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REDUCING THE RISK OF RIFT VALLEY FEVER TRANSMISSION IN TRADE EXCHANGES

FAO and the United Nations Development Programme held an expert consultation at FAO headquarters, Rome on 15 and 16 May 2001. Six international experts on Rift Valley fever (RVF) plus invited observers discussed issues directed to improving the management of the risk to humans and livestock that is posed by Rift Valley fever. The main objective of the meeting was to develop guidelines to reduce the risk of RVF transmission from animals to humans and between animal populations (see page 2).



Omdurman cattle market in the Sudan

PHOTO COURTESY OF PETER ROEDER

REGIONAL SURVEILLANCE SYSTEM IN AFRICA

A joint EMPRES-South African Development Community (SADC) workshop on disease surveillance and early warning was held in Pretoria from 26 to 30 March 2001, funded by FAO under a regional project, TCP/RAF/8932. The workshop was attended by national veterinary epidemiologists from eleven SADC countries. It concentrated on matters related to surveillance and the collection and analysis of survey data; subjects covered included surveillance methods, surveillance management, information management and a brief introduction to EMPRES TADinfo software (see page 9).

DIAGNOSIS AND CONTROL OF CONTAGIOUS BOVINE PLEUROPNEUMONIA IN AFRICA

The Third Research Coordination Meeting of the FAO/International Atomic Energy Agency Coordination Research Programme for contagious bovine pleuropneumonia was held in Nairobi from 18 to 22 June 2001 (see page 7).

RIFT VALLEY FEVER

Reducing the risk of Rift Valley fever transmission in trade exchanges

FAO/UNDP Expert Consultation on Risk Assessment and Risk Reduction of RVF Transmission in Trade Exchanges between the Horn of Africa and the Arabian Peninsula, Rome, 15-16 May 2001

In 1997-1998 excessive rainfall associated with the El Niño/Southern Oscillation phenomena precipitated a severe epizootic of RVF in the Horn of Africa. This caused much human and livestock disease and led to many countries, including those in the Arabian Peninsula, placing a total ban on trade in ruminants from the Horn of Africa.



PHOTOS FOURNIE PAR M. BLEICH

Trade of livestock between the Horn of Africa and the Arabian peninsula (Port of Berbera, Northern Somalia)

This and other recent episodes of this disease in Africa have resulted in FAO being asked by member countries and other authorities to address the issues created by RVF.

FAO and the United Nations Development Programme (UNDP) held an expert consultation at FAO headquarters, Rome on 15 and 16 May 2001. Six international experts on RVF plus invited observers discussed issues directed to improving the management of the risk to humans and livestock that is posed by RVF. The main objective of the meeting was to develop guidelines to reduce the risk of RVF transmission from animals to humans and between animal populations.

The natural history of RVF and its potential distribution inside and outside of Africa today were reviewed and discussed. The techniques available for assessing the risk of RVF were appraised, including the recent innovative early warning techniques using satellite imagery and ground-truth surveillance systems using mosquito population biol-

ogy, sentinel herds and serology. The meeting then discussed how these and other techniques, such as vaccination, could be used to reduce the risk of disease.

An understanding of the basic cycle of epizootics of disease, followed by long interepizootic periods, was recognized as essential to any risk management. The epizootics are associated with excessive rainfall, flooding, emergence of the infected mosquito vectors in high numbers, and high transmission rates among livestock and humans. Conversely, during interepizootic periods, the levels of infection are usually so low as to be undetectable. There is no recognizable disease in humans or in animals and intensive surveillance techniques may be necessary to detect any evidence of virus activity. A fundamental aspect of the natural history of RVF that was emphasized throughout the meeting is that RVF is widespread throughout Africa and that countries where evidence of the virus has been confirmed in the past are likely to be permanently infected. Recovered animals and animals vaccinated at least one month earlier are not infectious, are safe to eat and can be safely traded.

The expert consensus was that during epizootics, the risk of transmission of RVF virus through infected animals or humans is significant and warrants stringent measures to prevent transmission. However, in the interepizootic periods the risk of RVF is low, and would become significantly lower if risk reduction techniques were applied.

The meeting identified three epidemiological situations – epizootic, pre-epizootic and interepizootic. It recommended strategies that could be adopted by importing and exporting countries to reduce the risk of virus transmission in each of these situations. These strategies include the optional use of vaccine.

The meeting identified specific issues requiring future research and development, in particular new vaccines and epidemiological studies. Suitable laboratory tests for the diagnosis of RVF are available. It also identified the need to amend the International Office of Epizootics (OIE) Code for RVF in order to reflect current scientific knowledge about this disease and make it more applicable to all circumstances.

The principal recommended strategies for reducing the risk of transmission of RVF in trade livestock are summarized below:

LEVEL OF RISK	ACTIVITY IN EXPORTING COUNTRY	ACTIVITY IN IMPORTING COUNTRY
HIGH Epizootic RVF	Define extent of infection Longitudinal monitoring of infection in livestock populations (i.e. clinical surveillance, virus isolation/IgM antibodies) Determine the point at which virus activity has returned to pre-epizootic levels	Cease all imports of livestock from affected regions Resume trade 3-6 months after the last evidence of infection OR when the country considers the high risk has disappeared
POTENTIALLY HIGH Pre-epizootic conditions identified	Increase the level of monitoring in known RVF epizootic areas, such as floodplains, by clinical surveillance for abortion in livestock, disease in humans and serology in livestock Consider vaccination of trade stock at least one month before movement	Increase vigilance at ports of entry Increase random sampling at ports for evidence of recent infection (IgM antibody in the absence of a history of vaccination) If vaccinated animals are to be accepted they should be randomly sampled at ports for IgG antibodies
LOW Interepizootic period	Monitor sentinel herds in high-risk areas (floodplains) Consider vaccination of all trade animals at 9-12 months age	Regular random sampling of trade animals for IgM antibodies

Follow-up workshop on RVF transmission and trade, Nairobi,
21-22 June 2001

This meeting was a direct follow-up to the earlier expert consultation held in Rome on 15 and 16 May. Its purpose was to promote and explain the recommendations of the expert meeting to the main players in the Horn of Africa including chief veterinary officers (CVOs) and other interested international bodies, and some observers from livestock importing countries. It was hoped that the meeting would endorse the recommendations of the expert consultation, and advise how best these could be implemented in the Horn today.



PHOTO COURTESY OF MARG BLEICH

Testing camels for brucellosis before export (Somalia)

The meeting endorsed the recommendations of the expert consultation and also asked FAO and OAU-IBAR to pursue the establishment of a forum for exchange of dialogue between importers and exporters of livestock and to facilitate a revision of the OIE Code for RVF.

There was official representation at CVO or director-general level from Eritrea, Kenya, Somalia (Mogadishu), Somaliland, the Sudan, the United Republic of Tanzania, Uganda and Yemen plus senior epidemiologists or field staff from Egypt, Ethiopia, Djibouti and Yemen. International organizations represented included the Organization of African Unity/Interafrican Bureau for Animal Resources (OAU/IBAR), UNDP Somalia, the UN Office for the Coordination of Humanitarian Affairs (OCHA), the FAO Special Relief Operations Service (TCOR), the Intergovernmental Authority on Development (IGAD), the European Union-Somalia, the United States Agency for International Development (USAID), the Pan African Campaign against Epizootics (PACE) and the Community Animal Health and Participatory Epidemiology (CAPE) project, plus several non-governmental organizations actively involved in Somalia. In addition, representatives from the private livestock trade sector were also present. International expertise on RVF was provided by Drs Glyn Davies, Pamela Hunter and Bob Swanepoel.

The meeting endorsed the recommendations of the expert consultation and also asked FAO and OAU-IBAR to pursue the establishment of a forum for exchange of dialogue between importers and exporters of livestock and to facilitate a revision of the OIE Code for RVF. The meeting was a successful step in the process of establishing dialogue leading to improved livestock trade regulations between the Horn and the Arabian Peninsula. While vaccination was seen as a useful technique for reducing risk, questions were

raised about how effectively this could be implemented in the parts of the Horn from where the sheep and other livestock emanate. The next steps under the FAO project SOM/01/04/01/12 will be to take the results and recommendations from both the expert consultation and the technical workshop to the importers and initiate a dialogue between the parties concerned.

Meeting on surveillance and control in West Africa

Although surveillance has been considerably improved, safe and efficient tools for disease control are still lacking. More studies on the biology of the vector are needed to define an appropriate vector control strategy.

Workshop on RVF surveillance and control in West Africa, Dakar, 9-12 April 2001

A workshop on RVF surveillance and control was held in Dakar to gather the different institutions and stakeholders involved in the monitoring of the disease in the region. The workshop was part of the activities organized under the aegis of the FAO/TCP project TCP/RAF/8931 that last year initiated a regional early warning system in Mali, Mauritania and Senegal (see details in EMPRES Bulletin No. 15).

A panel of national and international experts met to discuss the progress made in the surveillance and control of the disease in the subregion, critically assess the early warning system that had been implemented and define the strategy to be adopted in the future at regional level. Forty participants represented the national veterinary services and central laboratories, national and international research centres (Institut de recherche pour le développement, Institut Pasteur of Dakar and Paris), international organizations (OIE, World Health Organization [WHO] and FAO) and donors.

Through the strong commitment of national institutions, the surveillance of RVF has been improved over the past two years, as has the understanding of the epidemiology of



PHOTO COURTESY OF VINCENT MARTIN, EMPRES

Workshop participants



Official speakers at the opening session

the disease in the three countries. After the end of the TCP project in September 2001, RVF surveillance will continue as part of the national disease surveillance system. Furthermore, the sustainability of the surveillance system implemented so far will be ensured by the PACE programme. A project of "telemedicine" called EMERCASE that aims to develop models of RVF spread in Senegal and foster real-time communication of disease occurrence via satellite connection will also play a major role in the surveillance of RVF in West Africa.

Although surveillance has been considerably improved, safe and efficient tools for disease control are still lacking. More studies on the biology of the vector are needed to define an appropriate vector control strategy.

The first results of a vaccine trial initiated in the context of the project were also presented during the workshop. The strain used was developed by the Institut Pasteur of Paris (Dr Bouloy) and a preliminary trial on small ruminants was carried out at the Laboratoire national d'études et de recherches vétérinaires (LNERV) in Dakar. The first results are encouraging and it was agreed by the participants that the strain R 566 could be a good vaccine candidate for emergency control of the disease.

An interdisciplinary approach was recognized as the only way forward to combat the disease. The forum provided by the workshop enabled participants with different backgrounds to meet and exchange experiences. The full proceedings of the meeting will soon be available in French on the FAO-EMPRES Web site.

CONTAGIOUS BOVINE PLEUROPNEUMONIA

Meeting on diagnosis and control of CBPP in Africa

Third Research Coordination Meeting of the FAO/International Atomic Energy Agency Coordination Research Programme on the Diagnosis and Control of Contagious Bovine Pleuropneumonia in Africa, Nairobi, 18-22 June 2001

The Third Research Coordination Meeting for contagious bovine pleuropneumonia (CBPP) was held in Nairobi from 18 to 22 June 2001. This meeting was attended by ten research contract holders from countries in Africa, namely: Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mali, Namibia, Nigeria, Uganda, the United Republic of Tanzania and Zambia. Two agreement holders from the Centre de coopération internationale en recherche agronomique pour le développement/Département élevage et médecine vétérinaire (CIRAD/EMVT) and the Scottish Agricultural Institute (Drs François Thiaucourt and Roger S. Windsor, respectively), together with representatives from the joint FAO/IAEA Division (Drs Martyn Jeggo and Adama Diallo), also attended. Dr John March of Moredun Research Institute, Edinburgh, UK, attended as an invited scientist. The meeting was held under the aegis of the OAU/IBAR/PACE programme for the first time. Discussions were held with various research contract holders on specific needs for CBPP research under the programme and on streamlining activities in countries participating in TCP/RAF/0172, and with the PACE coordinator, Dr R. Bessin, and two of his colleagues, Drs E. Tembi and B. Kebkiba. The present activities of FAO were explained as being supportive of and complementary to the efforts of PACE in the control of transboundary animal diseases such as CBPP and other epizootics of significance in Africa.



PHOTO COURTESY OF WILLIAM AMANFU, EMPRES

Workshop participants

A scientific presentation by Dr John March of the Moredun Research Institute on CBPP vaccine management showed that one of the factors responsible for CBPP vaccine failures could be the cell death of mycoplasma organisms after reconstitution of the vaccine due to a drop in pH. It was stated that the drop in pH, caused by the metabolism of glucose in the medium, could be stabilized by the addition of HEPES buffer. He recommended this for further study by vaccine-producing institutions, for possible incorporation of HEPES buffer in future CBPP vaccines. The principal recommendations of the meeting are:

- As the prevalence of CBPP disease in most countries is still not known, for any meaningful control strategy to be adopted a sampling frame for CBPP should be developed by the Project Coordinating Unit of PACE. Each country could then modify this framework to suit its own particular situation.
- In view of the transboundary nature of CBPP, countries must endeavour to harmonize and synchronize their control strategies. This could be facilitated through the existing structures of the OAU/IBAR/PACE group.

Areas for further research suggested by the meeting include the following:

- ↑ the development of a test to differentiate CBPP vaccinated cattle from those that are infected;
- ↑ the effects of various antibiotic treatments on the course and pathology of the disease.

BRUCELLOSIS

Brucellosis – a serious public and animal health problem in Kosovo

Brucellosis (both ovine and caprine) continues to be a major public and animal health problem in the Mediterranean as well as in Balkan countries such as Albania, Greece and Turkey (Macedonia). Data from health authorities have now shown that brucellosis is a serious public and animal health problem in Kosovo. Human brucellosis incidence is 1/100 000; however, the disease is underreported in humans due to difficulties in the clinical diagnosis.

A survey in sheep, goats and cattle was carried out in March 2001 under the project OSRO/KOS/908/USA. A prevalence of 5.9 percent in sheep and goats and 0.45 percent in cattle was found. Sera were screened with the Rose Bengale Test and confirmed with C-ELISA at the FAO/WHO Collaborating Centre, Weybridge, UK. No previous vaccination control had been carried out. Due to the limited time available it was decided to vaccinate sheep and goats with Rev 1 vaccine in the municipalities with the highest prevalence. The monitoring activities of the vaccination campaign will be followed up by the Animal Production and Health Division of FAO. Funds to support long-term control are needed and coordinated actions should be developed with neighbouring countries to control brucellosis in animals and humans.

REGIONAL SURVEILLANCE SYSTEM IN AFRICA

SADC
epidemiologists
meet outside
Pretoria

A joint EMPRES-SADC workshop on disease surveillance and early warning was held in Pretoria from 26 to 30 March 2001, funded by FAO under the regional project TCP/RAF/8932. The workshop was attended by national veterinary epidemiologists from eleven SADC countries. It concentrated on matters related to surveillance and the collection and analysis of survey data; subjects covered included surveillance methods, surveillance management, information management and a brief introduction to EMPRES TADinfo software.

Keynote speakers were Drs Rachel Madekurozwa (Project Coordinator, Zimbabwe), George Nipah (Technical Cooperation among Developing Countries [TCDC] Consultant, Ghana), Willie Ungerer (South Africa), Cleopas Bamhare (SADC Epidemiology/Informatics Coordinator, Namibia) and Bruce Mukanda (Zambia).



PHOTO COURTESY OF ROGER PASKIN, EMPRES

Workshop participants

The project supports an existing regional information system whereby all SADC countries contribute livestock disease information to a regional database (hosted by the Namibian Directorate of Veterinary Services in Windhoek). The database generates tabular outputs and is linked to a GIS system – from these outputs a regular SADC Livestock Disease Early Warning Bulletin is compiled and sent to all member countries. The system was initiated in 1997 and has grown and matured since then. The regional TCP project is providing database software for use at national level (national TADinfo) by countries needing it, is giving training to epidemiologists and disease managers and will be providing new software (regional TADinfo) for the database in Windhoek.

The beautiful and very tranquil setting of Centurion Park outside Pretoria contributed greatly to the atmosphere of a highly successful workshop. A follow-up meeting, involving both epidemiologists and disease managers, is planned for November.

CONTRIBUTIONS FROM FAO REFERENCE LABORATORIES AND COLLABORATING CENTRES

As a result of the major epizootic of foot-and-mouth disease and the drastic increase in the workload of the World Reference Laboratories, their contributions to the EMPRES bulletin have been disrupted but should resume in the next issues.

NEWS

The Twenty-fifth Arab Veterinary Congress, organized by the Egyptian Veterinary Society, Cairo, 6-9 May 2001

The Egyptian Veterinary Medical Association (EVMA) held its Twenty-fifth Arab Veterinary Congress in Cairo from 6 to 9 May 2001. The meeting was held under the auspices of the Ministry of Agriculture and Land Reclamation. The Congress was chaired by Prof. Dr Farouk El-Dessouky, President of EMVA.

The theme of the meeting was: "The need for an Arab Animal Health Commission". The opening ceremony was attended by Prof. Dr Youseff Wali (Vice Prime Minister, Ministry of Agriculture and Land Reclamation), the President of the Medical Syndicate and the President of the General Organization for Veterinary Services (GOVS).

One hundred and six scientific papers were discussed, covering a variety of fields related to different domestic animal species including environmental factors, breeding, genetics, zoonotic diseases, emergency and transboundary animal diseases, epidemiology, animal nutrition, physiology management and marketing.

The Congress concluded with the announcement of the establishment of an Arab Scientific Veterinary Association to be hosted in Cairo, with a number of objectives towards the improvement and development of veterinary science in the region.

Recommendations

1. The decree to establish a forum for animal health in the Near East is considered very important and necessary for its role in enhancing veterinary services, improving their adequacy and increasing cooperation and coordination among them to eradicate transboundary diseases. This resolution was adopted by Arab Agricultural Ministers at their regional meeting in Beirut organized by FAO in 2000. The Congress also called for support to the mutual trade of live animals and their products to cover the nutritional gap in animal protein and increase scientific awareness among veterinarians. The participants from member countries and FAO encouraged an acceleration and definition of a timetable for establishing this forum and its financial resources, and also the determination of goals that would enable the region to benefit from its activities.
2. The Congress confirmed that the security measures and regulations enforced by the Egyptian Government in its efforts to prevent bovine spongiform encephalopathy and other transboundary diseases reaching Egypt had resulted in the conservation of human safety and animal wealth in Egypt. It had also prevented any similar threats.

It was recommended that the other Arab States also adopt these measures to protect their animal stocks.

3. The important role of the scientific veterinary communities participating in the Social and Development Fund in preparing feasibility studies for minor animal stock projects and in conducting appropriate training programmes was emphasized.
4. The importance of monitoring the uses of veterinary medicine to ensure that the safe withdrawal periods were observed was emphasized. This would ensure that meat, poultry and other animal products were free from any remaining medicines and safe for consumption.
5. The Congress stressed the importance of precautionary medicine to protect animal wealth from threatening dangers.
6. Aiming at realizing food security in Egypt and the Arab World, the Congress highlighted the following:
 - The necessity of securing the convenient economic and political environment in the world so as to achieve economic integration among Arab states in the field of animal stock and development.
 - Supporting investments in essential extension and environmental research in the institutions concerned with animal stock development. Priority must be given to research and guiding plans for increasing domestic production of meat, milk, fish and other related products.
 - The importance of international assistance and cooperation so as to benefit from international expertise in the context of increasing nutritional animal and plant products was stressed.

Erratum

In EMPRES Bulletin No. 16/1, the photos presented on pages 3, 4, 16 and 17 were courtesy of M. Bleich and not M. Guerne.

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