

**MINISTRY OF AGRICULTURE
ANIMAL AND PLANT HEALTH REGULATORY
DIRECTORATE**

**ANIMAL HEALTH CAPACITY BUILDING
STRATEGY**

JUNE 2010

1. Introduction

- ◆ Livestock agriculture is one of the most important components of the Ethiopian agricultural economy. Livestock raising is serving as a source of livelihood food, draft power, cash income, assets for investment and insurance, manure etc for millions of smallholder pastoralists and farmers in the country.

On a global basis, animals and animal products are playing an increasing role in trade and are taking a greater national economic significance in many countries. This increasing global trade (increased overall movements of live animals and animal products to reach world markets) led to increased spread of new and potentially devastating diseases of animals affecting the economy, trade and public health of many countries within shorter time periods.

Since the introduction of Modern veterinary service in to Ethiopia around the end of 18th century, a num

Improved delivery and assured access to appropriate animal health services is known to improve livestock productivity to more economic levels.

In southern Afghanistan districts with access to basic services and remedies compared to districts without, mortality of animal s due to diseases was reduced on an average of **26 percent and 43 percent in young and adult ruminants, respectively.**

The estimated annual net benefits of the programme were in the order of 500 percent of the costs involved and amounted to some US\$120600 per district.

An estimated annual mortality loss of livestock due to disease in Ethiopia is in the order of 8-10%, 14-16% and 11-16% for cattle, sheep and goats respectively. This would mean a loss of about 4.3, 4.45 and 3.6 million cattle, sheep and goats respectively. A conservative estimate of reduction of mortality among adult ruminants by 26% (as was evidenced in Afghanistan) would save lives of about 1.2 million cattle, 1.16 million sheep 0.94 million goats.

In a country where livestock are so vital to the livelihoods of the community and the national economy, the role of effective animal health services delivery is playing has a tremendous significance towards attaining the millennium development goals of poverty reduction and ensuring food security.

The veterinary profession

The welfare of a profession is in a symbiotic relationship with the public interest.

Clear enabling legislation is required for public veterinary authorities to carry out their regulatory responsibilities. Likewise, legislation allowing for the **charter of veterinary professional associations** (national and local), establishing registration bodies, and allowing the existence of private veterinary practice are central to the rational delivery of veterinary services.

Enabling national legislation needs to define legally veterinary and other animal health care practices; to state academic and other qualifications required before registration; and to define the powers of the statutory body.

At least the following functions need to be assigned to some combination of legally sanctioned bodies:

- ✚ examination and certification of new veterinary graduates, immigrant veterinarians and other new entrants to ensure compliance with the statutory acts;
- ✚ registration of veterinarians and other animal health care providers indicating the levels of responsibility with which each category may legally be entrusted;
- ✚ protection of consumers from unlawful acts by registered animal health care providers;
- ✚ generally policing the activities of registered veterinarians and other health care providers to ensure that they act in accordance with laws relating to the practice of veterinary medicine;
- ✚ prosecuting non-registered persons who allegedly break the statutes; and
- ✚ Determining those remedies and vaccines that can be sold and dispensed by each class of animal health care practitioners.

Statutory registration body

A statutory body for examining, certifying, registering and disciplining those providing animal health care services is a necessary means both to uphold technical standards of the profession and to protect consumers.

Thus, this statutory body usually referred to as the *Veterinary Board* or *Council* should be **independent of direct control by the national veterinary service, the CVO or the professional veterinary**

association, while retaining the technical and ethical values of the profession.

Veterinary professional associations

Their activities are, however, monitored by legal authorities to ensure that the association or its members avoid abuse of the public trust.

National veterinary associations can take a credible advocacy role for the public interest. Governments and economies cannot operate well nor develop fully without the input of the collective contribution of the veterinary profession.

- ▶ Veterinary associations serve as a forum for communication based on common socialization between public service veterinarians and their peers in private practice and industry.
- ▶ Meetings of the national association provide the occasion for discussion among the various interest groups.
- ▶ the veterinary professional association can formulate a common stand on issues affecting the association's members but which also have wider public interest.
- ▶ The professional association has a critical role to play in maintaining and upgrading the technical competence of its members through continuing education.

Veterinary services delivery by non-veterinarians: AHAs, AHTs, auxiliaries and livestock owners

In many countries livestock owners treat and vaccinate their own animals legally with nonprescription drugs and vaccines.

The reason for this is that owners have the legal right to do as they wish with their own property, within limits imposed by local legislation

and cost efficiency. For treatment and vaccination by lay-persons to be tolerated, risks to the public need to be minimized and animal welfare maximized. This can only be accomplished through education and compliance monitoring.

The vital and economically viable services that AHAs, AHTs and auxiliary personnel perform in marginal areas, particularly in low-input low-output livestock systems, and/or with low value livestock species need to be recognized. Community-based primary animal health care workers have an important niche in the delivery of services in developing countries.

There is a need to define clearly the:

- ✚ tasks permitted to various cadres of the animal health team;
- ✚ the remedies and vaccines they are permitted to administer and
- ✚ the procedures and tests they are allowed to carry out.

Different decisions about these issues will be dictated by the ecological and economic conditions the livestock production system of each country. In making these decisions, however, the countries establishing regulations need to ensure that producers who desire economic animal health interventions are able to obtain them; that the long-term quality needs of producers are being secured; and that problems with the abuse of remedies are avoided. In all cases, the economic welfare of both the animal health cadre and the producers forms a legitimate basis for decision-making.

Under any circumstances, the effectiveness of animal health assistants, technicians and auxiliaries will be enhanced if they are incorporated within structures that provide technical advice, support

and guidance from veterinarians. An example of animal health auxiliaries (village relais) being successfully incorporated into the national veterinary services is in Burkina Faso. Auxiliary-level persons were trained under a project to administer Newcastle disease vaccine and were subsequently incorporated with the national veterinary service.

Services in low-potential, marginal areas

Mounting experience indicates that AHAs, AHTs and auxiliary personnel are more dependable in delivering veterinary services in marginal, low-potential areas than the public veterinary services or private sector veterinarians.

Where the economic value of individual animals is low, owners will:

- ✚ accept a certain level of loss before agreeing to pay for veterinary services;
- ✚ become skilled in diagnosing and treating their own animals;
- ✚ demand access to veterinary remedies and vaccines with which, often on the advice of a veterinarian, to treat their own animals; and
- ✚ request skilled diagnostic advice, often from post mortem and laboratory methods (Baker, 1995). They offer an affordable alternative to deliver selected services, even on a commercialized basis and are often highly motivated. In many countries (such as Bangladesh) women are the primary providers of basic animal health services in communities.

The public veterinary service still has responsibilities for implementing public service mandates in the marginal, low-potential

regions. To exercise these responsibilities, methods of delivery through other providers or outright subsidies need to be implemented. Policy-makers in the public veterinary services need to examine how NGOs, membership organizations, communities or the private sector are providing goods and services in other countries and benefit from lessons learned.

A delivery programme needs to be designed that meets the client's needs in an economical manner and still carries out government responsibilities. Numerous examples are presented in a forthcoming FAO policies and strategies document (in preparation).

Cost recovery

Cost recovery is the concept of "user-paid" fees for specific services that are acquired from the public veterinary services, by virtue of its professional responsibility, but that also financially benefit the owner of livestock or products. Cost recovery can be applied even where there are some positive externalities.

In theory, purely public goods such as public health should be financed by the national treasury or by an obligatory user fee (tax) on those who benefit. Where both the public and an identifiable private owner benefit, the cost needs to be apportioned. This is the economic basis for cost recovery for such services as vaccination for notifiable (gazetted) diseases, meat inspection for interstate commerce, and for herd disease status certification.

An example is the mandated hygiene inspection of meat shipped across state borders or internationally. Inspection and occasional condemnation of livestock are a nuisance and a cost to the livestock

producer, meat-packing industry and the consumer. At the same time certified government inspected and passed meat is more marketable and hence more valuable than meat that has been inspected. As inspection is both a burden and an asset, some or all of the costs can be recovered as user fees from the industry. These are legitimate costs of doing business that may be passed along to the consumer.

Experience indicates that cost recovery sensitizes the public to the inevitable need to pay for some goods and services, thus paving the way towards acceptance of full commercialization. Within the government services, cost recovery is a pragmatic, but hopefully temporary, way to supplement inadequate personnel and operational budgets in some countries.

It frequently is desirable to place the revenues from user fees into revolving funds to assure that sufficient will be available for the services to be provided. Revolving funds should be managed by the immediate users (public, private or both). This provides incentive and motivation to both providers and payers of services (Sidahmed, 1995).

Revolving funds should not reduce the state's responsibility to pay for services that are of a public good nature. It is possible and sometimes desirable that revolving funds be excluded from the government budget, where they will be free from treasury or International Monetary Fund restrictions. Such funds can then be a prelude to privatization, particularly when they are managed by end-users at the local level.

Balance of animal health education with national needs

A reasonable numerical balance of graduates between annual output and needs eliminates some pressures when restructuring veterinary services. It is extremely difficult, nonetheless, to estimate this balance largely because an equitable balance varies according to the perception of the various stakeholders. Clear deficits may be made up in a matter of months, by importing veterinarians from countries with a surplus, or within a few years through educating animal health assistants via the veterinary science curriculum. Excesses are a glut on the market and rather more difficult for national economies to absorb.

Rational utilization of veterinary expertise has a marked effect on the perceived number of graduates required. Published norms for the number of veterinarians or auxiliary personnel per thousand tropical livestock units do not make much sense if scant operational budgets restrict purchase of fuel for transportation or fees for services are so high as to preclude affordable care.

The public is not well served by major deviations from balance. With too few providers, services may not be available or are too expensive for large sections of society, while too many providers are expensive for governments to train and employ and cause highly competent private practitioners to be undercompensated. Likewise, competent practitioners cannot survive long term as they may not earn sufficient fees to be able to invest in new equipment and acquire skills provided by further education.

Overcapacity to produce veterinarians may be avoided through regional veterinary schools. Here the combined needs of several countries can be produced in one veterinary faculty that supports a

critical mass of expertise offering quality education. A regional veterinary school, by definition, leads to a "harmonized curriculum" that in turn allows for reciprocal registration of graduates among the countries. In addition to the cost savings in eliminating excess veterinary schools, reciprocal registration increases mobility and opportunities for veterinarians to fill gaps in demand. Where excess educational capacity already exists, faculties may exploit opportunities for providing continuing education, short-course refresher training, in-service training to meet governmental needs; or vocational courses for animal health assistants and auxiliary personnel.

Likewise, the training of auxiliary personnel needs to be approached cautiously. Auxiliaries must survive in the private sector (McCorkle and Mathias, 1996) subject to market forces, often in marginal livestock areas. They need sufficient skills to provide reliable, needed and cost-effective services but are constrained by excessive costs incurred by long-distance travel and the low density of livestock populations. A proper balance needs to match the supply of auxiliary personnel with expected demand. The concept that auxiliary personnel in reality are primarily livestock owners or farmers and only provide animal health or husbandry services part-time has proved successful in the Central African Republic, northeast Thailand and Afghanistan.

Part II

Potential and constraint

- ▶ **Presence of huge livestock resource**
- ▶ **Proximity to potential markets**
- ▶ **Huge land mass, varied agro-ecology and topographical conditions allowing creation of isolated compartments with**

different animal health status to enable continuous supply of export markets if diseases occur in certain parts of the country

- ▶ **Varied livestock breeds that have relative adaptation and resistance to a number of disease conditions**

Part III

Historical development

History of the veterinary service in Ethiopia

Modern veterinary service is started around the first half of 1885 with the introduction of the Italian veterinary mission. Much progress has been made since the establishment of the Animal health assistants training institute and the National veterinary institute both in Debre-Zeit since 1963.

The establishment of the Faculty of Veterinary medicine, AAU in 1979 in Debre-Zeit has been a tremendous boost to the supply of qualified veterinarians trained in Tropical veterinary Medicine. Since 2003 other 6 new faculties have emerged under Haromaya, Mekele, Gonder, Jima, Hawassa and Arbaminch universities and one TVET college at Alagae.

The veterinary services have developed much over the past 25 years. The number of staff and the number of delivery points for veterinary services has increased dramatically. Ethiopia has made much progress in the eradication of rinderpest and the verification of its eradication.

The Veterinary services have undergone many changes in structure and staffing. The country currently produces about 16 types of livestock and poultry vaccines with an average of 45-60 million doses per year.

Disease

Current status

Human resource, Public veterinary services, MoARD, 2007

| Region | Vet | AHA | AHT | Meat inspector | lab technician | Total |
|-------------|-----------|------|------|----------------|----------------|-------|
| Federal | 67 | 7 | 5 | 25 | 89 | 193 |
| Oromia | 78 | 437 | 599 | 94 | 42 | 1250 |
| Amhara | 56 | 656 | 27 | 27 | 35 | 801 |
| Tigray | 37 | 89 | 73 | 16 | 2 | 217 |
| Afar | 14 | 30 | 0 | 0 | 1 | 45 |
| Somali | 15 | 59 | 290 | 2 | 4 | 370 |
| SNNP | 59 | 124 | 470 | 36 | 21 | 710 |
| Benshangul | 9 | 24 | 115 | 1 | 1 | 150 |
| Gambela | 3 | 6 | 15 | 0 | 0 | 24 |
| Diredawa | 5 | 5 | 15 | 4 | 3 | 32 |
| Addis Ababa | 9 | 10 | 11 | 21 | 4 | 55 |
| Harari | 1 | 5 | 2 | 2 | 0 | 10 |
| Total | 353 | 1452 | 1622 | 228 | 202 | 3857 |

- **million cattle**
- **million sheep**
- **million goats**
- **million camels**
- **million equine**
- **million poultry**

| Species | Number in million | TLU in million | | | |
|---------|-------------------|----------------|--|--|--|
| Cattle | 43.23 | 43.23 | | | |
| Sheep | 29.64 | 2.964 | | | |
| Goat | 25.85 | 2.585 | | | |

| | | | | | |
|--------------|--------------|----------------|--|--|--|
| Camel | 2.32 | 3 | | | |
| Equine | 6.43 | 3.215 | | | |
| Poultry | 32.41 | 0.3241 | | | |
| Total | | 55.3181 | | | |

The human resource to TLU ratio compared to

| Category | Current status | African average | % from African Average | Stated target |
|-------------------|----------------|-----------------|------------------------|---------------|
| Vet | 157,000 | | | 34000 |
| AHA | 38000 | | | 8800 |
| AHT | 34000 | | | 10800 |
| AHA+AHT (3074) | 18000 | | | 6000 |

Besides the low number of professionals compared to the African Average, the difficult access to many of the rural areas and low logistic facilities available, high disease challenge requiring intensive field visits and checks may necessitate the Ethiopian animal health personnel above the continental average. The current programs in different Faculties will address the issue in the coming few years time.

Professional development through CPE is not available either for private or public employees. *This requires designing of training programs that will address all the stakeholders on at least on annual basis.*

Veterinary infrastructure 2007

| Region | Sub-Woreda clinic | Woreda clinic | Clinic total | Dom. Abattoir total | Quarantine station | Vaccine production and diag. institute | Ref. diag. lab | Reg. diag. lab | Total |
|--------------|-------------------|---------------|--------------|---------------------|--------------------|--|----------------|----------------|-------------|
| Addis Ababa | 0 | 7 | 7 | 3 | 0 | 0 | 0 | 1 | 9 |
| Afar | 44 | 27 | 71 | 1 | 0 | 0 | 0 | 1 | 39 |
| Amhara | 728 | 115 | 843 | 32 | 0 | 0 | 0 | 2 | 770 |
| Bensh.Gumuz | 78 | 22 | 100 | 7 | 0 | 0 | 1 | 1 | 62 |
| Dire Dawa | 21 | 1 | 22 | 1 | 0 | 0 | 0 | 1 | 24 |
| Federal | 0 | 0 | 0 | 0 | 3 | 1 | 1 | | 14 |
| Gambela | 8 | 6 | 14 | 2 | 0 | 0 | 1 | 0 | 0 |
| Harari | 0 | 3 | 3 | 2 | 0 | 0 | 0 | 0 | 9 |
| Oromia | 407 | 215 | 622 | 89 | 0 | 0 | 0 | 3 | 610 |
| SNNP | 126 | 92 | 218 | 47 | 0 | 0 | 0 | 2 | 164 |
| Somali | 43 | 49 | 92 | 2 | 0 | 0 | 0 | 1 | 97 |
| Tigray | 173 | 110 | 283 | 20 | 0 | 0 | 0 | 1 | 278 |
| Total | 1628 | 647 | 2275 | 206 | 3 | 1 | 3 | 13 | 2076 |

Private veterinary services -2007

| | Clinic | Health post | Clinic total | Drug importer | Pharmacy | Rur.drug shop | drug total | Total |
|---------------|--------|-------------|--------------|---------------|----------|---------------|------------|------------|
| Addis ababa | 12 | 0 | 12 | 0 | 25 | 0 | 25 | 37 |
| Afar | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| Amhara | 7 | 0 | 7 | 0 | 272 | 0 | 272 | 279 |
| Benshan.gumuz | 0 | 1 | 1 | 0 | 0 | 10 | 10 | 11 |
| Diredawa | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 |
| Federal | 0 | 0 | 0 | 27 | 0 | 0 | 27 | 27 |
| Gambella | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| Harari | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Oromia | 23 | 0 | 23 | 0 | 80 | 103 | 183 | 206 |
| SNNP | 2 | 3 | 5 | 0 | 0 | 26 | 26 | 31 |
| Somali | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 9 |
| Tigray | 3 | 0 | 3 | 1 | 0 | 14 | 15 | 18 |

Total **47** **4** **51** **28** **378** **170** **576** **627**

The number of private veterinary practitioners of all professional categories sums up to 627 of which 576 (91.9%) are involved in drug importation and retail activities and the rest 51 (8.1%) are involved in clinical services deliveries.

Problems to private sector:

- ◆ Confined mostly to big cities and towns
- ◆ No standard licensing and regulatory mechanism cross regions that delineate tasks to be performed by different categories and infrastructural requirements to be fulfilled
- ◆ Illegal drug trades and clinical and services provisions uncontrolled
- ◆ Lack of finance (credit facility with no or minimal collateral)
- ◆ Reliable and accessible supply of drugs, vaccines etc

List of diseases major trade limiting disease

- Rinderpest, PPR, SGP,LSD,RVF,FMD, **Current**

Administrative Structure

The veterinary services are organized as Federal (Animal Health Department of the Ministry of Agriculture and Rural Development) and Regional services. Although not fully implemented, the duties and functions of the federal and regional state veterinary services have become clearer.

An organigram of the Ministry of Agriculture and Rural development is attached in Appendix 2. At Federal level, the Department of Animal

Health is answerable to the State Minister for Agriculture Development.

Part V

Future interventions

- 1. Community service delivery : (clinical, drug, vaccine, AI, advice)**
- 2. Public: at present there are about --- Woreda and ----sub-woreda clinics----- total----- clinics which provide service to the community.**

Based on the assumption that at least one animal health post is required per 3 FTC the coverage is -----%.

The annual clinical services delivery data of 2006-2007 indicate that that animals that got the service are not more than 50 million to a maximum. This shows -----@ of the ruminant and equine population that may require to a minimum of at least one treatment per year including external parasites.

- a. Community (CBAHWs, Cooperatives etc)**
- b. Private**
- c. Others (NGO, etc)**

2. Federal issues

Information system

- ▶ Passive
- ▶ Surveillance
- ▶ Investigation
- ▶ **Prevention and control**
- ▶ **Tads**
- ▶ **Zoonotic**
- ▶ **Vector borne (tsetse, ecto-parasite etc)**

► **Breeding and multiplication centers, apiary, wild animal dis**

KEY POINTS: Artificial breeding centres

RISKS:

- An artificial breeding (AB) centre is an intensive, concentrated holding focus for various animal species.
- Collection of semen/embryos from animals incubating disease could lead to the use and storage of infected material.
- Rapid and diverse spread of an emergency disease could occur through dissemination of infected semen/embryos. The distribution of fresh and chilled semen/embryos would pose a higher risk than frozen material because the short storage time would increase the possibility of spreading the disease before clinical signs develop in the donor animals.
- Inseminators, technicians and veterinary surgeons visit farms over a large area, thereby providing the potential for rapid spread of disease.

DISEASE CONTROL STRATEGY:

- AB centres hold valuable elite breeding stock and a conserved store of genetic breeding resources. This justifies a significant commitment to ensure maximum protection at all times.
- If an emergency disease outbreak occurs in the area of an AB centre it would be feasible

to adopt an approach of temporarily closing down the processing and services operations of the AB centre and associated artificial insemination services. Operations would commence when subsequent information indicates that there is no further risk of spreading the disease by semen or embryo collection, storage or use.

Description of AB centres and their operation

1.1.1 AB centres (approved for import/export)

AB centres are licensed or approved quarantine centres established to hold and maintain cattle, sheep, goats, pigs or horses for the collection, processing, freezing, storage, importation, transfer and distribution of semen and embryos. These centres distribute fresh, chilled or frozen semen or embryos directly to semen and embryo centres, subcentres, inseminators, veterinarians and farmers.

As stated in *Minimum Health Standards* (AQIS 1988), licensed/approved AB centres must comply with the following criteria.

- (a) Be a quarantine area, securely double fenced by fences at least three metres apart. The wall of a building within the centre may replace all or part of the internal fence.
- (b) Be under veterinary supervision to the satisfaction of the relevant Chief Veterinary Officer (CVO).

(c) Have the following facilities within the fully health-tested area of the centre:

(i) accommodation facilities for stock that have passed the prescribed health tests;

(ii) facilities for the collection of semen from these stock; and

(iii) a processing laboratory and storage facilities for semen from these stock.

(d) Provide an admission area for stock under test before entry to the 'fully health tested'

area. The admission area shall be an additional quarantine area, preferably adjacent to

the fully health tested area of the centre. The admission area shall be separate from the

fully health tested area and from other adjacent areas by the buffer strip as described in

(a).

(e) Provide for the admission of stock to the fully health-tested area only after completion of

health tests that are carried out within the admission area.

(f) Provide for all stock in the centre to remain within its boundaries at all times and in

isolation from all stock not in the centre.

(g) Provide that, where a terminal for inseminators or other persons associated with stock

outside a centre, the facilities used by these personnel will have separate access to that of

the centre proper.

(h) Provide that samples collected from sires under test and equipment used for collection

shall not be taken into the semen laboratory, or alternatively, that arrangements

satisfactory to the CVO shall be made to ensure the separation of materials that have

been in contact with untested stock, from stock also on the centre.

(i) Ensure that semen from unlicensed sires may not be collected, processed, or used at a

licensed/approved artificial breeding centre. It may be stored at such centre in a separate

isolated container.

The entry and quarantine facilities, semen collection facilities, and hospital facilities on

licensed AB centres may be used for multiple species, subject to the satisfaction of the CVO.

Special entry and maintenance testing procedures may be added to the minimum health

standard for each species if one species is to be maintained alongside another species on the

licensed AB centre.

AUSVETPLAN Artificial breeding centres

3 Version 2.1

Embryo production is accepted on licensed/approved centres subject to donors meeting

standards for females as described in the *Minimum Health Standards*.

Imported frozen semen or embryos received from overseas or from licensed/approved AB

centres in Australia are admitted into licensed storage facilities on an AB centre.

The AB centres conduct a service for collection and processing and distribution of semen or embryos collected outside licensed AB centres. These products can be stored in an unlicensed area in tanks not containing any licensed semen or embryos.

The AB centre can supply liquid nitrogen and AI equipment to those involved in AI services.

They can also provide service and delivery of semen or embryos to farms by AI inseminators operating from the AB centre.

1.1.2 AB semen and embryo centres

These centres are licensed for the importation, storage and dispatch of frozen semen or embryos from overseas or fresh, chilled or frozen semen or embryos from licensed Australian AB centres. Semen or embryos collected outside licensed premises can be stored here but must be kept in separate containers and in isolation from licensed products. These centres are also licensed for the supply and dispatch of liquid nitrogen and AI equipment.

No animals are held or maintained on AB semen and embryo centres and no inseminators operate from the centres.

1.1.3 AB subcentres

These are licensed centres for the receiving, storage, and dispatch of fresh, chilled or frozen semen or embryos from licensed Australian or overseas AB centres.

Unlicensed/on-farm collected and frozen semen or embryos can be stored, in separate isolated storage, at these subcentres on behalf of owner farmers. These centres are able to supply and dispatch liquid nitrogen and AI equipment.

Inseminators may operate from these centres to deliver semen and embryos to farms.

Veterinarians and technical AI staff may operate an on-farm service for breeders for the collection, processing, freezing, storage and transfer of semen and embryos of animals held on farms outside licensed AB centres.

No animals are held or maintained on these subcentres.

1.1.4 Inseminators

Licensed inseminators or veterinarians may operate an on-farm service for the collection, processing, freezing, storage and transfer of semen and embryos of animals held on farms outside the AB centre.

Such inseminators or veterinarians can receive semen and embryos from AB centres and overseas, for storage or transfer to farm animals, or for distribution to other centres or to onfarm storage units. Inseminators are able to supply liquid nitrogen and AI equipment to farms.

1.1.5 On-farm semen and embryo facilities and centres

These are unlicensed facilities on farms used for the collection and processing of fresh,

chilled or frozen semen or embryos. The storage or distribution to other farms or storage facilities, and the transfer of semen or embryos to animals on this property (or other properties), occurs throughout Australia.

The semen or embryos collected at these on-farm facilities is unlicensed and is not available for direct sale or transfer to breeders not listed as owners of the animals (although conditions

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may vary between States). Unlicensed semen or embryos must be stored in isolation and separate from licensed semen or embryos.

1.1.6 On-farm semen/embryo storage and farmer AI services

This refers to licensed and unlicensed semen or embryos stored on-farm in a single container for on-farm AI or embryo transfer programs.

Licensed semen stored with unlicensed semen becomes classified as unlicensed and as such cannot be returned to be stored in AB centre storage facilities as licensed semen.

On-farm AI or embryo transfer programs can be implemented by the farmer, his staff, licensed inseminators or veterinarians.

- ▶ **Zonation**
- ▶ **Emerging and exotic**
- ▶ **Quarantine and inspection**

- ▶ **Emergency issues**
- ▶ **Disaster**
- ▶ **Tads outbreaks**
- ▶ **Control centers (local,zonal, regional,**

Functions of the LDCC

While the state or territory chief veterinary officer (CVO) is in overall command of eradication and control activities, the local disease control centre (LDCC) is responsible for operations (eradication and control) in a defined area.

The LDCC operates under policies and procedures determined by the state or territory disease control headquarters (SDCHQ), consistent with the relevant AUSVETPLAN manuals and the approved emergency animal disease response plan (EADRP). To carry out field activities, the CVO will appoint an LDCC controller who will report to the SDCHQ director.

The role of the LDCC controller is to manage the control/eradication operation within a restricted area (RA) and any other areas as defined by the CVO, and to help the community return to normal while the LDCC is operational. The functional management structure of the LDCC and the relations between its sections are shown in Figure 2.

The functions and size of the LDCC will vary according to the nature and size of the outbreak. If a unit within a section grows to the point where more than one coordinator is required, the span of control is divided and coordinators are appointed to each division.

Functions of the SDCHQ

The state or territory disease control headquarters (SDCHQ) is the centre responsible for state- or territory-wide coordination of all

emergency animal disease (EAD) response operations. The SDCHQ helps the chief veterinary officer (CVO) to develop disease control policies and facilitates their implementation in the field by the local disease control centres (LDCCs). The SDCHQ also has operational responsibility for all areas not covered by LDCC responsibility, ie all areas outside of the restricted areas (RAs).

The SDCHQ has the following primary roles:

- Develop and review the EAD Response Plan (EADRP) for approval by the Consultative Committee on Emergency Animal Diseases (CCEAD) and the National Management Group (NMG).
- Undertake strategic planning and develop incident action plans, including forecasting of logistical requirements for extended periods.
- Secure financial arrangements and define financial and other delegations.
- Develop, implement and coordinate state- or territory-wide EAD control policies and strategies.
- Coordinate disease investigation, tracing, surveillance and movement controls in the control area (CA) and elsewhere.
- Through the CVO, liaise with CCEAD, national, state and territory authorities, and relevant livestock and other affected industries.
- Liaise with state/territory emergency management organisations.

- Implement legal arrangements and ensure that all legal requirements are met.
- Brief the department's executive and minister, and government.

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- Notify other states/territories of tracings to their jurisdictions and of movement controls.
- Confirm new infected premises (IPs) and dangerous contact premises (DCPs) based on recommendations from the LDCC.
- Provide information state-wide to the media, industries, the community and groups with special information needs, ensuring that timing and content are coordinated with national, state and industry authorities.
- Ensure effective communication and networks between stakeholders.
- Coordinate technical advice to support operations.
- In conjunction with other agencies, assist with relief, recovery and community support activities.
- Ensure that adequate state records are kept.
- Respond to LDCC requests for resources.
- Monitor the effectiveness of the EAD response.
- Conduct a debriefing on the EAD response.

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5.1 Introduction

State and territory government authorities have constitutional responsibility in their jurisdictions for operations in response to

incidents involving an animal, aquatic animal or plant disease or pest; animal welfare; introduced marine pests; residues in food; and food safety or agricultural sabotage threats.

The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) is the lead Australian Government agency managing agricultural emergencies involving animal, aquatic animal or plant diseases or pests; animal welfare; and introduced marine pests. DAFF also supports human health and other agencies in matters involving residues in food, other food safety incidents, and food sabotage threats. DAFF provides national leadership and coordination in the management of emergency animal disease (EAD) emergencies, although the nature and extent of its role will vary depending on the complexity of the EAD outbreak.

DAFF fulfils its emergency roles under the DAFF Emergency Management Plan, which focuses on the coordination of the department's areas to ensure an effective input to the national response.

5.3 Role of the NCC

The actions of the NCC after initial notification of a suspected emergency will vary according to the nature of the incident. The NCC's main roles are at international, national and Australian Government levels.

5.3.1 International

- Meet Australia's international reporting obligations, particularly to the OIE (World Organisation for Animal Health, formerly Office International des Epizooties).

- Provide technical briefings and other information to trading partners as part of trade negotiations and addressing market access issues.
- Trace exported and imported agricultural products or animals.

5.3.2 National

- Convene, chair and provide the secretariat support for government–industry consultative committees.
- Coordinate national public communications.
- Coordinate national response strategies and monitor on-ground activities.
- Provide a national perspective on the use of options such as vaccination and zoning to control the pest or disease and maximise trading opportunities.
- Provide policy advice on national or international issues to the state or territory government involved (the ‘combat’ government).
- Develop national epidemiological models to support strategic agricultural emergency decision making.
- Coordinate supply of overseas vaccine and scarce resources within Australia.
- Coordinate access to the International Veterinary Reserve.

- Provide input to cost-sharing arrangements.
- Impose export controls as appropriate under the Export Control Act 1982.
- Revise and impose quarantine arrangements to mitigate the risk of an occurrence or recurrence of an agricultural emergency by amending controls applying at or before the border.
- Invoke Australian Government legislation — for example, the Quarantine Act 1908 — when necessary to assist with disease eradication operations in states and territories.
- Impose import controls under the Imported Food Control Act 1992, as directed by Food Standards Australia New Zealand.
- Coordinate responses with relevant industry groups.

5.3.3 Australian Government

- Liaise with other relevant Australian Government agencies during an agricultural emergency response.
- Manage the Australian Government public communications strategy in consultation with the Department of the Prime Minister and Cabinet and, in case of a terrorist situation or incident, the Attorney-General's Department.
- Maximise Australia's trade position in consultation with the Department of Foreign Affairs and Trade.

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- Provide high-level technical input to trade delegations to argue scientific aspects of Australia's position.

- ▶ **Identification, transport and movement control**
 - ▶ **Trade**
 - ▶ **Highland**
 - ▶ **Pastoral**
- ▶ **Diagnosis**
- ▶ **Input supply**
- ▶ **Legal support**
- ▶ **Statutory body**
- ▶ **Welfare**
- ▶ **Associations**
- ▶ **Education**
- ▶ **Public health, food inspection and certification**
- ▶ **Import/export control**
- ▶ **Communication**
 - ▶ **Database management**
 - ▶ **Publications, newsletters, year books,**
 - ▶ **Web site**

Part VI

Project profile

References

