint of movement.
- Observe and examine regularly the health of animals
- For animals rearing in the surrounding of epidemic zone within 5 km of radius should be vaccinated against Black leg.
- In the locality where Black leg is exposed, the cattle, buffalo at least 6 months olds should be vaccinated against this disease before raining and immunity expired period is one year.

- Cancellation of restriction

After the last sick animal is in good health reading 14 days and there is no any sick animal could be cancelled epidemic zone.

4. Swine fever

β Pigs are proven to be affected by swine fever are those show clearly clinical symptoms of swine fever.

β Suspicious sick pigs infected by swine fever are those do not show apparent clinical symptoms, but the result of diagnosis is confirmed as swine fever.

β Suspicious pigs affected by swine fever are those in the same group of affected pigs or not yet vaccinated and introduced in the area just exposed swine fever.

Duties of the concerned authorities

β Animal owner or persons witnessing the events shall notify to the VVW or chief of the village within 24 hours.

β VW or chief of the village could report the case to district livestock and fisheries center for controlling, coordinating with VVW and chief of the village to examine, evaluate the status of epidemic disease, separate sick pigs for treatment, destroy animal corpses and its wastes.

β Livestock and fisheries center further report the case to the Provincial livestock and fisheries section and to DLF for determining measures of prevention and stop the spread of epidemic diseases outbreak.

β Provincial livestock and fisheries section report the case to the provincial governor to request declaration of epidemic zone.

β Restrictions

1. It is forbidden to move sick or died pigs from rearing places
2. It is strictly forbidden to move pigs and their products contaminated by swine fever in or out of epidemic zone.
3. It is strictly forbidden to dispose animal corpse in lake, stream, river, should be burned or buried animal corpse in deep pit with the upper part of corpse being at least 1m deep from soil level.

β Area of restrictions

Epidemic zone determining should have the radius no more than 5km in the locality, where swine fever is found.

β Prevention

- Should provide clean drinking water and good quality feed following the need of pigs
- Pigs pen and its surroundings should be regularly clean.
- Observation and examine regularly the health of pigs.
- Should vaccinated at least 2.5 month aged pigs and immunity expired period is on year.

β Cancellation of restrictions

After the last sick pigs is in good health reaching 12 days and there is no any sick pig could be cancelled epidemic zone

5. Foot and Mouth disease

β Animals are proven to be affected by FMD are those show apparent clinical symptoms of FMD.

β Suspicious sick animals infected by FMD are those have wound lesion or blister in the mouth, feet, udder and salivation but do not show apparent clinical symptoms and the result of blood analysis is confirmed as FMD.

β Suspicious animals affected by FMD are those in the same group of affected animal or are not yet vaccinated and introduced in the epidemic zone.

2. Duties of the concerned authorities

β Animal owner or person witnessing the events shall notify the VVW or chief of the village within 24 hours.

β VVW or chief of the village could report the case to district livestock and fisheries center for controlling and coordinating with them to examine, evaluate the status of epidemic disease, separate sick animals for treatment, destroy animal corpses and its waste.

β Livestock and fisheries center further report to the provincial livestock and fisheries section and to DLF for determining measures of prevention and stop the spread of epidemic disease outbreak.

β Provincial livestock and fisheries section reports the case to the provincial governor to request declaration of epidemic zone.

♦ Restrictions

1. It is forbidden to move sick animals from their rearing place
2. It is strictly forbidden to move animals and its product contaminated by FMD in or out the epidemic zone.
3. It is strictly forbidden to dispose animal corpse in lake, stream, rivers, it should be burned or in the deep pit with the upper part of corpse being at least 1m deep from the soil level.

♦ Area of restrictions

Epidemic zone determining should have radius no more than 5km locality, where FMD is found.

♦ Treatment and prevention

1. Treatment:
The treatment is focusing to disinfect infected bacteria, apply disinfectants on the mouth sores (blue methylene, bingare, lemon), use formol 3% washing the feet and keep animals in clean and dry place. In severe case could use antibiotic injection IM or IV.
2. Prevention
 - Separate sick animals from their herd than treat then and limit their movement.
 - Observe and examine regularly the health of animals.

♦ Cancellation of restrictions:

After the last sick animal in the epidemic zone is in good health reading 21 days and there is no any sick animal should be epidemic zone.

Section 5

Slaughter of animal and meat inspection

Article 24 General provisions

No person or any group of persons is allowed to slaughter dress, debone animals such as cattle, buffalo, pig, sheep, goat and dog in anywhere. The suitable technical requirement for those places are approved to establishment of slaughterhouse or slaughter point by DLF or provincial, municipality or special zone agriculture and forestry department.

Article 25 Permission, design and construction of slaughterhouses

Person or group of person intend to establish slaughterhouse, slaughter point shall be issued permission by DLF or the Provincial, Municipality and Special zone Agriculture and Forestry Department according to the procedures as follow:

For slaughterhouse application form T.001 shall be submitted to DLF

For slaughter points Application form T. 001 shall be submitted to the provincial, Municipality and Special zone Agriculture and Forestry Department.

Necessary documents

- Φ Project document
- Φ Socio-economic feasibility and environment impact
- Φ Plan the masse for construction
- Φ Plan of the area of slaughter house and its surroundings

DLF or Provincial, Municipality and Special zone Agriculture and Forestry Department shall issue certificate of Technical requirement for slaughter house or slaughter points if person or group of person has completed the requirements of Article 25 of this technical norms.

Necessary documents for permission, design and construction of slaughter house are outlined by the concerned Ministry:

- permission of construction from ministry of communication post, Transport and construction
- License of operation from ministry of Trade and Tourism and the other documents.

Article 26 Minimum technical requirements for the establishment of slaughter houses.

To ensure that animal products should be clear according to hygienic principles and protect workers' security, the slaughterhouse must have minimum technical requirement requirements as follow:

A.) General principles

Φ Establishment should be located in highland area, far from dense communities, hospital, school, drinking water sources and should have protected fences.

Φ Should have yard and lairage for ante-mortem inspection

Φ Should have quarantine pen for suspicious animals and place for autopsy and destroy animal corpses where it should be separately and far from slaughter and meat handling places.

Φ Adequate working space should be provided such as slaughtering, dressing, deponing and storage

Φ Office or meeting room are separated

Φ Should have cloth change room, WC, sinks restaurant, rooms for workers and meat inspector separately.

Φ Should have wastes treatment systems (stove, septic tank) and water treatment systems (draining canal,...)

B.) Technical requirements for establishment of slaughterhouse

Φ Should have adequate space for each day slaughtering and handling

Φ Building's walls are at least 4 meters high and made by cement

Φ Floors should be beton, hard paved surface or smooth concrete.

Φ Roofs should be covered by galvanized sheets or tiles.

Φ Internal walls should be cement and the height is at least 2m.

Φ Should have clean water system, electricity, light and ventilation systems.

Φ Should be provided stainless pluck hooks for hanging carcass and offal's

Φ Should be provided tables, bench for implements. The surface of tables should be stainless or paved surface the bench should also be cement or stainless for easier cleaning.

Φ Should be provided evisceration room separate

Φ Should have sufficient sinks in each unit (slaughter and dressing hall and meat inspection should be provided not hand operated taps)

Φ The entry point of livestock and outlet point for (dressed carcass) meat should have a forward flow

Φ Should separate strictly clean zone and soiled zone

Φ Should provided cleaned storage (chill-room)

Article 27. Inspection of animals before slaughter (Ante-mortem examination)

Φ Before slaughter each animal must be examine (inspected) such as:

μ Necessary documents specified in Article 6 of the MAF regulation on livestock Management in Lao PDR N° 0004/MAF dated 02/01/1997

μ Examine several systems of animal according to technical veterinary certify good health animal.

μ Examination has to be done in the same day when animal transported prior slaughter. If animal stay in slaughterhouse more than 24 hours zoo-sanitary inspection will be one more again.

μ Animal keeping in the yard prior slaughter shall be provided with adequate feed, drinking water, clean and adequate space for resting

μ In some case such as: pregnant animal or male have to be castrated, veterinarian certify in letter and let them go out.

Article 28. The determination of slaughter method, hygiene and selling meat

1. slaughter method

Φ Each animal before slaughter must be inspected by veterinarian and washed property by clean water.

Φ After entered into slaughter hall animal should be slaughtered immediately

Φ Slaughtering of animals such as cattle, buffalo, sheep, goat and pig should be done in human manner to avoid suffer methods such as: head knocking or blowing. Should be done by captive-bolt pistols or electrical stunning.

2. Basic hygienic principles for slaughterhouse

Φ Slaughterhouse should have condition for protection and suitable measures to control the circulation of the human and animals in and out of the slaughterhouse.

Φ Holding yard and lairage in slaughterhouse shall be kept clean by disinfecting at least one time a month. In case of infectious disease is found the practice should follow article 24 and 37 of the MAF regulation N° 0004, dated 02/01/1997

Φ Slaughter area, dressing hall and store for meat or their products shall be washed as frequent and disinfected at least one time a week by lime or hydrochloride acid (Hcl) according to the recommendation of meat inspector.

- ⊕ All equipment, table, utensils used for slaughtering and dressing shall be washed and cleaned at intervals before and after slaughter operation
- ⊕ There should be an effective and continuous program for the control of pests including birds, rodents, dog and cat in the slaughterhouse and its surroundings.
- ⊕ In case of need to use insecticide which should be approved only for slaughterhouse such as: chlorophos, deandrin,..... and should be careful used according to the recommendation of meat inspector.
- ⊕ Non edible particles and waste material should be disposed in the slaughterhouse

3. Hygiene rules for officers and workers in the slaughterhouse

- ⊕ Every person engaged in slaughterhouse shall pass training education and has certificate free from severe infectious diseases such as: intestinal disease hepatitis, tuberculosis, endo and exto- parasites such as: itch, scabies, mange,....
- ⊕ All person working in slaughterhouse shall maintain a high degree of personal cleanliness. During operation should wear cloths following hygiene principles such as: caps, coat, gown, gloves and footwear. After work it must store in determined places.
- ⊕ Person who approved to visit slaughterhouse could wear specified cloths of slaughterhouse such as: gown, footwear and cap.
- ⊕ Cloth, equipment, implement shall be kept in separated cloths.
- ⊕ Smoking, eating, chewing, spitting shall be prohibited in slaughter place and any part of the slaughterhouse.

4. Transport of carcasses and meat products

- ⊕ Meat trucks should not carry anything other than meat not the same truck transported live animals.
- ⊕ Meat truck should be well covered to avoid dust, fly and other contaminating to meat.
- ⊕ Meat truck should have refrigeration system if the transport takes more than 2 hrs.
- ⊕ Meat trucks should be cleaned and disinfected by hydrochloride acid both before and after transportation.
- ⊕ It is forbidden to transport other dangerous matters together with meat such as: insecticides, pesticides, gasoline cans, fertilizers and other chemical materials, which will contaminate the meat.

21

- ④ Before transport offal's such as: estomachs, intestines must be cleaned, washed and scraped. (head and legs of large animals should be removed hairs away)
- ④ When transport of whole carcass, half carcass or quartered carcass should be hung on Hooks or kept in containers well covered. Other meat product should be kept in separate container.
- ④ Containers for transport meat should be made by stainless material and easier cleaned material such as: stainless container, plastic container.

4. Hygienic principles for meat places for sale in the market

- ④ If possible meat and offals for sale in the market should be hung by stainless hooks easier to clean.
- ④ Meat and offals for sale placed on table should be rendered separately meat, offals, blood. It is better if kept in glass cupboard and rendered on clean table which should be at least 80 cm high from soil level and table width no more than 80 cm, it should be cleaned befor and after selling.
- ④ Every meat seller should be regularly examined and certified by doctors.
- ④ Every meat seller should maintain high degree of cleanliness, have cutted fingernails and wash hands frequently and always after visiting the toilet.
- ④ It is forbidden that meat sheller seats on the same table of meat and their products.
- ④ Every meat sheller in the market should wear uniform cloth cleaned according to hygienic principle such as: caps, white gown and apron.
- ④ Every meat seller in the market should have certificate of slaughterhouse/slaughterpoints or other evidences indicated that meat and offals came from slaughtehouse/slaughterpoint or already inspected by meat inspector.
- ④ Meat or their products for sale should be fresh, no smell and contaminated.
- ④ Knives, chopng block and other equipment used for cutting meat and meat products should be cleaned and washed regularly.
- ④ Chopng block should be hard wood such as: tamarind wood, kheng wood or otehr wood no have smell and no have negative impact to the consumer' health.
- ④ Knives used to cut meat and their products could be made by stainless.
- ④ Several equipments should be stored in special places after sale meat for ensuring hygiene and cleanness.

6. Meat selling in the super market

- ⊕ Meat or their product for sale should have certificate from slaughterhouse/slaughterpoint certified technical requirement from DLF.
- ⊕ Meat or market products for sale should be packaged according to hygienic principles.
- ⊕ Should affixed label presenting weight, price, date of packaging, type source of meat or meat products
- ⊕ Should be kept in freezer or glass wardrobe having refrigerator system between 0 to 4°C.

Article 29 In case of infectious disease is found before slaughter

- ⊕ If any animals show clear clinical symptoms for Anthrax, Blackleg, Haemorrhagic septicemia, FMD or Swine fever, or if the Laboratory has confirmed that it is infected by one of those diseases, those animals need to be slaughtered under veterinary principle in the separated place but it should be in the limit of the slaughterhouse.
- ⊕ In case of dying of animals before slaughter and has confirmed that it is infected by Anthrax, the animal corpse should be properly burned and disinfected by 10% formalin thereafter the holding yard where the animal were kept and pour lime and protect these place by hard fencing.
- ⊕ Slaughter method is under the supervision of veterinarian with principle to avoid blood flowing from animal body, it should be head knocking or captive-bolt stunning.
- ⊕ In slaughterhouse the animal corpse should be destroyed by burning and in slaughter points by burial in the point at least 1.5 m deep and pour with lime.
- ⊕ Those holding yard should be disinfected by formalin, Dettol, Lizol and pour with lime and allow it at least one month before transport of animals.

Article 30 In case of infectious disease is found in the slaughterhouse

- ⊕ When infectious diseases such as: Haemorrhagic septicemia, Anthrax, Blackleg, FMD or Swine fever is found in the slaughterhouse, meat inspector can order immediate stop to slaughter next animal and practise technical principles as follow: clean and disinfect slaughter place by formalin 10-15%, destroy animal corpse by burning, boiled blood disease in the limit of slaughterhouse.
- ⊕ Implements such as: Knives, Axes, Containers... and others should be washed by formalin 10% or sodium hydroxide 5% the used cloth should be boiled in 100 °C

temperature for 30 minutes and plastic wear such as: Foot wear, gloves, ... should be soaked in formol or Cresil 1-2% and observe clinical symptoms, if it is irregular could go to the hospital.

- ⊕ For ensuring effective disinfection in case of Anthrax the slaughterhouse should be closed at least 15 days, for awine fever, blackleg and haemorrhagic septicaemia should be closed at least 3 days.

Article 30 In case of other diseases are found infectious diseases specified in article 29 of this technical norms DLF has also determined, that do not slaughter animal affected by some disease which are dangerous to human and animal health, these diseases are as below:

- ⊕ Rinderpest, Aujeszky's disease, infectious bovine rinotracheitis, contagious bovine, pleuropneumonia, Vesicular stomatitis, Leptospirosis, Rabies, Brucellosis, Tetanus, Swine erysipelas, Atrophic rhinitis, Salmonellosis, Fever animal having high T°, swollen animal, tin animal, pregnant or newly given birth, animal having cuts and wounds and vaccinated animals not reaching 21 days.
- ⊕ The above animals should not slaughtered for meat consumption.
- ⊕ In case found of Liverfluke, cystic meat, E. coli, Actinomycosis, Mastitis, Paratuberculosis and Botulism meat inspector should decide permission partial condemned meat can be distributed and disposed all carcass. If can be distributed meats should be cooked and done under supervision of meat inspector.

Article 32 In case of cystic meat

- ⊕ If three or more Cysts are found in one cut meat ($\approx 40 \text{ cm}^2$) of cheek, Tongue, intercostal muscles. Depend on decision of meat inspector that condemned meat can be distributed (on condition that this meat is well boiled) or destroyed in the slaughterhouse. In case of distribution this meat can be cutted in pieces which thickness no more than 10cm and boiled it at least 30 minutes.
- ⊕ If less than three Cyst are found in one cut by veterinary meat inspector more cut of chuck steak and round steak is needed, if found again cysts, this meat can be boiled under supervision of meat inspector.

Article 33 Slaughtering practices in slaughter points

Slaughtering practices in slaughterpoints should follow article 28 and 29 of the MAF regulation on Livestock management in LAO PDR N° 0004 dated 02/01/1997, but article 30 and 31 should be done in each slaughterpoints condition but could be ensured the hygiene principle and health of consumers by avoiding infectious diseases from animals to animals and from animals to human.

Article 34 For ink and stamps

- should write in the center "consumption prohibit"
- The size of letter is 5mm.

Figure of meat stamps



Round



Triangle



Square stamp

3. The minig of type of meat stamp

1. Round stamp: meaning good quality meat, free from disease and can distribute of consumption
2. Triangle stamp: meaning psed under condition of such treatment as by cooking.
3. Square stamp: meanins not permit to consumption

4. The colour of meat stamps

1. blue colour ink: meaning meat of Buffalo, goat and sheep.
2. Red colour ink: meaning meat of cattle and pigs.

5. Part of meat for meat stamp.

1. Cattle and buffalo: half carcass should be stamped to 8 points such as: steak, porterhouse steak, round steak and arm steak both interior and exterior part.
2. Pigs, sheep and goat: should be stamped to 6 points such as: rib cliops, backlog and foreleg both interior and exterior part.

Article 35: Practice for carcass affected by sever infectious disease sever infectious disease affected carcass can be destroyed strictly under supervision of veterinarian, it should not be allowed the ner to do himself.

Article 36: sending note of meat, meat products and offals meat and edible offals for sale in the market should hhave sending note from slaughterjhouse or slaughterpoint following applection form N^o C.006

Article 37: Slaughtering animals for traditional ceremonies.

- ◆ Slaughtering animals for traditional ceremonies such as : reception, wedding ceremony and worshipping should be approved by head of the village and should be inspected by village veterinary worker, meat and its products should be eater in each ceremony.
- ◆ If there is no village veterinary worker, head of the village has to certify, meat and its products should be also eaten in each ceremony.

1. Ink for stamping the meat :

Should be special ink which no have negative impact to the quality of meat.
Their color and smell is no dangerous to consumers' health.

Some ink position

	Violet	Red
-Violet Methylene	2.02g	-
-Amarant	-	10.1g
-Glycerine	40.55g	30.3g
-Rectificate alcohol 96°	10.10g	10.10g
-Sugar	0.10g	-
-Distilled water	47.23 ml	49.5 ml

2. Meat stamps (types, size and signs)

Φ Types of meat stamps

DLF is designed 3 types of meat stamps as follow:

1. Round stamp.
2. Triangle stamp.
3. Square stamp.

◆ Size of meat stamps

1. Round stamp: should have 5cm of diameter.
2. Triangle stamp: triangle should have 3 size equal and perpendicular should be 5cm.

Remark Round and Triangle stamps should be bordered from exterior to interior 1cm.

3. Square stamp: should have equal size of 5cm

◆ Mark of meat stamps

Each types of meat stamp should compose by letter as follow:

1. Round stamp:
Top part should write "DLF"
Center should write name of "slaughterhouse/slaughterpoint"
Bottom part should write "meat inspection unit"
2. Triangle stamp:
Left size should write "DLF"
Right size should write name of "slaughterhouse/slaughterpoint"
Bottom size should write "meat inspection unit"

Remark

Alphabet written on round and triangle stamps should be 2mm of size

3. Square stamp:

- ◆ In case of meat and its products for consumption in other places, should be inspected by village veterinary worker and certify by head of the village or case no have village veterinary worker. Head of the village certifies and this meat and its product shall not be allowed to put on sale in the market.

Article 38: The smuggling of slaughtering animals

Department of Livestock and Fisheries or Provincial, Municipality and Special zone Department of Agriculture and Forestry has determining that smuggling of slaughtering animals such as cattle, buffalo, pig in house or offices and distributing meat and its product for sale without permission from authority and inspection from veterinarian responsible in this area.

Section 6

Standard selection and marking animals to conserve as breeding stocks

Article 39: Determination of local breed conservation areas.

Determination of local breed conservation areas has purpose to conserve local breed from the impact of Livestock development areas for local breed conservation shall be clearly surveyed and have clear data base.

After areas determination, the principles and techniques should be done:

- ◆ To select the animals as breeding stock
- ◆ To castrated the excess males from selection
- ◆ -Not allowed to be moved selection animals from the local breed conservation area without permission of authorised officer.
- ◆ -Not allowed to bring new breed into the conservation area.
- ◆ -The Department of Livestock and Fisheries shall define the local breed conservation area for cattle, buffalo and pig in some mountainous areas.

Article 40: The selection of animals to conservation as breeding stock.

1.
 - ◆ One year old cattle's height of male is at least 1.2m and of female 1.1m.
 - ◆ One year old Buffalo's height of male is at least 1.3m and of female 1.25m.
 - ◆ The height measure is made from foreleg foot to the top of
 - ◆ -One year old Cattle has weight between 100-120kg
 - ◆ -18 month old cattle has weight between 120-150kg
 - ◆ and more than 2 years old Cattle has weight more than 180kg
 - ◆ - Same age female has less weight for 10% of the male.

27

- ◆ -One year old buffalo has weight between 130-150kg
 -18 month old buffalo has weight between 150-180kg
 -and more month than 2 years buffalo has weight more than 200kg
- 2. Cattle-Buffalo conserved as breeding stock should not be aggressive, difficult to catch, no affected infectious disease and genetic disease, should be healthy and should have good phenotypical formation. After selection, those animals should be registered and marked signs with a hotiron at the upper back legs. After balancing proper ratio between the male and female animals. The males that do not conform to selection criteria and excess of animal balance should be castrated or sale.
- 3. What should not do with animals that are conserved for breeding stock should follow Article 48 of the MAF regulation on Livestock management in LAO PDR N° 0004 dated 02/01/1997.
- 4. Animals owner should request for withdrawal these animals from the breeding herd while they have presented bad characters. Should follow article 49 of the MAF regulation on Livestock management in LAO PDR N° 0004 dated 02/01/1997. After permission of withdrawal the concerned officer shall stamp (W) on the registration card and issue certificate for withdraw by DAFO. Those animal should be slaughtered or castrated and rearing for sale.
 - In case that animal owner has to move from conservation area. Depend on the decision of concerned officer their animal should be moved or purchased as breeding herd.
- 5. Government policy for breeding stock owner, who receives special benefit such as : animal vaccination free. The transfer of ownership should be done in conservation area. Each transfer of ownership should be reported to the concerned officer for easier monitoring.