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LA FIEVRE APHTEUSE

RAPPORT

de la

SOIXANTE DOUZIEME SESSION DU COMITE EXECUTIF

La Haye, Pays-Bas
29 et 30 Novembre 2005

ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET L'AGRICULTURE

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INTRODUCTION

Le Comité Exécutif de la Commission européenne de lutte contre la FA (EUFMD) a tenu sa soixante douzième session à La Haye, Pays-Bas, les 29 et 30 novembre 2005.
Les membres du Comité Exécutif présents étaient les Drs Sloboden Cokrevski, Ex République Yougoslave de Macédoine; Peter de Leeuw, Pays-Bas (Président); Rolf Krieger, Allemagne; Eugen Olaru, Roumanie; Nihat Pakdil, Turquie et Preben Willeberg, Danemark.

Les observateurs présents étaient: Drs Kris De Clercq (Belgique), Président du Groupe de recherche et Alf-Eckbert Füssel, Chef de secteur, DG-SANCO, Bruxelles; Mr Sébastien Dubost, Programme de sécurité alimentaire de la CE en Arménie; Prof. Dr Nikola Belev, Président de la Commission régionale de l'OIE pour l'Europe; Dre Christianne Bruschke, Fonctionnaire chargée de projet, OIE, Paris; Dr David Paton, Laboratoire Mondial de Référence (LMR). La FAO était représentée par le Dr Joseph Domenech, Chef du service de la santé animale.

D'autres observateurs étaient présents: Drs Sinan Aktas, Institut SAP, Ankara, Turquie; A.L.J. Nielen, Département de la qualité alimentaire et de la santé animale, Pays-Bas; Aldo Dekker, Institut central pour le contrôle des maladies animales (CIDC), Lelystad; Johan Bongers, CIDC, Lelystad; Piet van Rijn, CIDC, Lelystad; Flamur Kadriu, CVO Adjoint de l'Agence vétérinaire et de l'alimentation du Kosovo et Mr Mike Robson du Département de l'agriculture de la FAO.

Le Secrétariat était représenté par le Dr Keith Sumption (Secrétaire) et Mme Egiziana Fragiotta (Assistance administrative).

En l'absence du Président du Comité Exécutif, la réunion a été présidée par le premier vice-président, le Dr Peter de Leeuw.

Mme Renée M. Bergkamp, Directeur Général de la qualité de l'alimentation et de la santé animale, Ministre de l'agriculture, de la nature et de l'alimentation, Pays-Bas, ouvrit la réunion et souhaita la bienvenue aux participants à la 72ème session du Comité Exécutif. Elle manifesta son plaisir de voir que son gouvernement accueillait la session. Les Pays-Bas ont été l'un des membres fondateurs de la Commission quelques 50 ans plus tôt, et furent un solide défenseur de ses activités depuis lors. Elle exprima sa satisfaction de constater que le Dr Peter de Leeuw avait été élu membre du Comité Exécutif. Elle considéra que la tâche internationale de promouvoir le contrôle des maladies animales est importante non seulement pour les Pays-Bas mais aussi pour tous les autres pays. L'histoire récente a illustré cela au cours des années 90 et au début des années 2000, quand les Pays-Bas luttaient contre des foyers de peste porcine classique, de fièvre aphteuse et d'Influenza aviaire, qui résultèrent, entre autres, en un changement dans la compréhension du contrôle des maladies animales. Ceci fut démontré lors de la conférence internationale sur « les coûts matériels et immatériels du contrôle des maladies animales » tenue à Bruxelles en décembre 2004 dont les résultats furent consignés par Peter de Leeuw et présentés lors de la dernière session du Comité Exécutif. Les Pays-Bas ont également partagé leurs expériences avec les Etats membres de l'UE et ont tenté d'influencer les politiques futures, en particulier sur l'utilisation de la vaccination, contribuant à changer la politique en matière de contrôle d'urgence des maladies animales. Du fait de l'impact social et économique de la dernière épizootie de FA aux Pays-Bas, la priorité est donnée maintenant aux questions de politique relatives au contrôle des foyers de FA, et en particulier à celles concernant l'utilisation de l'outil de la vaccination préventive dans certaines zones vaccinales et aux conséquences de l'autorisation de laisser les animaux poursuivre leur vie productive normale. Il est entendu que cela peut avoir des conséquences économiques, sauf si les importateurs acceptent la sécurité des produits provenant d'animaux vaccinés. Mme Bergkamp insista aussi sur l'importance de revoir et de renforcer les mesures préventives contre la FA, et fit valoir les principaux objectifs

de ce Comité qui sont « la prévention et le contrôle de la FA en Europe ». Elle ajouta que, en réalité, dans un futur prévisible, la frontière extérieure de l'Union européenne se déplacera vers l'est. Les efforts pour prévenir et éradiquer la FA devraient par conséquent être concentrés sur les pays frontaliers tels que la Syrie, l'Irak, l'Iran, l'Azerbaïdjan, l'Arménie et la Georgie. La prévention de la FA en Europe peut être mieux assurée en utilisant une stratégie de « défense avancée » et il est noté que cette Commission accomplit un important travail dans ce domaine. Elle ajouta que le pouvoir politique des Pays-Bas attache également de l'importance au travail du Groupe de recherche du Comité technique permanent de l'EUFMD et continue à soutenir la participation néerlandaise à ce groupe. Elle conclut en souhaitant à tous une réunion fructueuse et un séjour agréable à La Haye.

Le Dr Peter de Leeuw, Président, prit ensuite la parole et souhaita aussi la bienvenue aux participants. Il présenta les excuses de Karin Schwabenbauer, Vasilios Stylas et Romano Marabelli qui ne pouvaient assister à la réunion. Il demanda l'approbation de l'assistance pour inviter un observateur du Kosovo à suivre la session, lequel décrirait la situation de la FA dans ce pays. En l'absence d'objections, le Dr Flamur Kadriu, CVO Adjoint de l'Agence vétérinaire et de l'alimentation du Kosovo fut invité à la réunion.

Point 1. Adoption de l'ordre du jour (Annexe 1)

L'ordre du jour a été adopté avec une modification: le Secrétariat devrait fournir, au point 2, une vue d'ensemble du plan d'action pour 2006, à la suite du résumé des activités de l'EUFMD en 2005.

Point 2. Activités de la Commission EUFMD depuis la 36ème Session générale

Le Secrétaire présenta un résumé des activités de la Commission, indiquant les missions réalisées par le Secrétariat, le personnel de la FAO et les nationaux en 2005 (**Annexe 2**), par pays et par type d'action. Celles-ci incluaient plusieurs missions en Turquie, dans les pays du Caucase, en Iran et dans d'autres pays infectés de FA, les réunions de l'EUFMD, du groupe de travail de l'Autorité européenne de sécurité alimentaire sur le risque de FA en Europe, du groupe ad hoc de l'OIE et d'autres réunions, les actions du Groupe de recherche incluant la mission à Hong Kong et l'actuelle mission de surveillance de la FA au Niger, qui se déroulait au moment de la session.

Le Secrétaire présenta ensuite un papier sur la mise en œuvre en 2006 du plan stratégique de la Commission EUFMD pour 2005-8 (**Annexe 3**). L'objectif du rapport était d'indiquer le statut des actions proposées ou approuvées, y inclus un certain nombre où des décisions étaient requises au cours de la 72ème session.

Il indiqua que des ressources humaines supplémentaires étaient nécessaires pour fournir le soutien technique à ces actions ainsi qu'à leur mise en œuvre. La création d'une Unité sous-régionale de soutien à Tbilissi, Georgie, pour la prévention et le contrôle des maladies animales transfrontières devrait aider à fournir de l'expertise technique aux pays trans-caucasiens, et peut être pour certaines zones de l'est de la Turquie.

Au cours de la discussion, il fut mis en lumière que les pays trans-caucasiens ont besoin d'être informés sur la sélection de la base opérationnelle de l'Unité sous-régionale de soutien, et sur les facteurs ayant conduit à la décision.

Du fait que des aspects spécifiques du plan seraient discutés plus avant et approuvés sous les points pertinents de l'ordre du jour, on prit note du plan et on lui donna un soutien de principe.

Conclusions

1. Le Comité fit bon accueil au nouvel accord entre l'EUFMD/FAO et la CE relatif au soutien financier aux mesures de contrôle de la FA pour la période 2005-8 et considéra que cela devrait permettre d'entreprendre des activités essentielles de contrôle des maladies qui sont significatives pour la région entière.

2. Le Comité considéra que les activités proposées dans le plan d'action pour 2006 étaient totalement cohérentes avec le plan stratégique 2005-8 de l'EUFMD et approuva le plan, sous réserve des décisions à prendre lors de l'examen ultérieur de points de l'ordre du jour.

3. Une lettre officielle de la FAO aux pays trans-caucasiens est nécessaire; elle devrait être préparée après consultation et accord de l'OIE et de la CE, et expédiée aux autorités de Georgie, d'Arménie et de l'Azerbaïdjan pour leur expliquer la raison de la localisation à Tbilissi de l'Unité sous-régionale de soutien pour la lutte contre les maladies animales transfrontières (Centre CG-MAT).

Point 3. Rapport du Premier Comité directeur régional du Cadre global OIE/FAO pour le contrôle progressif des maladies animales transfrontières (CG-MAT) en Europe organisé les 13 et 14 octobre 2005

3.i Rapport sur les points relatifs au contrôle de la FA

Le rapport du 1er Comité directeur régional a été présenté par l'OIE. La Dre Husu-Kallio, Directeur général adjoint, DG SANCO, a été élue Présidente du Comité et un résumé des points principaux relatifs à la FA a été fourni par le Dr Füssel.

3.ii Actions de construction de capacités – discussion sur le soutien technique aux pays de la région qui ne sont pas reconnus par l'OIE comme étant indemnes de FA

La Dre Christianne Bruschke, du Département scientifique de l'OIE, résuma la position des demandes récentes à l'OIE pour la reconnaissance de l'état indemne de FA sans vaccination, provenant de pays de la région européenne. Le groupe ad hoc responsable s'était réuni en septembre 2005 et son rapport a été transmis à la Commission scientifique. La Dre Bruschke ne pouvait pas faire de commentaires sur les rapports car ceux-ci n'avaient pas encore été revus et approuvés par la Commission scientifique. Cependant, eu égard à l'expérience récente, il était clair que quelques dossiers reçus auraient pu être beaucoup améliorés si un effort supplémentaire avait été fait pour s'assurer que les questions les plus significatives avaient été identifiées et traitées dans les dossiers. Elle considéra que la fourniture de conseils techniques en temps opportun permettrait de s'assurer que les pays soient mieux informés des questions d'importance majeure et des problèmes et des solutions potentielles à traiter pendant la préparation des dossiers. Elle indiqua qu'étant l'organisme chargé de l'évaluation, il pouvait exister un conflit potentiel pour l'OIE d'offrir des conseils autrement qu'en termes généraux aux pays sur la préparation de leurs dossiers.

Au cours de la discussion, il apparut clairement que la structure des services vétérinaires dans quelques pays soumettant les dossiers constituait un problème majeur, et que cela aurait pu être anticipé avant leur soumission.
Quelques membres du Comité Exécutif exprimèrent leur préoccupation de constater que la crédibilité pourrait être amoindrie si la Commission EUFMD fournissait un conseil technique qui ne conduisait pas au résultat désiré; en conséquence, la Commission devrait procéder avec précaution lorsqu'elle fournit son assistance.

Le Dr Flamur Kadriu fut invité à présenter la situation de la FA au Kosovo. Il décrivit l'organisation des services vétérinaires (**Annexe 4**) et fournit un dossier d'information sur une étude sérologique récente réalisée dans le territoire; tous les échantillons testés par le LMR grâce au test ELISA pour les anticorps NSP ont donné des résultats négatifs. Il indiqua que le Kosovo désirait fortement adhérer aux normes de l'OIE et souhaita assurer que les résultats de la surveillance des maladies dans le pays étaient disponibles internationalement de manière à soutenir les industries de l'élevage et le statut des pays, à la fois du Kosovo et de ses voisins. Cependant, à l'heure actuelle, l'absence de reconnaissance internationale du territoire empêche cela, et il en résulte que l'information sur la surveillance des maladies ne peut pas être rapportée directement à l'OIE, et le territoire n'accepte pas de transmettre son rapport par l'intermédiaire du délégué de la Serbie et Monténégro auprès de l'OIE.

Conclusion

Quand l'opportunité se présente, le Secrétariat a été autorisé à répondre aux pays de la région européenne indiquant que de l'assistance est nécessaire pour estimer et conseiller sur leur état de préparation à leur requête de reconnaissance de l'état indemne de FA. En conséquence, de telles réponses devraient conduire à une meilleure identification des problèmes et des actions requises au niveau national.

Le soutien technique ci-dessus pourrait également inclure le Kosovo.

Point 4. Contrôle et éradication de la FA en Turquie – Coordination du soutien technique

4 a. Situation présente

4 a.i. Rapport sur le contrôle et le suivi sérologique de la FA en Thrace, 2005

Le Dr Sinan Aktas présenta un rapport (**Annexe 5**) sur la sérosurveillance réalisée dans la région de Thrace en 2005, laquelle faisait suite au plan développé en décembre 2004 par un comité d'étude du Groupe de recherche de l'EUFMD. L'objectif principal de l'étude était d'informer la gestion de la FA sur la présence ou l'absence de circulation du virus dans la région, et un second objectif était d'évaluer l'immunité de la population après vaccination. Deux tournées de collecte de sérums ont été organisées, la première dans le but de détecter la circulation du virus et la seconde, réalisée 60 jours après la vaccination, pour évaluer la couverture vaccinale et le niveau estimé de l'immunité de la population. L'étude a été conçue pour détecter une prévalence de 2% au niveau des villages et de 5% entre les villages; 9728 échantillons furent collectés au jour 0 de la campagne de vaccination, provenant de 152 villages et de 64 bovins par village. Les résultats détectèrent 29 sérums positifs (confirmés à la fois par les tests NSP de Cedi et de Bommeli) donnant un taux global de 0,29% ; 19 de ceux-ci provenaient de 3 villages de la Province d'Istanbul, situés à l'intérieur ou très proches de la cité. 477 sérums supplémentaires (tous les prélèvements furent réalisés sur des animaux provenant de villages ayant retourné des résultats positifs) et 34 prélèvements pour probang (provenant d'animaux positifs aux tests NSP) furent collectés lors de recherches de suivi de l'étude sérologique primaire; 17 positifs additionnels ont été trouvés dans un village (Kayabasi) mais dans aucun autre village de l'échantillonnage.

L'investigation a révélé un foyer non déclaré, apparemment limité à deux étables, sans aucun autre animal positif provenant d'autres locaux dans le même village. Le foyer survint immédiatement après la fête de kurban, fin janvier/début février, environ deux mois avant l'étude sérologique. Du fait du profil des âges et de l'absence d'animaux positifs additionnels dans d'autres villages, on a conclu qu'il n'y a pas d'évidence de circulation du virus dans d'autres parties de la région de Thrace.
Les niveaux d'immunité post-vaccinale à 60 jours après vaccination, au niveau provincial, étaient supérieurs à 60% pour les animaux âgés de 4 à 12 mois pour chaque sérotype, et au dessus de 78% pour les animaux âgés de 12 à 24 mois. Les niveaux les plus bas étaient chez les jeunes animaux dans la Province d'Istanbul (52-55%), au moins 10% inférieurs à ceux des autres Provinces.

Conclusions

1. Le Comité a pris note du rapport et a exprimé sa satisfaction du fait que les résultats du suivi sérologique de la campagne de vaccination indiquaient un niveau d'immunité généralement satisfaisant à travers la région, y compris chez les bovins de moins de 2 ans d'âge.

2. Un foyer non déclaré dans la région de Thrace a été détecté par la sérologie; on estima que l'infection des animaux avait pris place en janvier/février 2005 dans la zone de Kayabasi mais n'a pas diffusé, probablement en raison de l'immunité consécutive à la précédente campagne de vaccination, à l'automne.

3. On devrait étudier davantage le plus bas niveau d'immunité chez les jeunes animaux dans la Province d'Istanbul ; c'est un sujet d'inquiétude étant donné l'histoire de l'introduction de la maladie dans cette Province.

4. Des mesures additionnelles pour détecter l'infection après des évènements à risque tels que des mouvements d'animaux au moment de la fête de kurban devraient être considérées afin de réduire le temps entre l'entrée du virus et sa détection par les autorités.

4 a.ii. Rapport des missions récentes de l'EUFMD et progrès des actions de surveillance

Le Secrétaire a présenté un rapport des récentes missions FA en relation avec le contrôle de la maladie en Turquie.

A la suite d'une réunion de planification en avril à Rome, une mission destinée à évaluer le besoin et les modalités pour un soutien en matière de surveillance de la FA en Anatolie orientale a été réalisée du 6 au 11 juin par Keith Sumption et Tom Murray (Expert associé, Commission EUFMD), avec des fonctionnaires principaux du Directorat général pour la protection et le contrôle (GDPC), Ankara. En raison des ressources humaines limitées pour les enquêtes sur les foyers, et du niveau obscur de sous déclaration inhérent aux systèmes de surveillance passive dans les populations vaccinées, le Secrétariat a conseillé de conduire une rapide évaluation épidémiologique participative afin d'établir la distribution de la FA dans la Province d'Erzurum, et d'identifier les facteurs de risque qui ont conduit à la situation épidémiologique actuelle. L'utilisation des techniques participatives pour rassembler l'information a été conseillée car cela devrait avoir l'avantage de découvrir les perspectives des propriétaires de bétail ; elles pourraient être conduites au moment où les animaux seraient sur les pâturages d'été des hauts plateaux, et indisponibles pour l'examen ou la collecte de sérums. Une mission de suivi, impliquant un consultant de la FAO pour fournir de la formation et Tom Murray pour recommander des procédures de biosécurité au cours des enquêtes de terrain, a été organisée en août afin de former le personnel vétérinaire du VCRI d'Erzurum et du Directorat provincial et

afin de soutenir les activités de terrain fournies par lettre d'accord avec l'Institut SAP. L'évaluation rapide prit place au cours d'une période de 5 semaines en août et septembre ; 98 villages ont été visités et près de 700 personnes interviewées. 11 foyers actifs de FA ont été découverts pendant le travail de terrain et un rapport détaillé des résultats rassemblés en octobre par Berhanu Admassu, consultant de la FAO. Le rapport avait été expédié à l'Institut SAP et au GDPC pour réponse, et un sommaire des principaux résultats a été présenté (**Annexe 6**).
En bref, ces résultats ont été :

- dans les années récentes, la FA a affecté presque toutes les parties de la province chaque année, et la plupart des villages ont rapporté le fait ;
- il existe une sous déclaration très significative aux autorités ;
- les programmes de vaccination sont incapables d'atteindre la majorité de la population du bétail pour des raisons incluant la pénurie de ressources humaines et la mauvaise programmation des opérations en relation avec les mouvements saisonniers ;
- les facteurs de risque majeurs pour l'introduction de la maladie et les perceptions des propriétaires sur les programmes de contrôle ont été promptement tirés au clair et des études expéditives pourraient fournir un mécanisme utile et rapide pour identifier et traiter les problèmes et mesurer les progrès du contrôle de la FA.

Keith Sumption a été invité à participer à deux symposia (à Van, du 25 au 30 juin, et à Ankara, du 26 au 28 septembre) sur l'éradication de la FA, de la PPR et de la SGP en Turquie, organisés par le projet jumelé (Turquie/Allemagne soutenu par la CE). La mission dans la province de Van fournit une occasion importante de reconsidérer la difficulté de prévenir l'entrée de la FA au travers des frontières orientales avec l'Iran et l'Irak, et de développer des idées pour aider le GDPC à gérer la couverture vaccinale croissante dans cette région. L'importance d'établir un système de suivi indépendant à l'intérieur du GDPC pour évaluer la performance des mesures de contrôle et particulièrement de la vaccination par l'Administration provinciale a été mise au premier plan par les résultats de la mission, incluant l'observation de la FA par la mission dans un village après un intervalle apparent de quelques 5 années. Après discussion avec le conseiller du projet jumelé et les membres de l'équipe de la mission au sujet de l'appui technique à l'éradication de la FA post-projet,le Secrétariat rédigea une note conceptuelle pour le soutien aux autorités turques destinée à améliorer le suivi, l'évaluation et la planification des mesures de contrôle dans la région orientale de la Turquie ; cette note a été revue par le GDPC puis discutée entre le GDPC, l'Institut SAP et les représentants de la délégation de la CE au cours du symposium de septembre tenu à Ankara. Suite aux commentaires reçus, il a été demandé à un consultant de la FAO de formuler un document de projet ; il réalisa une mission à Erzurum en octobre, planifiée pour coïncider avec le stade de rédaction du rapport sur l'évaluation rapide de la FA. Le brouillon de document de projet qui en est résulté est attaché (**Annexe 7**).

La réunion tripartite EUFMD-FAO/OIE/CE sur le contrôle de la FA et d'autres maladies exotiques dans le sud des Balkans s'est tenue du 24 au 26 Novembre à Alexandropoli, Grèce. (**Annexe 8**).

Dans ses commentaires sur ce qui précède, le Dr Füssel indiqua que tout au long de l'année l'importance des mesures de contrôle en Turquie était plus intense qu'auparavant, depuis que les mesures de surveillance en Bulgarie et en Grèce avaient été réduites en intensité en comparaison avec les années antérieures. *Inter alia*, la responsabilité de la protection de ces pays dépend des mesures conduites en Turquie, et par conséquent le suivi, l'évaluation et la détection précoce des foyers de maladies revêtent une importance encore plus grande. Les évènements de 2005, avec un foyer détecté par la sérologie quelques mois après son occurrence, mirent en lumière la nécessité d'interdire les mouvements d'animaux pendant la fête du kurban, excepté pour aller directement à l'abattoir, et d'utiliser des mesures de surveillance active en particulier après des mouvements d'animaux à haut risque où et quand ils continuent de se produire.

4 b. Résumé de la stratégie et du programme d'éradication de la FA, et statut du financement nécessaire

4 b.i. Présentation par le gouvernement de Turquie

Le Dr Sinan Aktas présenta la situation du contrôle national de la FA (**Annexe 8**), et résuma la stratégie nationale d'éradication de la FA planifiée pour la période 2006-2015. 111 foyers ont été déclarés au cours des 10 premiers mois de 2005, identifiés comme étant dus aux types 0 (97 foyers) et A (6 foyers), et 8 pour lesquels le type n'a pas été confirmé. Cela est en augmentation par rapport aux années antérieures, avec des évènements inhabituels comprenant l'implication de localisations telles que les provinces de Rize et de Samsun sur la côte de la Mer Noire, en raison de l'achat d'animaux infectés provenant des principales zones endémiques à l'est. La distribution de l'infection a été large, et les évènements impliquant les provinces de l'ouest ont été considérés comme résultant de mouvements survenant pendant la période du kurban, introduisant l'infection depuis l'est. Sinan Aktas présenta les taux de vaccination pour certaines provinces occidentales proches d'Istanbul; plus de 70% des animaux enregistrés ont été vaccinés au printemps (vaccin bivalent AO) et en automne (vaccin trivalent) avec des vaccins produits par l'Institut SAP, Turquie. Le retour à l'utilisation du vaccin trivalent a été décidé suite à l'information reçue de la FAO concernant le repérage de foyers du virus Asia 1 en Iran.

Pour ce qui concerne le contrôle dans les années à venir, la Turquie a approuvé un programme de contrôle de la FA avec le soutien financier de la CE entre 2007 et 2009 qui cherchera à inclure 100% des populations de larges et de petits ruminants dans le pays, avec une vaccination biannuelle des bovins et une vaccination une fois par an pour les petits ruminants ; le but est de réduire les foyers de telle manière qu'en combinaison avec des mesures sanitaires sur les mouvements, assistées par un système d'identification et d'enregistrement totalement fonctionnel, des zones peuvent être progressivement reconnues indemnes de FA, avec l'objectif que des zones significatives du pays pourront être reconnues comme ayant un statut comparable à celui des pays de l'UE en 2015.

Sinan Aktas fournit un tableau montrant que le programme serait financé conjointement par la CE, avec environ 64,7 millions d'euro identifiés pour fournir le vaccin antiaphteux et l'équipement pour le programme 2007-9, 0,436 million pour la sérosurveillance et 0,3 million pour les matériels d'assainissement et de désinfection ; les contributions respectives s'établissent à de près de 49 millions par la CE et 16 millions par la Turquie. Le plan d'exécution fut également présenté, les vaccinations et la sérosurveillance commençant respectivement en mars et en juin 2007 ; les spécifications des contrats seraient rédigées de juin à septembre 2006.

4 b.ii. Proposition pour un soutien technique via l'EUFMD pour la préparation de l'éradication dans la période 2006-7

Le Dr Sumption présenta un projet de soutien formulé dans le but de traiter les faiblesses dans la prévention et le contrôle de la FA en Anatolie orientale, et de construire des capacités en Turquie pour mettre efficacement en oeuvre la campagne nationale contre la FA planifiée pour débuter en 2007. Le soutien proposé serait donné en 2006-7, et construirait des capacités au niveau régional, en utilisant les Instituts de contrôle et de recherche à Erzurum et Elazig comme des centres i) pour suivre et évaluer la diffusion des épizooties dans leurs aires de responsabilités ; ii) pour aider les Directorats provinciaux dans la planification des campagnes de vaccination de masse ; iii) pour agir comme des pôles de communication afin d'améliorer la prise de conscience des mesures de prévention contre la FA ; iv) pour traiter des problèmes relatifs à la vaccination des animaux chez les ayant droits ; et v) pour augmenter le soutien au

niveau politique et parmi les autres agences impliquées (telles que la police) dans l'application des mesures. Il indiqua que le support était destiné à améliorer les compétences pour mettre en oeuvre des mesures de vaccination de masse, et compte tenu du fait que l'on attendait l'implication de plus de 80 provinces, il était approprié de travailler par l'entremise de centres de contrôle sub-nationaux pour assurer la coordination et le suivi au jour le jour des évènements dans leur zones et pour former les personnes responsables des agences d'exécution au niveau provincial. Le Dr Sumption suggéra que le GDPC, la FAO et la CE devraient revoir ensemble le type des apports mentionné dans le document.

Discussion

Le Président proposa que la discussion se concentre sur le rôle que la Commission devrait jouer pour soutenir le programme de contrôle de la FA en Turquie. Il souligna l'important travail conduit en collaboration avec la Turquie et l'expérience de la Commission et de son Comité technique en matière de contrôle de la FA, lesquels devraient prêter leur concours dans l'importante phase de consolidation du contrôle, avec l'objectif de l'éradication éventuelle.

En réponse à des questions sur le contrôle des mouvements des animaux, le Dr Jean Guegan, DG-SANCO, représentant la position de la DG-élargissement, indiqua que dès 2006 la CE suivrait et évaluerait les progrès de l'identification et de l'enregistrement des animaux, ainsi que les progrès des postes d'inspection frontaliers (BIPS). Il admit que l'expertise technique disponible à travers la Commission EUFMD pourrait être une assistance valable, par exemple dans le conseil technique pour l'acquisition des apports pour le programme de contrôle de la FA, et dans d'autres domaines.

On discuta ensuite des problèmes liés à l'exécution et des responsabilités pour le suivi et l'évaluation du programme d'éradication de la FA.

On se soucia du fait que le soutien financier était presque entièrement destiné à des apports matériels et ne fournissait pas d'appui pour la gestion ou l'exécution, ou pour la communication avec les ayant droits pour traiter des questions affectant le succès du programme ; on s'interrogea sur les problèmes de la capacité du service vétérinaire à absorber et à utiliser le vaccin, étant donné le faible niveau de couverture vaccinale dans des zones importantes du pays.

La coordination du programme fut discutée, et l'implication d'un appui technique extérieur, à travers la Commission EUFMD, fut clairement soutenue au niveau des organes centraux de coordination, au moins dans le Groupe d'organisation, et si possible dans l'Unité de direction du projet. Le Dr Guegan indiqua que ces organes doivent commencer leur travail en 2006. On s'interrogea sur l'absence d'une vaccination de rappel, et le Dr Willeberg demanda si l'Unité de direction sera chargée d'assurer le suivi de l'exécution.

Les membres du Comité Exécutif indiquèrent leur appui en ce qui concerne le soutien au GDPC pour préparer le programme majeur de vaccination et de contrôle, à travers un programme de préparation concentré sur les Instituts régionaux de contrôle et de recherche vétérinaire au service des provinces de l'est et du sud-est de la Turquie. On suggéra que le programme ne devrait pas être considéré comme distinct du programme de la CE, qu'il devrait être basé à l'intérieur des structures existantes du GDPC et des synergies assurées par l'Organe central de coordination établi pour le programme FA 2007-9. Le Dr Aktas indiqua que la Turquie désirait le projet proposé car il devrait apporter une vision externe afin d'aider à identifier des solutions aux problèmes de mise en œuvre et techniques rencontrés dans le contrôle de la FA. Si le soutien de la FAO ne pouvait pas être obtenu, le GDPC tenterait d'exécuter les actions de terrain

du projet grâce à ses propres ressources, en se basant sur l'expérience acquise lors de l'étude pilote d'Erzurum.

Conclusions

1. Les résultats du suivi sérologique apportèrent la preuve que la campagne de vaccination du printemps 2005 avait atteint une couverture large et une réponse post-vaccinale satisfaisante dans la population bovine en Thrace.

2. Le suivi sérologique mit également en évidence un foyer de FA non déclaré dans la région de Thrace au début de 2005, mais il ne semblait pas qu'une diffusion secondaire ait pris place.

3. Il est probable que le niveau d'immunité résultant de la vaccination de 2004 ait constitué un important facteur dans l'absence de diffusion du virus de la FA à partir de son foyer près d'Istanbul.

4. Cet évènement apparaît être en rapport avec des mouvements d'animaux durant les fêtes de kurban et des mesures additionnelles devraient être étudiées afin de détecter l'infection au plus tôt après cette période en 2006.

5. L'incursion la plus récente du virus dans la région de Thrace met en lumière l'importance des mesures de contrôle contre la FA en Thrace, incluant mais non limitées à la vaccination, afin de protéger les pays voisins, Grèce et Bulgarie.

6. 2006 devrait être considérée comme une année de transition avant que le soutien majeur de la CE ne commence en 2007. Cette année, les activités de soutien à la Turquie par la Commission EUFMD devraient continuer et celles-ci devraient être une partie intégrale du programme de contrôle et d'éradication à l'échelle du pays.

7. La proposition d'appuyer les Centres régionaux de contrôle des maladies (RDCC) pour l'amélioration de l'exécution de la prévention et du contrôle de la FA en 2006 a été soutenue.

Recommandations

1. Le Secrétariat et le Groupe de recherche devraient continuer à assister le GDPC pour revoir les résultats de 2005 et pour développer un plan pour la sérosurveillance en 2006 dans la région de Thrace, y compris des directives pour les enquêtes de suivi à conduire suite à la détection de résultats positifs par les tests NSP.

2. Il est recommandé que des représentants de la Commission EUFMD participent aux réunions des futurs Organes centraux de coordination (Groupe d'organisation et Unité de direction) qui devraient commencer leur travail en 2006, de manière à rendre disponible l'expertise de cette Commission dans le contrôle de la FA dans cette région, acquise au cours de tant d'années.

3. Le management et les structures de travail mis en place dans les projets soutenus par l'EUFMD devraient être appropriées pour incorporation dans le programme d'éradication de la FA développé par la Turquie.

Point 5. Contrôle de la FA dans le Trans-Caucase

5 a. Situation présente

5 a.i. Rapport sur les actions en 2005 pour maintenir la zone tampon et en suivi sérologique

Le Secrétaire présenta une revue du soutien aux trois pays du Trans-Caucase en 2005 pour l'exécution du contrôle de la FA financé par l'EUFMD grâce au Fonds fiduciaire de la CE, et aussi par la FAO (TCP/RER/3001). Le résumé figure en **Annexe 9**. Aux termes de l'accord avec la CE et suite aux recommandations de la réunion de Paris en mai 2004, la vaccination en zone tampon a été poursuivie au printemps 2005, avec un suivi sérologique dessiné par l'EUFMD. Une réserve de 140 000 doses de vaccin antiaphteux avait été conservé chez le fournisseur et fut utilisée pour répondre à la requête de l'Arménie de fournir du vaccin FA pour la zone tampon pour le 15 septembre. Suite à une nouvelle procédure d'appel d'offres et après réception de garanties provenant de la DG-SANCO, un nouvel achat de vaccin a été fait pour assurer la fourniture à chaque pays (au 15 octobre 2005) pour la vaccination d'automne 2005 en zone tampon et une livraison additionnelle en février 2006 pour assurer la vaccination de printemps. On avait discuté avec les CVO de chaque pays des résultats du suivi sérologique de 2005; on avait trouvé la preuve d'expositions au virus aphteux mais on ne put déterminer si celles-ci résultaient d'une seule ou de multiples introductions du virus dans la zone. Le manque de déclaration de maladie clinique peut être le résultat de niveaux d'immunité satisfaisants en Arménie et en Azerbaïdjan, mais il est probable, cependant, que la maladie clinique soit survenue mais ne fut pas déclarée. Par conséquent, le Secrétaire indiqua que le risque d'entrée du virus et de diffusion à travers la zone existait. Le processus de développement et de testage des plans d'urgence contre la FA a commencé, grâce au soutien de la FAO ; un exercice régional de simulation (au bureau) a été organisé en novembre 2005, après des ateliers nationaux destinés à examiner la qualité des plans. Ce procédé a permis d'identifier des trous et des faiblesses, dans la stratégie globale et en détail, affectant leur faisabilité. Cependant, les plans pouvaient valablement servir en d'autres situations, notamment pour l'Influenza aviaire hautement pathogène, et cet aspect a été traité lors de l'atelier régional. Du fait que le TCP/RER/3001 se termine au début de 2006, la poursuite des progrès devrait constituer une priorité du programme régional de 3 ans (voir plus loin).

5 b. Coordination des apports à la surveillance et au contrôle de la FA 2006-8

5 b.i. Proposition pour une Unité régionale de contrôle de la FA (Centre de coordination du contrôle de la FA FAO/OIE/CE)

Le résumé d'une proposition de projet pour un programme de trois ans pour faire suite en 2006-8 au soutien à la coordination de la surveillance et du contrôle de la FA dans les pays trans-caucasiens, et au renforcement de la capacité de gestion en urgence, a été présenté avec une date de mise en exécution proposée au début de 2006. Ce projet a été développé du fait de l'engagement à long terme de l'EUFMD/OIE/CE dans les mesures de contrôle des maladies dans la zone tampon des pays du Trans-Caucase depuis 1999. La proposition de coordonner les apports techniques et le suivi des mesures à partir d'une base à Tbilissi avait été acceptée en mai 2004, et le Comité régional de direction du CG-MAT lors de sa réunion d'octobre 2005 a réaffirmé son soutien à l'établissement d'un centre qui peut être considéré, à cause de son importance géopolitique et épidémiologique, comme une « Unité sous régionale de soutien » du CG-MAT.

Le Secrétariat rapporta que M. Mikheil Svimonishvili, Ministre de l'agriculture de Georgie, avait offert par écrit le support de son gouvernement en fournissant un bureau pour le Centre de coordination. Le financement du projet sera requis pour fournir le soutien épidémiologique et

logistique nécessaire pour l'opération du projet, et suite aux consultations en Georgie et en Arménie début novembre 2005, plusieurs options pour le soutien dans les trois prochaines années ont été évaluées :

Option 1: Maintenir le soutien à la vaccination dans la zone tampon jusqu'au printemps 2007, avec un support technique régional de base.
Option 2: Maintenir la vaccination dans la zone tampon jusqu'à la fin de 2008, avec un important soutien de conseil technique pour la surveillance et le contrôle de la FA dans chaque pays, ainsi que pour le suivi et l'évaluation.
Option 3: Comme l'option 2, mais avec le financement de la vaccination progressivement réorienté vers la construction de capacités si et quand le financement national est garanti pour le maintien de la vaccination dans la zone tampon.
Option 4: Le programme régional de soutien présenté en octobre au Comité régional de direction OIE/FAO (cette option était antérieure aux discussions tenues avec les Ministères des pays du Caucase en novembre 2005).

Mr Sebastian Dubost, de la Délégation de la CE à Erevan, Arménie, résuma le mécanisme de soutien de la CE à travers le Programme de sécurité alimentaire (PSA) à l'Arménie. Ce programme devrait se poursuivre jusqu'à fin 2006 en Arménie et en Georgie, mais arriverait à son terme en 2005 en Azerbaïdjan. Le soutien du PSA avait inclut l'agriculture en plusieurs zones, et comportait un soutien budgétaire au gouvernement ainsi que la fourniture de support technique extérieur additionnel afin d'atteindre des objectifs approuvés, qui sont la condition des crédits budgétaires suivants. Il a été prouvé que c'était un mécanisme efficace pour améliorer la planification de l'agriculture et la mise en œuvre de mesures telles que le suivi sérologique de la FA ou la vaccination contre la peste porcine classique en Arménie. Pour ce qui concerne les systèmes nationaux de surveillance des maladies animales (SNSMA) en Arménie, la coopération avec la FAO a été productive, cette dernière développant le logiciel de la banque de données (par le TCP/RER/3001) et le PSA fournissant le conseil technique pour mettre en œuvre le système au niveau national, et établissant le SNSMA dans des régions pilotes antérieurement au déploiement national en 2006. Pour ce qui est du suivi sérologique, le programme parallèle de l'EUFMD dans la zone tampon a conduit à la détection de résultats différents entre le laboratoire national et ceux trouvés par la FAO. La discussion avec Keith Sumption a permis la résolution du problème; le support de la FAO est recherché pour améliorer la capacité et les performances du laboratoire pour la réalisation de la surveillance.

Sebastian Dubost estima qu'il existe une possibilité que le financement extérieur de la zone tampon soit interrompu en Arménie, les achats étant faits par les fonds nationaux disponibles pour le contrôle des maladies épizootiques.

Le Président, dans sa réponse, accueillit la suggestion favorablement, mais mit en garde sur la nécessité de garantir le respect des normes internationales de qualité des vaccins utilisés.

Le Dr Füssel suggéra que l'on entrait dans une autre période de transition, avec la Turquie démarrant un programme d'éradication, avec le risque de réduire ou même d'interrompre, au moins en Georgie et en Arménie, la vaccination prophylactique de masse une fois que l'incidence de la FA sera ramenée à un niveau beaucoup plus bas en Turquie orientale, grâce à leur programme pour les 4 ou 5 prochaines années. Il mit en garde contre la dépendance envers le financement national de la vaccination dans la zone tampon, étant donnés les problèmes du passé et les incertitudes dans la région, incluant l'impact des réformes des services vétérinaires. Il soutint l'opinion que le soutien était justifié pour aider aux réformes et qu'il pourrait être requis dans un certain nombre de domaines, assurant directement ou indirectement une plus grande capacité à détecter et à contrôler les maladies épizootiques, y compris l'identification et

l'enregistrement du bétail, la mise en œuvre de réformes pour traiter les exigences de la sécurité alimentaire, ainsi que la certification comprenant la capacité des laboratoires et l'assurance qualité.

Conclusions

1. Des actions de suivi sont nécessaires pour identifier la raison de la découverte de groupes d'animaux séropositifs dans des parties de la zone tampon.

2. Les résultats du suivi sérologique pour l'exposition au virus appuient la vaccination continue des animaux dans la zone tampon avec des vaccins satisfaisant aux normes internationales jusqu'à ce que le risque provenant de pays voisins soit efficacement réduit ou que des alternatives faisables soient identifiées.

3. La décision d'entreprendre les tests sérologiques à l'extérieur, dans un laboratoire de référence européen, avec comparaison des résultats par une analyse indépendante de scientifiques du Groupe de recherche de l'EUFMD était justifiée; elle contribua à parvenir à un consensus dans l'interprétation des résultats

4. La sécurité du vaccin antiaphteux produit nationalement et utilisé en Arménie reste douteuse.

Recommandations

1. Le soutien de la Commission en 2006 devrait continuer sur la base de la seconde option ; l'accord de la DG-SANCO devrait être recherché à cet effet pour utiliser le Fonds fiduciaire afin d'en autoriser la poursuite, incluant la fourniture de conseils techniques régionaux au programme à partir d'une base opérationnelle en Georgie.

2. Pour ce qui concerne 2007 et 2008, la décision de continuer selon l'option présentée, ou dans une forme modifiée devrait être prise avant ou pendant la prochaine réunion du Comité Exécutif ; elle dépendra des indications provenant de la CE selon lesquelles le financement additionnel nécessaire pourrait être rendu disponible.

Point 6. Contrôle de la FA en Iran – Rapport de la phase I des actions de surveillance et de contrôle de la FA soutenues par l'EUFMD, la CE et la France.

Le Secrétaire présenta les progrès enregistrés lors de la phase I du projet. Les principales activités n'ont pas été initiées, l'autorisation de la CE de commencer n'ayant été reçue qu'en octobre 2005. Les activités ont débuté suite à l'accord sur l'utilisation du Fonds fiduciaire pour soutenir la phase I du programme proposé.

Conclusion

Le Comité a noté:

- Que l'exécution du projet a été retardée mais fut convaincu que le plan d'action pour la première année devrait conduire à une amélioration significative de l'information en matière de surveillance disponible pour aider à la planification des mesures de gestion du risque, incluant celles devant être menées en Turquie et dans le Caucase.

- L'importance de réduire le temps entre la mise en oeuvre du projet et l'arrivée de l'information sur la circulation des virus aphteux de types A et Asia-1, afin d'aider à la sélection des antigènes vaccinaux à utiliser dans le Caucase et en Turquie.

Recommandation

1. Les progrès du projet devraient être revus lors d'une réunion organisée dans la deuxième moitié de 2006 en présence d'une représentation de haut niveau de la CE et de l'OIE.

Point 7. Situation du risque de FA

a. Rapport du LMR de la FAO sur les changements dans la situation globale du risque

Le Dr Paton présenta le rapport du LMR de la FAO pour la FA (**Annexe 10**). Il souligna que la diversité antigénique parmi les isolements du type A reste un défi pour la sélection des vaccins. Un certain nombre d'isolements originaires d'Iran sont plus proches de A22 que du type du vaccin utilisé en Turquie qui est le topotype A Iran96.

Au total, les **recommandations** du LMR sur la sélection des antigènes vaccinaux n'ont pas changé mais on devrait prendre note du changement vers A22 Irak parmi les virus circulant dans la région ouest de l'Eurasie.

Il fit rapport du développement de l'accord entre les Laboratoires de référence de l'OIE de former un réseau sous la FAO/OIE et cela a déjà produit un Rapport annuel unifié à l'OIE et à la FAO, pour remplacer les rapports séparés faits antérieurement par le LMR et Panaftosa. Le processus d'écrire un rapport annuel devrait aider à l'identification des trous dans la surveillance et des problèmes à résoudre par le réseau.

Le Dr Paton appela à nouveau l'attention sur l'absence d'isolements de virus en provenance d'Inde et de Chine, quoique des progrès substantiels aient été faits pour s'assurer que les laboratoires concernés étaient en contact avec le LMR et qu'au moins une collaboration au niveau scientifique pouvait être suivie qui pourrait conduire à une information plus importante. Cette approche avait déjà produit de l'information comme les séquences des virus des épidémies d'Asia-1 en Chine, et avait montré que deux sous-types de virus différents étaient en circulation dans cette région.

Il indiqua que le réseau FAO/OIE de laboratoires avait identifié un besoin de soutien financier pour assurer une collaboration active et la résolution de problèmes, incluant le support à l'organisation de réunions annuelles, l'échange de réactifs ou le développement de produits biologiques spécifiques requis pour la normalisation, le développement d'une banque de données partagée, et pour les fonctions de Secrétariat. Il mentionna que les laboratoires avaient oeuvré pour former le réseau, organisant un atelier prévu les 7 et 8 décembre pour déterminer comment agir pour intégrer l'information de laboratoire dans les systèmes globaux d'information sur la santé animale. L'OIE, l'EUFMD et l'EMPRES/FAO seront représentés à cette réunion, de même que les Laboratoires de référence de l'OIE et de la FAO pour la FA, la peste porcine classique, la PPR, la fièvre catarrhale, l'Influenza aviaire et d'autres infections.

Le Dr Paton appela l'attention sur les plans pour la phase XIX de la FAO qui ont été dressés par le LMR et le Président du Groupe de recherche; un accord était nécessaire sur la répartition des coûts entre la DG-SANCO (au nom du Laboratoire de référence communautaire, LRC) et l'EUFMD, du fait que le nouveau LRC (à annoncer) pouvait s'attendre à être remboursé par la

CE pour les coûts concernant les pays membres de l'UE, autorisant l'EUFMD-FAO d'agir en support de l'assurance qualité dans les pays voisins et les Laboratoires de référence.

b. Le réseau FAO/OIE soutenant la surveillance globale de la FA

Le Dr Sumption présenta un court rapport sur le travail du Secrétariat en 2005 pour traiter les trous dans la surveillance du virus en relation avec le réseau FAO/OIE (**Annexe 11**).

Comme il avait été approuvé lors de précédentes sessions, le Secrétariat avait soutenu la soumission d'échantillons, dont la principale entrave était la disponibilité de moyens financiers. Les programmes de la FAO avaient aussi aidé en cela, résultant en soumissions de virus au LMR en provenance d'Afrique de l'est (Kenya), d'Afrique de l'ouest (de pays couverts par un PCT de la FAO) et du Soudan en 2005. Le processus, dans la majorité des cas, requit près de 12 mois de travail préparatoire, mais n'avait en aucune manière atteint le niveau d'une base de données sur la surveillance du virus.

Le Dr Sumption fit le rapport d'une mission en cours fin novembre au Niger, où la FAO fournit un véhicule 4X4 et la CE finança les coûts d'un expert ouest africain et un expert EUFMD (Francis Geiger). La mission a prévu de visiter 4 localisations et de collecter des échantillons là où c'est possible, et d'identifier si la collecte régulière de prélèvements dans des zones de passage d'importance régionale pouvait être réalisée. On espérait que cela pourrait établir une prise d'échantillons active et régulière dans des zones où l'on sait peu de choses sur les virus circulants.

Du côté du réseau de laboratoire, il indiqua que le contrat de services EUFMD/FAO de trois ans avec le LMR se terminera fin 2005. Le support annuel est supérieur à US$ 70 000 pour la fièvre aphteuse, comprenant aussi l'assurance qualité externe et la normalisation (études par phases de la FAO) ; on devra repenser aux exigences du contrat, étant donnée la requête de soutenir le réseau, et que le support pour certaines fonctions pourrait être couvert par le Laboratoire de référence communautaire (quand il sera désigné). Conformément aux procédures de la FAO, le nouveau contrat pourrait être attribué après appel d'offres.

Discussion

Les présentations ont entraîné un nombre important de questions et de discussions.

En ce qui concerne la FA de type O récemment au Brésil, on s'inquiéta de ce que la vaccination pourrait ne pas avoir été appliquée efficacement du fait que les foyers n'ont pas été prévenus par l'utilisation d'une souche de vaccin apparemment appropriée (O1 Campos, dont on dit qu'elle possède une bonne couverture antigénique avec les isolements récents). Il était également préoccupant que l'origine des foyers ne puisse pas être repérée en raison de l'absence d'information très récente sur les séquences en provenance des pays voisins. Cela indique soit que les données sur la caractérisation font défaut, soit que le virus circule sans être détecté.

La sélection de vaccins pour l'est africain était également problématique. Le fait qu'il existe peu ou pas de vaccins pour le type A dans cette région était préoccupant. Le Dr Paton approuva mais indiqua que pour toute l'Afrique et pour les virus SAT en particulier, il y a relativement peu de vaccins en rapport avec la diversité des types antigéniques en circulation. Les réactifs ne sont pas toujours disponibles au LMR pour examiner la convenance de tels vaccins comme ceux utilisés en Afrique.

On discuta de la circulation d'Asia-1 dans l'est de l'Asie où différents subtypes existaient avec des extensions à l'intérieur de la Russie et de la Mongolie. Des détails sur la politique de vaccination, et le début de la vaccination contre Asia-1 en Chine au cours des deux dernières années furent réclamés mais n'étaient pas disponibles. On avança l'hypothèse que des vaccins dangereux utilisés quelque part dans la région auraient introduit l'un des deux subtypes trouvés en Chine.

La sécurité des vaccins antiaphteux fut discutée à la lumière des résultats provenant d'Afrique et de la région de Chine en 2005, où des séquences de type vaccinal avaient été détectées parmi les virus circulant sur le terrain. Le Dr De Clercq fit remarquer que là où ils sont suivis, les procédés de production de vaccins de bonne qualité ainsi que les procédures d'assurance qualité adhérant aux normes de l'OIE et/ou de la Pharmacopée européenne, avaient efficacement réduit à zéro le risque de virus résiduels ; dans certaines régions, les problèmes étaient en rapport avec l'absence de mise en œuvre des procédures développées en Europe (avec un apport majeur du Groupe de recherche de la Commission EUFMD) au moins 20 années auparavant.

Concernant le réseau de laboratoires FA, le Dr Willeberg exprima l'opinion que si l'objectif du réseau est d'améliorer la surveillance globale de la FA, il s'ensuit que le réseau devrait avoir accès à l'expertise en modélisation et aux outils relatifs afin de traiter les zones d'incertitude, incluant le risque de diffusion entre les régions.

Le Secrétaire donna la position de la FAO sur le réseau. Dans la ligne des résolutions de la 32ème Session générale, la FAO avait écrit à l'OIE exprimant le désir d'établir un réseau sur le modèle du réseau OFFLU sur l'Influenza aviaire, dans lequel à la fois les laboratoires de références de la FAO et de l'OIE seraient représentés, mais aussi d'autres ayant de l'expertise pour assurer un complément global de ressources d'experts, incluant les laboratoires nationaux de référence, les centres collaborateurs et les experts en épidémiologie. Il indiqua que la FAO avait proposé de fournir le Secrétariat d'un réseau global et pourrait de plus offrir quelque soutien au réseau de laboratoires.

Christianne Bruschke, représentant l'OIE, dit que leur idée était de suivre le modèle de l'Influenza aviaire, mais d'inclure d'autres collaborateurs scientifiques; les demandes seraient évaluées par le Comité scientifique. Il est nécessaire d'avancer sur la base de l'expérience de l'Influenza aviaire.

La question de la désignation du LMR fut soulevée; celle-ci serait-elle affectée si la FAO donnait ses contrats à un autre laboratoire ? Le Secrétaire répondit que la désignation du LMR n'était pas liée au contrat, mais que si la FAO plaçait le contrat pour le typage des virus avec un autre laboratoire, il s'ensuivrait qu'au-delà d'une période de temps la désignation du LMR devrait inévitablement être revue.

Conclusions

1. Le Comité Exécutif échangera de l'information sur le renouvellement du contrat avec le LMR, et le dossier sera clos dans les 21 jours suivants.

2. Il n'existe pas suffisamment de données provenant de certaines régions en Amérique du sud pour aider à la compréhension de l'origine des foyers récents de FA de type O au Brésil.

3. La diffusion récente de virus du type Asia-1 dans des zones de la Fédération de Russie et en Chine qui pourraient être en relation avec une souche de virus-vaccin, indique une fois de

plus, que les programmes de vaccination peuvent résulter en l'introduction de l'infection, avec des conséquences pour la transmission transfrontalière.

4. Etant donné que – hormis une seule exception au cours des 10 dernières années – l'on a montré que les foyers de type C étaient liés à des introductions de virus-vaccin, on devrait considérer la cessation globale de la vaccination contre le type C; après cela, une garantie adéquate sera nécessaire pour permettre la vaccination avec des stocks d'urgence de vaccins de type C approprié de qualité assurée, si le besoin émerge.

Recommandations

1. On devrait accorder la priorité à la collecte de l'information, d'isolements et de souches vaccinales nécessaires à l'amélioration de l'évaluation du risque relative à la région africaine.

2. Du fait que la situation du type A en Iran est importante pour les pays membres de l'EUFMD, il est essential que les foyers de type A dans l'ouest de l'Iran soient rapidement caractérisés pour permettre une alerte plus précoce aux problèmes de maladie; les activités collaboratives avec l'Iran devraient être prioritaires pour aborder cette préoccupation

3. On devrait s'efforcer, à l'intérieur du programme de travail du LRC ou grâce à d'autres financements, d'entreprendre des tests de protection et de neutralisation croisées afin d'établir le niveau de protection des vaccins conservés dans l'UE et les virus circulant de type A en Iran.

4. La FAO devrait continuer la discussion avec l'OIE afin d'aboutir à un accord sur l'établissement d'un réseau élargi d'expertise de la FA, qui devrait inclure des experts dans le domaine de la surveillance et de la modélisation de la FA, et étendre le réseau OIE/FAO des laboratoires de référence de la FA.

5. La Commission devrait continuer de travailler sur les trous dans la surveillance globale, là où la complexité des virus de la FA est attendue, mais où l'information de base est insuffisamment disponible

6. Les organisations internationales font tout, en fonction de leurs possibilités, pour encourager les pays à utiliser seulement des vaccines antiaphteux dont on a démontré qu'ils rencontraient les normes de l'OIE.

Point 8. Rapport du groupe de travail sur le développement d'une initiative de formation sur la FA

Mike Robson (FAO) présenta le rapport du groupe de travail sur la formation établi lors de la 36ème session générale (**Annexe 12**). Ce groupe s'est réuni en deux occasions, en juin à Londres, à l'invitation du Dr Reynolds, CVO du Royaume Uni (DEFRA), et à Lyon en septembre, reçu par le Dr Mallet, ENSV, Lyon. This group had met on two occasions, in June in London, hosted by CVO of the UK, Dr Reynolds (DEFRA), and in Lyon in September, hosted by Dr Mallet, ENSV. Le groupe comprenant des représentants du Royaume Uni, de France, d'Allemagne et d'Irlande, avait contribué à l'avant-projet du programme de formation et avait ébauché les titres et les grandes lignes des modules destinés à deux types de personnels, ceux qui sont impliqués dans la réponse immédiate aux suspicions de FA et dans la mise en œuvre du contrôle local de la FA, et ceux responsables de la prise de décision au niveau national.

Il fit ressortir que la formation serait basée sur l'hypothèse que les pays ont besoin que leur personnel comprenne comment organiser leurs activités pour satisfaire les exigences de la Directive de 2003 sur le contrôle de la FA; deux groupes de personnes sont prioritaires pour la formation, d'une part les vétérinaires/personnels impliqués dans le contrôle au niveau local, qui seraient présents et les plus nombreux et nécessiteraient une formation en langue locale et, d'autre part, ceux impliqués dans les centres de contrôle nationaux. Par conséquent, il a été suggéré d'utiliser une approche à la formation par des jeux d'outils, pour créer des aides qui pourraient être rapidement adaptées aux langues locales et ainsi être utilisées par les Services nationaux. Un second principe était que la formation serait orientée vers la résolution des problèmes, en insistant auprès des stagiaires travaillant individuellement ou en groupes pour qu'ils s'attaquent à des problèmes typiques et difficiles que l'on peut s'attendre à rencontrer pendant les opérations de contrôle de la FA. Les matériels existants, livres et documents en ligne et autres sources seraient utilisés partout où cela sera possible. La proposition présentée était donc destinée à développer et à tester les modules avec des groupes de stagiaires, et d'utiliser le retour de sessions de formation et de formateurs concernés pour s'assurer que le problème posé est suffisamment réaliste pour ressembler à la réalité. L'apprentissage interactif pourrait être un défi mais cela serait peut être un avantage important pour les stagiaires interagissant que de discuter les solutions aux problèmes, et de partager des idées, des expériences et des pratiques.

M. Robson fournit une estimation des coûts pour la première année d'activités ; quelques composants seraient sous contractés à l'extérieur suite à offres compétitives suivant les procédures normales de la FAO, mais le travail clé de coordonner et de développer le contenu, le curriculum et la formation devrait requérir l'apport technique spécialisé fourni au mieux par un professionnel à temps partiel ou complet.

Conclusion

Le Comité a pris note du rapport et approuvé la proposition de poursuivre son développement. Le Secrétariat devrait développer cela en un document complet qui pourrait être transmis en tant que requête de financement par le Fonds fiduciaire CE/FAO.

Point 9. Rapport du Groupe de recherche du Comité technique permanent

Le Dr De Clercq présenta le rapport (**Annexe 13**) du Groupe de recherche du Comité technique permanent. Il appela l'attention sur le nombre de groupes de travail et leurs rôles et responsabilités à l'intérieur du plan de travail 2003-5, et résuma les progrès de ces groupes. Il indiqua ensuite les points qui furent discutés lors de la session close du Groupe, accueillie par l'Institut Friedrich Loeffer, à Greifswald, Allemagne, du 20 au 23 septembre 2005. Tous les membres élus du Groupe étaient présents, lesquels furent rejoints par le personnel de la FAO basé en Iran (Francis Geiger), au Tadjikistan (Erika Carlsson) et au Pakistan (Mansoor Hussain, épidémiologiste du projet FAO TADS de surveillance et de contrôle pour l'Asie centrale). Ces personnels additionnels avaient été convoqués par le Secrétariat EUFMD pour aider à l'évaluation du risque d'Asia-1 pour la Turquie, en réponse aux questions reçues du GDPC, Ankara.

Le Groupe a développé un plan de travail pour le biennium 2005-7 (**Annexe 14**). Dans le but d'accroître l'efficacité des efforts, le plan a identifié des domaines qui ne sont pas couverts par des actions parallèles impliquant des pays membres ou d'autres programmes ; il indique la division des tâches entre les groupes de recherche : d'un côté les parties considérées comme étant principalement la responsabilité de groupes de travail rassemblés par d'autres projets, et de

l'autre ceux ayant un rôle de coordination, en particulier l'Action coordonnée (FA & Peste porcine classique) financée par la DG-Recherche, et le rôle du LRC de l'UE pour la FA.

Le Dr De Clercq mit en lumière la flexibilité du Groupe pour répondre rapidement et s'adapter aux tâches nouvelles qui sont identifiées, mais aussi les problèmes de coordination entre les diverses actions financées par la CE qui ont des fonctions apparentées.

Il indiqua également que:

- Les résultats de l'atelier de Brescia sur la comparaison des performances des tests NSP, soutenu par Improcon/EUFMD et organisé par le Groupe de recherche de l'EUFMD en 2004, seront soumis pour publication en décembre 2005.
- Il fut proposé d'organiser un atelier pour les décideurs, les experts techniques et les épidémiologistes, afin de mettre en pratique les résultats du travail récent sur la surveillance post-vaccination à des scénarios réalistes en la matière.

Discussion

Le Président félicita le Dr De Clercq pour sa réélection à la Présidence du Groupe, et le remercia sincèrement pour ses efforts pour améliorer la coordination dans ce domaine important. Il lui souhaita la bienvenue pour son travail avec le Comité Exécutif durant ce biennium, et lui demanda de transmettre la gratitude de l'Exécutif pour le travail du Groupe.

Le Dr Willeberg soutient fortement l'idée du séminaire sur la surveillance post-vaccination (SPV) et invite à une participation au niveau des CVO. Le Secrétariat et le Groupe devraient consolider les détails de ce qui est proposé. Il considéra qu'il est d'une importance majeure de développer un logiciel pour améliorer la prise de décision en SPV, et pressa le Groupe de terminer et de tester cet outil avant les discussions avec les CVO à ce sujet.

Il réitéra également son soutien pour l'accroissement de l'implication des épidémiologistes dans le Groupe, et pour le développement de lignes directrices sur la sélection de modèles pour aider la prise de décision lors des foyers.

En relation avec les lignes directrices de l'OIE sur la surveillance de la FA, le Dr Willeberg suggéra une option selon laquelle on devrait développer des lignes directrices européennes qui sont plus spécifiques mais à l'intérieur du cadre de celles de l'OIE. Il indiqua que l'Exécutif et le Groupe de recherche étaient importants pour garder l'impulsion dans ce processus.

Le Dr Füssel suggéra que dans l'état actuel des connaissances et compte tenu du besoin de flexibilité pour les décideurs pour la mise en œuvre, l'opportunité d'améliorer davantage les lignes directrices de l'OIE sur la surveillance de la FA est très limitée; si un changement est requis, il faudrait indiquer clairement ce que l'on voudrait voir changer. Il est nécessaire d'être très prudent pour garder une essentielle flexibilité dans l'interprétation ou dans l'exécution, qui permette la gestion du risque par les pays importateurs. Il convint que la CE peut décider unilatéralement dans le cadre du Comité permanent pour la santé animale (CE- CPSA) mais si cela crée de la rigidité dans les lignes directrices, alors cela peut créer subséquemment des problèmes pour les pays membres.

Pour ce qui concerne le concept du réseau FAO/OIE pour la FA, le Dr Domenech se félicita de l'excellent travail du Groupe et souligna que l'idée est qu'ensemble avec l'OIE, le réseau devrait être établi en incluant d'autres experts, dans lesquels le Groupe de recherche peut être considéré comme un noyau d'expertise technique. La FAO et l'OIE s'accordent pour baser le réseau sur le modèle de l'OFFLU; la FAO propose d'accueillir le Secrétariat du réseau.

Le Dr Cokreski demanda des clarifications sur les lignes directrices sur les transports, du fait de l'importance des problèmes rencontrés pour transporter des prélèvements vers les laboratoires de référence. Le Dr Eugen Olaru, remplaçant du CVO de Roumanie, était du même avis, mais indiqua que le transport est coûteux mais faisable.

En réponse, le Secrétaire ajouta qu'il y a deux niveaux où l'action est presque continuellement nécessaire : l'un est au niveau où sont fixées les réglementations internationales pour le transport d'échantillons et d'agents de maladies (Sous-comité des Nations Unies pour le transport des produits dangereux, et les réglementations subsidiaires des transports aériens basées sur celles-ci) ; l'autre niveau est de donner une simple assistance aux pays pour leur compréhension des réglementations en vigueur, et pour trouver la voie la plus appropriée et la plus efficace pour faire parvenir des prélèvements aux laboratoires de référence. L'OIE a pris en charge le premier niveau, et il sera important qu'ils continuent de le faire et de fournir régulièrement des mises à jour sur les progrès et les problèmes qui affecteront la capacité de transporter dans le futur.

Au second niveau, le Groupe de recherche devrait fournir une mise à jour annuelle pour guider les laboratoires de référence sur l'état des réglementations et, au moins pour la FA, comment expédier les prélèvements au LMR.

Le Dr Paton ajouta que le changement récent de classer les échantillons pour le diagnostic à un niveau inférieur à celui des cultures de virus devrait aider au transport des prélèvements. Cependant, les pays où la FA est endémique font le plus souvent face à des obstacles majeurs, là où les compagnies aériennes ne transporteront pas de produits classés comme dangereux; cela peut demander de complexes routages de transport, ce qui peut être un problème pour la qualité des prélèvements aussi bien que pour la logistique. Il est probable que ce problème durera ; il en sera de même pour le soutien que l'EUFMD/FAO apporte à ces pays pour réaliser la soumission d'échantillons.

Les problèmes de la vaccination contre le type C, et de la sécurité des vaccins antiaphteux ont été soulevés à nouveau, et plusieurs membres ont suggéré que la FAO et l'OIE devraient prendre le commandement pour faire pression sur les pays afin qu'ils utilisent seulement des vaccins satisfaisant aux normes internationales.

Conclusion

Le plan de travail du Groupe de recherche pour la période 2005-7 a été approuvé.

Recommandations

1. Le Secrétariat devrait aller de l'avant dans la planification de l'atelier sur la surveillance post-vaccination en 2006.

2. Les pays membres devraient prendre en considération les résultats du Groupe de recherche et l'atelier sur la SPV à venir, avant d'envisager de plaider pour des changements dans les lignes directrices de l'OIE sur la surveillance de la FA.
3. Il est demandé au Groupe de recherche de finaliser la révision des directives sur le transport des échantillons de FA pour circulation aux parties intéressées par le Secrétariat.

4. Les organisations internationales devraient être encouragées à travailler à l'organisation d'une série d'ateliers régionaux sur les sujets de la qualité des vaccins, de l'innocuité et du suivi de la vaccination, pour les pays qui continuent à vacciner contre la FA.

Point 9.b Implication de l'EUFMD/FAO dans le projet UE-EPIZONE

Le Dr Sumption indiqua que la FAO avait été invitée à participer, en tant que partenaire, dans le projet EPIZONE qui en est au stade des négociations entre la CE (DG-Recherche) et les coordinateurs (Piet van Rijn et Johan Bongers, CIDC-Lelystad, Pays-Bas). Il proposa que les coordinateurs présentent un résumé du projet, et que le Comité Exécutif discute sa pertinence pour les activités de contrôle de la FA et le rôle de la FAO/EUFMD dans le projet.

Le Dr Bongers présenta un résumé. Le projet avait été proposé sous la rubrique FP6 comme un réseau d'excellence, et 20 institutions devraient à présent le rejoindre en tant que partenaires. Les négociations sont en cours avec la DG-Recherche et il est prévu que le projet débutera mi-2006. Il illustra la structure du projet, avec un Organe de direction et un Conseil consultatif, ainsi qu'un budget proposé de 14 millions d'euros sur 5 ans. Il indiqua les thèmes transversaux et les thèmes spécifiques, et qu'à ce stade seul le plan de travail pour les 18 premiers mois avait été rédigé mais pas finalisé.

Dans la discussion qui suivit, il apparut clairement que les partenariats créent des problèmes logistiques et de gestion, et que beaucoup dépendrait de l'effort des dirigeants des différentes institutions pour conduire les efforts dans leurs domaines. Les activités liées à la FA n'étaient pas claires également, bien que plusieurs thèmes puissent fournir une opportunité d'améliorer l'évaluation du risque, le développement et la normalisation du diagnostic, et de faire progresser les actions pour le développement du vaccin. La présentation a montré que l'effort d'EPIZONE était de mieux intégrer les actions de laboratoires existantes plutôt que de financer des lignes de recherche spécifiques. On s'inquiéta qu'il en résulte un nombre considérable de réunions et de rapports additionnels sans un investissement substantiel en activités de recherche ; par conséquent, on considère qu'EPIZONE facilite plutôt que ne réalise des progrès réels en matière de recherche.

Le Dr Sumption proposa que les domaines d'implication de la FAO/EUFMD devraient aider à la liaison entre l'Europe et les scientifiques des zones d'endémie de FA, et devraient faciliter le transfert d'expertise entre ces régions. Il proposa que la FAO/EUFMD se concentre sur le thème des initiatives de formation du projet EPIZONE et sur le thème concerné par la liaison des experts en Europe et les actions de contrôle dans les pays d'endémicité. L'initiative de formation de l'EUFMD pourrait être le modèle pour le transfert des connaissances, et EPIZONE pourrait être un bon véhicule pour élargir l'initiative pour inclure d'autres institutions en tant que partenaires de formation. De plus, EPIZONE pourrait aider au soutien d'une plus grande expérience des situations de contrôle des maladies dans les Institutions européennes, et une banque de données d'experts aiderait la FAO à trouver l'expertise appropriée pour les actions de réponse.

Conclusions

1. Le projet EPIZONE est pertinent pour le travail de la Commission EUFMD.

2. Les apports de l'EUFMD/FAO pourraient être dans le domaine du développement de la formation/connaissance de la gestion et dans le développement d'une base de données globale sur l'expertise en matière d'épizooties.

Recommandation

1. Le Secrétariat devrait continuer le développement du partenariat avec le projet EPIZONE.

Point 10. Réforme de la FAO – mise à jour et pertinence pour la Commission EUFMD

Le Dr Domenech, FAO, fournit une mise à jour sur le processus de réforme de la FAO. Il indiqua que l'Organe suprême de prise de décision est la Conférence bisannuelle de la FAO, laquelle s'est réunie récemment à la mi-novembre et a pris des décisions relatives au budget, au programme de travail et sur les réformes proposées. Les réformes proposées à la Conférence incluaient l'établissement d'une nouvelle Division qui se concentrerait sur la prévention des urgences (EMPRES) à la fois des pestes des animaux et des plantes, et le Directeur Général avait indiqué qu'une haute priorité serait accordée aux opérations d'EMPRES pour les maladies animales. Cependant, ce changement résulterait en ce que d'autres spécialistes de la santé animale seraient placés dans des Divisions différentes; il a reçu l'assurance que son rôle en tant que CVO de la FAO continuerait mais devrait être aménagé à travers des arrangements de travail transversaux. Suite à la Conférence, la conclusion est que le processus de réforme pour EMPRES sera retardé d'un an. Certaines parties de la réforme pourraient intervenir mais les contraintes budgétaires imposées par la Conférence auront un impact majeur sur les changements en 2006-7, à moins que l'on s'accorde sur quelque financement additionnel.

Les documents de la réforme avaient proposé que les Commissions de nature régionale, comme l'EUFMD, pourraient déménager vers le site de l'Organe économique ou politique régional, qui est Bruxelles, dans le cas de l'Europe. Le Dr Domenech indiqua la position de la FAO selon laquelle l'EUFMD devrait rester au siège à Rome. Aucun membre du Comité Exécutif n'exprima son opposition à cela.

Point 11. Etats financiers

Le Secrétaire présenta les Etats financiers préparés par la Division de l'administration et des finances (AFF) de la FAO pour 2005 et pour les trois Fonds fiduciaires relatifs à la Commission EUFMD (**Annexe 15**).

En ligne avec les recommandations de la 36ème session et pour la première fois, les dépenses seraient rapportées à la fois en dollar des EU, la monnaie des opérations de la FAO, et en euro selon un système de taux de change standard fonctionnant à la FAO.

Ainsi qu'il était attendu depuis les engagements faits pour les contributions en 2005 et l'effet de la dépréciation du dollar, la balance flottante a fortement diminué pendant l'année, mais cela devrait être corrigé en 2006-7 par le nouveau niveau des contributions approuvé lors de la 36ème session, ce qui devrait permettre d'honorer les engagements approuvés précédemment.

Pour ce qui concerne le Fonds fiduciaire opéré avec la CE, celui-ci connaissait actuellement un important déficit, depuis que la Commission avait acheté du vaccin pour la continuation de la zone tampon dans le Caucase afin de respecter les dates opérationnelles limites pour la livraison, d'où la nécessité de dépenser avant d'avoir reçu environ 2 million € de la CE sur le financement approuvé en 2005. Le Secrétaire espérait que le Comité Exécutif et la CE appréciaient que cela fut possible en raison de la longue relation existante dans l'opération du Fonds avec la CE, et à

cause de l'engagement de la FAO d'assurer que les actions d'urgence ne sont pas retardées par de telles transactions financières.

Il présenta ensuite les plans de dépenses pour 2006 pour les deux Fonds fiduciaires principaux (**Annexe 3**). Il demanda que le Comité Exécutif examine et approuve le plan qui était en ligne avec ce qui fut accepté à la 36ème session, sauf dans la ligne budgétaire relative à l'équipement non consommable. Il demanda que l'Exécutif approuve l'achat d'un véhicule de projet à utiliser pour soutenir les actions de coordination du contrôle de la FA mises en œuvre à partir du bureau FAO/OIE basé en Georgie. L'utilisation de ce Fonds fiduciaire assurerait que les opérations sont indépendantes dans leur action et serait vue comme une contribution des pays membres de l'EUFMD au contrôle régional de la FA.

En relation avec la dépense proposée à partir du Fonds fiduciaire, l'approbation du financement serait suivie par le mécanisme habituel, la décision sur la façon dont on utilise le Fonds dans une année donnée appartenant à la CE. Le tableau fut fourni pour s'assurer qu'il est bien clair que si l'option 2 de soutien au projet régional de contrôle de la FA est approuvée, on peut s'attendre alors à ce que le Fonds devienne déficitaire en 2007-8, sauf si un financement additionnel de l'ordre de 1,2 million € est garanti.

Conclusions

1. Les états de dépenses pour 2005, et les plans de dépenses prévus pour 2006 furent approuvés.

2. L'impact financier de la réalisation des actions proposées à partir du Fonds fiduciaire de la CE a été noté.

3. La réponse de la CE à la proposition de dépense en 2006 est d'une grande importance ; il en est de même d'assurer des garanties financières additionnelles dans la période qui s'écoulera d'ici à la prochaine session, afin de couvrir les coûts du contrôle de la FA dans le Caucase dans les années 2007-8.

Point 12. Autres sujets

Le Secrétaire appela l'attention sur ce qu'il fut interrogé par une société technologique qui était intéressée par l'évaluation d'un système basé sur des codes barre et des scanners à main qui pourraient enregistrer le point d'utilisation des vaccins ou la collecte de tubes de sang par des agents vétérinaires du terrain. Au cours de la discussion, on remarqua que le système pourrait aider l'administration et l'enregistrement mais ne pourrait pas prévenir la fraude par lui-même, puisque le code barre des bouteilles de vaccin pourrait être enregistré sans que le vaccin soit ultérieurement inoculé aux animaux.

Le Président conclût la discussion en disant que le système pourrait des avantages administratifs s'il était couplé au GPS de façon à ce que les détails du temps et de l'espace de la vaccination ou de la collecte d'échantillons puissent être rassemblés centralement afin de suivre l'avancée des activités, particulièrement l'utilisation des vaccins en urgence ou en routine.

Le Dr Cokrevski ajouta que l'Ex République Yougoslave de Macédoine avait déjà mis en oeuvre un système similaire pour l'enregistrement de l'identification des animaux avant leur déplacement. Il considéra que cela était un domaine pour le suivi de routine où de tels systèmes pouvaient réduire le temps de latence entre l'émission des permis de se déplacer et l'enregistrement de l'information au niveau central.

Conclusion

Le Secrétariat a été autorisé à aller de l'avant pour identifier les opportunités d'évaluer la technologie, à condition qu'il n'y ait aucun coût additionnel pour la Commission.

Point 13. Futures réunions

Le Dr Pakdil indiqua que la Turquie était disposée à accueillir la 73ème session.

On se mit d'accord sur les dates des 15 et 16 juin 2006. Le lieu de la session sera proposé par la Turquie dans un futur proche. Le moment de l'année pourrait signifier de chaudes températures sur la côte; des lieux plus tempérés à l'intérieur du pays pourraient avoir des avantages car ce sont aussi des zones où d'importants travaux sur la FA seront poursuivis.

Le Président remercia le Dr Pakdil pour l'aimable invitation ; il exprima sa confiance que la 73ème session serait un évènement réussi et mémorable pour la Commission.

Remarques de clôture

Le Président, au nom de Karin Schwabenbauer, Présidente de la Commission, remercia les membres et les remplaçants et observateurs pour leur contribution à la 72ème session. Il remercia le Secrétariat pour son aide dans les arrangements et les encouragea dans leurs efforts pour exécuter les recommandations adoptées. Il mentionna son appréciation pour l'équipe du Ministère de l'agriculture, de la nature et de la qualité alimentaire, qui avait travaillé sur les arrangements pratiques. Il souhaita un bon retour à chacun.

Le Dr Sumption déclara l'appréciation de la FAO et du Secrétariat envers le Dr de Leeuw et son équipe pour leur excellente hospitalité et leur souci du détail pour assurer le succès de la réunion. Il présenta une petite marque de témoignage au Dr de Leeuw et à Mle Hamid-Hardenberg.

Appendix 1

72nd Session of the Executive Committee
of the European Commission for the Control of Foot-and-Mouth Disease

The Hague, the Netherlands
29-30 November 2005

PROVISIONAL AGENDA

Provisional Timetable - Day 1: Items 1 to 5; Day 2: Items 6 to 13

Opening Statement: Mrs. Renée M. Bergkamp, Director-General, Dept. of Food Quality and Animal Health, Ministry of Agriculture, Nature and Food Quality, The Hague

3. **Adoption of the Agenda**

4. **Activities of the EUFMD Commission since the 36th General Session**

5. **Report of the First Regional Steering Committee of the GF-TADS[3] in Europe held on 13-14 October**
   i. Report on items relating to FMD control
   ii. Capacity building actions – discussion on technical support to countries in the region which are not recognised by the OIE as free of FMD

6. **FMD control and eradication in Turkey – co-ordination of technical support**
   a. *Current situation*
      i. Report on FMD control and sero-monitoring in Thrace region, 2005
      ii. Report of recent EUFMD missions and progress of surveillance actions (*FAO Letter of Agreement with SAP Institute for action in Erzurum Province*[4])
   b. *Summary of strategy and programme for FMD eradication and status of required funding*
      i. Presentation by Government of Turkey
      ii. Proposal for technical support via EUFMD for preparation for eradication in the period 2006-7[5]
   c. *Discussion and position statements of EC representatives (DG-SANCO and DG-enlargement)*

7. **FMD control in the Trans-Caucasus**
   a. *Current situation*
      i. Report on the actions in 2005 to maintain the buffer zone and in sero-monitoring[2]

[3] OIE/FAO Global Framework for progressive control of TransBoundary Animal Diseases
[4] Report to Executive Ctte and EC on use of EC Trust Fund MTF/INT/003/EEC ("EC Trust Fund")
[5] Proposal with financial implications for EC Trust Fund

b. *Co-ordination of inputs in FMD surveillance and control 2006-8*
    i. Proposal for a Regional support unit for FMD Control (FAO/OIE/EC FMD Control Co-ordination centre)[3]

Items below are proposed for Day 2

8. FMD control in Iran
- a. *Progress report - Phase I of the EUFMD/EC/France supported actions on FMD surveillance and control*[2]

9. Co-ordination of FMD surveillance
- a. *Report of the FAO WRL on change in global risk situation*
- b. *FAO/OIE Network - supporting global surveillance for FMD*
    - i. Status of agreements
    - ii. FAO support via the EUFMD Trust Funds and FAO regular programme
        1. Mission to Niger (November 2005) to improve virus submission[2]
        2. Improving FMD virus collection from risk areas[3]
        3. Support for FAO/OIE laboratory network functions[3]

10. Report of the working group on development of a FMD training initiative
- a. *Progress report*
- b. *Presentation of Project Proposal*[3]

11. Report of the Closed Session of the Standing Technical Committee of the Research Group held in Insel Riems, Germany, September 2005[2]

12. FAO reform process - update and relevance to EUFMD Commission

13. Financial statements

14. Any other business

a. Evaluation of new technologies to track vaccine usage in the field - proposal with relevance to field programmes.

15. Future meetings

Appendix 2

DUTY TRAVEL - EUFMD COMMISSION
2005

ACTIVITY	ACTION BY	LOCATION	DATES	PURPOSE	FUNDING
CAUCASUS	Carsten Pötzsch (Germany)	Rome, Italy	10-13 April	Drafting of project document for support to a 3-year programme on FMD & transboundary diseases in the Caucasus	TF
	Andriy Rozstalnyy (SEUR)	Georgia, Armenia, Azerbaijan	3-14 May	Inspection of buffer zone vaccination and organization of sero-monitoring	TCP/RER /3001
	Karoline Schollmeyer (Germany)	Tbilisi, Georgia	19-24 June	Workshop on FMD organised through project TCP/RER/3001	TF-EC
	Andriy Rozstalnyy (SEUR)	Borjomi, Georgia	19-26 June	1st Regional workshop on development of national contingency plans (NCPs)	TCP/RER/ 3001
	Andriy Rozstalnyy (SEUR)	Armenia and Azerbaijan	2-15 October	National workshops to evaluate draft NCPs for FMD	TCP/RER/ 3001
	Keith Sumption	Tbilisi, Georgia Yerevan, Armenia	23-27 October 28-30 October	Project feasibility mission	TF
	Carsten Pötzsch (Germany)	Tbilisi, Georgia	23-28 October	Project feasibility mission	TF-EC
	Andriy Rozstalnyy (SEUR)	Tbilisi, Georgia	6-19 November	National workshop to evaluation Georgian NCP for FMD and regional workshop on simulation exercises to evaluate NCPs	TCP/RER/ 3001
	Martyn Edelsten (UK)	Tbilisi, Georgia	13-23 November	Attend FAO regional workshop organised through TCP/RER/3001	TF (to be reimbursed by project)
TURKEY	Keith Sumption	Erzurum, Turkey	6-11 June	Project formulation mission	TF
	Tom Murray	Erzurum, Turkey	6-11 June	Project formulation mission	TF
	Mustafa Tufan Haluk Askaroglu Abdulnaci Bulut (Turkey)	Erzurum, Turkey	6-11 June	To accompany FAO staff on project formulation mission	TF
	Keith Sumption	Van, Turkey	25-30 June	FMD investigation/tracing procedures and draft guidelines; field trip to Van	TF
	Admassu Berhanu (Ethiopia)	Erzurum, Turkey	20 July – 5 August	Technical support to establish field applications of participatory epidemiology techniques	TF
	Tom Murray	Erzurum, Turkey	31 July – 4 August	Pilot study to investigate distribution and risk factors of FMD in Erzurum	TF
	Keith Sumption	Ankara, Turkey	26-28 September	Workshop on animal disease Eradication programmes in Turkey and their implementation	TF

ACTIVITY	ACTION BY	LOCATION	DATES	PURPOSE	FUNDING
	Admassu Berhanu	Erzurum, Turkey	10-27 October	Follow-up to previous mission	TF - EC
IRAQ (Jordan)	Keith Sumption	Amman, Jordan	16-19 May	Change management training programme	OSRO/IRQ/ 406/UDG
EUFMD MEETINGS	Kris De Clercq (Belgium)	Rome, Italy	23-25 January	71st Session of the Executive Committee	TF
	Carsten Pötzsch (Germany)	Rome, Italy	23-25 January	To present a report at the 71st Session on consultancy to Caucasus	TF
	Kris De Clercq (Belgium)	Rome, Italy	26-29 April	36th Session of the EUFMD Commission	TF
	Tony Garland (UK)	Rome, Italy	26-29 April	Rapporteur at the 36th Session	TF
	Dónal Sammin (Ireland)	Rome, Italy	26-29 April	Rapporteur at the 36th Session	TF
	Carsten Pötzsch (Germany)	Rome, Italy	26-29 April	36th Session	TF
	Keith Sumption	Insel-Riems, Germany	18-25 September	19/9: CSF-FMD meeting, Berlin Session of the Research Group (20-23/9)	TF
	Tom Murray	Insel-Riems, Germany	18-25 September	19/9: CSF-FMD meeting, Berlin Session of the Research Group	TF
	Egiziana Fragiotta	Insel-Riems, Germany	19-25 September	Session of the Research Group	TF
	Members of the Research Group: De Clercq/ Aktas/ Alexandersen/ Brocchi/ Bronsvoort/ Dekker/ Georgiev/ Greiner/ Moutou/ Sammin/Yadin /Paton	Insel-Riems Germany	19 – 25 September	Session of the Research Group	TF EC and TF
	Francis Geiger (Iran)	Insel-Riems, Germany	19-24 September	Invited guest: Session of the Research Group	TF
	Manzoor Hussein (Pakistan)	Insel-Riems, Germany	19-24 September	Invited guest: Session of the Research Group	Part TF EC & part GTFS/INT/ 907/ITA
	Kris De Clercq (Belgium)	The Hague, the Netherlands	28 Nov – 1 Dec	72nd Session of the Executive Committee	TF
	Keith Sumption	The Hague, the Netherlands	28 Nov – 1 Dec	72nd Session of the Executive Committee	TF
	Egiziana Fragiotta	The Hague, the Netherlands	28 Nov – 1 Dec	72nd Session of the Executive Committee	TF
TRIPARTITE MEETINGS	Keith Sumption	Geneva, Switzerland	1-3 February	FAO/OIE/WHO Tripartite - GLEWS	TF
	Keith Sumption	Alexandrou-polis, Greece	24-26 November	FAO/EC/OIE Tripartite on the Balkans	TF
	Keith Sumption	London, UK	30-31 January	EFSA panel	Reimbursed by EFSA

ACTIVITY	ACTION BY	LOCATION	DATES	PURPOSE	FUNDING
EFSA MEETINGS	Keith Sumption	London, UK	13-15 March	EFSA panel	" "
	Tom Murray	London, UK	13-15 March	EFSA panel and assist with finalization of FMD incidence elements	TF
EFSA MEETINGS	Keith Sumption	Brussels, Belgium	1 July	EFSA panel	Reimbursed by EFSA
	Keith Sumption	Brussels, Belgium	2 September	EFSA panel	" "
	Keith Sumption	London, UK	23 November	EFSA panel	" "
OIE MEETINGS	Keith Sumption	Geneva, Switzerland	1-3 February	FAO/OIE/WHO Tripartite	TF
	Keith Sumption	Paris, France	23-26 May	OIE General Session	TF
	Keith Sumption	Paris, France	12-14 October	1st meeting FAO/OIE steering committee GF-TADs	TF
OTHER	Dónal Sammin (APO)	Brescia, Italy	5-6 January	Follow-up to NSP workshop held in Brescia in May 2004	TF
	Dónal Sammin (APO)	Brussels, Belgium	10-14 January	NSP workshop and EmproCon follow-up	TF EC
	Francis Geiger (France)	Rome, Italy	20-23 January	Briefing on action to be conducted in Iran under EUFMD EC	TF
	Keith Sumption	Brussels, Belgium	23-24 February	EC – First stakeholder meeting for the European technology platform for global animal health	TF – reimbursed by EC
	David Paton (UK) Dónal Sammin (Ireland)	Hong Kong	6-24 March	To assist i the study on diagnostic tests for FMD in pigs	TF
	Tom Murray (APO)	Copenhagen, Denmark	7-10 March	To take part in discussions on planning & evaluation of nordic FMD simulation exercises	TF
	Tom Murray (APO)	London, UK	11-12 April	To visit Pirbright Laboratory and assist with preparation of reports on training needs on FMD control	TF
	Keith Sumption	London, UK	20-21 June	1st Training group meeting (as rec. at 36th session)	TF
	Slobodan Cokrevski (TFYR of Macedonia)	London, UK	20-21 June	1st Training group meeting	TF
	Keith Sumption	London, UK	15-16 August	Visit FAO-WRL to discuss future action	TF
	Keith Sumption	Lyon, France	13 September	2nd Training group meeting	TF
	Keith Sumption	London, UK	17 October	WRL to discuss progress of CSF/FMD project	TF
	Francis Geiger (France/Iran) Emmanuel Couacy-Nymann (Côte	Niamey, Niger	18 Nov. – 3 Dec.	FMD surveillance feasibility mission	TF EC

ACTIVITY	ACTION BY	LOCATION	DATES	PURPOSE	FUNDING
	d'Ivoire)				
	Keith Sumption	London, UK	5-7 December	Workshop on integration of laboratory-based information. Organised by CSF/FMD Action Plan	TF

Appendix 3

Implementing the EUFMD Strategic Plan – 2006

Background:

The EUFMD Strategic Plan, as approved by the 36th Session:

Sets out the strategic vision – goal

Consistent with the EUFMD constitution, the strategy is to undertake a programme of actions that will assist member countries, and the EC, to progress towards the goal, or vision, of:

- A Europe free of FMD – the FMD disease-free state achieved and maintained in all Europe.

Purpose

Envisages the member countries, with support from the EUFMD Commission and other partners, working towards the following:

1. No occurrence of FMD in officially free countries of Europe in the period to 2008.
2. Effective management of risk of entry through improved access to information of FMDV circulation in source countries and of epidemiologically significant events.
3. No occurrence of Asia-1 infection in Turkey over the 4 year period.
4. Reduction in incidence of other exotic FMD types entering Turkey over this period.
5. FMD surveillance targets and reporting in Caucasus countries and in Iran (and Iraq, Syria) that meet the requirements of at risk countries for early warning.
6. Incidence of FMD in Thrace region of Turkey reduced to zero in period; targets for surveillance, disease investigation and reporting in Thrace region meet need for early and effective control of incursions.
7. Reduction in distribution of type A and type O FMD in Anatolia – defined by increase in the Provinces/area, and in period /time when virus infection is shown not to be present.

Recommended a Strategy for action

The strategy focuses on actions to be taken to achieve outcomes which are useful to member states to help them achieve and maintain FMD freedom.

The Commission should focus on delivery in four key categories of action in the period 2005-8:

- Support to FMD control in "traditional risk areas"- threatening south-eastern Europe and Turkey.
- Global FMD observation – virus circulation and risk.
- Coordination of technical studies to address constraints to policy implementation.
- Capacity building across Europe – raising and retaining expertise and competence in the scientific basis of FMD control and in best practises in epidemic management.

The Commission should therefore in the 4 year period develop projects, gain funding and implement projects to enable it to develop useful outputs and outcomes which are applied in member countries and beneficiaries:

1. Improved system for monitoring FMD virus strain circulation operational
2. Technical constraints to preferred European FMD control policies reduced
3. System for professional development in FMD management/expertise developed
4. FMD risk surveillance and management programmes operating in target countries
5. FMD incursions/emergencies rapidly controlled, where supported by specific Commission decisions

The Secretariat/FAO should take steps to find funding for the following:

- 1: Implementation of an FMDV observation action, supporting European vaccine management through better identification of risk trends and events, including:
  - support to developing country veterinary services to collect and submit samples;
  - support to information exchange and networking of FMD Reference Laboratories.
- 2: Supported actions to address technical constraints identified by the EUFMD Standing Technical Committee, working with the FAO/EC/OIE Co-ordination structure for FMD and CSF laboratories.
- 3: Implementation of innovative, capacity building action to raise technical competence of key levels of the European epizootic control management.
- 4: Field programme support:
- Support the implementation of comprehensive actions for the surveillance and effective response to FMD in the southern Balkans region (Turkey, Greece, Bulgaria);
- Implementation of a project for early warning of FMD regional risk events, through supported actions with the Islamic Republic of Iran;
- Implementation of a project for the surveillance and effective response to FMD risk in countries of the South Caucasus (Georgia, Armenia, Azerbaijan);
- Identification and formulation of project actions to control risk in other countries neighbouring to Turkey, and in other FMD risk situations, as required by the emerging situation.

Plan of action of action for 2006

Towards goal of official FMD free status

- **Moldova:** technical support to assist Moldova towards official FMD free status should be provided under EC-FAO Food Security Programme (EC-FAO FSP), 2006-8 with FAO implementing and AGAH/EUFMD as lead technical unit.

- **Republics of Belarus, Serbia and Montenegro, status of Kosovo;** *decision on EUFMD action to provide technical advise or support needed*

Activity status - under the 5 Strategic Plan categories

Category of Activity		*Targets/supported*	*EUFMD funded*	*EC-FAO Trust Fund*	*Other FAO relating to FMD*	*Complementary donor & FAO actions*
1	Improved system for monitoring FMD virus strain circulation operational	All European countries, but global value	Annual contract with WRL will finish 2005. FAO Open tender proposed to follow: support to FAO/OIE network and to global surveillance services, 2006	To be decided. Priorities for supported submission: - west Africa, Sudan/horn of Africa	Some regional support e.g: 1. Italian funded Central Asia TADS; 2. Asian Bank Mekong subregional project	OIE WAHIS development FAO-EMPRES-I information system development Exploratory: FAO/OIE and Co-ordination Action discussion on surveillance networking.
2	Technical constraints to preferred European FMD control policies reduced	All European countries	EUFMD-Research Group meeting 2006.	To be decided. Meetings of task groups to progress Workplan of EUFMD-RG		DG-Res funded CA FMD&CSF (2005-). DG-Res funded EPIZONE (2006-)
3	System for professional development in FMD management/expertise developed	All European countries, potential global	Secretariat inputs to training initiative.	To be decided. Training initiative prepared: year 1 request circa US$ 330,000		

Category of Activity		*Targets/supported*	*EUFMD funded*	*EC-FAO Trust Fund*	*Other FAO relating to FMD*	*Complementary donor & FAO actions*
4	**FMD risk surveillance and management programmes operating in target countries**	Trans-Caucasus-regional	Secretariat technical and admin support time. Vehicle provision – EUFMD TF ?	Trans-Caucasus: Buffer zone Spring vaccination 2006 approved. To be decided: Proposal formulated for 2006-8, 2006 costs of.EURO 636k.	Trans-Caucasus: FAO funded: final workshop of TCP/RER/3001, Jan 2006.	Office: Provided by Govt of Georgia
	FMD management in target countries	**Georgia**		Agreed: BZ Spring vaccination 2006. **2006 priorities:** **Address low vaccination rates in BZ-organisation/cold store** Technical support to establish TADinfo/National Surveillance system (NADSS). Baseline national FMD survey. Prevention planning: Progress NCPs		EC-FSP support to reform of veterinary service. US-DETRA project. Important capacity in FMD diagnosis will be in place.
	FMD management in target countries	**Armenia**		Agreed: Spring vaccination 2006. **2006 priorities, funds not yet agreed :** Implement TADinfo/NADSS with active follow up of FMD sero-surveillance findings. Laboratory support: -external quality assurance and training to establish sero-monitoring - outbreak /virus confirmation Progress NCPs		EC-FSP in country technical assistance to implement NADSS. FAO/Italian Government support to brucellosis control (expected not signed) – some synergy.
	FMD management in target countries	**Azerbaijan**		Agreed: Spring vaccination 2006. **2006 priorities, funds not yet agreed :** Address 2005 problems Identify capacity gaps.		EC-FSP, French bilateral. US-DETRA project should begin 2006. Important capacity in

Category of Activity		*Targets/supported*	*EUFMD funded*	*EC-FAO Trust Fund*	*Other FAO relating to FMD*	*Complementary donor & FAO actions*
				National baseline FMD sero-survey. Progress NCPs Surveillance system: Implement TADinfo installation, training, NADSS with active follow up of FMD sero-surveillance findings. Laboratory support: -external quality assurance and training to establish sero-monitoring. - outbreak /virus confirmation		FMD diagnosis will be in place - ?2007 FAO/UNDP support to privatised delivery of vet. services, focus on brucellosis surveillance and control.
	FMD management in target countries	**Iran**	Secretariat technical and admin support time Secretariat technical support time	Iran: FAO Technical co-ordinator in place provided by France. Phase 1 programme approved, [US$ 761,000, of which 2006: US$381k.].		
	FMD management in target countries	**Turkey**	Secretariat technical support time	Turkey: To be decided 12/2005. Actions in 2006-7 to protect eastern borders and prepare for national eradication drafted. Thrace region: Diagnostic support to sero-surveillance to be identified 12/2005.		EC enlargement support to FMD eradication (project fiche prep) -support not until 2007+
		Syria	To be decided			
	FMD management in target countries	**Iraq**	Secretariat technical support time		Uncertain; via FAO support to rebuilding services.	
	FMD managemert in target countries	**Moldova**	Secretariat technical support time (to be charged to EC-FAO FSP project)		Moldova: Expected US$ 314k EC-FAO FSP funded technical support to TADS prevention and control, FMD	

Category of Activity		*Targets/supported*	*EUFMD funded*	*EC-FAO Trust Fund*	*Other FAO relating to FMD*	*Complementary donor & FAO actions*
					freedom, 2006-8	
		Kosovo	To be decided.		Via FAO programme support (?).	
		Middle-east and north Africa	Secretariat technical support to FMD roundtable meeting 2006 (5 days)			
5	FMD incursions/emergencies rapidly controlled, where supported by specific EC decisions	EU & EUFMD m.c. benefit.	As required; Secretariat technical support time	Situation dependent.		

Cross-cutting implementation issues

1. **Regional support units for TADS prevention and control – protection of Trans-Caucasaia and eastern Turkey**

The technical support can be provided through:

1. Tbilisi base

The Government of Georgia has offered office accommodation to host an FAO/OIE Regional Co-ordination Centre in Tbilisi, Georgia.
As an operational base, Tbilisi office could enable a technical support officer to serve EUFMD actions in:

Georgia
Armenia
Azerbaijan

PLUS: Eastern Turkey - especially areas neighbouring to Georgia and Armenia

Secretariat proposal:
See paper.
Recruit Technical Support Officer (specialism in surveillance/epidemiology)
Recruit administrative assistant for implementation - via UNDP/Tbilisi as FAO Office in Tbilisi is not full FAO-Country Office.
Vehicle: required and propose purchase under EUFMD Trust Fund under biennial budget 2006-7.

2. Teheran base:

Project Office is provided by Government of Iran, staffed by FAO-EUFMD Officer (Francis Geiger) and project management team for Iranian Veterinary Organisation (IVO).

Project implementation is via FAO Office in Teheran, as baby project from EC Trust Fund.

The EC/FAO Phase I project support includes western provinces bordering Turkey as one (of three) areas for improving surveillance in 2006.

3. FAO Headquarters (Rome):

EUFMD Secretariat for co-ordination, technical backstopping to countries/areas not covered by above (may include other regions of Turkey according to agreement GDPC).

2. **Technical support for professional development in FMD surveillance and control**

Secretariat proposes that an additional officer to be recruited:

- Part-time training officer, under the FMD training initiative (if approved)
- Part -time responsibilities technical support (backstopping) to FMDV surveillance actions outside European boundaries in non-European risk areas

3. **Administrative support assistant, FAO Headquarters**

Project implementation via FAO/UNDP system of offices is established but admin-heavy. The project has a very high number of transactions/activity. The need to include an additional assistant to operate the project was foreseen in the EC-FAO agreement on use of the Trust Fund 2005-8, and is a requirement to service the project by FAO Management. Recruitment should occur in 2006.

Proposal for expenditure – 2006

Given in Annex 1and 2.

1. MTF/INT/011/MUL - TF number 904200

   Significant points:

   1. The proposal to increase Non-Expendable Equipment Line to US$ 44,000, to allow purchase of a vehicle for Regional Support Unit based in Tbilisi.
   2. The other figures are as agreed in the 36th Session, and provide for a recovery in balance (the balance acts to bridge at times when contributions are delayed).
   3. The increase in Contracts line gives the Executive flexibility to direct project formulation, or increase contracts (e.g. WRL/Reference Labs).

2. Scenario for expenditure from EC-Trust Fund (MTF/INT/003/EEC)

   The final agreement on the use of the Fund rests with the EC.

   The table indicates cash-flow issues if proposed actions were funded from the Trust Fund with current scheduled contributions from EC.

   Proposed actions in 2006 could be financed, but a minimum of additional 1.2 m Euro would be required in period 2007-9 to offset the costs of the actions (mainly the cost of the Buffer zone operation in Trans-Caucasia).

Projection for 2006; *MTF/INT/011/MUL - TF number 904200*

Annex 1

MTF/INT/011/MUL - TF number 904200

– Projection for 2006

Year		2005 (15th Nov)		2006 (Projection)
	US$			US$
Balance as at 1 January		168,822	$	209,060.97
Interest received	3,637.00			
Contribution from member countries	296,455.0	300,092	$	496,210.00
(As per statement 2)				
Expenditure	By 15th Nov	In final period 2006		
Commission Secretary	157,354.0	31,471	$	200,000.00[6]
Consultant	20,643.00			15,600.00
Admin. Support Personnel	71,931.00	14,386		86,920.00
Contracts	46,061.00			85,405.00
Duty Travel	53,982.00	10,796		66,967.00
General Operating Expenses	18,239.00			2,791.00
Expendable Equipment	14,444.00			3,375.00
Non-Expendable Equipment	60.00			44,000.00
Total Expenditure	382,714			501,058.00
Projected Last 6 weeks of 2005 expenditure by end of 2005		56,653		
Cash balance as at 15 November 2005 and projection -12/2006		86,200	$	**200,212.97**
Outstanding Contributions 15th Nov (exc Yugoslavia):		122,860.97		

[6] As dollar/euro exchange rate fluctuates ad costs in Rome are adjusted to euro costs, the yearly support costs of secretary and assistant cannot be closely estimated; above projection shows a fall in projected costs compared to April 2005.

Annex 2

Scenario for expenditure from EC-Trust Fund (MTF/INT/003/EEC)

IN EURO. Figures for 2005 are not final, and support costs (inc. administrative assistant costs from 2006) are not included.

Option 2	*Activity*	*2,005*	*2,006*	*2,007*	*2,008*	*2,009*	*Total*
Scheduled contrib.		2,000,000	625,000	625,000	625,000	625,000	4,500,000
	Trans-Caucasia	614,000	636,615	956,418	950,435		3,157,468
	Iran	25,000	320,000	190,000	100,000		635,000
	Eastern Turkey	40,000	200,000	200,000			440,000
	Training		285,000	285,000	100,000		670,000
	Surveillance	15,000	100,000	125,000	125,000		365,000
	TSU Officer		100,000	100,000	100,000		300,000
	Other Support Costs	25,000	25,000				
	Total	719,000	1,666,615	1,856,418	1,375,435		5,567,468
	Year end Balance	1,281,000	239,385	-992,033	-1,742,468	-1,117,468	

UNMIK IPVK

INSTITUCIONET E PËRKOHSHME TË VETOQEVERISJES
PRIVREMENE INSTITUCIJE SAMOUPRAVLJANJA
PROVISIONAL INSTITUTIONS OF SELF-GOVERNMENT

QEVERIA E KOSOVËS/ MINISTRIA E BUJQËSISË, PYLLTARISË DHE ZHVILLIMIT RURAL
VLADA KOSOVA/ MINISTARSTVO POLJOPRIVREDE, ŠUMARSTVA I RURALNOG RAZVOJA
GOVERNMENT OF KOSOVA/MINISTRY OF AGRICULTURE, FORESTRY AND RURAL DEVELOPMENT

Agjencia Veterinëre dhe Ushqimit të Kosovës (AVUK)
Kosovska Agencija za Veterinu i Hranu (KAVH)
Kosovo Veterinary Food Agency (KVFA)

Presented by:
Dr.Qaush Kabashi, Chief Executive Officer of Kosovo Veterinary and Food Agency

Introduction

- Kosovo Veterinary and Food Agency (KVFA) is a new organization established in 2000 with the support of the United Nations Interim
- Administration Mission in Kosovo (UNMIK) adopted by the resolution 1244 (1999) (annex 2). The authority given to the Special Representative of the Secretary-General, under the above mentioned United Nations Security
- Council Resolution 1244 (1999), promulgated and published the regulation on "A Constitutional Framework for Provisional Self-Government"
- (Regulation nº 2001/9 of 15 of May 2001). This Regulation (Annex 3) entitles the Kosovo, under interim international administration, to be governed democratically through legislative, executive, and judicial bodies and institutions.

Introduction

- According to the referred legal frame, the Provisional Institutions of Self-Government, in fact the Assembly of Kosovo, under the United Nations Interim Administration
- Mission in Kosovo, approved the "Veterinary Law", Law No.2004/21, of 30 July 2004, which regulate the organization and the activities of Kosovo Veterinary and Food Agency (KVFA) under the Ministry of Agriculture Forestry and Rural Development (MAFRD) (annex 4).
- In meantime, Kosovo Veterinary and Food Agency is committed to provide information for the World Animal Health Information System and collaborate in the activities of OIE in order to build the institutional capacities enabling to implement the mandate and strategy in the territory of Kosovo.

Country Information

Location:

- South-eastern Europe
- Border countries: Albania, Macedonia ,Serbia and Montenegro
- Coastline: none (landlocked)
- Map references: Europe

Area: total: 10,877 sq km

Climate: warm, dry summers and autumns and relatively cold winters with heavy snowfall

Elevation extremes:

- lowest point: Drini River 270 m
- highest point:: Gjeravica 2,674 m

Population: Estimated 2.200,000

Government type: Parliamentary democracy

Currency: Euro

Institutional Ret-up Related to Public Veterinary Services

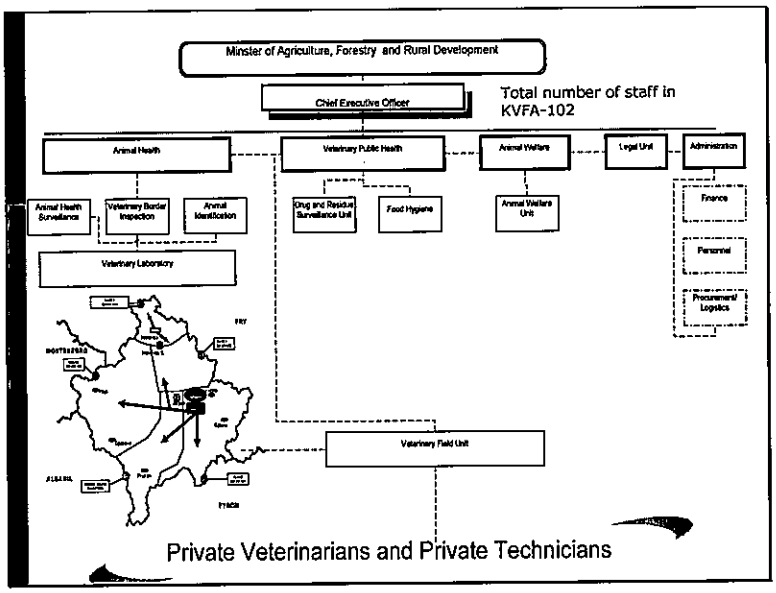
Name: **Kosovo Veterinary and Food Agency**

Responsibilities of KVFA (according to veterinary law nr. 21/2004)

- measures concerning live animals and biological products, semen, cells and embryos, by-products and plant products subject to veterinary requirements, relating to the:
- control of Infectious and contagious diseases;
- notification of certain diseases specified by the Ministry;
- animal identification and registration;
- animal health conditions required for their movement;
- animal health conditions required for their import;
- measures, concerning products of animal origin relating to the
- requirements for their production and placing on the market

Continuation:

- conditions required for their import;
- measures relating to live animals and products of animal origin concerning:
- the prohibition on the administration and use of certain substances;
- the monitoring of certain substances and residues;
- animal waste and pathogens;
- measures concerning veterinary inspections relating to the export of live animals, products of animal origin and biological products, semen , cells and embryos, byproducts and plant products subject to veterinary requirements;
- certification with regard to veterinary controls;
- the relationship with other international organizations pertaining to veterinary matters.

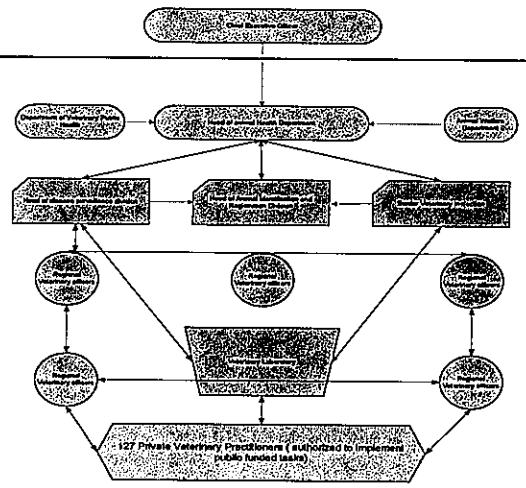


ANIMAL HEALTH DEPARTMENT

Duties and obligations of Animal Health Department

- develop a structured background surveillance programme
- establish a system of international disease surveillance
- create working instructions for dealing with the major epidemic, endemic and zoonotic diseases
- clarify the procedure for confirming the existence of epidemic disease
- prepare contingency plans for dealing with the major epidemic disease
- prepare contingency plans for dealing with the major epidemic disease outbreaks e.g. foot and mouth disease and bluetongue

Organogram of AHD



ANIMAL HEALTH SECTOR ACTIVITIES FOR 2004

vaccination activities

- Vaccination against Rabies 55.000 doses
- Treatment against Echinoccocus. 100.000 tablets
- Vaccination against Classical Swine Fever 55.000 doses
- Vaccination against Anthrax (Endemic Regions) 14.000 doses
- Vaccination against New Castle 1.500.000 doses
- Program for Bluetongue
- TBC- control 20.000 doses

Agensioni Veterinar dhe I Ushqimit të Kosovës
Kosovo Veterinary and Food Agency

Survey Activities for 2004

- Program for Bluetongue (longitudinal study on presence of bluetongue in Kosovo)
- Program for Brucellosis Bovine and Melitensis
- Program for Leucosis
- Program for Avian Influenza
- Program for New Castle
- Program for Salmonellosis
- Program for FMD
- Program TBC- control

gensioni Veterinar dhe I Ushqimit të Kosovës
sovo Veterinary and Food Agency

VACCINATION ACTIVITES 2005

- Vaccination against Rabies 55.000 doses
- Treatment against Echinoccocus. 110.000 tablets
- Vaccination against Classical Swine Fever 55.000 doses
- Vaccination against Anthrax (Endemic Regions) 16.000 doses
- Vaccination against New Castle 1.600.000 doses
- Vaccination against Brucellosis 65.000 doses

SURVEY ACTIVITIES: 2005

- **Program for Bluetongue**
- **Program for Brucellosis Bovine and Melitensis**
- **Program for Leucosis**
- **Program for Avian Influenza**
- **Program for New Castle**
- **Program for Salmonellosis**
- **Program for FMD**
- **Program TBC- control**
- **Program for Mastitis test**

FMD Sero-surveillance

- As per holdings census carried out during 2003, there are : **92000 cattle farms in Kosovo and 237000 animals of bovine species**

Sero-surveillance was based on the 99% confidence of detection of disease if the prevalence is more than 1%.

According to epidemiological calculations, 908 blood samples were taken from randomly selected bovine animals of different categories.

Samples were sent to the laboratory in Pirbright (UK) and subsequent results showed no presence of FMD in Kosovo

Technical support needed

- O.I.E requirements related to annual surveillance programs for FMD
- Introduction to the O.I.E reporting obligations related to FMD.
- Assistance in developing contingency plan
- Assistance in preparation of requests for as FMD free recognition
- Assistance in the establishment of disease reporting system to the O.I.E

Thank you for the attention !!!

1

A Serosurveillance for FMDV-NSP in Juvenile Cattle in Turkish Thrace, 2005

BULUT, A.N., SAREYYUPOGLU, B., TEZEL, A. AND AKTAS, S.
Sap Institute, ANKARA, TURKEY

2

FMD Vaccination Programme in Thrace

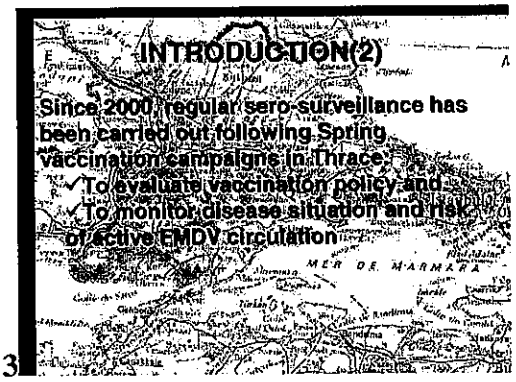
- Spring & Autumn vaccination
- Spring only
- Şap Institute Trivalent vaccine (O/A/Asia1)

3

INTRODUCTION(2)

Since 2000, regular sero-surveillance has been carried out following Spring vaccination campaigns in Thrace:

- **To evaluate vaccination policy and**
- **To monitor disease situation and risk of active FMDV circulation**



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A sero-surveillance was carried out again this year but the aim and design of the serosurvey was different from previous serosurveys:

The primary objective was to provide evidence that FMD virus has not been circulating

- focus exclusively on cattle
- target juvenile cattle (*< 2 years but >4 months*)
- two-stage sampling strategy: first sampling *at the time of vaccination*
- *and follow-up investigation*
- villages as primary sampling units
- detect a 2% prevalence of "infected villages"
- detect a 5% within-village prevalence
- require 95% confidence in result

The secondary objective was evaluation of the field efficacy of Şap Institute vaccine

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- [illegible] ELISA sera: In total 9728 sera were collected at 0. day during the vaccination
- Sera [illegible] antibody levels: 960 sera were collected at 60. day postvaccination in 15/152 units.
- Follow-up investigation sera: In total 477 sera were collected in 8 positive units.

Villages: Kayabasi, Ciftalan and Frizkoy in Istanbul, were sampled as positive premises (all cattle in each premise) and within village population as randomly with 2% prevalance and 95% confidence.

In the others units, just all animals were bled in positive premises

During the follow-up investigation, 34 OP were collected from NSP positive cattle.

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- NSP ELISA:

CEDI-diagnostic NSP-FMD ELISA kit was used for primary testing of sera and sera which were detected as positive by CEDI were tested again by Bomelli-chekit NSP ELISA kit.

- Antibody detection ELISA:

Liquid-phase Blocking ELISA (LPBE) was used for measuring of antibody levels and titration of sera detected as positive by NSP ELISAs.

- Antigen detection ELISA:

Indirect Sandwich Antigen Detection ELISA was used for testing of tissue culture supernatants for OP fluids.

- Lamb Kindney Primary cell cultures were used for virus isolation from OPs.

8

1.Results of the main survey

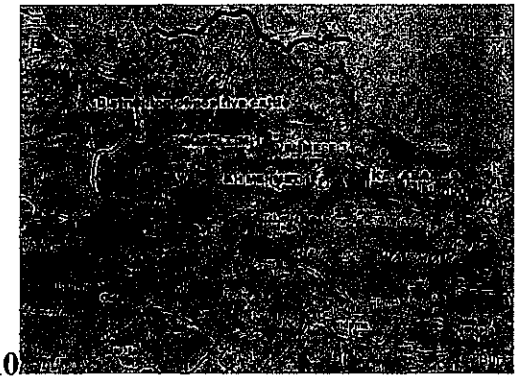
- 29 sera were positive in total 9728 sera by NSP-FMD ELISA(CEDI-Diagnostic)
- Positive sera were tested again by NSP-ELISA Bomelli-chekit
- And titrated by LPBE

PROVINCE	NUM.OF.SERA	NUM.OF.POSITIVE	%
ÇANAKKALE	[illegible]	0	0
EDİRNE	2884	0	0
İSTANBUL	1600	11	1.07
KIRKLARELİ	2304	1	0.04
TEKİRDAĞ	2880	9	0.31
TOTAL	9728	29	0.29

9

PROVINCE	DISTRICT	VILLAGE	NUM. OF POSITIVE
İSTANBUL	B.ÇEKMECE	FİRİZKÖY	1
İSTANBUL	B.ÇEKMECE	KAYABAŞI	9
İSTANBUL	EYÜP	ÇİFTALAN	9
KIRKLARELİ	BABAESKİ	MÜSELLİM	1
TEKİRDAĞ	ÇORLU	KARAMEHMET	1
TEKİRDAĞ	ÇORLU	AHMEHMET	1
TEKİRDAĞ	ÇORLU	VELİMEŞE	3
TEKİRDAĞ	HAYRABOLU	TEMREZLİ	4
		TOTAL	29

10



11

In total, 70,6%, 73,6% and 69,3%protection rates were detected for types O, A and Asia-1 respectively from sera collected at day 60 postvaccination.

		PROTECTION RATE (%)					
		TYPE O		TYPE A		TYPE ASIA-1	
PROVINCE	NUM.of SERA	04-12(*)	12-24	04-12	12-24	04-12	12-24
ÇANAKKALE	100	62	81	65	82	58	79
EDİRNE	100	64	79	64	85	61	78
İSTANBUL	100	52	75	55	77	54	74
KIRKLARELİ	100	63	78	69	83	59	80
TEKİRDAĞ	100	70	82	71	85	68	82
TOTAL	500	62,2	79	64,8	82,4	60	78,6

(*= age of the cattle(Month))

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VILLAGES	POPULATION SIZE	NUM.of SERA	NUM. of POSITIVE	NUM. OF PREVIOUS POSITIVITY	N.B.
FRIZKÖY	172	65	4	1	
KAYABAŞI	960	149	26	9	
ÇİFTALAN	320	58	5	9	same animals positive
AHMEHMET	585	32	1	1	same animals positive
KARAMEHMET	1232	36	1	1	same animals positive
VELİMEŞE	800	45	1	3	
TEMREZLİ	400	47	4	4	same animals positive
MÜSELLİM	252	45	0	1	
TOTAL	4721	477	42	29	

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Kayabaşı:

- Population size:960
- Number of sera tested:149
- Number of NSP positivity: 26
- An unreported outbreak was detected.
- Outbreak was occurred after the Kurban Festival within two premises (End of January/beginning of February).
- All 26 positive sera were from these two premises.
- And no other positive animals found in other premises within this village.

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The other villages (Frizköy, Çiftalan, Velimeşe, Ahmehmet, Karamehmet, Temrezli and Müsellim):

- Total positivity:16
- Although sampling of juvenile cattle was required, it was identified that the positive sera were taken from older cattle in the main survey.
- Because of this, some animals were scored as positive.
- During the follow-up investigation in addition to these animals all animals within these premises were sampled.
- Except from those previously positive animals, there was no positive animals from these sampling (from young and older cattle)
- So it is concluded that there is no active FMDV circulation in these villages.

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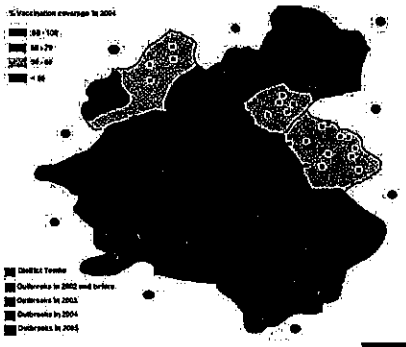
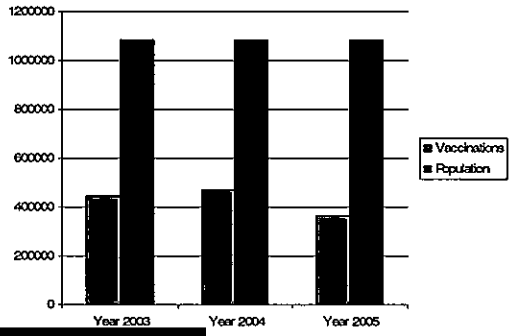
- This year more animals were bled (in Thrace and also in each unit: last year 4800/48; this year 9728/64).
- Only young cattle were sampled.
- Last year it was carried out after vaccination, but this year sera were collected at day 0.
- Although the amount of sera have been doubled, the positivity rate was low when compared to those of previous years (1.18%/0.29%)

Appendix 6

Report on
The Participatory Epidemiological Investigation of FMD in Erzurum Province

Support of the training of veterinary officers in the participatory epidemiological investigation of FMD in Erzurum Province





PART TWO

Consultant's End of Assignment Report

Berhanu Admassu
Addis Ababa

On distribution across the province:

All the 98 villages surveyed reported having had an outbreak of FMD. Among the surveyed villages 64% of them have reported that they have encountered FMD outbreaks in 2005, while 17% of the villages reported that the last date of the outbreak in 2004 and the rest 19% of the villages recalled the date of the outbreak as being about 4-8 years back (see figure 2).

In a 5 week period:

During this investigation the teams have encountered 11 active FMD outbreaks in *Ciflik and Merdiven* (AŞKALE) , *Guzelyurt and Toparlak (MERKEZ), başpınarlar and kosk* (ŞENKAYA), *sirakonak,* (İSPİR), *muratbagi (HORSAN), serdarli bld (TORTUM), bellitas (HINIS) and Tüysüz* (ÇAT) villages.

On vaccination:

"The informants stated that FMD vaccination coverage in their villages were very low, because veterinary services rarely came and if they did, they often came during a time when many cattle were away to grazing areas.

They also noted that the teams did not stay long enough for the cattle to be brought from distant areas, and that many of the distant grazing areas had not been visited by the vaccination teams.

Informants from the veterinary services confirmed these problems and added that the lack of vaccination crushes made it extremely difficult to vaccinate in many areas.

The poor transport situation in the district veterinary offices is also mentioned as a causal factor for reaching late in the village during vaccination programme.

In fact most veterinary clinics were and still are without vehicle"

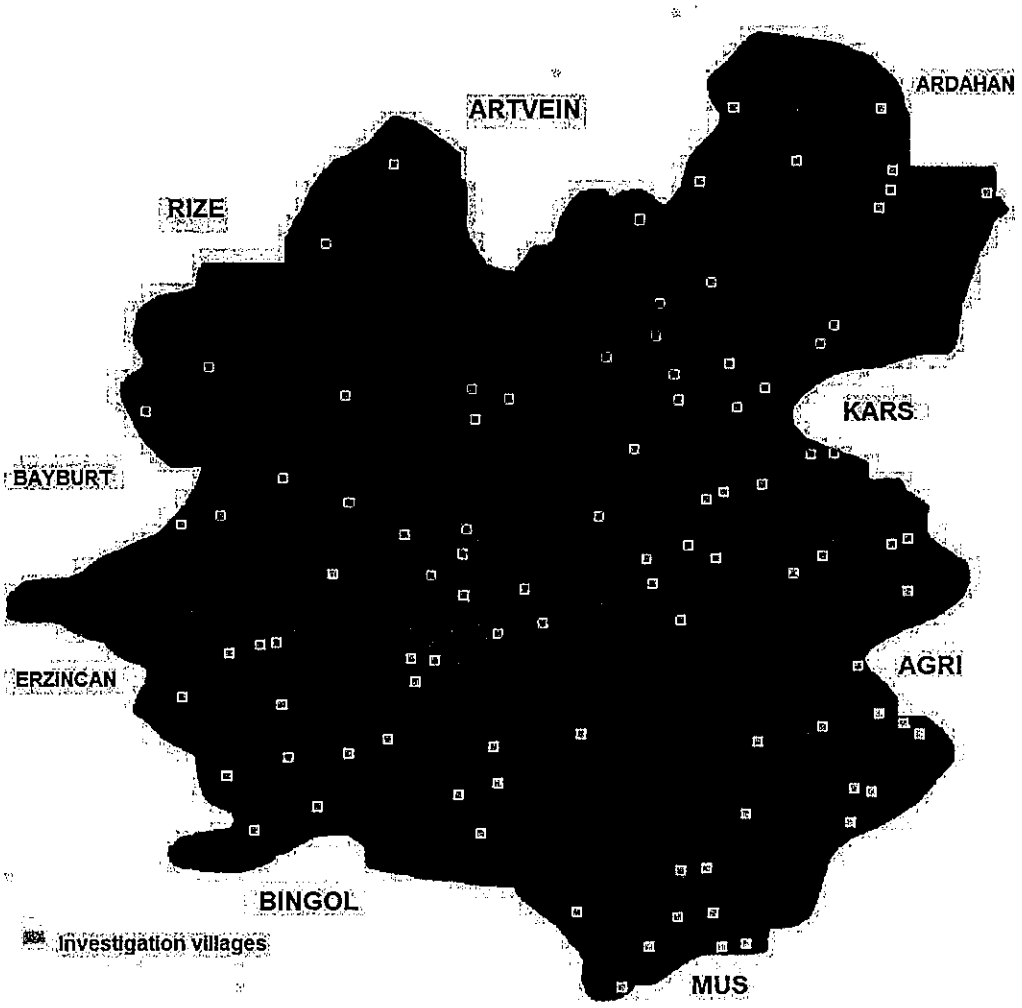
Summary and Selected findings from the Report:

Through an intense period of field work over a 5 week period, the FMD situation in one major Province of Turkey was rapidly assessed through use of participative epidemiology techniques, involving two teams undertaking visits to 98 villages and interviewing 670 persons.
The full report provides an exceptionally useful picture of the probable risk factors and practises that maintain FMD in this region. The methods are relatively new and had not been previously applied to FMD (possibly any disease) in Turkey. The results provide an indication of the scale of under-reporting, and of the delivery problems to be overcome.
An FAO consultant trained 6 veterinarians in the methodology and field work was financially supported via the EC Trust (MTF/INT/003/EEC).

Objectives
To gain information on the incidence and distribution of FMD in Erzurum Province and on patterns of disease incidence and spread through province wide epidemiological investigation. In addition, the study sought to collect information on the recent history of FMD circulation and community experience, through the process of participatory disease investigation methods in randomly selected villages from each district.

Study team composition and schedule
The survey team contained six veterinarians, who had previously been trained in participatory approach and methods and had experience of using the methods in the field. These investigators were selected from the provincial veterinary service and from the veterinary control and research institute. The investigators were received a ten days PE training. After the training they were practiced in three villages of Erzurum district for 3 days as pre-test and made discussions on the responses in order to develop experience and skill for the main practical fieldwork.
The PE disease investigation was started on 8th, August 2005 and completed on 20th September 2005. A total of 670 community informants participated in the PE disease investigation.

Map 1. Study area and randomly selected villages



Data

Selected results: (full results in the Part II, Consultancy Report)

4.2. Recent FMD outbreaks history

A retrospective investigation of village FMD outbreaks through targeted focus group and key informants was done in order to find out if there has ever been an outbreak of FMD in the village. If there has been an outbreak, the date of the last outbreak and the estimated number of animals affected was required. If there has never been an outbreak in the memory of any of the villagers, the earliest date since which group is sure that there have been no outbreaks is also required.

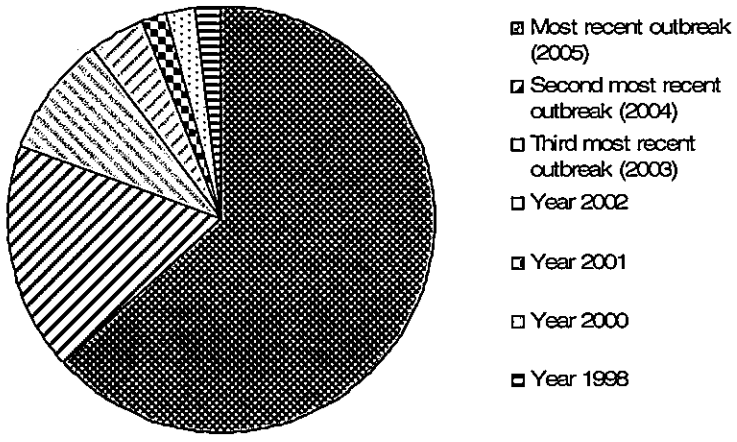
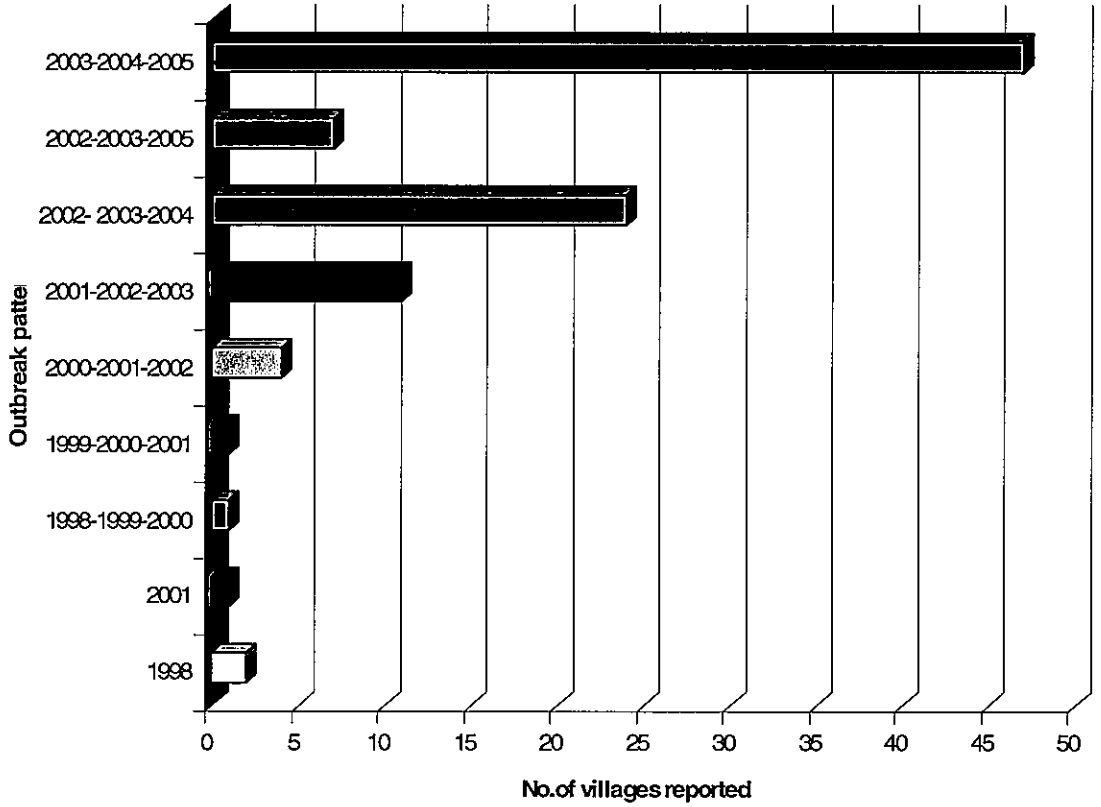


Figure 1. The percentage of investigated villages reported the last date of FMD outbreak between 1998 and 2005.

Informant's observation on the occurrence of FMD in their own herds, neighbouring herds was reported. All the villages surveyed reported having had an outbreak of FMD and occurred very frequently in their herds and also

they observed in the neighboring villages. Respondents provided the last date of FMD outbreaks between 1998 and 2005 For all surveyed villages, FMD outbreak is a common episode and the disease was not reported to animal health authorities at every occurrence.

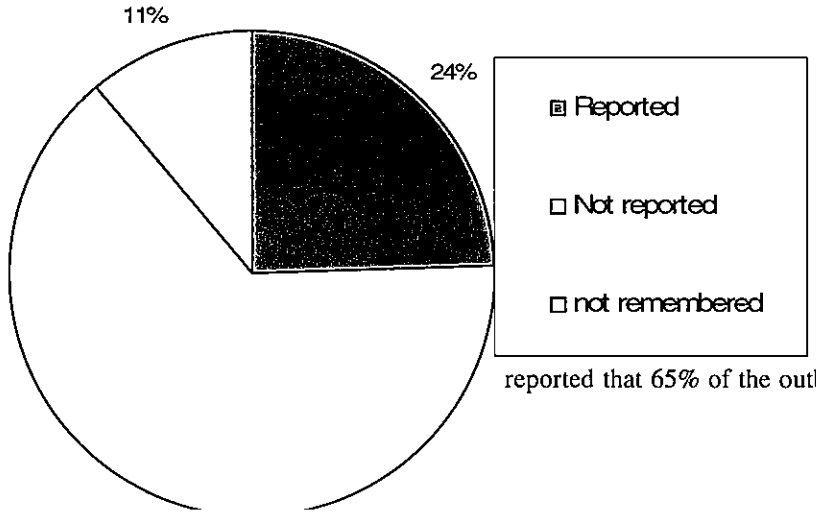
Figure 2. Pattern of FMD outbreaks between 1998-2005



All the 98 villages surveyed reported having had an outbreak of FMD. Among the surveyed villages 64% of them have reported that they have encountered FMD outbreaks in 2005, while 17% of the villages reported that the last date of the outbreak in 2004 and the rest 19% of the villages recalled the date of the outbreak as being about 4-8 years back (see figure 2).

During this investigation the teams have encountered 11 active FMD outbreaks in *Ciflik and Merdiven* (AŞKALE) , *Guzelyurt and Toparlak (MERKEZ), başpınarlar and kosk* (ŞENKAYA), *sirakonak,* (İSPİR), *muratbagi (HORSAN), serdarli bld (TORTUM), bellitas (HINIS) and Tüysüz* (ÇAT) villages.

Reporting outbreaks : Figure 3. Reporting status of FMD outbreaks as recalled by respondents



During the discussion informants reported that 65% of the outbreaks occured in

2004 and 2005 were not reported. The reporting of suspected outbreaks of disease is very low. According to the information, out of the reported 24 outbreaks only 18 were investigated by veterinary professionals. Informants have pointed out that incase of an outbreak community members and traders are reluctant to report and /or they do not want somebody to report it. Farmers consider that if an outbreak is reported to higher officials or veterinarians they fear that restriction of animal movements might placed on them. During an outbreak, the provincial, district and village animal health police force commission will immediately ban the entrance and exit of animals and animal products to and from the concerned area. Animal markets are also closed. Due to these fear many outbreaks are not reported.

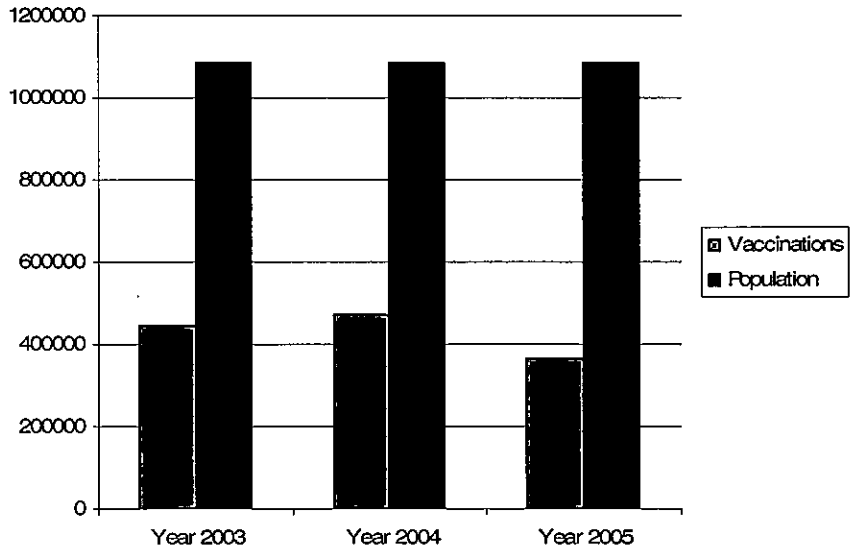
4.8. Vaccination history

Informants were asked in the interviews about their knowledge, attitudes and constraints in regard to FMD vaccination. They have reported that vaccination was carried out in 83% of the surveyed villages in 2005 and mainly it was a spring vaccination while 17% of the villages have not vaccinated their herd. Since the PE investigation was executed in August and September the report does not include the autumn 2005 vaccination result.

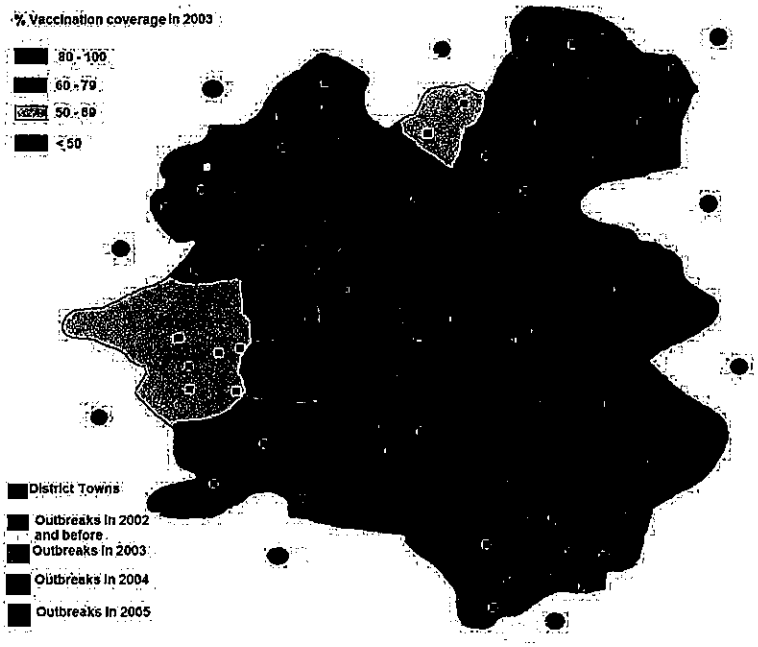
Table 11. The last date of FMD vaccination as recalled by respondents

Last date of vaccination	Number of villages
The 2005 spring vaccination	80
The 2004 spring vaccination	7
The 2004 autumn vaccination	1
The 2002 spring vaccination	1
No information	9

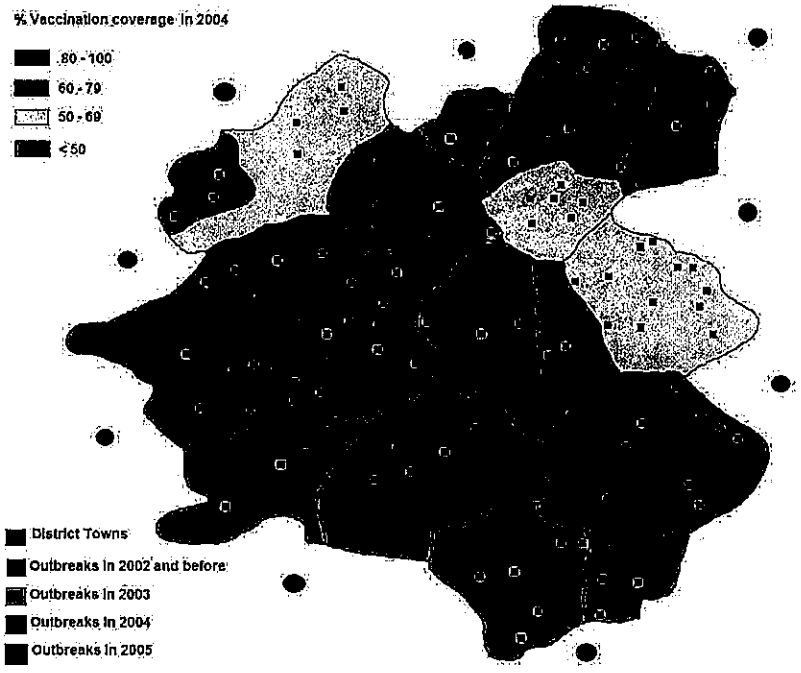
Figure 7. Three years FMD Vaccination achievements



Mass vaccination campaign twice in a year (spring and autumn) is practiced in the province. Frequently, the spring vaccination campaign is carried out between March and April and the autumn vaccination campaign in September and October. However, the vaccination coverage in all districts was analysed and mapped as follows (Map 4-6). Mapping the vaccination coverage is a useful exercise as it provides a very clear overview what has been achieved so far.

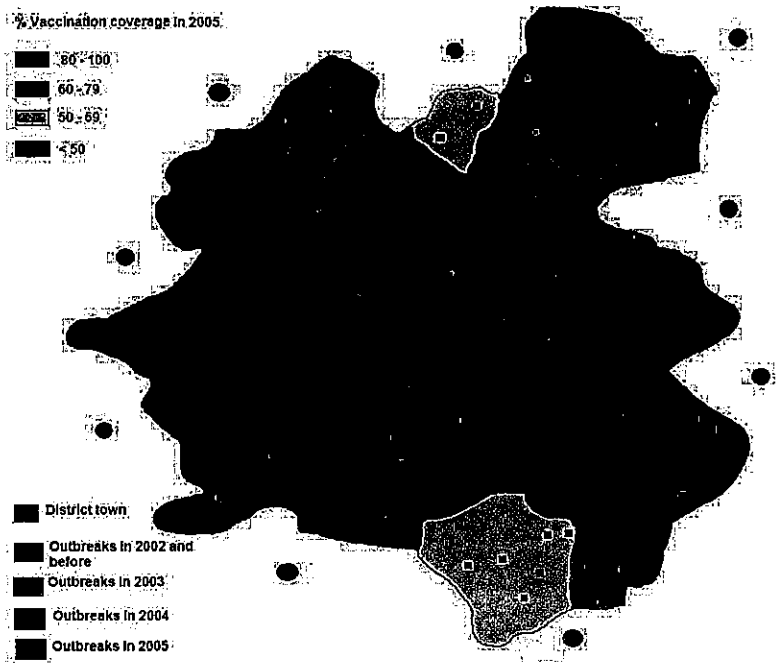


Map 4: Vaccination coverage during 2003 spring + autumn vaccination period



Map5: Vaccination coverage during 2004 (spring + autumn) vaccination period

Map 6.:Vaccination coverage during 2005 spring vaccination period



As shown on the above Maps and Figure 7, over the last 3years, 1.28 million vaccinations have been completed in a total estimated population of 3.3 million cattle and yet this has failed to control the disease. These conventional mass vaccination campaigns have been unsuccessful in achieving adequate coverage which favours endemic situation for prolonged period. However in some districts the vaccination coverage is improving from time to time and the number of outbreaks reported decreases as the vaccination efficiency increases.

The informants stated that FMD vaccination coverage in their villages were very low, because veterinary services rarely came and if they did, they often came during a time when many cattle were away to grazing areas. They also noted that the teams did not stay long enough for the cattle to be brought from distant areas, and that many of the distant grazing areas had not been visited by the vaccination teams. Informants from the veterinary services confirmed these problems and added that the lack of vaccination crushes made it extremely difficult to vaccinate in many areas. The poor transport situation in the district veterinary offices is also mentioned as a causal factor for reaching late in the village during vaccination programme. In fact most veterinary clinics were and still are without vehicle.

5. Summary and Conclusion

This PE investigation was an opportunity for veterinarians in Erzurum to practice PE methods. A few lessons learned about these methods were, the use of PE methods enabled about 670 informants to be involved in the investigation over a short time period and recorded the current FMD distribution.
The use of PE requires much concentration on the part of the investigators, careful listening and a willingness to cross check information on the spot using open and probing questions. Investigators also need to be constantly aware of their own behaviour and body language, and understand how this affects the interaction with informants. Fr people who are not accustomed to PE, this level of concentration can be tiring but with practice, becomes second nature. These points indicate that future VCRI investigations based on PE methods should include sufficient time for methodology development and fine-tuning of methods in the field.

Lessons learned about FMD participatory epidemiological investigation

1. The livestock owners were able to accurately define a number of clinical entities including FMD (Dabak),
2. The livestock owners had a remarkable understanding of many of the epidemiological aspects of FMD. They stressed that FMD or Dabak is mainly a disease of young cattle in their herds and they believed that older cattle were largely immune as a result the pervious vaccinations.
3. This investigation suggested that the long-standing persistence of FMD and identified the cattle movement to and from market and trade and introduction to susceptible herd as the primary cause. The statements of

livestock owners and the relative ranking of risk factors have clearly indicated that the grazing areas at the depression plains which are located between the mountains and plateaus followed by yayla pasture areas are an area of high FMD transmission. Most of the outbreaks reported in 2005 occurred in the month of May when animals are turned out to these grazing areas. The survival of FMD virus depends on the continued contact between infected animals and naive susceptible cattle. The mixing of newly purchased cattle from markets with unvaccinated (susceptible) young animals in the shared grazing areas provides an excellent setting for the dissemination of the disease.

4. All districts of the province are found to be infected with FMD (Dabak).
5. The reported cases occurred on a more or less regular basis, seasonal and outbreaks are less severe.
6. FMD outbreaks were observed every year or every two years in 90% of the investigated villages
7. The policy for controlling FMD (Dabak) is primarily through mass vaccination and so far the vaccination efficiency is below the required level.
8. The involvement of private veterinarians in the delivery of FMD vaccination is at its start stage in major towns and around commercial farms. Whilst, despite ongoing efforts, remote and marginal villages are not well covered and served. The reason is that private operators at the moment do not find remote and marginal areas attractive and economically viable.
9. Often inadequate veterinary surveillance: The ability of field staff at district and provincial level to undertake proper investigation of FMD outbreaks is very low. Again, lack of operational funds limits the ability of staff to travel to reported outbreaks.

Based on this information the conclusion of this participatory epidemiological investigation is that there was sufficient evidence to show that foot-and-mouth disease is still circulating in all districts of Erzurum Province. The pattern of disease outbreaks suggests that FMD is being maintained in an endemic status all over the province. The disease pattern and size of the population can be easily creating favorable condition to an endemic situation.

Further activities suggested

In order to improve FMD reporting, investigation, diagnosis and control of foot-and-mouth disease the following actions are recommended:

1. Improve the detection of outbreaks through fast and accurate disease reporting (all cases including rumours) is required. This requires improving the ability to early detection, rapid diagnosis and swift application of effective control measures.
2. Introduction of Market inspection and surveillance: It becomes very clear from the investigation that most of animal markets are ideal source of FMD. The absences of any checks at the point-of-entry to the market allow both infected and susceptible animals to enter and freely mix within marketplaces. Introducing Market inspection and surveillance should be started at least in to Erzurum animal market.
3. Quarantine and livestock movement control should be applied rigorously but in a way that imposes only the degree of restriction that is necessary to achieve control and that is realistic to gain compliance. Vaccination should be regarded as a secondary disease control process, after livestock movement control. It cannot be expected to be effective if movement control is not rigorously applied.

4. Review and strengthen the current strategic official vaccination practices
    - to involve private veterinary practitioners to enter into the vaccine market for the supply of vaccine and vaccinate as many animals as possible in order to obtain herd immunity levels of over 80%. The essential roles of government should be to regulate the quality of vaccine and its use in the field. Allowing the private sector to undertake vaccine supply and delivery could significantly reduce public expenditure on much of the FMD vaccination carried out and increase the ability to the public to concentrate on surveillance activities.
    - introduction of alternative vaccination delivery systems such as the use of para -veterinarians linked with private veterinarians. It can be started as a pilot in some remote and underserved areas and then intensify based on the outcome. As para-veterinarians are members of the local community, they can respond more quickly to any animal health needs. With careful training and with the support of veterinary services, they can assist with the collection of samples for disease surveillance, effectively and rapidly report outbreaks and provide data for veterinary research. They can contribute to animal identification systems, tracing systems and animal movement control systems. They can play an important role in mobilising and informing comunities about animal health issues. In remote, and transhumant communities, they move

with herds to highland pasture grazing areas and continue to provide these basic services. They can offer the opportunity to coordinate animal health surveillance and control across extensive grazing areas.

5. Establish a Provincial Disease Control Unit (PDCU) at the Erzurum Veterinary Control and Research Institute. FMD investigation and control should be a function of this unit and make required funds available so that the unit can respond promptly to reports of FMD. This unit should at all time have a car, the operational costs and manpower available to act quickly. The disease reporting system, presently operated needs to be introduced within this unit. The data obtained should be processed by the PDCU. The following activities are proposed:
    - Establishment of a good reporting system between all levels of partners, i.e. livestock owner, village, district, provincial and PCDU. The PCDU should be responsible of improving disease-reporting formats, mailing systems and the dissemination of information and provision of feedback to the reporter.
    - Establishment of a disease surveillance system able to detect FMD if it were present
    - Provide a central capability to undertake FMD diagnostic procedures, establish the ability to swiftly diagnose disease and conduct epidemiological surveys
    - Develop ability to swiftly react to emergency situations
    - Discovery of outbreaks and trace back to define the source of the disease.
    - Training and motivation of all veterinary staff on foot-and-mouth disease surveillance, investigation procedures and in specimen collection which is essential to the success of controlling disease outbreaks in endemic situation.
    - Improve the awareness of livestock owners to the requirements of FMD control to increase their compliance.
    - Undertake extension activities to livestock owners so that they understand the need to report FMD outbreaks immediately.
6. Although respondents in this survey ranked *Dabak* as the most frequent and important disease most of them have not aware of the losses. The disease generally causes only mild to moderate disease in particular in young and low-producing local breeds. The disease is more of a concern for small-scale farmers with higher producing animals. Although the observed mortality rate is very low the impact of the disease on reduced livestock production and other various losses is not well understood. To raise farmers concern for the disease and their willingness to cooperate in control activities, further study on the impact of FMD and the cost-benefit of FMD control should be considered.

Annex 1. Schedule for the field work implementation of participatory epidemiological investigation of FMD

DISTRICT	Villages to be investigated					Date of investigation	Team
MERKEZ	soğucak	yolgeçti	kırmızıtaş			08.08.05	A
MERKEZ	dereboğazı	kümbet	güzelyurt			09.08.05	B
MERKEZ	arıbahçe	umudum	toparlak			10.08.05	B
AŞKALE	ortabahçe	merdiven				11.08.05	B
AŞKALE	kavurmaçukuru					12.08.05	A
AŞKALE	çiftlik	yeniköy				13.08.05	A
ILICA	Çavdarlı	A.canören				14.08.05	A
ILICA	Paşayurdu	Elmalı				15.08.05	B
ILICA	Toprakkale	Kapılı				16.05.05	A
PASİNLER	B.tuy	Karavelet				17.08.05	B
PASİNLER	Pelitli	Ügümü	Y.danişment			18.08.05	A
TEKMAN	Başdere	Toptepe				19.08.05	B
TEKMAN	Karatepe					20.08.05	B
TEKMAN	Düzyurt	Güzeldere				21.08.05	B
ÇAT	Aşağıçat	Çirişli				22.08.05	B
ÇAT	Sarıkaya	Muratçayır				23.08.05	B
ÇAT	Tüysüz	Çayırtepe				24.08.05	A
OLTU	Çamlıbel	Yarbaşı				25.08.05	B
OLTU	Kaleboğazı	Elmadüzü				26.08.05	A
OLTU	Süleymanlı					27.08.05	A
NARMAN	Yukarıyayla					28.08.05	A
NARMAN	Sütpınar	Kışlaköy				29.08.05	B
NARMAN	Araköy	Gökdağ				30.08.05	A
KARAYAZI	Ulucanlar	Yalındal				31.08.05	A
KARAYAZI	Anıtlı					01.09.05	A
KARAYAZI	Köyceğiz	Duruca E	Karabey	Göktepe	Sukonak	02.09.05	B
KARAYAZI	Aşağı İncesu	Çaltılı				03.09.05	B
ŞENKAYA	hoşköy	söğütler	yoğurtçular			04.09.05	B
ŞENKAYA	başpınarlar	köşk				05.09.05	B
ŞENKAYA	dörtyol					06.09.05	A
İSPİR	başköy	çamlıkaya nahiyesi	sırakonaklar			07.09.05	B
PAZARYOLU	göztepe	konakyeri				08.09.05	A
KARAÇOBAN	Karaköprü	Molladavut	Çatalgül			09.09.05	A
HINIS	bellitaş	erence	ovakozlu			10.09.05	A
HINIS	halilçavuş	tipideresi	yayla konak			11.09.05	A
OLUR	çataksu	ormanağzı	yukarı karaca			12.09.05	A
KÖPRÜKÖY	savatlı	y.söğütlü	derebaşı	ılıcasu		13.09.05	B
HORASAN	bahçe	horumlar	muratbağı			14.09.05	B
HORASAN	yüzören	kırkgözeler	karabıyık			15.09.05	A
HORASAN	akkeren	danışment	hacıhalil			16.09.05	A
TORTUM	karli	ziyaret	alapinar	Çaylica		17.09.05	B
TORTUM	serdarli	cevizli (u.dere)				18.09.05	B

Annex 2. Last date FMD outbreak per district

	Districts	Number of villages investigated	Number of FMD outbreaks observed in						
			2005	2004	2003	2002	2001	2000	1998
1	HINIS	6	4	1		1			
2	TEKMAN	5	4		1				
3	HORASAN	9	7	2					
4	ÇAT	6	1	1	1				1
5	MERKEZ	9	8		1				
6	İSPİR	3	1			2			
7	NARMAN	5	4		1				
8	ŞENKAYA	6	6						
9	KARAÇOBAN	3	2	1					
10	KARAYAZI	10	9	1					
11	KÖPRÜKÖY	4	-	2	1		1		
12	PASİNLER	5	2	2	1				
13	AŞKALE	5	4	1					
14	ILICA	6	1	2	1			2	
15	PAZARYOLU	2	1				1		
16	TORTUM	5	4	1					
17	UZUNDERE	1	-	1					
18	OLTU	5	1	1	2				1
19	OLUR	3	3						
		98	62	16	9	3	2	2	2

Annex 3. Last date and pattern of FMD outbreak per surveyed village and sources of the outbreak

District	Surveyed village	Time of the outbreak occurred	Sources of the disease	Pattern of the outbreak at least for three years
HINIS	bellitaş	2004	ovaçevirme village	2002- 2003-2004
	erence	May-05	erzurum animal market	2003-2004-2005
	halilçavuş	May-05		2002-2003-2004
	ovakozlu	May-05	erzurum animal market	2003-2004-2005
	tipideresi	2002		2004-2003-2002
	yayla konak	Jun-05		2003-2004-2005
TEKMAN	Başdere	May-03		2001-2002-2003
	Düzyurt	Jun-05	güzeldere	2002-2003-2004
	Güzeldere	Jun-05	erzurum animal market	2002-2003-2004
	Karatepe	Aug-05	erzurum animal market	2002-2003-2004
	Toptepe	May-05	erzurum animal market	2002-2003-2004
HORASAN	akkeren	May-05	sheep came from Igdır	2003-2004-2005
	bahçekoy	May-05	erzurum and horasan animal market	2003-2004-2005

	danışment	May-05		2003-2004-2005
	hacıhalil	May-05	sheep came from Igdır	2003-2004-2005
	horumlar	Aug-04		2002-2003-2004
	karabıyık	Jun-05	erzurum and horasan animal market	2003-2004-2005
	kırkgözeler	May-04		2002-2003-2004
	muratbağı	Jul-05	erzurum and horasan animal market	2003-2004-2005
	yüzören	Jun-05	erzurum and horasan animal market	2003-2004-2005
ÇAT	Aşağıçat	May-04		2002-2003-2004
	Çayırtepe	May-98		1998
	Çirişli	Jun-04		2002-2003-2004
	Muratçayır	Jun-03		2001-2002-2003
	Sarıkaya	Jun-03		2001-2002-2003
	Tüysüz	May-05	erzurum animal market	2003-2004-2005
MERKEZ	arıbahçe	Jun-05	erzurum animal market	2003-2004-2005
	dereboğazı	May-05	erzurum animal market	2002-2003-2004
	güzelyurt	Sep-05	erzurum animal market	2003-2004-2005
	kırmızıtaş	May-05	erzurum animal market	2003-2004-2005
	kümbet	Apr-05	erzurum animal market	2003-2004-2005
	soğucak	May-05	erzurum animal market	2003-2004-2005
	toparlak	Jun-05	erzurum animal market	2003-2004-2005
	umudum	2003		2001-2002-2003
	yolgeçti	Jun-05	erzurum animal market	2003-2004-2005
İSPİR	başköy	Jun-02		2000-2001-2002
	çamlıkaya nahiyesi	Jun-02		2000-2001-2002
	sırakonaklar	Aug-05	neighbouring village	2003-2004-2005
NARMAN	Araköy	May-05	neighbouring village	2003-2004-2005
	Gökdağ	May-Jun-2003		2001-2002-2003
	Kışlaköy	Apr-05	narman market	2003-2004-2005
	Sütpınar	Jun-05	narman market	2000-2001-2002
	Yukarıyayla	Jun-05	narman market	2003-2004-2005
ŞENKAYA	başpınarlar	May-05	aşkale,sgöle,şnkaya hayvan pazarları	2003-2004-2005
	dörtyol	Jun-05	Oltu animal market	2003-2004-2005
	hoşköy	Jun-05		2003-2004-2005
	köşk	Aug-05		2003-2004-2005
	söğütler	Jun-05	aşkale,göle and şenkaya animal market	2003-2004-2005
	yoğurtçular	Jul-05	aşkale,göle and şenkaya animal market	2003-2004-2005
KARAÇOBAN	Çatalgül	2005	muş bulanık animal market	2003-2004-2005
	Karaköprü	2005	muş bulanık animal market	2003-2004-2005

	Molladavut	2004		2002-2003-2004
KARAYAZI	Anıtlı	Jun-05	ağrı ve horasan animal market	2003-2004-2005
	Aşağı İncesu	Jun-05	karayazı animal market	2003-2004-2005
	Çaltılı	Jun-05	karayazı animal market	2002-2003-2004
	Duruca E	May-05	neighbouring village	2003-2004-2005
	Göktepe	Jun-05	neighbouring village	2003-2004-2005
	Köyceğiz	Jun-05	erzurum animal market	2003-2004-2005
	Karabey	May-05	Villages from Tutak, Agri	2003-2004-2005
	Sukonak	May-05		2003-2004-2005
	Ulucanlar	2005	erzurum animal market	2003-2004-2005
	Yalındal	2004		2002-2003-2004
KÖPRÜKÖY	savatlı	Aug-04		2002-2003-2004
	y.söğütlü	Aug-03		2001-2002-2003
	derebaşı	2001		1999-2000-2001
	ılıcasu	2004		2002-2003-2004
PASİNLER	B.tuy	2005	erzurum animal market	2003-2004-2005
	Karavelet	2004		2002-2003-2004
	Pelitli	Jun-03		2001-2002-2003
	Ügümü	Apr-05	animal markets	2003-2004-2005
	Y.danişment	Jun-04		2002-2003-2004
AŞKALE	çiftlik	Aug-05		2003-2004-2005
	kavurmaçukuru	Jul-05	erzurum animal market	2001-2002-2003
	ortabahçe	Apr-05	aşkale animal market	2003-2004-2005
	yeniköy	2004		2002-2003-2004
	merdiven	May-05		2003-2004-2005
ILICA	A.canören	Jan-03		2001-2002-2003
	Çavdarlı	2000		1998-1999-2000
	Elmalı	Jun-05		2003-2004-2005
	Kapılı	2000		2000-2001-2002
	Paşayurdu	2004		2002-2003-2004
	Toprakkale	2004		2002-2003-2004
PAZARYOLU	göztepe	May-01		2001
	konakyeri	2005		2003-2004-2005
TORTUM	Alapinar	2004		2002-2003-2004
	Çaylica	2005	fromTaşoluk village	2003-2004-2005
	Karli	2005	dumlu village and erzurum animal market	2003-2004-2005
	Serdarli bld	Jul-05	erzurum,tortum and oltu animal markets	2002-2003-2005
	Ziyaretli	Jul-05		2002-2003-2005
UZUNDERE	cevizli	Sep-04		2002-2003-2004
OLTU	Çamlıbel	Sep-04		2002-2003-2004
	Elmadüzü	Aug-03		2001-2002-2003

	Kaleboğazı	May-03		2001-2002-2003
	Süleymanlı	Jun-05	Oltu animal market	2002-2003-2005
	Yarbaşı	Sep-98		1998
OLUR	çataksu	Jun-05		2002-2003-2005
	ormanağzı	Jun-05		2002-2003-2005
	yukarı karaca	Jun-05		2002-2003-2005

Appendix 7

Improving the Management of FMD Surveillance and Control Measures in Eastern Anatolia, Turkey

Summary of draft project document for actions in 2006-7

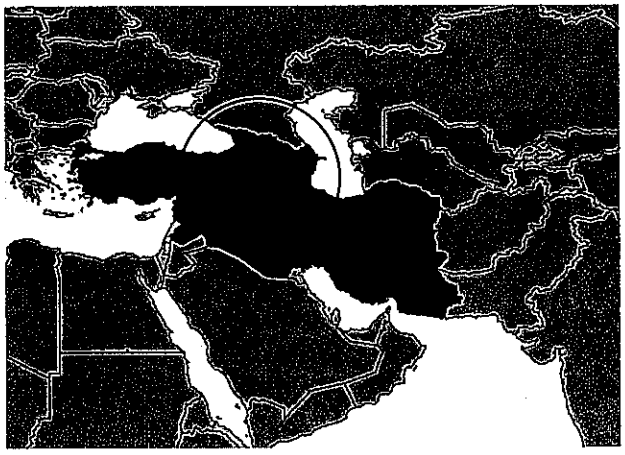
Direct Beneficiary:
Turkey

Indirect beneficiaries:

Georgia, Armenia
Southern Balkan countries

Component of the EUFMD/FAO support to regional control of FMD in the frontier zone :

Trans-Caucasian countries
Islamic Republic of Iran
Turkey



Acknowledgement

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Abbreviations

YTL	(new) Turkish Lire
DPC	Deputy Project Coordinator
FAOR	FAO Representative
FMD	foot and mouth disease
GDPC	General Directorate of Protection and Control
GoT	Government of Turkey
LOA	Letter of Agreement
NPC	National Project Coordinator
TOR	terms of reference
VCRI	Veterinary Control and Research Institute

Glossary of Turkish words

kaymakam	District mayor or headman
kurush	one hundredth of one Turkish Lire
muhtar	Village Headman
şap	foot and mouth disease

Tables

Summary of Proposal (**EUFMD Secretariat**)

- The aim is to provide technical support that will significantly reduce risk of disease movement through eastern Turkey into rest of Anatolia and to Caucasus countries.
- And to increase the likelihood of successful application of mass vaccination and other measures in the national FMD eradication programme whose start date is taken to be 2007.
- Two years of technical support to the GDPC to instigate management changes that will result in greater capacity to plan and implement vaccination based FMD control.
- Technical support to improve control of FMD in Provinces bordering to Georgia and Armenia, and to Iran, focussing on improved outbreak investigation and implementation of preventive measures.
- Builds on experience gained in epidemiologic investigations 2004-5, including application of PE (participatory epidemiology) investigations.
- Component of regional FMD protection program, including parallel actions in Caucasus and in Iran.

Introduction (**EUFMD Secretariat**)

Prevention of disease movement through the eastern borders of Turkey towards western Turkey, and into the Caucasus, is a major concern for the EUFMD Commission and an agreed part of the EUFMD Strategic Plan for 2005-8 is the re-enforcement of control measures that will reduce risk of entry and dissemination of EXOTIC virus incursions.

The support is also aimed to increase likelihood of success of measure to control ENDEMIC viruses present in eastern Turkey, under the national programme.

A concept note for the technical support project was prepared between FAO (EUFMD Secretariat) and GDPC, after liaison with the EC funded twinning project during June 2005. The concept note was presented in September 2005 at an eradication programme planning meeting in Ankara, and a consultant recruited to develop the project document in October, con-incident with the conclusion of the GDPC/SAP Institute/FAO activities in Erzurum.
The consultant's report and his draft of the project document have been circulated to GDPC for comments, and their comments incorporated, in November.

Note: the document including budgeting does not have EUFMD Secretariat's clearance and is for discussion purposes. It will be necessary for FAO to modify these according to its practices for project budgeting and administration.

Sections from the draft Project Document (Authors: David Hadrill, and GDPC Ankara)

Target area

It is proposed that the project has four administrative centres (offices) located at:

- The Head of Animal Health Department, Epidemiology and Animal Disease Combat Sections, GDPC, Ankara
- The FMD (*Şap*) Institute, Ankara,
- The Veterinary Control and Research Institute, Erzurum, and
- The Veterinary Control and Research Institute, Elazig.

The target area for field work is epidemiologically significant Provinces in eastern Anatolia, especially where there is risk of FMD entry and onward spread. Specifically, the following 14 (including Erzurum and Elazig) Provinces will be covered:

Erzerum	Elazig	Ankara
1. Agri	1. Bingöl	1. Afyon
2. Ardahan	2. Bitlis	2. Çorum
3. Artvin	3. Hakkari	3. ± Kastamonu
4. Bayburt	4. Muş	
5. Igdir	5. Siirnak	
6. Kars	6. Van	

Each Province is subdivided into Districts. Each District has a Ministry of Agriculture Office with a veterinarian or a veterinary technician. Typically, in Erzurum Province, Districts have 50 or 60 villages. However, in some Provinces elsewhere in Turkey there may be as few as 10 villages.

There is an option on including some provinces around Ankara, as indicated above. It is recommended to do so in order to follow up animal movement from Anatolia to the Ankara area, for trade or slaughter.

Project activities

Project purpose and outputs

The draft concept note for the project states the project's purpose, concept and outputs as follows.

Purpose: Establish into operation FMD management and monitoring systems that meet requirements of the Government of Turkey (GoT) FMD eradication strategy and which address stakeholders' participation issues in FMD control.

The idea:

- The Veterinary Control and Research Institutes (VCRI) Erzurum and Elazig are supported and developed to provide expert and independent regional monitoring of FMD epidemiology and the effectiveness of control measures. Lessons learnt can be used to inform, or roll-out "best practices and procedures" to other regions.
- Vaccine delivery modalities are identified, costed, and as far as possible evaluated during the four campaigns to occur in 2006 and 2007.
- A consultation and communications centre is established/operating to address reporting and policy implementation issues with stakeholders.
- The regional centre may be a sustainable approach after 2007, and act as training centre for rolling out the eradication monitoring service – e.g. development of local implementation (local disease control centres (LDCC), lessons to respond to FMD and other emergency events.

Outputs

1. Functional FMD surveillance and outbreak investigation unit with operational capacity for monitoring reporting rates, epizootic spread and delivery and impact of vaccination and other control measures;

2. Delivery procedures and modalities identified that enable campaigns to overcome vaccine delivery constraints and meet campaign targets;
3. Regional and provincial consultative procedures in place to enable stakeholders to participate in solving problems associated with FMD eradication strategy;
4. Communications capacity in place and operational to address requirements for disease reporting and uptake /compliance with control measures;

Activity plan

[Refer to Chart in Section 4.4]

Time chart

	Activity	2006												2007											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	**Project start-up and management**																								
1.1	Staff assignment/recruitment	■	■																						
1.2	Establish offices: Ankara, Erzurum, Elazig	■	■																						
1.3	Procurement: vehicles, office equipment, furniture, etc.	■	■	■																					
1.4	Plan implementation (coordination with GDPC vaccination)		■	■																					
1.5	Plan project staff training & study tour	■	■																						
1.6	Base-line surveys		■	■																					
1.7	Reporting						■						■						■						■
2	**Disease investigation and monitoring**																								
2.1	Actively search outbreaks		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.2	Review procedures and plans for vaccination		■						■						■						■				
2.3	Control of outbreaks		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.4	Back and forward tracing		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.5	Support local disease control centres?			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	**Vaccination [undertaken by the authorities]**			■	■					■	■					■	■					■	■		
4	**Consultation and communication**																								
4.1	Develop communications strategy		■	■																					
4.2	Convene meetings			■			■			■			■			■			■			■			
4.3	Set up "hotline" for outbreak reporting				■																				
4.4	Subcontract media specialist				■																				
4.5	Organise workshops			■						■					■					■					
5	**Training**																								
5.1	Epidemiology training & study tour						■	■																	
5.2	English language training		■	■	■	■																			
6	**Mid-term review and evaluation**												■												■

Inputs and costs

FAO inputs

Cost estimates for FAO inputs, as discussed with the FMD Institute Deputy Director, are shown in Table 1 below.

Table 1. Cost estimates of donor-funded inputs to proposed project.

	Item	quantity	unit	unit cost	subtotal
1	Resources for FMD investigation teams (Erzurum and Elazig)				
1a	4 WD vehicles	3	vehicle	35,000.00	105,000.00
1b	DSA for Task Force teams (4 persons * 2 teams * 100 days * 2 years)	1600	DSA	35.00	56,000.00
	DSA for Project Coordinators (4 persons * 50 days * 2 years)	400	DSA	35.00	14,000.00
	DSA for field visits from FMD Institute	100	DSA	35.00	3,500.00
	Fuel costs (40,000 km per veh per year; 10 km/litre = 240,000/10 litres)	24,000	litre	2.00	48,000.00
	Vehicle maintenance costs	3	per vehicle	1,000.00	3,000.00
1c	Salary of driver (2 drivers, 2 years)	4	annual salary	12,000.00	48,000.00
1d	Office furniture	2		750.00	1,500.00
	Computers - laptops	4	laptop	1,250.00	5,000.00
	Computers - desktops	4	desktop	1,000.00	4,000.00
	Printers	3	printer	200.00	600.00
	Photocopier	2	copier	400.00	800.00
	Consumables (paper, printer toner, etc)	lump sum			1,000.00
1e	Meetings for stakeholders (transport costs and DSA, 10 persons * 7 meetings)	70	participants	35.00	2,450.00
	English language training (per month @ 500.00 in Elazig and Erzurum, 3 mo. each)	6	month	750.00	4,500.00
	Epidemiology training (short course in EU for 8 veterinarians inc. travel and DSA) with study tour	8	course	7,500.00	60,000.00
	Other costs (fax machine, scanner, GPS equipment, maps, misc)	lump sum			10,000.00
	Base-line study (sero-survey: vacutainers, needles, cyotubes, test kits; &/or PRA survey)	estimate			10,000.00
					-
2	Support services - technical and operational				-
2a	Top-up of salary of National and Regional Coordinators (4 persons, USD 400/month)	96	per month	400.00	38,400.00
2b	FAO Technical Support Services from AGAH, Rome (2 missions * 2 weeks)	2	missions	8,000.00	16,000.00
2c	Consultants				-
	Participatory impact assessment of disease control & delivery options				-
	consultant to train assessors (10 days)				-
	consultant to help with the analysis and feed-back workshop (10 days)				-
	20 days fee plus DSA	20	day	500.00	10,000.00
	consultant travel				2,000.00
	Costs of other evaluation team member(s) if any				
3	Resources for stakeholder consultations/communications				
3a	Fee for contracted media specialist and				40,000.00

	production of materials				
3b	Establish Telephone Hotline	NO ?			
3c	Resources for workshops (easel, flip-chart paper, pens, refreshments, DSA and travel)	8	workshop	1,250.00	10,000.00
					-
4	"Unallocated" e.g. vaccine subsidy depending on options for vaccination delivery.	NO ?			
5	"Additional training component in Turkish language" - EU FMD Initiative				-
6	FMD diagnostic kits?				-
				total	**480,650.00**

Notes

1. The numbers (1a, etc.) in the left column correspond with those in the draft concept note.
2. The vehicle cost is for a 4-WD double cab pick-up, excluding VAT but including Turkish "special tax".
3. The DSA rate of USD 35.00 per day is the same rate that has been used in related a project and is considered to be a necessary incentive for Institute staff whenever they leave the office and go to the field.
4. The FMD (*Şap*) Institute in Erzurum has sufficient computers and office furniture, and so no provision is made for purchase of equipment for a third office there.
5. The base line survey costs will be estimated based on sample sizes to be calculated by the Deputy Director of the *Şap* Institute.
6. The monthly salary of the most senior Institute staff is USD 800.00 per month, less than that of drivers and general unskilled staff. It is considered necessary to offer a "top-up" to their salaries to encourage interest in and involvement with the project.
7. The cost of FAO Support Services should be entered by FAO.
8. Additional costs for monitoring (mid-term review) and evaluation (impact assessment) should be entered by FAO.

GoT inputs

An estimate of the Government of Turkey contribution is shown in table 2 below.

Table 2. GoT contribution to proposed project

item	quantity	unit	unit cost	subtotal
Veterinarians in Task Force (8 persons*24 months)	192	salary per month	750.00	144,000.00
Office rooms for 24 months in 2 centres	48	rent per month	500.00	24,000.00
Şap Institute - diagnostic services	2	estimate per year	20,000.00	40,000.00
Internet connection to (3 offices * 2 year)	6	rent per year	100.00	600.00
			total	**208,600.00**

Annex 1

Sections from project document –Activity and Implementation issues

4. 2 Activity plan

To achieve the outputs above, the following activities are indicated:

1 Project start-up and management
1.1 Staff assignment/recruitment
1.2 Establish offices: Ankara, Erzurum, Elazig
1.3 Procurement: vehicles, office equipment, furniture, etc.
1.4 Plan implementation (coordination with GDPC vaccination)
1.5 Plan project staff training & study tour
1.6 Base-line surveys
1.7 Reporting

2 Disease investigation and monitoring
2.1 Actively search outbreaks
2.2 Review procedures and plans for vaccination
2.3 Control FMD outbreaks
2.4 Back and forward tracing
2.5 Support local disease control centres?

3 Vaccination [undertaken by the authorities]

4 Consultation and communication
4.1 Develop communications strategy
4.2 Convene meetings
4.3 Set up "hotline" for outbreak reporting
4.4 Subcontract media specialist
4.5 Organise workshops

5 Training
5.1 English language training
5.2 Epidemiology training and study tour

6 Mid-term review and evaluation

Implementation considerations

1 Project start-up and management

1.1 Staff assignment/recruitment

A part-time National Project Coordinator should be based at the (GDPC). There should be two part-time Deputy (Regional) Coordinators, based at Erzurum and Elazig. One part-time Deputy (Regional) Coordinator based at Sap Institute, Ankara,
or
There should be three part-time Deputy (Regional) Coordinators, based at Sap Institute, Ankara, Erzurum and Elazig.

It is proposed that the part-time National Project Coordinator (NPC) and the Deputy Project Coordinator (DPC) positions are filled, respectively, by the Director of the National FMD (*Şap*) Institute and the Directors of the Erzurum and Elazig Veterinary Control and Research Institutes (VCRI). It is proposed that the Veterinary Task Force members (four vets each in Erzurum and Elazig) are assigned by the GoT.

It needs to be decided whether a Communications Officer is recruited to work together with the veterinary teams. If this position is created, he/she should be recruited according to normal procedures (advertise, short-list, interview). The preference from the FMD Institute representative consulted during the mission is that this post is not created, but that the Task Force members decide what external requirements there are from a media specialist, and then sub-contract the services. This approach risks under-participation by all stakeholders, particularly the villagers.

An alternative option is the appointment of an active Project Assistant, perhaps an Associate Professional Officer or UN Volunteer. Proposed TOR are given in the appendix and these TOR include both administrative and communications duties..

1.2 Establish offices: Ankara, Erzurum, Elazig

In Ankara two offices would be located in the GDPC and FMD Institute. It may be that the project does not require a separate office there, but can be managed by the NPC from his offices. In Erzurum and Elazig, FMD Institute, Ankara, the project offices would be located within the VCRI and FMD Institute.

1.3 Procurement: vehicles, office equipment, furniture, etc.
Three vehicles are required: one each for Ankara, Erzurum and Elazig. In Ankara, there are sufficient computers and no more need to be procured. The VCRI project offices need to be furnished and equipped.

1.4 Plan implementation (coordination with GDPC vaccination)
The General Directorate of Protection and Control (GDPC) is responsible for the national vaccine programme. It is desirable that the proposed project tests alternative strategies for implementation, but this may require a change in the law. For example, if proposed District-level Local Disease Control Centres were to plan and implement vaccination, this would apparently be outside existing Turkish legislation, under which sole responsibility is designated to the GDPC and Provincial Directorates.

1.5 Plan project staff training & study tour
The training will be planned during project inception. See Activity 5, below, for description of training required by project staff.

1.6 Base-line surveys
It is planned to survey Erzurum Province, where a pilot participatory epidemiology study has been carried out in 2005, and possibly one other province. The sero-survey would detect infection in cattle one year old and younger. It is expected that this would be a useful indicator of impact of the project and would be reassessed after two years.

The project will also utilise the findings of the participatory epidemiology exercise carried out in Erzurum Province in 2005 for base-line indicators. Some or all of the same indicators will be assessed at the end of the project implementation period in the final evaluation.

1.7 Reporting
Proposed reports are listed in the section on Project Management.

2 Disease investigation and monitoring

2.1 Actively search outbreaks
2.2 Review procedures and plans for vaccination
2.3 Control of outbreaks
2.4 Back and forward tracing
Activities 2.1 to 2.4 are the core of the disease investigation and monitoring component of the project. The introduction of these epidemiological principles will be new to the VCRI's and the region.

2.5 Support Local Disease Control Centres
Local (District) Disease Control Centres have been proposed previously, but are not operational. GoT representatives consulted during the mission were sceptical that they could have a role.

3 Vaccination [undertaken by the authorities]

Vaccination campaigns are carried out in spring (March-April) and autumn (September-October). The project's Veterinary Task Forces will assist the Provincial Directorates with planning these campaigns.

The recent participatory study found that vaccination currently reaches less than 50% of the target bovine population (Berhanu Admassu, personal communication). In the project, it is desirable to test options on vaccine delivery and compare results in different Districts in the project target area. For example, a subsidy on vaccine cost to farmers could be provided in some areas, but not others. Or the use of "community vaccinators" (villager community members who have received short training and then work under the authority of the veterinarian with responsibility for vaccination in the village) could be trialled. However, there appears to be reluctance on the part of GoT representatives met to try these new approaches. Reasons given include:

- If a subsidy is given in part of the project area, there will be problems with neighbouring areas that do not receive the subsidy.
- There is no provision in the current legislation for community vaccinators.
- There is a surfeit of trained manpower (vets and vet technicians).

Unless the recalcitrance to try new vaccine delivery methods is overcome, the project has limited options for testing innovative vaccine delivery modalities.

4 Consultation and communication

4.1 Develop communications strategy
The strategy will be developed together with a consultant Participatory Communications Specialist (see TOR in appendix) who will also be responsible for improving the communication skills of the veterinarians.

4.2 Convene meetings
To make the project successful, it is important to have the support of local leaders, in particular the *muhtar*, *kaymakam* and Province Governor. Meetings will be organised at which these leaders are present, together with representatives of the Veterinary Authorities and the police, who are responsible for livestock movement control. These meetings will take place in each Province. Members of the Task Force teams will develop relations and maintain frequent contact with key *muhtars* and *kaymakams*.

4.3 Set up "hotline" for outbreak reporting
The idea of a dedicated phone line for anonymous reporting is not considered useful by GoT representatives consulted. However, it is recommended that this is reassessed in project inception. For example, reporting might be encouraged if there is a phone-line coupled with a scheme in which a payment is made to anyone reporting a case that is followed up and proven to be FMD.

4.4 Subcontract media specialist
The media specialist will be charged with producing leaflets or whatever other media formats are appropriate for disseminating messages to raise awareness.

4.5 Organise workshops
Early in the project, there should be a launch workshop in each VCRI region. Key local figures (the *muhtar*, *kaymakam*, Province Governor, police inspectors, traders, and so on) will be invited. Workshops may be useful to brief Government and Private Veterinarians who are carrying out vaccination. There should also be workshops at which the findings of the mid-term review and evaluation are presented.

5 Training

5.1 English language training
Most staff members at the VCRI have low English language ability. English language training is necessary if project epidemiologists are to properly benefit from a short course in epidemiology plus study tour in Europe. It will also facilitate communication with and reporting to FAO as well as understanding of international, for example European Union, FMD documentation.

5.2 Epidemiology training and study tour
For the Study Tour, it is proposed that a centre of excellence in Europe for epidemiology (for example, the Free University of Berlin or the Veterinary Epidemiology and Economics Research Unit at the University of Reading) be contracted to provide a short, intensive course in basic epidemiology. The Study Tour should include a visit to a Veterinary Epidemiology Unit and should enable the participants to understand how disease investigation is carried out in Western Europe.

6 Mid-term review and evaluation

The mid-term review will provide preliminary recommendations on how to deliver FMD vaccination more effectively in the region, with potential application in a far wider area. The review will also provide an opportunity to assess progress and realign this as required in implementation of the remainder of the project.

The final evaluation will assess the impact of the project, and compare the assessment of indicators at the end of the project with the results from both the planned base-line sero-survey and the participatory epidemiology assessment that was completed prior to the start of the project.

REPUBLIC OF TURKEY
MINISTRY OF AGRICULTURE AND RURAL AFFAIRS
FMD INSTITUTE

COUNTRY REPORT
By
Dr. Sinan AKTAS

72nd Session of the Executive Committee of the European Commission for the Control of FMD
The Hague, the Netherlands
29-30 November 2005

1

FMD SITUATION

Circulating FMDV serotypes within the country

- Type A
- Type O
- Asia 1 *(never seen since April 2002)*

2

FMD Outbreaks in 2005

MONTH	OUTBREAKS				SUSCEPTIBLE		INFECTED		DEATHS	
	Type O	Type A	Not Typed	Tot.	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep
January	7	1		8	129		36			
February	9			9	267	115	56	41	7	40
March	8	2		10	767	1200	217	850		50
April	14	2		16	568		178		21	
May	9	1	4	14	3040	1	126	1	2	
June	14			14	1372	284	410	450	26	
July	16			16	570		279			
August	9		2	11	944		246		1	
September	9		1	10	1245		196		1	
October	2		1	3	51	76	17	50		
TOTAL	97	6	8	111	9092	1676	1556	592	42	90

3

FOOT AND MOUTH DISEASE SITUATION IN TURKEY

- Foot and mouth disease is endemic in Anatolia with 2 serotypes (Types O and A).
- There were 111 FMD outbreaks reported so far in Turkey, 2005
  - 97 outbreaks due to type O
  - 6 outbreaks due to type A
  - 8 outbreaks due to not typed
- Type O was responsible for most of these outbreaks.
- Strict measures such as quarantine, disinfection, movement restrictions and ring vaccination in the regions where FMD occurred have been applied.

4

FMD Outbreaks in 2005
Last 10 Months

5

Control Programme

- Surveillance and monitoring
- Vaccination
- Animal movements control
- Strict measures and quarantine
- Compensation (Thrace Region)
- Other measures

6

Control Programme

- Vaccination
  - Mass vaccination policy is main element of control program
  - Ring vaccination around the outbreaks

Large Ruminant:

- Application of routine mass vaccination twice a year at least 80% of all large ruminants in the country.

Application of strategic vaccination to large ruminants in the selected region at the Black Sea Region

Small Ruminant:

- Application of routine mass vaccination once a year at least 80% of all small ruminants in the Thrace and Marmara regions.

7

Control Programme

- Vaccination policy
  - Spring vaccination campaign by using trivalent vaccine in selected Eastern and Southeastern Anatolian provinces and bivalent vaccine in other regions in March and April
    - *Thrace and Marmara Regions:* Vaccination of all ruminants
    - *In the other regions of Turkey:* Vaccination of all large ruminants
  - Autumn vaccination campaign by using trivalent vaccine in all country in September and October
    - *Thrace and Marmara Regions:* Vaccination of all Large ruminants
    - *In the other regions of Turkey:* Vaccination of all large ruminants

8

9

Vaccination figures for the Spring vaccination campaign in Turkey in 2005

	Vaccination Programme		Vaccinated		Vaccination%	
	Large Rum.	Small Rum	Large Rum.	Small Rum	Large Rum.	Small Rum
Total	9.143.312		7.029.314		77	

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Vaccination figures for the Autumn vaccination campaign in Turkey in 2005

	Vaccination Programme		Vaccinated		Vaccination%	
	Large Rum.	Small Rum	Large Rum.	Small Rum	Large Rum.	Small Rum
Total	9.143.312		4.918.094		54	

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Vaccination Figures for the Spring Vaccination Campaign in Western Anatolia Region in 2005

Provinces	Programme	Vaccinated	Programme	Vaccinated	Percentage%	
	Large Ruminants		Small Ruminants		Large Rum.	Small Rum.
BALIKESIR	226,146	234,807	275,500	317,474	104	115
BILECIK	31,953	29,019	46,900	42,566	91	91
BURSA	119,850	90,440	149,900	[illegible]	75	47
CANAKKALE	112,597	112,119	128,400	138,656	100	108
EDIRNE	131,535	95,342	195,466	207,913	72	106
ISTANBUL	51,750	40,519	40,950	11,857	78	29
KIRKLARELI	78,264	67,596	121,000	143,519	86	119
KOCAELI	55,520	47,657	53,129	9,854	86	17
SAKARYA	121,126	101,257	30,000	1,934	84	6
TEKIRDAĞ	114,466	101,649	109,000	121,994	88	111
YALOVA	7,908	7,540	9,750	5,212	95	53
KARABÜK	43,941	35,411	0	0	81	
DÜZCE	45,077	37,335	7,000	[illegible]	83	[illegible]
TOPLAM	1,140,535	[illegible]	[illegible]	[illegible]	88	[illegible]

12

Vaccination figures for the Autumn vaccination campaign in Western Anatolia region in 2005

Provinces	Programme	Vaccinated	Programme	Vaccinated	Percentage%	
	Large Ruminants		Small Ruminants		Large Rum.	Small Rum.
BALIKESIR	225,168	177,458	0		78	
BILECIK	31,955	29,719	0		90	
BURSA	119,850	88,620	0		74	
ÇANAKKALE	112,597	96,435	0		86	
EDIRNE	131,535	118,961	0		90	
ISTANBUL	51,750	50,264	0		97	
KIRKLARELI	78,264	77,207	0		99	
KOCAELI	55,520	45,259	0		83	
SAKARYA	121,126	100,061	0		83	
TEKIRDAĞ	114,966	99,094	0		86	
YALOVA	9,908	6,596	0		65	
KARABÜK	43,941	38,320	0		63	
DÜZCE	45,077	34,419	0		76	
TOPLAM	1,140,533	[illegible]	0		84	

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Vaccination Figures for the Spring Vaccination Campaign in Thrace Region in 2005

Provinces	Vaccination Programme		Vaccinated		Percentage%	
	Large Rum.	Small Rum.	Large Rum.	Small Rum.	Large Rum.	Small Rum.
ÇANAKKALE	112,597	126,400	104,706	[illegible]	92	108
EDIRNE	131,535	195,466	114,292	[illegible]	87	107
ISTANBUL	51,750	40,950	34,904	11,947	67	29
KIRKLARELI	78,264	[illegible]	70,269	145,558	90	120
TEKIRDAG	114,966	[illegible]	99,574	[illegible]	87	100
TOPLAM	489,092	[illegible]	[illegible]	[illegible]	87	105

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Vaccination Figures for the Autumn Vaccination Campaign in Trace Region in 2005

Provinces	Vaccination Programme		Vaccinated		Percentage%	
	Large Rum.	Small Rum.	Large Rum.	Small Rum.	Large Rum.	Small Rum.
ÇANAKKALE	112,597	0	96,435	0	86	0
EDIRNE	131,535	0	118,861	0	90	0
ISTANBUL	51,750	0	50,264	0	97	0
KIRKLARELİ	78,264	0	77,207	0	99	0
TEKIRDAĞ	114,966	0	99,094	0	86	0
TOPLAM	489,092	0	441,861	0	90	0

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EU PROJECT

CONTROL OF FMD IN TURKEY

2007-2009

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EU PROJECT

- Control of foot and mouth disease (FMD) in Turkey
- The overall objective of the project is to eradicate FMD in Turkey to ensure a high level of animal health status like in the EU.
- Control of FMD in Turkey by mass vaccination policy in accordance with other EU control measures such as animal identification, movement and market controls.

EU PROJECT

-
  - Vaccination
  - Sero-surveillance
  - Control measures
  - Cleaning and disinfection

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EU PROJECT

- The aim of vaccination and surveillance programme in Thrace region

The aim of Republic of Turkey is to achieve the status of being FMD free with vaccination in Thrace by 2010. To attain this goal, the present programme will first establish regionalization of Turkey as Thrace and Anatolia in order to prevent animal movement from Anatolia. Second, vaccination of sheep and goat at a level of 100 % once a year will be targeted which was not considered previously. Identification and registration system for bovine animals will be operational by the start of the first vaccination campaign. The same rule will apply for ovine and caprine animals in Thrace. However, ovine and caprine animals in Anatolia, simultaneous action of identification is envisaged to be done during vaccination.

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EU PROJECT

- The aim of vaccination and surveillance programme in Anatolia

In Anatolia, Republic of Turkey's aim is to ensure 100 % vaccination of ruminant population. Identification and registration system for bovine will also be operational.

19

EU PROJECT

- Thrace region is recognized as officially FMD free with vaccination by OIE.
- The disease is taken under control in Anatolia with a high level of immunization of the main susceptible species.

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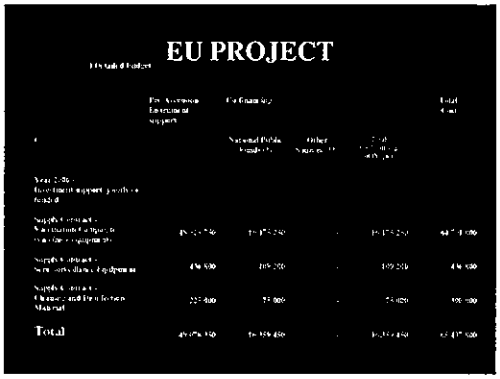
EU PROJECT



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EU PROJECT

Implementation Schedule

	ToR's/Technical Specifications	Start of Tendering/Call for proposals	Start of Project Activities	Project Completion
Supply Contract – Vaccination Campaign protective equipments	June 2006	September 2006	March 2007	September 2009
Supply Contract – Sero-surveillance Equipment	September 2006	January 2007	June 2007	August 2007
Supply Contract – Cleaning and Disinfection Material	September 2006	January 2007	June 2007	August 2007

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EU PROJECT

Costs of the phases

PHASES	COST DUE TO FMD (€)
STABIL ENDEMIC PHASE (1996-2003) (SEP)	112,832,785
ERADICATION PHASE (2006-2013) (EP)	230,434,830
FREE PHASE (2014-2021) (FP)	20,679,956

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Appendix 9

Outline of Project Proposal:

Co-ordination of FMD surveillance and control in the Trans-Caucasus countries and strengthening of emergency management capacity

Direct beneficiary Countries:

Georgia, Armenia and Azerbaijan

Proposed Implementation date: 1/1/06

Summary

A 3 year PROGRAMME of support for FMD control is proposed, comprising the main elements of:
- support to maintain the FMD buffer zone from autumn 2005 to spring 2007, through provision of quality assured FMD vaccine for cattle and small ruminants, containing appropriate antigens;
- a Regional Co-ordination unit (FAO/OIE) for technical support and co-ordination, with an international expert, Russian speaking and based in Tbilisi, Georgia, to co-ordinate and provide inputs to assist countries in the transition towards international/EC standards for emergency management planning, monitoring of vaccination and FMD surveillance;
- support to undertake surveillance programmes, including improving laboratory quality assurance and information systems and direct support for laboratory tests (diagnostic reagents, kits, training).

Key Recommendations from Consultants reports 2004-5

1. Training of staff in epidemiology and diagnostics, diagnostic facilities and transparency have to be improved to introduce more risk-based vaccination and surveillance schemes.
2. An effective epidemiological unit for animal health decision making should be created.
3. Effective computerized national animal health information systems should be developed. A web-based regional animal health information system should be established to allow sharing of disease information between Georgia, Armenia and Azerbaijan, possibly including Turkey, Iran and Russia.
4. Storage facilities and logistics of vaccination campaigns should be improved as to ensure appropriate vaccine quality at the time of use.
5. Baseline sero-surveillance investigations are necessary to assess the FMD situation in the countries. Surveillance and control strategies should be developed and applied for entire countries, preferable the whole region.
6. Regional cooperation between the South Caucasus countries, and Turkey and Iran in FMD surveillance and control is necessary.
7. Close cooperation between animal health projects and governments in the region is recommended.

Conclusions and recommendations of the EUFMD Standing Technical Committee on the results of the buffer zone sero-monitoring in June 2005

8. In the animals sampled in Armenia and Azerbaijan the vaccination was generally effective in inducing high antibodies titres, irrespective of the age of the animals.
9. The results are consistent with, although do not provide proof of, current or recent virus circulation in the three countries. Assuming that the vaccination effect to elicit NSP response is identical in all study regions, the observed heterogeneity in NSP positivity rate may be interpreted as an indication of circulating infection in some counties.

Recommendations

10. Follow up investigations should be conducted in villages where positive NSP results were found with emphasis on young stock.
11. Investigations should be extended countrywide to provide baseline information. Follow up seromonitoring should include other susceptible species and should be risk based.
12. The results should be discussed with national veterinary services and regional cooperation on disease and surveillance and control should be strongly encouraged.
13. Cooperation with European institutions/laboratories on epidemiology and diagnostic support should be continued.

Objectives of the programme 2006-8 should include;

- Re-enforced regional bio-security, especially at the borders between the transCaucasus and Turkey and Iran.
- Reduced risk that TADS entry will result in high impact at national and regional level on livestock health, including spread to third countries.

To meet these objectives, a proposal for was developed in April 2005 (by FAO and OIE experts) with 3 main components:

1. Regional Coordination of national FMD prevention actions, policy development and implementation support.
2. Surveillance, information management, and emergency planning.
3. Laboratory capacity to support FMD surveillance and control programmes.

The Project Outputs[7] should be:

Outputs (by component)
Component 1: - Regional cooperation framework adopted - National TADS prevention (risk management) strategies formulated and implemented for FMD Component 2: - National Emergency management plans revised and tested - Regulatory controls reviewed - National FMD surveillance policies developed and implemented - National disease information systems upgraded, populated with relevant GIS information, able to cross-talk with Laboratory information and management system (LIMS), and adopted into routine use. (GIS to level of complete coverage of animal population) - National plans for continuing surveillance after project end, including laboratory capacity developed (end of project) including human resources
Component 3 – Laboratory - NRLs upgraded to safely undertake FMDV confirmation and serology (under review: at least inactivated virus only), - National capacity for FMD serology, serology for - SPs (LPBE/SPCE) for vaccination coverage and epidemiologic investigation/typing - NSP ELISA for virus circulation - upgraded to reach performance indicators for response time and integration with DVS - NRL capacity to confirm infection by antigen detection ELISA

[7] As proposed by the FAO/OIE project drafting group, April 2005.

Options inputs -and costs

Following the April 2006 planning meeting, discussions were held with country representatives and various options for supplying inputs identified.

Option 1. Baseline support package (vaccine supply phased out by spring 2007) .
Option 2. Regional co-operation and technical support, Buffer Zone Vaccine supply (to end of 2008).
Option 3. Regional co-operation and technical support plus capacity building programme with conversion to national funded buffer zone vaccination in 2007-8.

These are indicated under THREE options, below. (note that Option 2 & 3 follows consultation in 10/2005 with countries – on the basis of the fourth option which had been presented at the Regional GF-TADS meeting, October 2005).

Options 1 and 2 *assume that the international project staff costs, and vehicle hire or supply, would be costed and provided by the overall EUFMD/EC programme.*

Option 1. Limited buffer zone support to spring 2007, provision of baseline regional technical support package

Cost: additional 1.0 million euro, which includes:

- allocation of 420,000 for purchase of OIE/EP grade trivalent vaccine for buffer zone vaccine, and in autumn 2006 /spring 2007 only to Georgia and Azerbaijan, sufficient for only maintaining the buffer zone for initial period (2006, spring 2007) ;
- national disease information system capacity building workshops, training;
- small allocation for diagnostic support to surveillance including contract for external quality assurance and training;
- Staff costs Deputy Co-ordinator, National Project Consultants, travel costs and allowances.

Excludes:

- staff costs of the international co-ordinator
- Major equipment or laboratory refurbishment
- Vehicles
- Vaccine for Armenia in autumn 2006/2007

Assumes: *the international project staff costs, and vehicle hire or supply, would be costed and provided by the overall EUFMD/EC programme*

Option 2. Buffer Zone to 2008, and technical support - (buffer zone vaccination until end of 2008) (*recommended by EUFMD Secretariat*)

In this option, if beneficiary countries are supplied with quality vaccine for the buffer zone until end of 2008, and support to implement national animal disease surveillance for FMD. Laboratory support is supplied to Armenia and Azerbaijan according to gaps in other support.

Cost: additional 2.54 million euro, which includes:

- allocation to purchase of OIE/EP grade trivalent vaccine for buffer zone vaccine, sufficient for maintaining the buffer zone at current levels to the end of 2008;
- national disease information system capacity building workshops, training;
- allocation for diagnostic support to surveillance including contract for external quality assurance and training;
- Staff costs Deputy Co-ordinator, National Project Consultants, travel costs and allowances.

Excludes:

- staff costs of the international co-ordinator
- Major equipment or laboratory refurbishment
- Vehicles

Assumes: *the international project staff costs, and vehicle hire or supply, would be costed and provided by the overall EUFMD/EC programme*

Option 2 Expenditure breakdown - 2006 (US$) (~ euro 636,615)

2006	*Regional*	*Georgia*	*Armenia*	*Azerbaijan*
Surveillance		21,797	21,797	21,797
Laboratory		19,360	77,635	67,635
Training/Workshops	29,260	8,722	5,556	5,556
National staff		41,167	3,167	3,167
Other	43,225			
Buffer zone vaccine	375,000[8]			
Total	447,485	91,046	108,154	98,154
Grand Total ($USD)				744,839
euro				636,615

Option 3. Regional co-operation and technical support plus capacity building programme with conversion to national funded buffer zone vaccination in 2007-8

In this option, if beneficiary countries agree to cover costs of maintaining the buffer zone vaccination, using quality assured vaccine under their national budgets then 90 % of the savings to the programme will be made available to support surveillance and control capacity building.

Cost: additional 1.7 million euro, which includes:

- allocation of 420,000 euro for purchase of OIE/EP grade trivalent vaccine for buffer zone vaccine, sufficient for only maintaining the buffer zone for initial period (2006, spring 2007);
- circa 700,000 euro (being 90% of the saving on vaccine purchase) available to be assigned to upgrading national capacity to undertake FMD prevention and emergency control programmes, lab equipment etc; priorities to be formulated at national level and agreed by EC and FAO project board;.
- allocation for diagnostic support to surveillance including contract for external quality assurance and training;
- Staff costs Deputy Co-ordinator, National Project Consultants, travel costs and allowances.

Excludes:

- staff costs of the international co-ordinator, vehicles.

Option 4. Regional Support Programme presented at OIE/FAO Regional Steering Committee

The costs of the programme of support included the international technical advisor, and costs of four vaccination campaigns in the buffer zone, and other support to laboratory upgrading (in Armenia and Azerbaijan). The value of the above support was estimated at 2.7 million euro, including current vaccine purchase commitments (equates to circa 2.1 million euro of fresh funding for period 2006-8).

Option 4 was revised after comments received at the GF-TADS meeting and following a visit by Secretary EUFMD Commission to Georgia and Azerbaijan in late October, and is presented as Options 2 and 3, above.

Each of the proposed options are in line with May 2004 meeting of the OIE/EC/FAO Tripartite on FMD control in the Caucasus, but differ in the level of operational support and likelihood of national sustainability. Following consultation with the countries, and between EC, FAO and the OIE in October and November 2005, it is hoped financing agreement will be agreed by end of December 2005.

Government contribution and commitments

Country beneficiaries are expected to commit to principles agreed at OIE Paris May 2004 meeting.

Countries participating in the actions that support FMD surveillance and control must:

[8] Figure excludes purchase for spring 2006 which was covered in 2005 budget.

- agree to meet international standards for reporting of FMD and other TADS, as given OIE International Animal Health Code;
- demonstrate commitment to regional action and co-ordination, through the early reporting of disease events to neighbouring countries, to sharing of information at regional steering committees;
- Demonstrate commitment to the phasing out of use of vaccines that do not meet international standards for potency and safety;
- Agree to adopt the principles of the FAO good emergency management practises (GEMP) and to engage in the pathway to develop and implement GEMP with national actions;
- Appoint a lead agency and a national coordinator for the project;
- Cover the cost of implementation (storage, transport, vaccination costs) of the vaccination programmes which use vaccine supplied by FAO;
- In addition, with each country before the project begins, agreement will be made on the allocation of in cash and/or in kind (for example office, and one or more full time project personnel) to support the project, according to subproject requirements which will be formulated and agreed with each Government. This may include specific refurbishment to laboratories or facilities where required for safe operating standards.

Project Management

- See main document
- Implemented from FAO headquarters (Budget Holder EUFMD Secretary), using UNDP/FAO admin system in each country for local purchases and payments.
- Project Co-ordination office in Tbilisi, co-ordinate inputs and delivery and reporting to FAO-HQ, management and technical support for PMUs in each country.

Project Management Units (PMUs) in each country with responsibility for work-plans each 6 months, progress reports. Co-ordination with other donors e.g. EC representation (EC-FSP/country delegation) on Project Steering/Advisory Committee (each 3 months) in each country.

Appendix 10

Annual OIE/FAO FMD Reference Laboratory Network Report
January – November 2005

FAO World Reference Laboratory and OIE Reference Laboratory for FMD (WRLFMD), Institute for Animal Health, Pirbright, UK: Jean-Francois Valarcher, Nigel Ferris, Nick Knowles, Bob Statham, David Paton

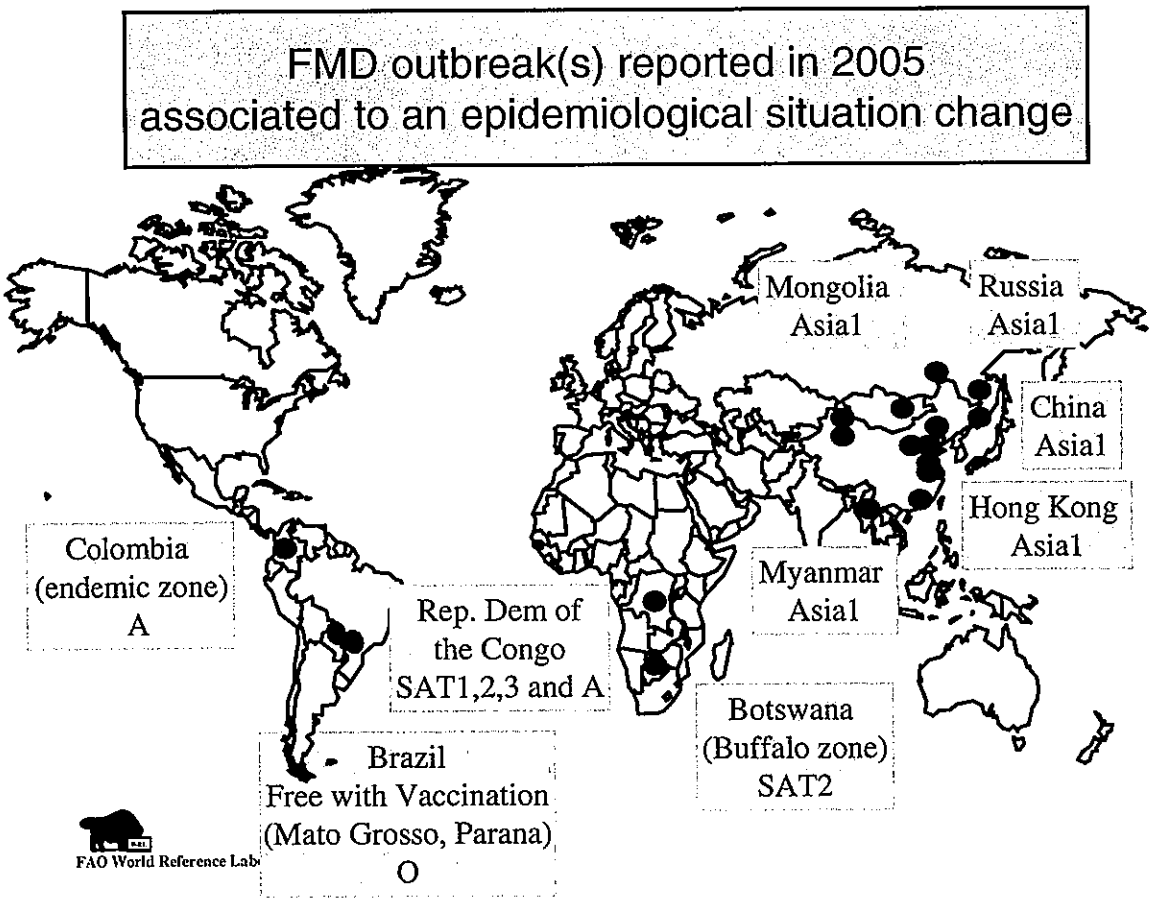
Centro Panamericano de Fiebre Aftosa (PANAFTOSA) and OIE Reference Laboratory for FMD, Rio de Janeiro, Brazil: Ingrid Bergmann, Viviana Malirat, Rossana Allende

Federal Governmental Institute, Centre for Animal Health (FGI ARRIAH) and OIE Reference Laboratory for FMD, Vladimir, Russia: Aleksey Shcherbakov, Valery Zakharov

OIE Regional Reference Laboratory for the Sub-Saharan continent, Gabarone, Botswana: Hervé Coupier, Lindani Mozola, George Matlho

1. Summary report on FMD outbreaks during year in question from surveillance region covered by reference laboratory

1.1. Countries that have reported FMD outbreaks in 2005 (January-November) and FMD serotypes related to those outbreaks (where known)



No data are available for 2005 from Handistatus on the global situation by country.

The SEAFMD website (http://www.seafmd-rcu.oie.int/index.php) provides maps showing countries in the region that have experienced outbreaks in each month of 2005 (Cambodia: not typed, Lao PDR: type O, Peninsular Malaysia: type O and A, Myanmar: type O and Asia 1, Philippines: type O, Thailand: type O and A, Vietnam: type O and A).

PANAFTOSA collects information on outbreaks in South America:
Number of reported FMD-infected farms in South America until week 44.

Country	Total	Type O	Type A	Type C	Clinical – epidemiological diagnosis
Bolivia	0				
Brazil	15	15			
Colombia	1		1		
Ecuador	41	27			14
Perú	0				
Venezuela	2	1	1		
Total	59	43	2	0	14

1.2. Overview and discussion of outbreak information
Highlighting changes in epidemiological situation, relative risk for disease spread and information gaps.

No FMD outbreaks were officially reported in FMD-free countries not using vaccination. FMD remained largely confined to traditionally infected areas between January and November 2005.

The OIE Scientific Commission for Animal Diseases has, at its meeting held from 13 to 19 January 2005, decided to restore the status "FMD free zone with vaccination" to the zone of Argentina situated north of the 42° parallel and the status "FMD free country with vaccination" to Paraguay. Columbia also gained the status "FMD free with vaccination in two new zones that were officially recognized as such in May 2005.

Since the reporting procedure of the ex-OIE List A diseases has changed, less information about FMD outbreaks in endemic countries is available. Only changes in the epidemiological situation of FMD are now reported in real-time.

For this period, epidemiological changes in FMD situation have occurred in Botswana (Buffalo zone / serotype SAT2), Brazil (Mato Grosso, / serotype O), China (serotype Asia1), Colombia (endemic zone / serotype A), Congo (Rep. Dem of the Congo / SAT1,2,3 and A), Hong Kong (serotype Asia1), Mongolia (serotype Asia1) and Russia (serotype Asia1).

The recent appearance of the Asia 1 serotype in China (east and west), Hong Kong, Mongolia, Myanmar, Russia, Tajikistan, along with the traditional occurrence of this serotype in India, Iran and Pakistan suggested that a single strain of Asia1 could be spreading throughout Asia. By collaborating with FGI ARRIAH (Russia), LVRI (China), PDFMD (India), Pakchong (Thailand), we were able to demonstrate that viruses belonging to five different genetic sub-lineages were responsible for those outbreaks.

At the end of this reporting period, type O FMDV has been recorded in the southern state of Mato Grosso do Sul in Brazil in an area previously free with vaccination.

A selection of the viruses received from various outbreaks around the world were further characterised by partial genomic sequencing and serological matching to vaccine strains. Phylogenetic analyses were performed by using complete VP1 gene sequences.

2. Clinical samples and FMDV isolates submitted to reference laboratories of the FMD network during the year in question

2.1. Tabulation of data on clinical samples received and serotyping results

Samples collected in 2005 in question:

Country	No. of samples	Virus isolation in cell culture/ELISA FMD virus serotypes							SVD virus	NVD	RT-PCR for FMD (or SVD) virus (where appropriate)			Laboratory
		O	A	C	SAT 1	SAT 2	SAT 3	Asia 1			Positive	Negative	Not determined	
Botswana	8					8					8			WRL
Brasil	15	15									13		2	PANAFTOSA
Burkina Faso	10									10		10		WRL
Cameroon	119					In progress								WRL
Colombia	1										1			PANAFTOSA
Cote d'Ivoire	6									6		6		WRL
Ghana	4									4		4		WRL
Hong Kong (China)	16	7						8		1	15	1		WRL
Iran	32	6	20							6	25	7		WRL
Ireland	11									11		11		WRL
Kenya	1				1						1			WRL
Mali	4	3								1	4			WRL
Pakistan	26**	19						2		7	25	1		WRL
Philippines	10	3								7	3	7		WRL
Saudi Arabia	14	11								3	11	3		WRL
Senegal	3									3		3		WRL
Sudan	3	3									3			WRL
Togo	16	4	1							11	3	13		WRL
Venezuela	7	2	5								7			PANAFTOSA
Vietnam	5	5									5			WRL
Zambia	2				2						2			WRL
Total	313	78	27		3	8		10		70	126	66	2	

Samples received at WRL in year in question, but collected earlier

Country	Year	No. of samples	on in cell culture/ELISA FMD virus serotypes							VSV		SVD virus	NVD	RT-PCR for I virus (where
			O	A	C	SAT 1	SAT 2	SAT 3	Asia 1	New Jersay	Indiana			Positive
Ecuador	2004	22	10							11	1			22
Hong Kong (China)	2004	1	1											1
Iran	2004	12		2					3				7	4
Kenya	2003-2004	14		2	1		7						4	14
Lao PDR	2003	1		1										1
Mali	2004	16		1									15	
Myanmar	2004	4	4											4
Pakistan	2004	2											2	2
Thailand	2004	9	1	2									6	9
Togo	2004	1	1											
Venezuela	2004	8	1	7										8
Zambia	2004	16				6							10	7
Total		106	18	15	1	6	7		3	11	1		44	50

FMDV	foot-and-mouth disease virus
VI/ELISA	FMDV serotype identified following virus isolation in cell culture and antigen detection ELISA
RT-PCR	reverse transcription polymerase chain reaction for FMD viral genome
NVD	no foot-and-mouth disease, swine vesicular disease or vesicular stomatitis virus detected
*	two samples were positive for O and Asia1
VSV	Vesicular stomatitis virus

2.2. Overview and discussion of samples received and serotyping results

Overview highlighting changes in patterns of sample receipts and information gaps.

In 2005, FAO WRLFMD received 366 clinical samples or FMDV isolates, collected between 2003 and 2005, for virus isolation and characterisation (TABLE 2). Samples were collected in 21 countries located in Europe, Asia and Africa. European samples were collected in the Republic of Ireland and were negative for FMDV by several techniques. African FMDV isolates were collected in ten countries (Botswana, Burkina Faso, Cote d'Ivoire, Ghana, Kenya, Mali, Senegal, Sudan, Togo and Zambia) between 2003 and 2005. FMD viruses obtained from the Middle East and from southern Asia were collected in three countries (Saudi Arabia, Iran and Pakistan) between 2004 and 2005. Strains collected in southeast Asia between 2004 and 2005 were obtained from Hong Kong, Myanmar, Philippines, Thailand and Vietnam.

FMD virus types O, A, C, SAT 1, SAT 2 and Asia 1 were isolated at the WRLFMD from the above listed submissions. As usual, type O was the most prevalent identified serotype. All of these viruses were further characterised by partial genomic sequencing (complete VP1 gene). In addition, complete VP1 sequences were received from FGI ARRIAH, LVRI-China and Pakchong-Thailand Regional Laboratories for comparison to sequences compiled in WRLFMD database.
A selection of specimens was also further studied regarding their antigenic relationship to vaccine strains.

During the same year PANAFTOSA received a total of 53 clinical samples, collected between 2004 and 2005, material that was sent for additional virus characterisation (molecular and/or antigenic, including vaccine matching) (TABLE 2), as the primary isolation and characterization is carried out in the country of origin.
FMD virus types O and A and Vesicular Stomatitis Virus New Jersey and Indiana 1 were characterized at PANAFTOSA from the above listed submissions by partial genomic sequencing (complete VP1 gene of FMDV and partial NS gene of VSV), and antigenic characterization was carried out by Indirect Sandwich ELISA and/or Complement Fixation Test Subtyping was carried out by Complement Fixation Test and selected specimens were studied regarding their antigenic relationship to vaccine strain by r relationship and Expectancy of Protection (EPP) assay.

3. Genetic and antigenic typing of FMD virus isolates submitted to the Reference Laboratory during the year in question

3.1 Tabulated data on isolates typed genetically and antigenically

3.1.1. Summary of genetic typing (one table for each serotype)

FMDV isolate	Region sequenced (bases)	Subtyping result	Reference for dendrogram	
Serotype O				
O/HKN/13/2004	VP1 (639)	O Cathay	Fig..5.5	WRLFMD
O/HKN/9/2005	VP1 (639)	O Cathay	Fig..5.5	WRLFMD
O/HKN/10/2005	VP1 (639)	O Cathay	Fig..5.5	WRLFMD
O/HKN/11/2005	VP1 (142)	O Cathay	Fig..5.5	WRLFMD
O/HKN/12/2005	VP1 (639)	O Cathay	Fig..5.5	WRLFMD
O/HKN/13/2005	VP1 (142)	O Cathay	Fig..5.5	WRLFMD
O/HKN/14/2005	VP1 (639)	O Cathay	Fig..5.5	WRLFMD
O/HKN/15/2005	VP1 (639)	O Cathay	Fig..5.5	WRLFMD
O/HKN/16/2005	VP1 (142)	O Cathay	Fig..5.5	WRLFMD
O/IRN/8/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.2	WRLFMD
O/IRN/9/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.2	WRLFMD
O/IRN/12/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.2	WRLFMD
O/MAI/1/2005	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/MAI/2/2005	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/MAI/3/2005	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/MYA/4/2004	VP1 (639)	O SEA (Mya98)	Fig. 5.7	WRLFMD
O/MYA/1/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/MYA/2/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/MYA/3/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/MYA/4/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/MYA/5/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/PAK/1/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/2/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/3/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/7/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/9/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/10/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/11/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD

O/PAK/12/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PAK/13/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.3	WRLFMD
O/PHI/1/2005	VP1 (639)	O Cathay	Fig. 5.6	WRLFMD
O/PHI/2/2005	VP1 (639)	O Cathay	Fig. 5.6	WRLFMD
O/PHI/3/2005	VP1 (639)	O Cathay	Fig. 5.6	WRLFMD
O/SAU/4/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/5/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/6/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/7/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/8/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/9/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/10/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/11/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/12/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/13/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SAU/14/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.4	WRLFMD
O/SUD/1/2005	VP1 (639)	O EA-3	Fig. 5.1	WRLFMD
O/SUD/2/2005	VP1 (639)	O EA-3	Fig. 5.1	WRLFMD
O/SUD/3/2005	VP1 (639)	O EA-3	Fig. 5.1	WRLFMD
O/TAI/8/2004	VP1 (639)	O SEA (Mya98)	Fig. 5.7	WRLFMD
O/TAI/20/04R2*	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.7	TRRL
O/TAI/36/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/TAI/37/04*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/TOG/1/2004	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/TOG/1/2005	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/TOG/3/2005	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/TOG/4/2005	VP1 (639)	O WA	Fig. 5.1	WRLFMD
O/VIT/1/2005	VP1 (639)	O Cathay	Fig. 5.7	WRLFMD
O/VIT/3/2005	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.7	WRLFMD
O/VIT/4/2005	VP1 (639)	O SEA	Fig. 5.7	WRLFMD
O/VIT/1/05*	VP1 (639)	O Cathay	Fig. 5.7	TRRL
O/VIT/2/05*	VP1 (639)	O Cathay	Fig. 5.7	TRRL
O/VIT/3/05*	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.7	TRRL
O/VIT/4/05*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/VIT/5/05*	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.7	TRRL
O/VIT/6/05*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/VIT/7/05*	VP1 (639)	O Cathay	Fig. 5.7	TRRL
O/VIT/8/05*	VP1 (639)	O ME-SA (PanAsia)	Fig. 5.7	TRRL
O/VIT/9/05*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/VIT/10/05*	VP1 (639)	O SEA (Mya98)	Fig. 5.7	TRRL
O/Eldorado/MS/Bra/05 (4523-2)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4523-3)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4523-4)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4583-7)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4583-8)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4583-9)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4583-10)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4583-11)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4593-50058-2)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (4593-50058-3)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (814-4)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (815-3)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Eldorado/MS/Bra/05 (837-4)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Pichincha/Ecu/04 (050/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Pichincha/Ecu/04 (064/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Cotopaxi/Ecu/04 (067/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA

O/Los Ríos/Ecu/04 (071/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Carchi/Ecu/04 (072/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Los Ríos/Ecu/04 (074/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Esmeraldas/Ecu/04 (097/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Cotopaxi/Ecu/04 (099/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Imbabura/Ecu/04 (101/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Pichincha/Ecu/04 (106/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Trujillo/Ven/05 (21378)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Zulia/Ven/05 (21386 IBHK)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
O/Mérida/Ven/04 (21237/04)	VP1 (639)	O Euro-SA	Fig. 5. 17	PANAFTOSA
Serotype A				
A/IRN/32/2004	VP1 (636)	A Asia (Irn96)	Fig. 5.10	WRLFMD
A/IRN/33/2004	VP1 (639)	A Asia (Irn96)	Fig. 5.10	WRLFMD
A/IRN/1/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/2/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/4/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/5/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/7/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/10/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/13/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/14/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/16/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/IRN/17/2005	VP1 (636)	A Asia (Irn96)	Fig. 5.10	WRLFMD
A/IRN/18/2005	VP1 (639)	A Asia	Fig. 5.10	WRLFMD
A/KEN/1/2003	VP1 (639)	A Africa	Fig. 5.8	WRLFMD
A/KEN/2/2003	VP1 (639)	A Africa	Fig. 5.8	WRLFMD
A/LAO/36/2003	VP1 (636)	A Asia	Fig. 5.11	WRLFMD
A/MAI/4/2004	VP1 (639)	A Africa	Fig. 5.9	WRLFMD
A/TAI/6/2004	VP1 (636)	A Asia	Fig. 5.11	WRLFMD
A/TAI/9/2004	VP1 (636)	A Asia	Fig. 5.11	WRLFMD
A/TOG/9/2005	VP1 (639)	A Africa	Fig. 5.9	WRLFMD
A24/Bogotá/Cundinamarca/Col/05	VP1 (639)	A Euro- SA (A24)	Fig. 5. 18	PANAFTOSA
A/Apure/Ven/05 (21335)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Táchira/Ven/05 (21351)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Mérida/Ven/05 (21366-A)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Mérida/Ven/05 (21369)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Mérida/Ven/05 (21374)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Táchira/Ven/04 (20904)	VP1 (636)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Táchira/Ven/04 (21203)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Táchira/Ven/04 (21211)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Barinas/Ven/04 (21218)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Táchira/Ven/04 (21229)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Yaracuy/Ven/04 (21270)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
A/Barinas/Ven/04 (21283)	VP1 (639)	A Euro- SA	Fig. 5. 18	PANAFTOSA
Serotype C				
C/KEN/1/2004	VP1 (633)		Fig. 5.12	WRLFMD
Serotype Asia1				
Asia1/Armenia/2000	VP1 (611)		Fig. 5.16	ARRIAH
Asia1/JiangSu/CHA/2005	VP1 (633)		Fig. 5.16	LVRI
Asia1/WuXi/JS/China/2005	VP1 (633)		Fig. 5.16	LVRI

Asia1/YanQuing/BJ/China/2005	VP1 (633)		Fig. 5.16	LVRI
Asia1/SanHe/HeB/China/2005	VP1 (633)		Fig. 5.16	LVRI
Asia1/Zhangjiakou/HeB/China/2005	VP1 (633)		Fig. 5.16	LVRI
Asia1/JingNing/GS/China/2005	VP1 (633)		Fig. 5.16	LVRI
Asia1/TongRen/QH/China/2005	VP1 (633)		Fig. 5.16	LVRI
Asia1/Georgia/2000	VP1 (622)		Fig. 5.16	ARRIAH
Asia1/Georgia/2001	VP1 (625)		Fig. 5.16	ARRIAH
Asia1/HKN/1/2005	VP1 (633)		Fig. 5.16	WRLFMD
Asia1/HKN/2/2005	VP1 (633)		Fig. 5.16	WRLFMD
Asia1/HKN/3/2005	VP1 (633)		not shown	WRLFMD
Asia1/HKN/4/2005	VP1 (633)		not shown	WRLFMD
Asia1/HKN/5/2005	VP1 (633)		not shown	WRLFMD
Asia1/HKN/6/2005	VP1 (633)		not shown	WRLFMD
Asia1/HKN/7/2005	VP1 (633)		not shown	WRLFMD
Asia1/HKN/8/2005	VP1 (633)		not shown	WRLFMD
Asia1/IRN/25/2004	VP1 (633)		Fig. 5.16	WRLFMD
Asia1/IRN/30/2004	VP1 (633)		Fig. 5.16	WRLFMD
Asia1/IRN/31/2004	VP1 (633)		Fig. 5.16	WRLFMD
Asia1/Mongolia/2005	VP1 (633)		Fig. 5.16	ARRIAH
Asia1/PAK/2/2004	VP1 (633)		Fig. 5.16	WRLFMD
Asia1/Amursky/RUS/2005	VP1 (633)		Fig. 5.16	ARRIAH
Asia1/Khabarovsk/RUS/2005	VP1 (633)		Fig. 5.16	ARRIAH
Asia1/Prymorsky/RUS/2005	VP1 (633)		Fig. 5.16	ARRIAH
Asia1/TAJ/1/2004*	VP1 (633)		Fig. 5.16	ARRIAH
Asia1/TAJ/2/2004*	VP1 (633)		Fig. 5.16	ARRIAH
Asia1/TAJ/3/2004*	VP1 (633)		not shown	ARRIAH
Asia1/TAJ/4/2004*	VP1 (633)		not shown	ARRIAH
Asia1/TAJ/5/2004*	VP1 (633)		not shown	ARRIAH
Asia1/TAJ/6/2004*	VP1 (633)		not shown	ARRIAH
Serotype SAT1				
SAT1/KEN/1/2005	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/27/2004	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/28/2004	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/29/2004	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/30/2004	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/31/2004	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/32/2004	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/1/2005	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
SAT1/ZAM/2/2005	VP1 (663)	SAT1 NWZ	Fig. 5.13	WRLFMD
Serotype SAT2				
SAT2/BOT/1/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/2/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/3/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/4/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/5/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/6/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/7/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/BOT/8/2005	VP1 (648)		Fig. 5.15	WRLFMD
SAT2/KEN/5/2004	VP1 (648)		Fig. 5.14	WRLFMD
SAT2/KEN/6/2004	VP1 (648)		Fig. 5.14	WRLFMD
SAT2/KEN/8/2004	VP1 (648)		Fig. 5.14	WRLFMD
SAT2/KEN/9/2004	VP1 (648)		Fig. 5.14	WRLFMD

SAT2/KEN/10/2004	VP1 (648)		Fig. 5.14	WRLFMD
SAT2/KEN/11/2004	VP1 (648)		Fig. 5.14	WRLFMD
*, not a WRLFMD Ref. No.				
O/IRN/20/2005		in progress		
O/IRN/21/2005		in progress		
A/IRN/22/2005		in progress		
O/IRN/23/2005		in progress		
A/IRN/24/2005		in progress		
A/IRN/25/2005		in progress		
A/IRN/26/2005		in progress		
A/IRN/27/2005		in progress		
A/IRN/28/2005		in progress		
A/IRN/29/2005		in progress		
A/IRN/30/2005		in progress		
A/IRN/31/2005		in progress		
O/PAK/14/2005		in progress		
O/PAK/15/2005		in progress		
O/PAK/16/2005		in progress		
O/PAK/17/2005		in progress		
O+Asia1/PAK/19/2005		in progress		
O/PAK/20/2005		in progress		
O/PAK/21/2005		in progress		
O+Asia1/PAK/22/2005		in progress		
O/PAK/24/2005		in progress		
O/PAK/25/2005		in progress		
O/Pakistan vaccine		in progress		

3.1.2. Summary of antigenic typing

FMDV isolate	Vaccines matched	r value by ELISA	r value by CF50	r value by VNT
Serotype O				
O Afg 2003/16	O Manisa			>1.0
O Bhu 2004/39	O Manisa			0.5
O Bhu 2004/40	O Manisa			0.44
O Eri 2004/1	O Manisa			0.43
O Eri 2004/2	O Manisa			0.36
O Eri 2004/3	O Manisa			0.04
O Hkn 2005/9	O Manisa			0.4
	O 3039			0.5
O Hkn 2005/15	O Manisa			0.33
	O Taiwan 3/97			0.21
	O 3039			0.51
O Irn 2004/6	O Manisa			0.47
O Irn 2004/15	O Manisa			0.62
O Irn 2004/20	O Manisa			0.47
O Irn 2005/12	O Manisa			>1.0
O Irn 2005/20	O Manisa			>1.0
O Irn 2005/23	O Manisa			>1.0
O May 2004/2	O Manisa	1		0.65
	3039	1		
	4147	0.61		
	O Phi 95	1		
	O Tai 189/87	0.86		

	O TNN 24/84	0.71	
O May 2004/3	O Manisa	>1.0	0.5
	3039	1	
	4147	0.71	
	O Phi 95	>1.0	
	O Tai 189/87	1	
	O TNN 24/84	0.86	
O Mai 2005/1	O Manisa		>1.0
O Mya 2004/1	O Manisa		0.6
O Mya 2004/2	O Manisa		0.69
O Pak 2005/3	O Manisa		0.81
O Pak 2005/7	O Manisa		0.65
O Pak 2005/9	O Manisa		>1.0
O Pak 2005/12	O Manisa		>1.0
	O TNN 24/84	0.75	
O Pak 2005/14	O Manisa		>1.0
O Pak 2005/16	O Manisa		>1.0
O Pak 2005/17	O Manisa		>1.0
O Pak 2005/24	O Manisa		>1.0
O Pak 2005/25	O Manisa		>1.0
O Phi 2004/4	O Manisa	1	
	3039	1	
	4147	0.61	
	O Phi 95	1	
	O Tai 189/87	1	
	O TNN 24/84	0.86	
O Phi 2004/5	O Manisa		0.26
O Phi 2004/6	O Manisa	1	
	3039	1	
	4147	0.68	
	O Phi 95	1	
	O Tai 189/87	1	
	O TNN 24/84	0.86	
O Phi 2004/7	O Manisa		0.21
	O Taiwan 3/97		0.30
O Phi 2005/1	O Manisa		0.43
O Phi 2005/2	O Manisa		0.35
O Phi 2005/3	O Manisa		0.3
O Sau 2005/4	O Manisa		0.78
O Sau 2005/8	O Manisa		0.68
O Sau 2005/9	O Manisa		0.95
O Sau 2005/10	O Manisa		0.83
O Sau 2005/14	O Manisa		>1.0
O Sud 2005/1	O Manisa		0.97
O Sud 2005/3	O Manisa		0.83
O Rwa 2004/2	O Manisa		0.69
O Rwa 2004/3	O Manisa		0.56
O Tan 2004/1	O Manisa		0.65
O Tan 2004/2	O Manisa		0.21
O Tan 2004/14	O Manisa		0.72
O Tai 2004/6	ASK	0.25	
	118/87	1	
O Tai 2004/8	O Manisa		>1.0
	189/87	1	
O Tai 2004/9	ASK	0.22	
	118/87	0.43	
O Tog 2004/1	O Manisa		0.69
O Tog 2005/1	O Manisa		0.55
O Tur 2000/5	O Manisa		>1.0
O Tur 2002/12	O Manisa		>1.0
O Tur 2003/3	O Manisa		>1.0
O Tur 2003/7	O Manisa		>1.0
O Uga 2004/4	O Manisa		0.43

O Uga 2004/5	O Manisa		0.19
O Uga 2004/6	O Manisa		0.28
O Uga 2004/18	O Manisa		0.3
O Vit 2005/3	O Manisa		0.59
O Zam 2000/2	O Manisa		0.6
O/Eldorado/MS/Bra/05(4523-2)	O1 Campos	0.62	
O/Eldorado/MS/Bra/05(4583-9)*	O1 Campos	0.56	
O/Eldorado/MS/Bra/05(4583-10)	O1 Campos	0.41	
O/Eldorado/MS/Bra/05(4583-11)	O1 Campos	0.48	
O/Eldorado/MS/Bra/05(814-7)	O1 Campos	0.31	
O/Eldorado/MS/Bra/05(837-2)	O1 Campos	0.45	

* Antigenic match of O/Eldorado/MS/Bra/05(4583-9) to vaccine strain O1 Campos studied by r relationship and Expectancy of Protection (EPP) assay.

EPP Value	**By VNT:**	**by ELISA:**
30 days post vaccination	87.96	82.91
30 days post revaccination	98.59	99.29

Serotype A

A Bhu 2003/7	A Irn96		0.24
	A 5925		0.55
	A Sau 95		0.47
	A22 Irq 24/64		0.22
	A Irn 2001		0.41
A Bhu 2003/40	A Irn96		0.31
	A 5925		0.55
	A Sau 95		0.4
	A22 Irq 24/64		0.15
	A Irn 2001		0.25
A Irn 1999/22	A 5925	0.61	
	A Irn 2001	0.61	
A Irn 2001/32	A22 Irq 24/64		0.18
	A24 Cruzeiro		0.05
	A May97		0.06
	A 5925	<0.1	0.45
	A Sau95		0.2
	A Irn 2001	<0.1	0.1
A Irn 2002/6	A Irn96		0.85
	A22 Irq 24/64		>1.0
	A24 Cruzeiro		0.05
	A May97		0.1
	A 5925	0.43	
	A Irn 2001	<0.1	
A Ken 2003/1	A22 Irq 24/64		0.26
	A15 Tai 1/60		0.1
	A24 Cruzeiro		0.07
	A Irn96		0.09
	A May97		0.05
	A Irn87		0.15
A Ken 2003/2	A22 Irq 24/64		0.28
	A15 Tai 1/60		0.15
	A24 Cruzeiro		0.08
	A Irn96		0.09
	A May97		0.07
	A Irn87		0.14
A Irn 2003/5	A22 Irq 24/64		0.13
	A24 Cruzeiro		No neutralisation
	A Irn96		0.14
	A May97		0.12

	A Tur 14/98	>1.0	
	A 5925	0.22	
	A Irn 2001	<0.1	
A Irn 2003/7	A22 Irq 24/64		0.13
	A24 Cruzeiro		0.02
	A Irn96		0.09
	A May97		0.06
	A 5925	0.23	0.12
	A Sau95		0.06
	A Irn 2001	<0.1	0.03
A Irn 2003/10	A22 Irq 24/64		0.18
	A24 Cruzeiro		0.07
	A Irn96		0.39
	A May97		0.14
	A Sau95		0.04
	A 5925	0.5	
	A Irn 2001	0.38	0.17
A Irn 2003/41	A22 Irq 24/64		0.33
	A24 Cruzeiro		0.05
	A Irn96		0.35
	A May97		0.06
	A 5925	0.61	
	A Irn 2001	0.4	
A Irn 2004/7	A22 Irq 24/64		0.67
	A24 Cruzeiro		0.05
	A Irn96		0.11
	A May97		0.09
	A Irn87		0.12
	A 5925	0.61	0.39
	A Sau95		0.13
	A Irn 2001	<0.1	
A Irn 2004/32	A22 Irq 24/64		0.16
	A24 Cruzeiro		No neutralisation
	A Irn96		0.4
	A May97		No neutralisation
	A Irn87		No neutralisation
	A 5925	0.43	0.27
	A Sau95		0.13
	A Irn 2001	0.25	0.1
A Irn 2004/33	A Irn96		>1.0
	A May97		0.16
	A Irn87		0.12
	A 5925		No neutralisation
	A Sau95		0.12
A Irn 2005/1	A24 Cruzeiro		0.08
	A Irn96		0.06
	A May97		0.14
	A Irn87		0.16
	A Irn 2001		0.09
A Irn 2005/4	A22 Irq 24/64		>1.0
	A24 Cruzeiro		0.06
	A Irn96		0.11
	A May97		0.14
	A Irn87		0.16
	A 5925	0.53	0.43
	A Sau95		0.18
	A Irn 2001	<0.2	0.07
A Irn 2005/5	A22 Irq 24/64		0.71
	A24 Cruzeiro		0.08
	A Irn96		0.1
	A May97		0.07
	A Irn87		0.17
	A 5925	0.61	0.51

	A Sau95		0.18
	A Irn 2001	<0.2	
A Irn 2005/7	A22 Irq 24/64		31
	A Irn96		0.05
A Irn 2005/17	A22 Irq 24/64		0.07
	A Irn96		0.19
A Irn 2005/22	A22 Irq 24/64		0.45
	A Irn96		0.05
A Irn 2005/28	A22 Irq 24/64		0.41
	A Irn96		0.05
A Irn 2005/29	A22 Irq 24/64		0.45
A Lao 2003/36	A22 Irq 24/64		0.13
	A15 Tai 1/60		0.26
	A24 Cruzeiro		0.06
	A Irn96		0.2
	A May97		0.36
	A Irn87		0.25
A Mai 2004/4	A22 Irq 24/64		0.55
	A Irn96		0.09
A May 2004/3	A Irn96		0.35
	A May97		0.44
	A Irn87		0.22
	A 5925		0.37
	A Sau95		0.19
A May 2004/4	A Irn96		0.2
	A May97		0.37
	A Irn87		0.17
	A 5925		0.05
	A Sau95		0.09
	A Irn96		0.05
A Pak 2003/9	A22 Irq 24/64		0.1
	A 5925		0.6
	A Sau95		0.31
	A Irn 2001		0.26
A Pak 2003/11	A22 Irq 24/64		0.1
	A 5925		0.51
	A Sau95		0.36
	A Irn 2001		0.23
A Pak 2003/77	A24 Cruzeiro		0.11
	A Irn96		0.18
	A May97		0.11
	A Irn87		0.22
A Syr 2002/5	A Tur 14/98	>1.0	
A Tai 2004/6	A24 Cruzeiro		0.07
	A Irn96		0.17
	A May97		0.26
	A Irn87		0.25
	ASK	0.25	
	118/87	1	
A Tai 2004/9	A24 Cruzeiro		0.05
	A Irn96		0.16
	A May97		0.26
	A Irn87		0.29
	ASK	0.22	
	118/87	0.43	
A Tur 2002/14	A Tur 14/98	>1.0	
A Tur 2003/5	A22 Irq 24/64		0.14
	A Sau95		0.13
	A Irn 2001		0.18
A Tog 2005/9	A22 Irq 24/64		0.21
	A Irn96		0.09
A Vit 2004/4	A24 Cruzeiro		0.1

	A Irn96	0.5	0.16
	A May97	>1.0	0.28
	A Irn87	<0.2	0.23
	A 5925		0.15
	A Sau95		0.11
	Tai ASK S9	0.7	
	A Ind 17/82	0.3	
	A Sau 23/86	0.9	
	A22 Irq 24/64	>1.0	
A Vit 2004/5	A Irn96	0.4	
	A May97	>1.0	
	A Irn87	0.9	
	Tai ASK S9	0.9	
	A Ind 17/82	<0.1	
	A Sau 23/86	0.9	
	A22 Irq 24/64	0.4	
Asia1			
Asia1 Hkn 2005/1	As Ind 8/79		0.35
	As Shamir		0.58
Asia1 Hkn 2005/2	As Ind 8/79		0.39
	As Shamir		0.87
Asia1 Ind 1980/10	As Shamir	0.45	
	WBN 117/87	0.48	
Asia1 Ind 1981/15	As Shamir	1	
	WBN 117/87	1	
Asia1 Irn 2004/10	As Ind 8/79		0.13
	As Shamir		0.91
Asia1 Irn 2004/30	As Ind 8/79		0.58
	As Shamir		>1.0
Asia1 Irn 2004/31	As Ind 8/79		0.62
	As Shamir		0.52
Asia1 Pak 2003/67	As Ind 8/79		0.16
	As Shamir		0.55
Asia1 Pak 2003/76	As Ind 8/79		0.11
	As Shamir		0.48
Asia1 Pak 2004/1	As Ind 8/79		0.13
	As Shamir	>1.0	0.74
	WBN 117/87	1	
Asia1 Pak 2004/2	As Ind 8/79	>1.0	0.12
	As Shamir	>1.0	0.39
	WBN 117/87		
Serotype C			
C Ken 2004/1	C Oberbayern		0.28

3.2. Overview and discussion of typing results

3.2.1. FMDV serotype O

From Africa, FMD viruses of serotype O collected in Sudan belonged to the EA-3 topotype and were closely related to those collected in 2004 (Fig 5.1). Isolates of the same serotype collected in Mali and Togo were related and belonged to the West Africa (WA) topotype (Fig 1). Isolates collected in Sudan and in Togo showed a good matching with O Manisa by VNT.

From Southern Asia, FMD viruses of serotype O were collected in Iran, Pakistan and Saudi Arabia. Isolates collected in Iran and Pakistan belonged to the PanAsia strain (ME-SA topotype) and were closely related to those collected in Nepal and Bhutan in 2004 (Fig. 5.2 and 5.3). Isolates of serotype O collected in Saudi Arabia belonged to the PanAsia strain and were closely related to those collected in Iran in 2004 (Fig 5.4). Isolates from these countries were shown to have a very good matching with O Manisa by VNT.

From East Asia, FMD viruses of serotype O collected in Hong Kong and the Philippines belonged to the Cathay topotype (Fig 5.5 and Fig 5.6). Some of the isolates collected in Vietnam also belonged to this topotype. Genetic differences could be observed between isolates collected in different countries. However genetic relationships were demonstrated between isolates collected in each country and those collected in 2003 and 2004 in the same place (Fig. 5.7).
Other isolates of serotype O collected in Myanmar, Thailand and Vietnam belonged to various topotypes and sub-lineages (Fig 5.7). Isolates collected in Myanmar in 2004 belonged exclusively to the SEA topotype (Mya98 strain) and were closely related to isolates collected in 1999, 2000 and 2002 in the same country. Vietnamese viruses collected in the same year belonged either to the ME-SA topotype (PanAsia strain) or to the SEA topotype (Mya98 strain). These isolates were very closely related to isolates collected in 2004 and 2005 in Thailand.
Isolates belonging to the Cathay topotype collected in Philippines were shown to have a good match to O Manisa, 3039, 4147, Phi 95, Tai 189/87and O TNN 24/84 by ELISA and those collected in Hong Kong had a moderate match to O Manisa and 3039 by VNT. Other isolates of serotype O collected in Myanmar, Thailand and Vietnam had a good matching by ELISA and /or VNT to O Manisa, 189/87 and moderate to O ASK.

From South America, The type O isolate responsible for the outbreaks recorded in the FMD-free with vaccination area in Mato Grosso do Sul, Brazil belonged to the Euro-SA topotype, being endogenous from the continent, and with homology values between 90-93% to the strains that have sporadically re-appeared in the Southern Cone of the continent in the years 2000, 2002 and 2003 (Fig 5.17). It was subtyped as O1 (Fig 6). Vaccine matching gave satisfactory results by r relationships and Expectancy of Protection (EPP) (by VNT and ELISA), with vaccines containing strain O1 Campos.
The other FMD viruses of type O characterized in the continent were from episodes in still endemic countries (Ecuador and Venezuela), all belonging to the Euro-SA topotype, although from different lineage than that causing the emergence in the Southern Cone (Fig 5.17)

3.2.2. FMDV serotype A

From Africa, Kenyan isolates of serotype A were identical to each other and very closely related to one of the Kenyan vaccine strains, K5/80, with percentage identity values of 99.69% (2 nucleotide difference) (Fig. 5.8). FMDV isolates collected in Mali and Togo were related to isolates collected in Cameroon in 2000 (Fig 5.9). By VNT, Isolates collected in Kenya had a moderate match to A22 IrQ 24/64 and poor to A15 Tai 1/60, A24 Cruzeiro, A Irn 96, A May 97 and A Irn 87. Isolates collected In Mali and Togo had a good and poor match to A22 Irq 24/64, respectively. Both of these isolates had a poor match to A Irn96.

From Southern Asia, FMD viruses collected in Iran belonged to the Asia topotype (Irn 96 strain or unnamed sublineages) (Fig 5.10). All these isolates were closely related to those collected in the same country in 2003 and 2004. By VNT and for most of the isolates, isolates collected in Iran in 2005 had a good match to A22 Irq 24/64 and A5925 but a poor match to A Irn 96, A May 97, A Irn 87 and A Irn 2001.

From East Asia, isolates were collected in Lao PDR and Thailand in 2003 and 2004, respectively. These viruses were closely related to those collected in Southeast Asia (Fig 5.11). The FMDV isolate of serotype A from Lao PDR was closely related to isolates collected in Malaysia and Thailand in 2003 and 2004, respectively. All isolates of type A collected in Thailand in 2004, except one, were closely related to each other and to some collected in the same country in 2003. By Elisa, isolates collected in Vietnam had a very good matching to A May 97, A Irn 87, ASK, A Ind 17/82, A Sau 23/86 and A22 Irq 24/64. By VNT, isolates collected in Malaysia, Thailand and Vietnam good to poor matching to A May 97, A Irn 96 and A5925.

From South America, occurrence of FMDV Type A was recorded in Colombia, specifically in Bogotá, Department of Cundinamarca. No outbreaks have been confirmed in this area since September 2002 (twenty-nine months). A precise characterization of the agent was undertaken and it was found to have a high level of homology with the A24 Cruzeiro reference strain, Fig. 5.18, matching at 638 out of the 639 nucleotides. As a result of laboratory testing and epidemiological investigations carried out around the outbreak and in in-contact farms, the likelihood of a field origin has been ruled out and it was assumed that the outbreak was caused by a laboratory virus strain.

The other FMDV type A characterized in the continent were from episodes in a still endemic country (Venezuela), and all isolates were placed within the Euro-SA cluster (Fig 5.18)

3.2.3. FMDV serotype C

FMDV of serotype C was collected in Kenya in 2004. This isolate appeared to be very closely related (99.84%; 1 nucleotide difference) to the Kenyan vaccine strain, K267/67 and to previous outbreaks that country in 1983 and 1996 (Fig. 5.12). By VNT a weak match was shown to C Oberbayern.

3.2.3. FMDV serotype SAT1 and SAT2

SAT1 isolates collected in Zambia in 2005 were very closely related to isolates collected in the same country in 2004 (Fig 5.13). This shows that this outbreak is not yet under control. A SAT1 virus collected in Kenya, was not closely related to any other SAT 1 virus (Fig. 5.13).

SAT 2 isolates collected in Kenya belonged to two different sublineages (Fig. 5.14). Two FMDV isolates were very closely related to the Kenya vaccine strain, K65/82 (99.54 and 99.69 % nt identity, respectively). The others were closely related to viruses isolated from outbreaks of FMDV in Tanzania and Malawi in 2004. SAT2 viruses collected in Botswana were closely related (Fig 5.14) to an FMDV isolate collected in African buffalo in the same country in 1998 (not shown on phylogenetic tree) supporting the supposition that this outbreak has probably an origin in wildlife.

3.2.4. FMDV serotype Asia1

Asia1 serotype remained restricted to Asia.
Viruses belonging to five different sublineages are circulating in Asia (Fig 5.15):
-One FMDV isolate of serotype Asia 1 collected in Iran was closely related to those collected in Iran and Afghanistan in 2001
-Other FMDV of serotype Asia 1 collected in Iran were closely related to viruses collected in Pakistan between 2002 and 2005, Tajikistan in 2004 and Hong Kong in 2005.
- FMD viruses collected in India in 2004 belonged to a unique sub-lineage.
- Finally, FMDV isolates collected in Myanmar were related to viruses collected in Myanmar or Thailand a few years earlier.
The Asia 1 virus responsible for outbreaks in China and Russia were also closely related to each other (less than 0.79% difference) and to viruses from India (Tamil Nadu) isolated in 1980-81 (1.42-1.74%). It can be suspected that these outbreaks are vaccine related, although Indian viruses from 1980-81 do not match with any known vaccine strains of Asia 1.
FMDV isolates collected in Mongolia were closely related to isolates collected in China and Russia between May and July 2005. By VNT and/or ELISA it appears that Asia 1 Shamir should provide a good coverage. Some isolates collected in Pakistan, Iran and Hong Kong showed a good match by ELISA to Asia 1 Shamir and A Ind 8/79. However by VNT, isolates from these countries have shown a better match to Asia 1 Shamir than to Asia 1 Ind 8/79. Isolates collected in India in 1980 and 1981 that are closely related to viruses responsible the outbreaks in Russia and China had a good match to Asia 1 Shamir and WBN 117/87.

4. Overall conclusions

FMDV is still active in many parts of the world. An improvement of the global surveillance for FMD has occurred this year. Different reasons can explain this observation such as the existence of projects on FMD funded by FAO or other organisations in different parts of the world and also by the good collaborations between several FMD laboratories (WRL FMD, FGI ARRIAH, BVI, Pakchong RRL, Lanzhou, VRI). However, the situation in the Middle East remains a concern because a very low number of clinical samples were submitted in 2005 from this area.

Serotype O remains the most prevalent serotype. FMDV of serotypes A and SAT show the highest degree of genetic and antigenic variability. In 2005, the spread of Asia 1 in Asia and the confirmation of serotype C in Africa were the two main novelties.

The epidemic of FMD serotype Asia 1 was in reality caused by viruses that belong to five different sublineages. It has become increasingly clear that China has a key role in the control of the spread in Asia.

The occurrence of serotype C in Kenya in 2004 was confirmed and the isolate was closely related to a vaccine strain. The report of type C in Pakistan in 2004 was not confirmed by analysing samples detected positive in this country. The infrequent occurrence of serotype C and the relatedness of the Kenyan isolate to a vaccine strain raises the question of whether it would be pertinent to globally cease vaccination against this serotype (except in areas where wild-type viruses are proved to be circulating, e.g. Brazil).

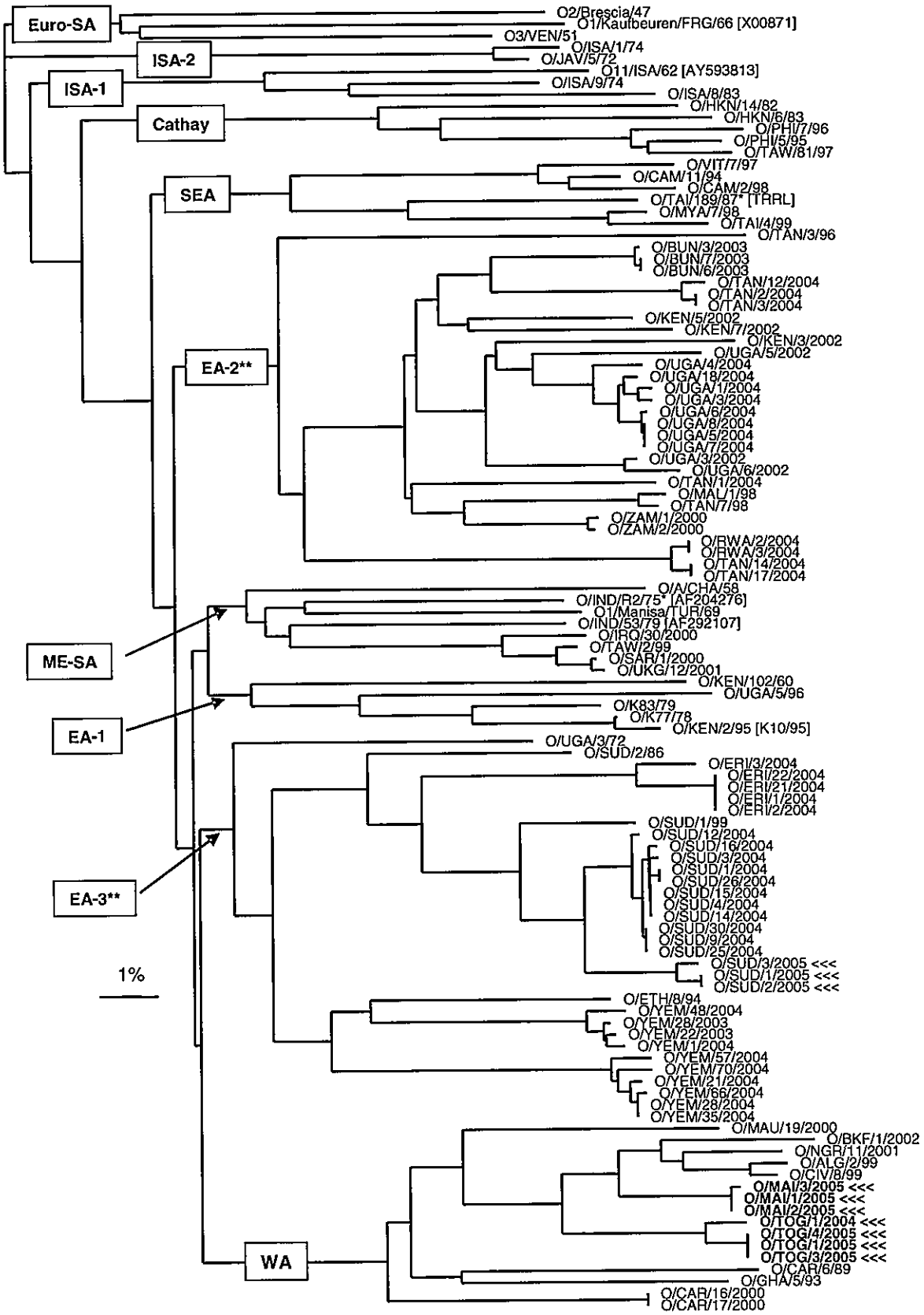
Based on VNT and ELISA assays, O Manisa and Asia1 Shamir remain very appropriate as vaccine strains to protect against most field isolates. For serotype A, different vaccine strains are necessary to provide a full coverage. It is noticeable that some recent isolates collected in Iran gave a good matching to A22 Iraq 24/64.

Vaccine matching studies carried out with FMDV strains circulating in South America indicated that strains O1 Campos, A24 Cruzeiro and C3 Indiana l remain appropriate as vaccine strains to protect against field isolates.

Global surveillance will be improved by continuing efforts to solicit sample submissions, however, the cost and difficulties of sending infectious goods by air remains a considerable constraint. Efforts to improve the global surveillance must be pursued by supporting financially the coordination of reference laboratories for FMD such as the OIE/FAO network of reference laboratories for FMD.

5. Appendix of dendrograms

Fig. 5.1. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Africa (Mali, Sudan and Togo)



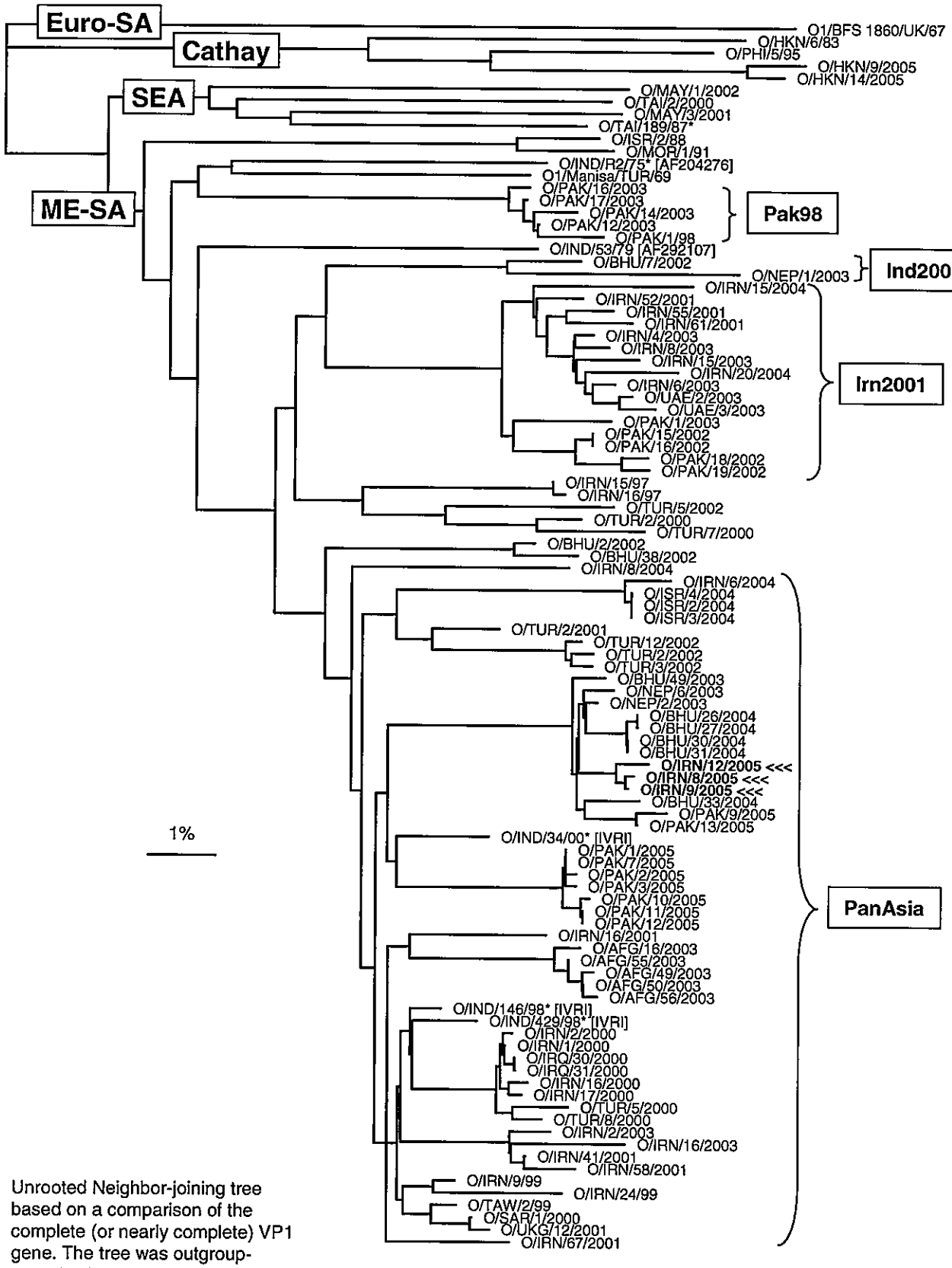
Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene (~639 nt). The tree was outgroup-rooted using the Euro-SA topotype sequences.

* Not a WRLFMD Ref. No.

** proposed new topotypes

N.J. Knowles R. J. Midgley & J.-F. Valarcher, 10 October 2005

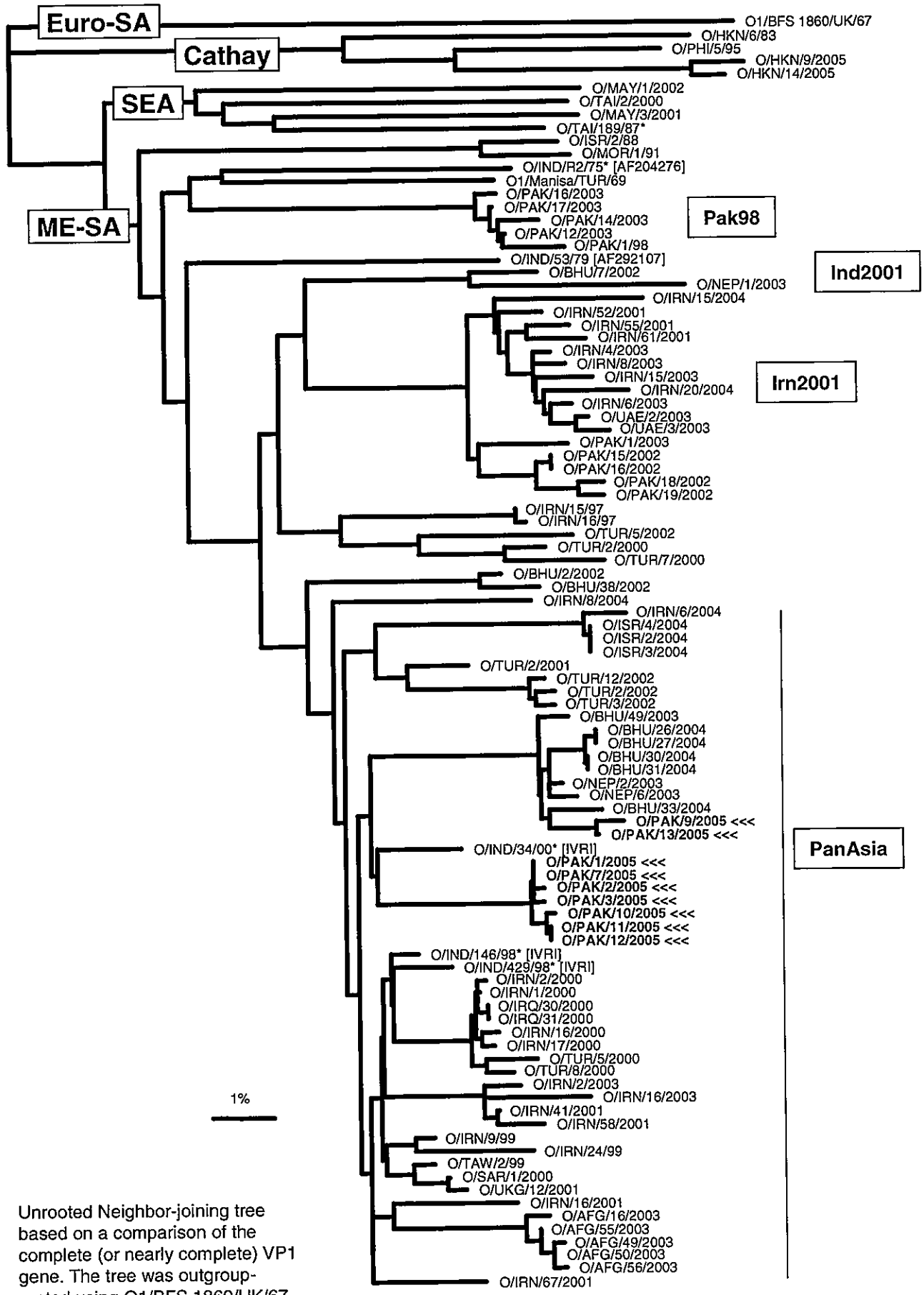
Fig. 5.2. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Iran



Unrooted Neighbor-joining tree based on a comparison of the complete (or nearly complete) VP1 gene. The tree was outgroup-rooted using O1/BFS 1860/UK/67.
*, not a WRLFMD ref. no.

N.J. Knowles, R.J. Midgley & J.-F. Valarcher, 10 October 2005

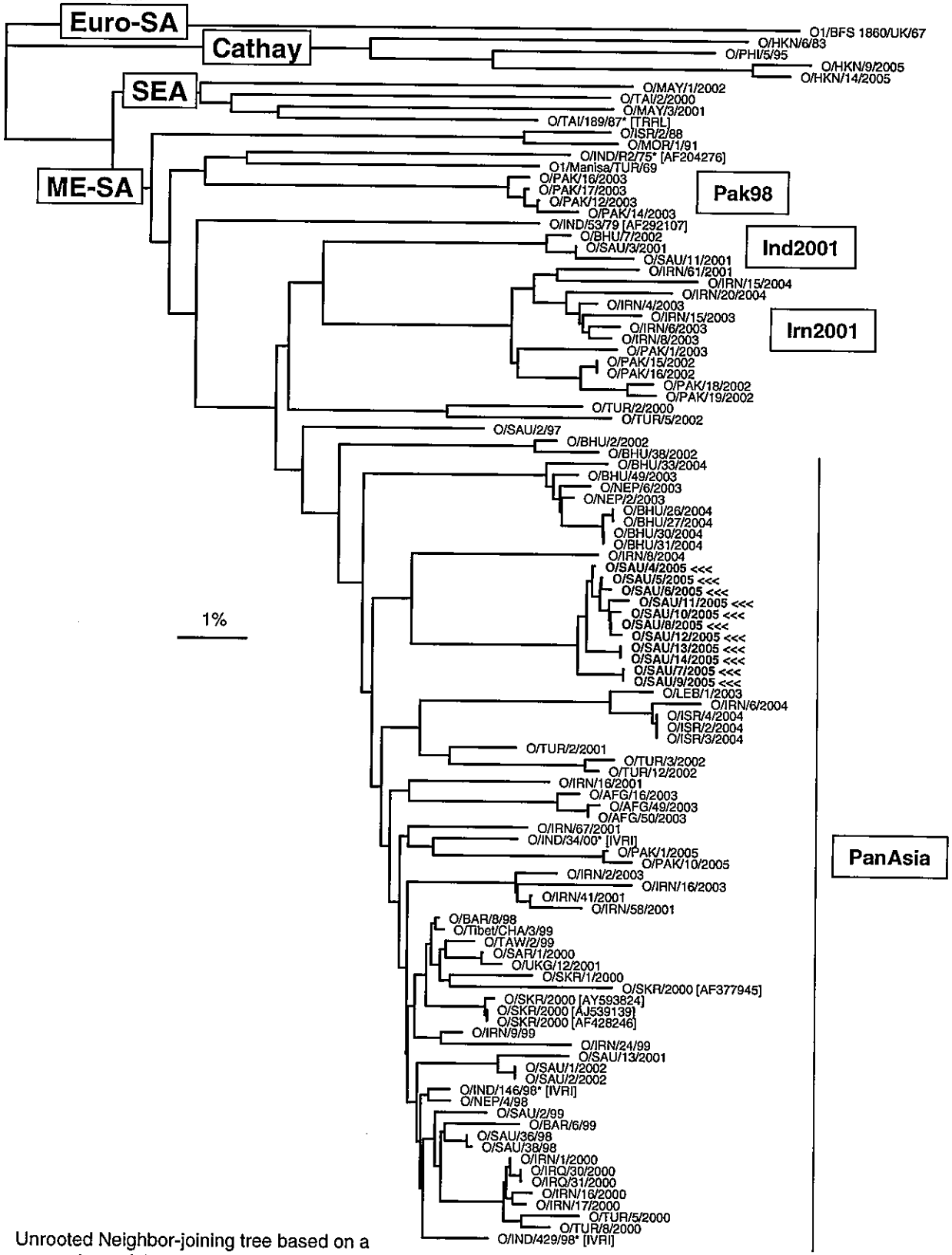
Fig. 5.3. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Pakistan



Unrooted Neighbor-joining tree based on a comparison of the complete (or nearly complete) VP1 gene. The tree was outgroup-rooted using O1/BFS 1860/UK/67.
*, not a WRLFMD ref. no.

N.J. Knowles, R.J. Midgley & J.-F. Valarcher, 22 June 2005

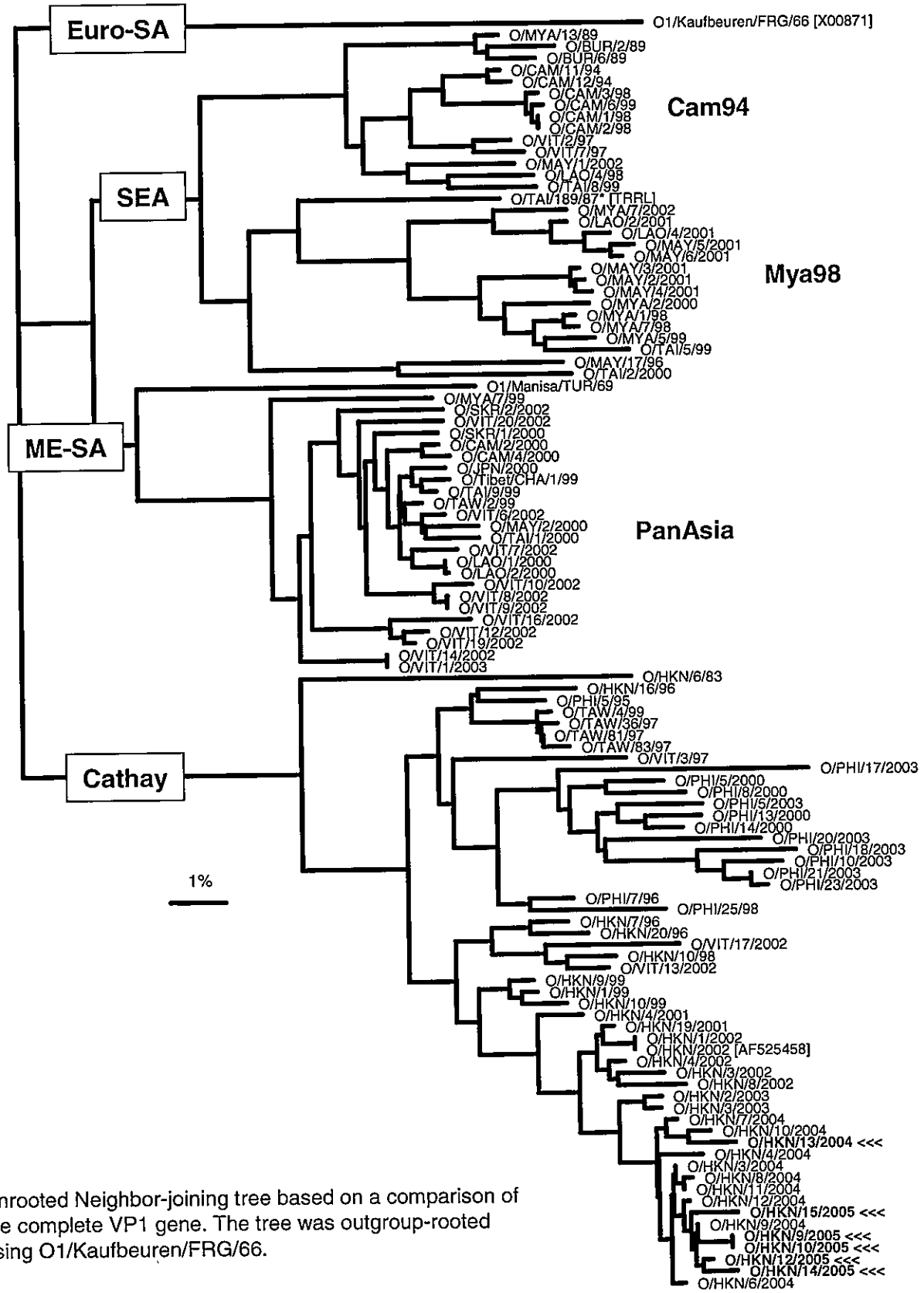
Fig. 5.4. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Saudi Arabia.



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using O1/BFS 1860/UK/67.
*, not a WRLFMD ref. no.

N.J. Knowles, R.J. Midgley & J.-F. Valarcher, 5 September 2005

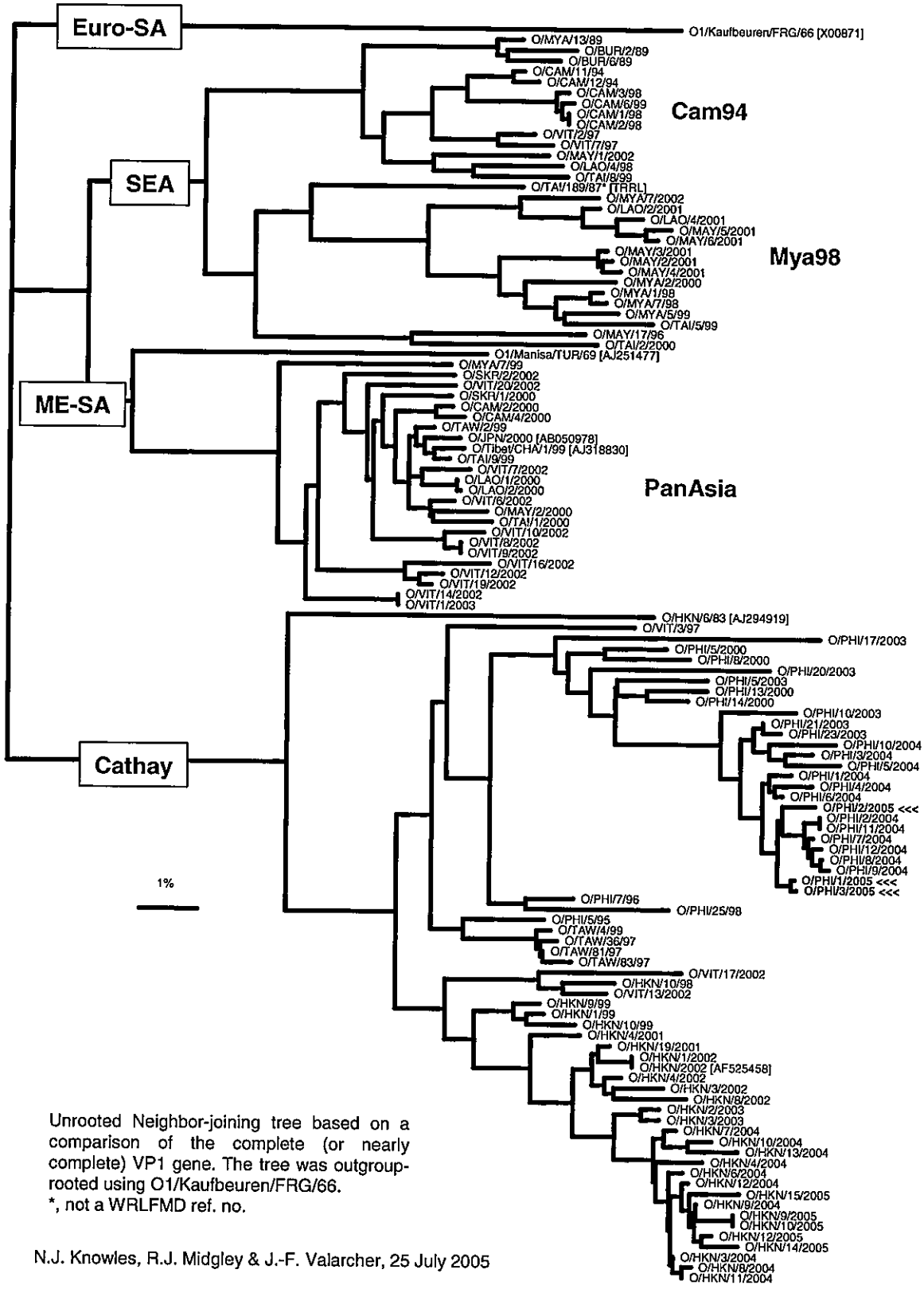
Fig. 5.5. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Hong Kong.



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using O1/Kaufbeuren/FRG/66.

N.J. Knowles, P.R. Davies, R.J. Midgley & J.-F. Valarcher, 7 June 2005

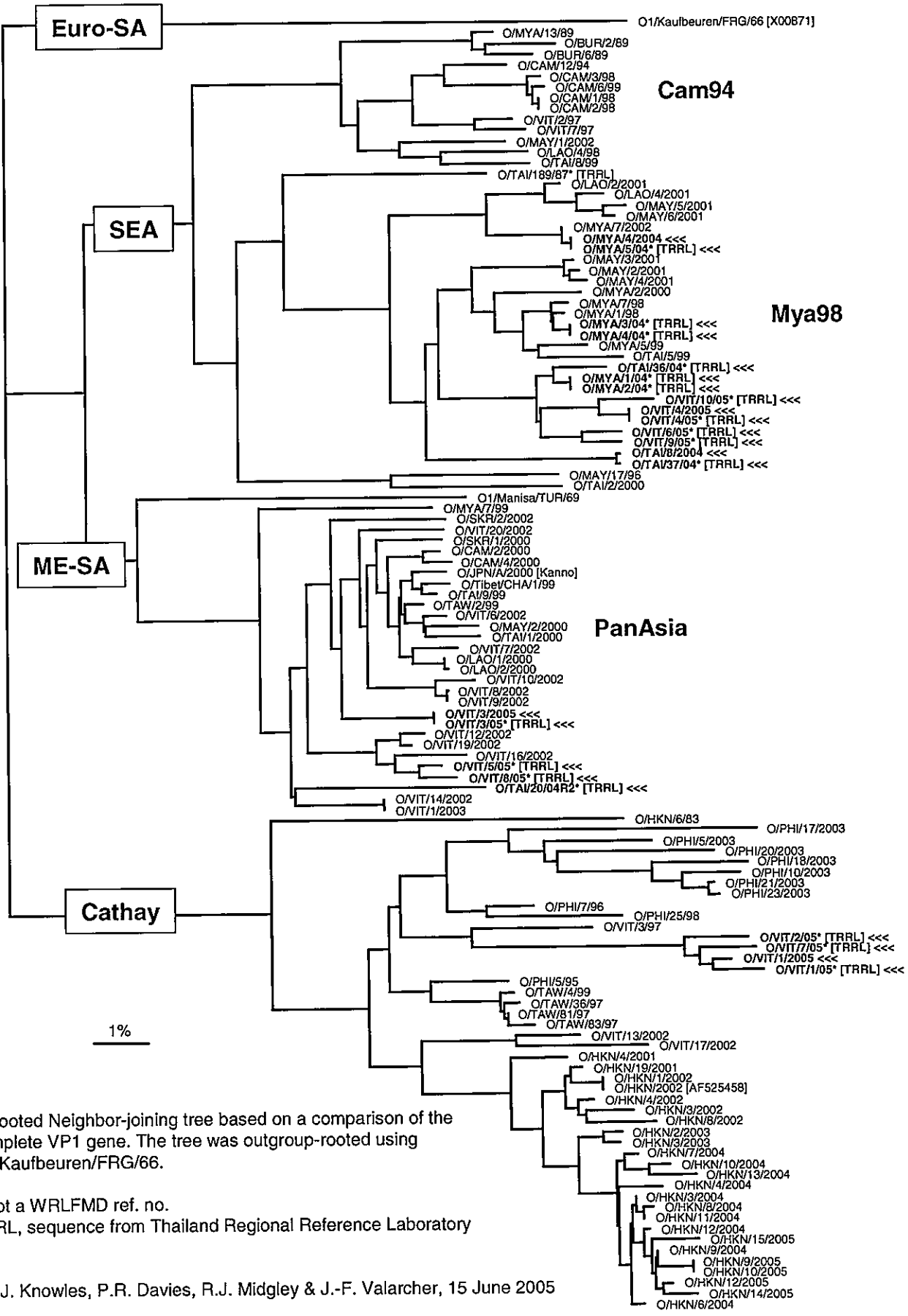
Fig. 5.6. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Philippines.



Unrooted Neighbor-joining tree based on a comparison of the complete (or nearly complete) VP1 gene. The tree was outgroup-rooted using O1/Kaufbeuren/FRG/66.
*, not a WRLFMD ref. no.

N.J. Knowles, R.J. Midgley & J.-F. Valarcher, 25 July 2005

Fig. 5.7 Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in Thailand, Myanmar and Vietnam. Some of these sequences have been supplied by Pakchong RRL for FMD.

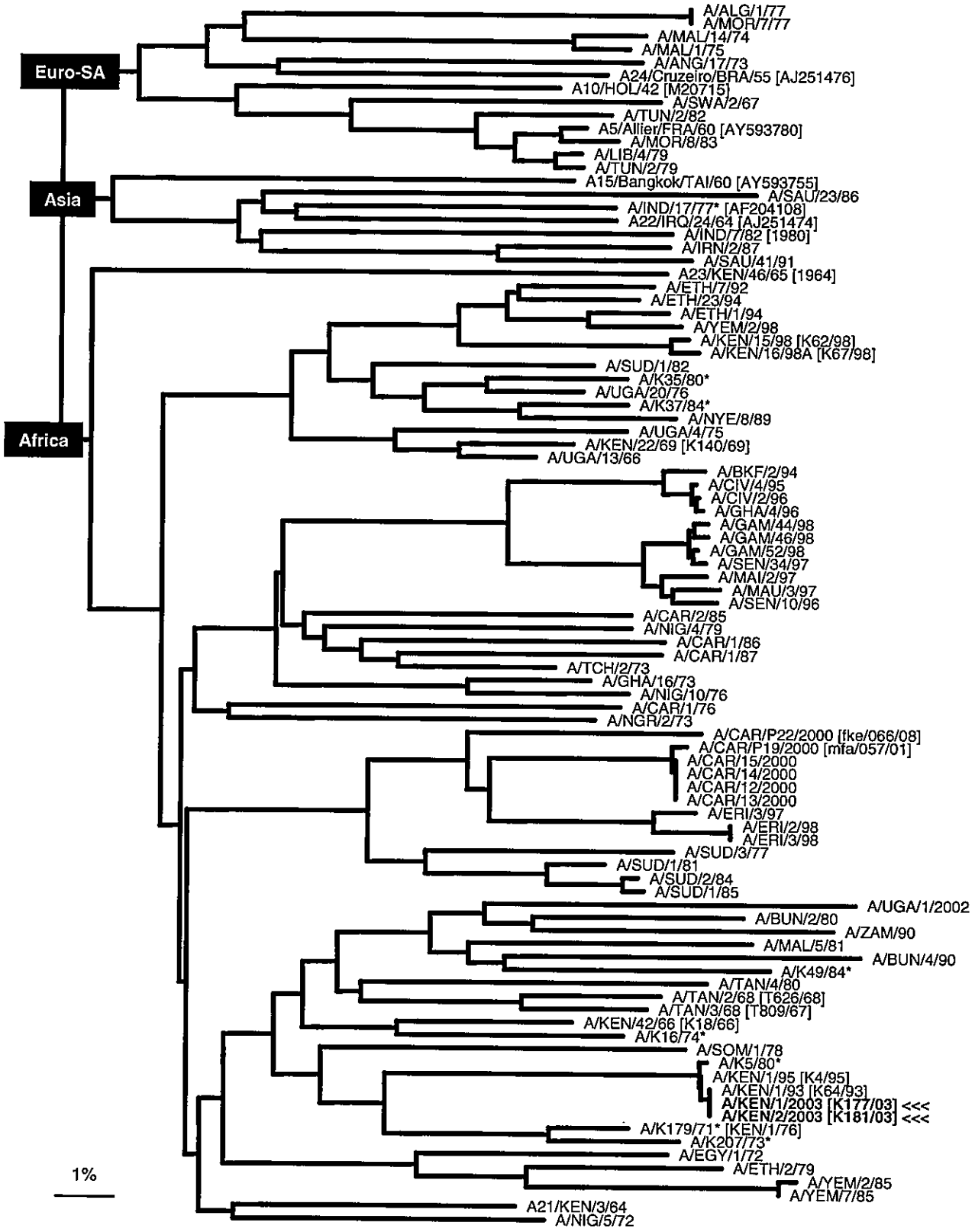


Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using O1/Kaufbeuren/FRG/66.

* Not a WRLFMD ref. no.
TRRL, sequence from Thailand Regional Reference Laboratory

N.J. Knowles, P.R. Davies, R.J. Midgley & J.-F. Valarcher, 15 June 2005

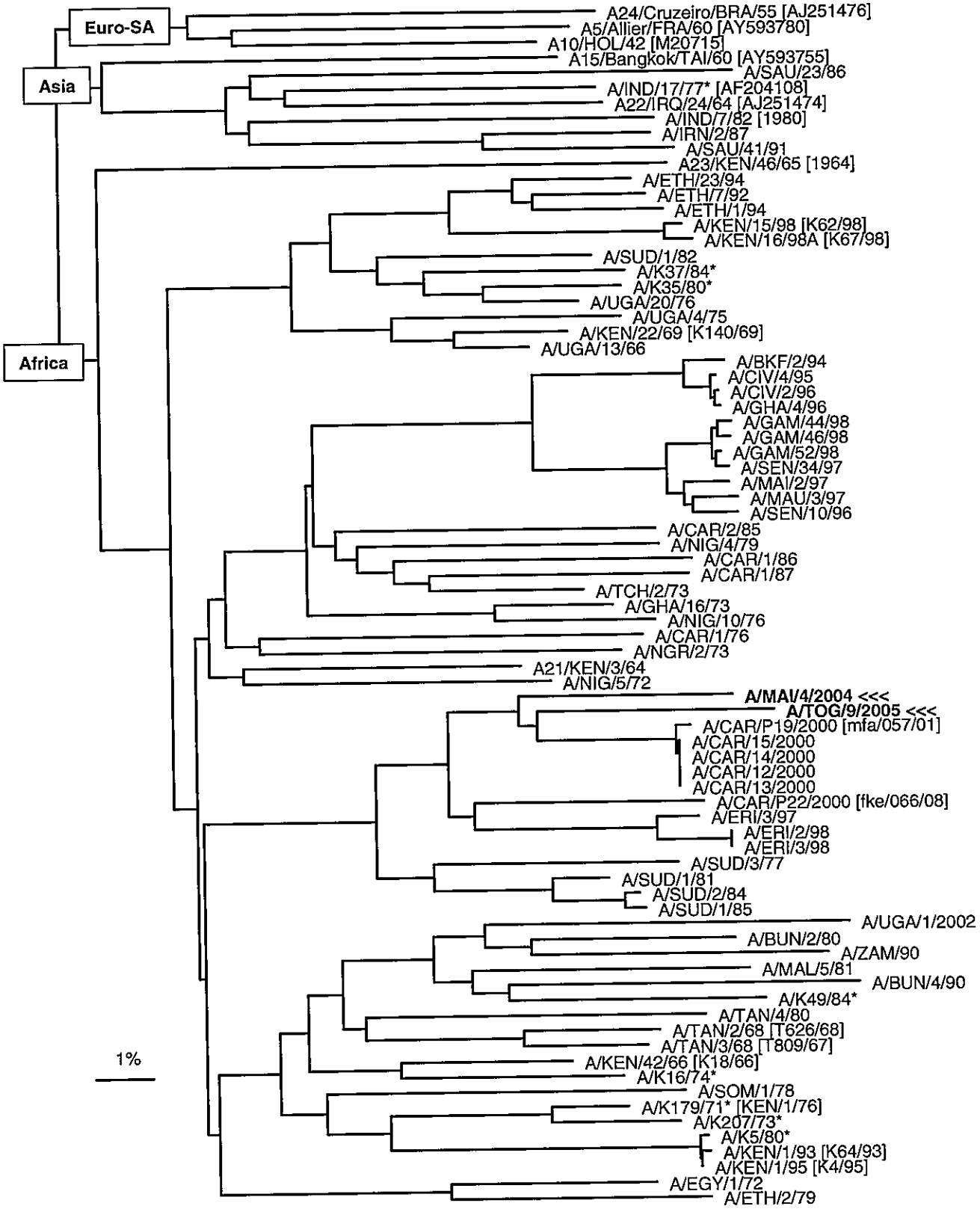
Fig. 5.8. Neighbor-joining tree comparing the complete VP1-coding sequences of type A FMDV collected in Kenya.



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene.
The tree was outgroup-rooted using members of the Euro-SA topotype.

N.J. Knowles, P.R. Davies, R.J. Midgley & J.-F. Valarcher, 15 February 2005

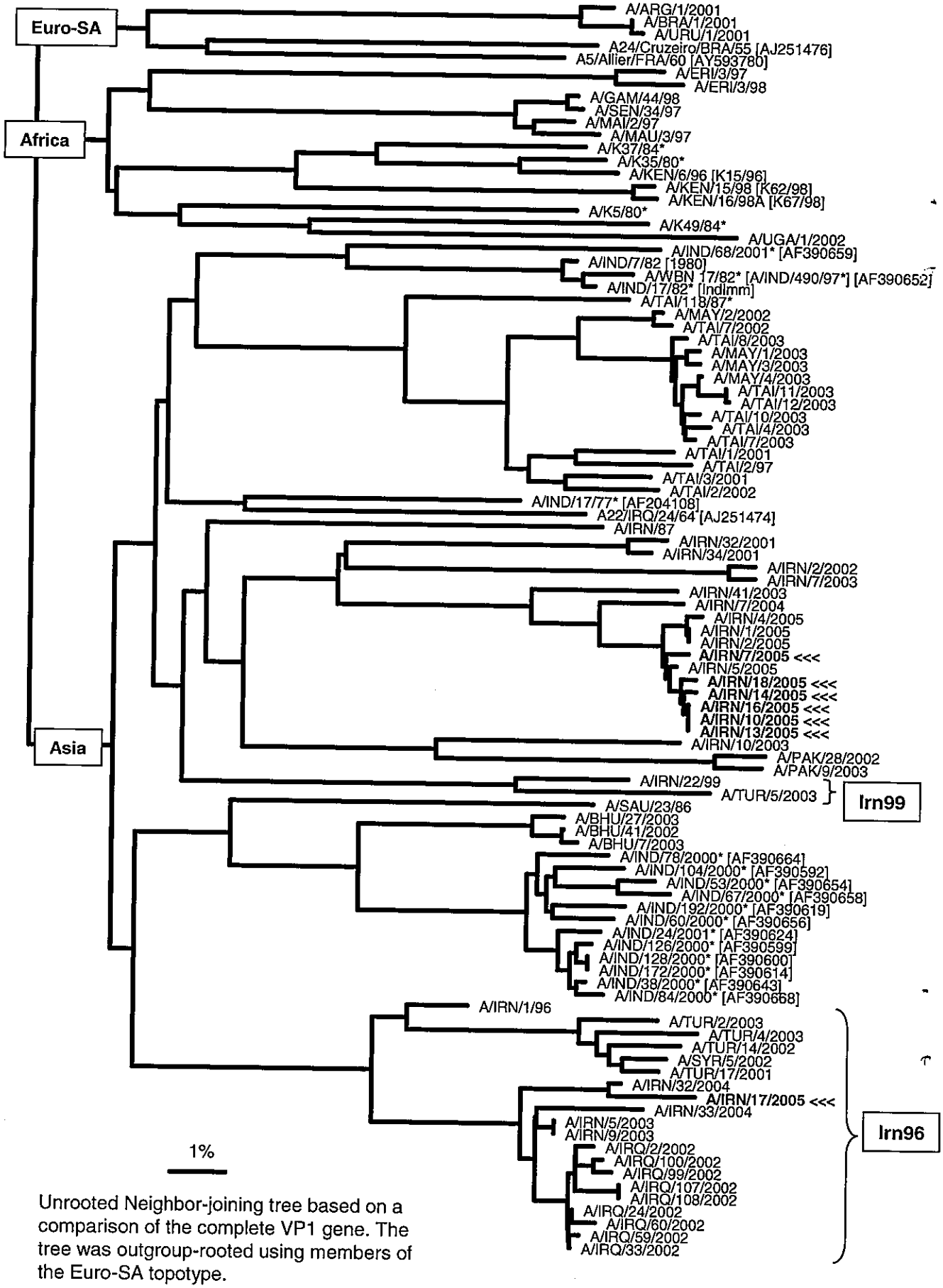
Fig. 5.9. Neighbor-joining tree comparing the complete VP1-coding sequences of type A FMDV collected in Togo and Mali.



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene.
The tree was outgroup-rooted using members of the Euro-SA topotype.

N.J. Knowles, R.J. Midgley & J.-F. Valarcher, 10 October 2005

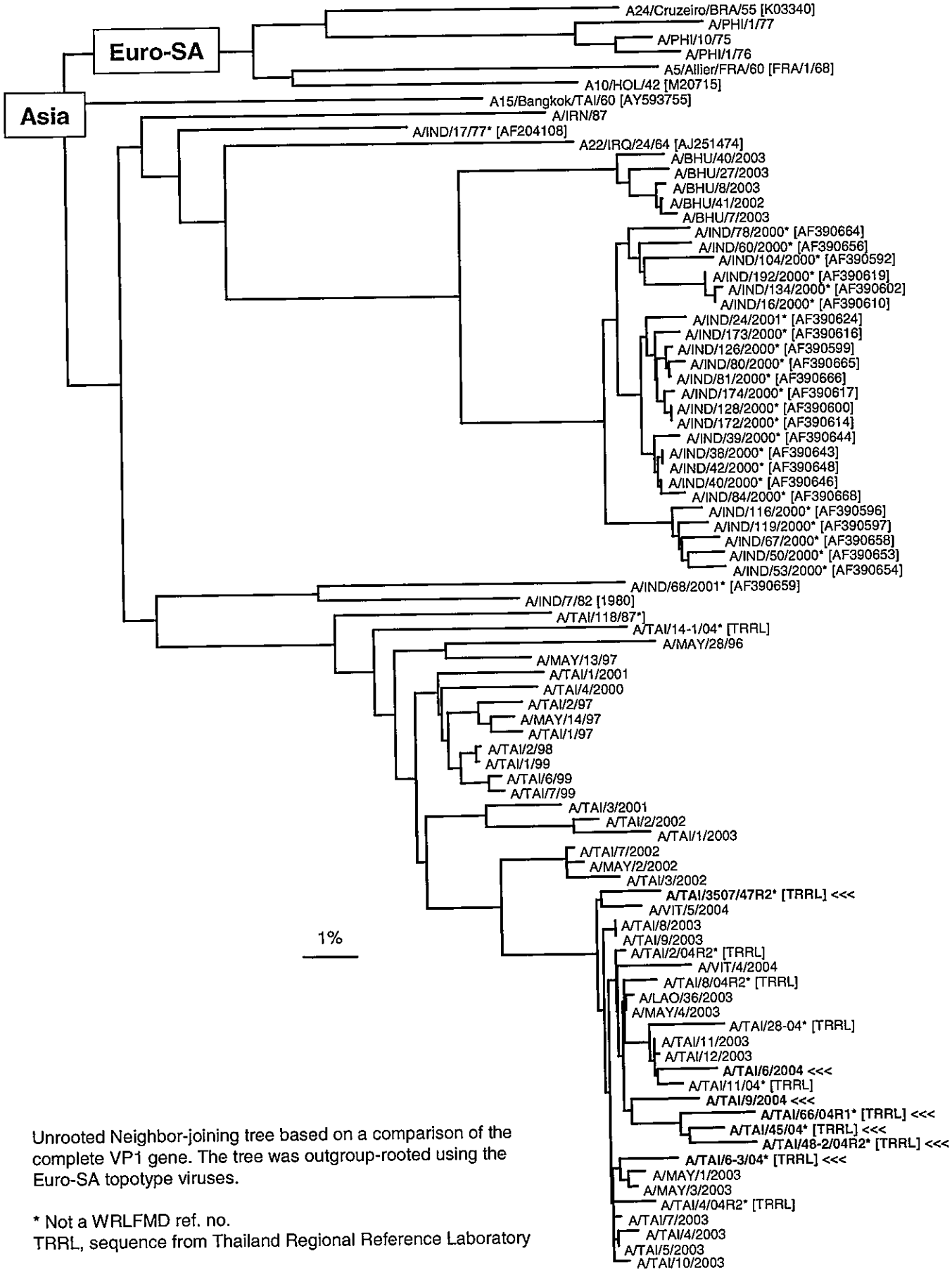
Fig. 5.10. Neighbor-joining tree comparing the complete VP1-coding sequences of FMDV serotype A collected in Iran



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using members of the Euro-SA topotype.

N.J. Knowles, R.J. Midgley & J.-F. Valarcher, 10 October 2005

Fig. 5.11. Neighbor-joining tree comparing the complete VP1-coding sequences of type A FMDV collected in Lao PDR and Thailand.

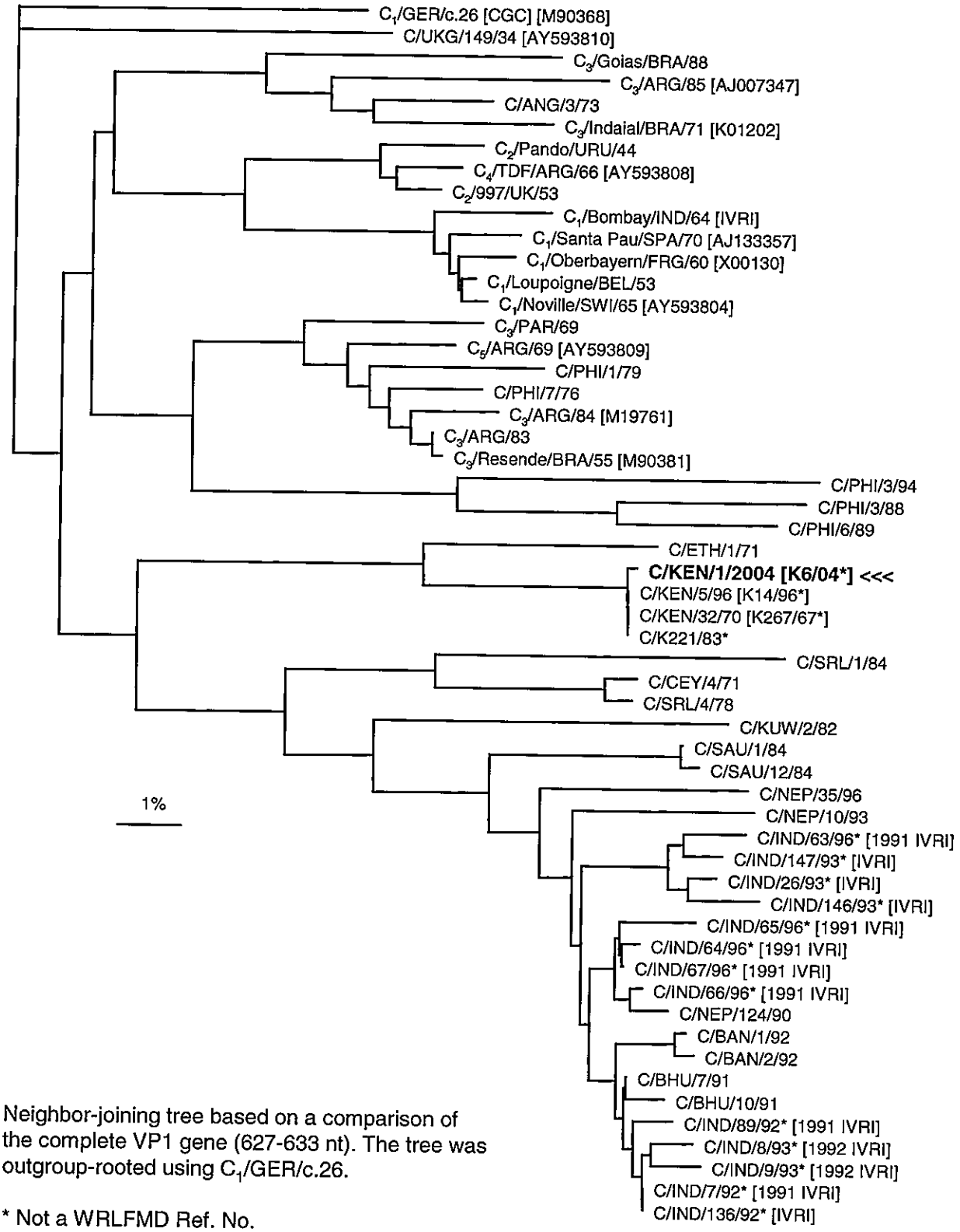


Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene. The tree was outgroup-rooted using the Euro-SA topotype viruses.

* Not a WRLFMD ref. no.
TRRL, sequence from Thailand Regional Reference Laboratory

N.J. Knowles, P.R. Davies, R.J. Midgley & J.-F. Valarcher, 15/06/2005

Fig. 5.12. Neighbor-joining tree comparing the complete VP1-coding sequences of type C FMDV collected in Kenya.

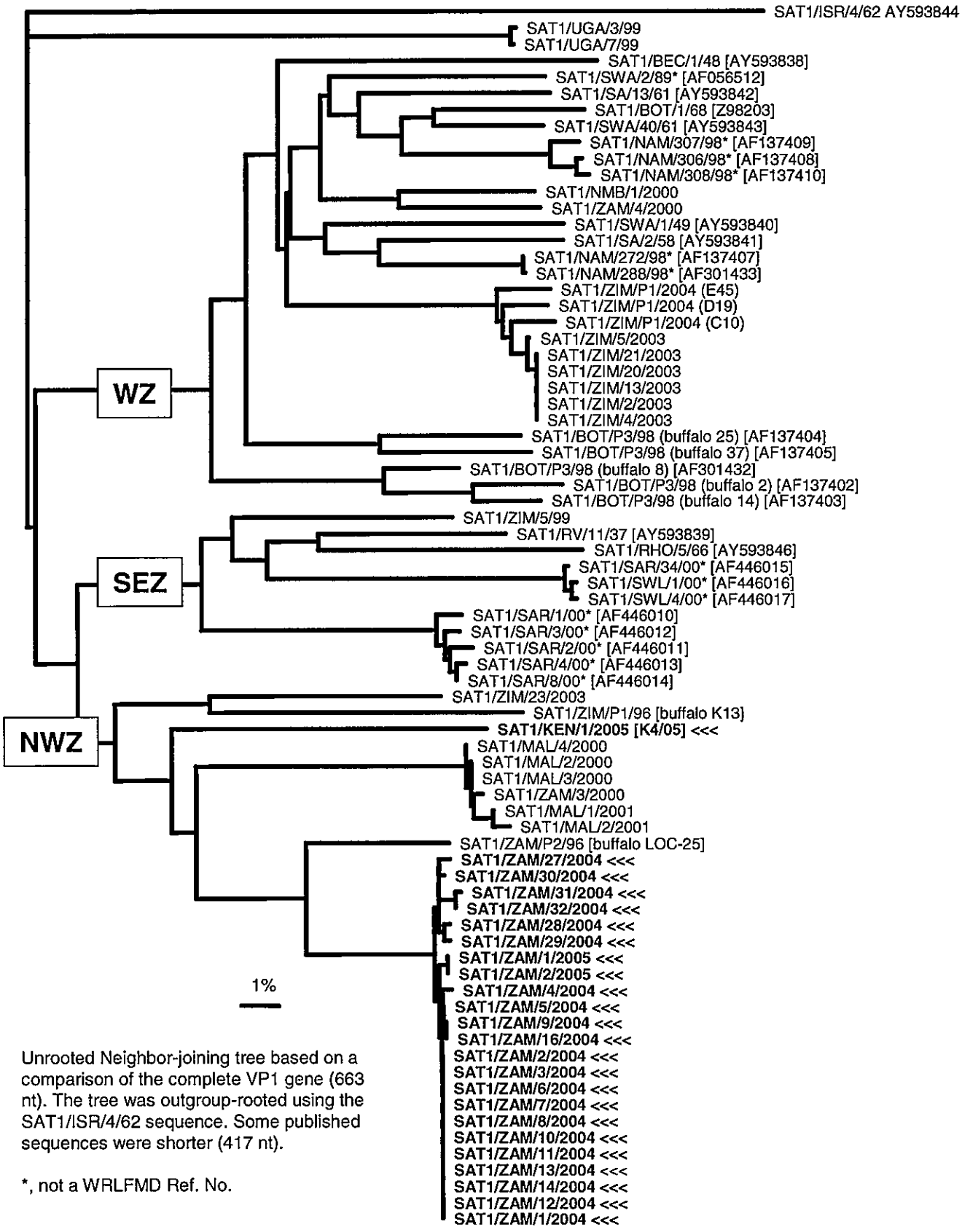


Neighbor-joining tree based on a comparison of the complete VP1 gene (627-633 nt). The tree was outgroup-rooted using C_1/GER/c.26.

* Not a WRLFMD Ref. No.

N.J. Knowles, R.J. Midgley, P.R. Davies and J.-F. Valarcher, 22 March 2005

Fig. 5.13. Neighbor-joining tree comparing the complete VP1-coding sequences of type SAT1 FMDV collected in Kenya and Zambia.

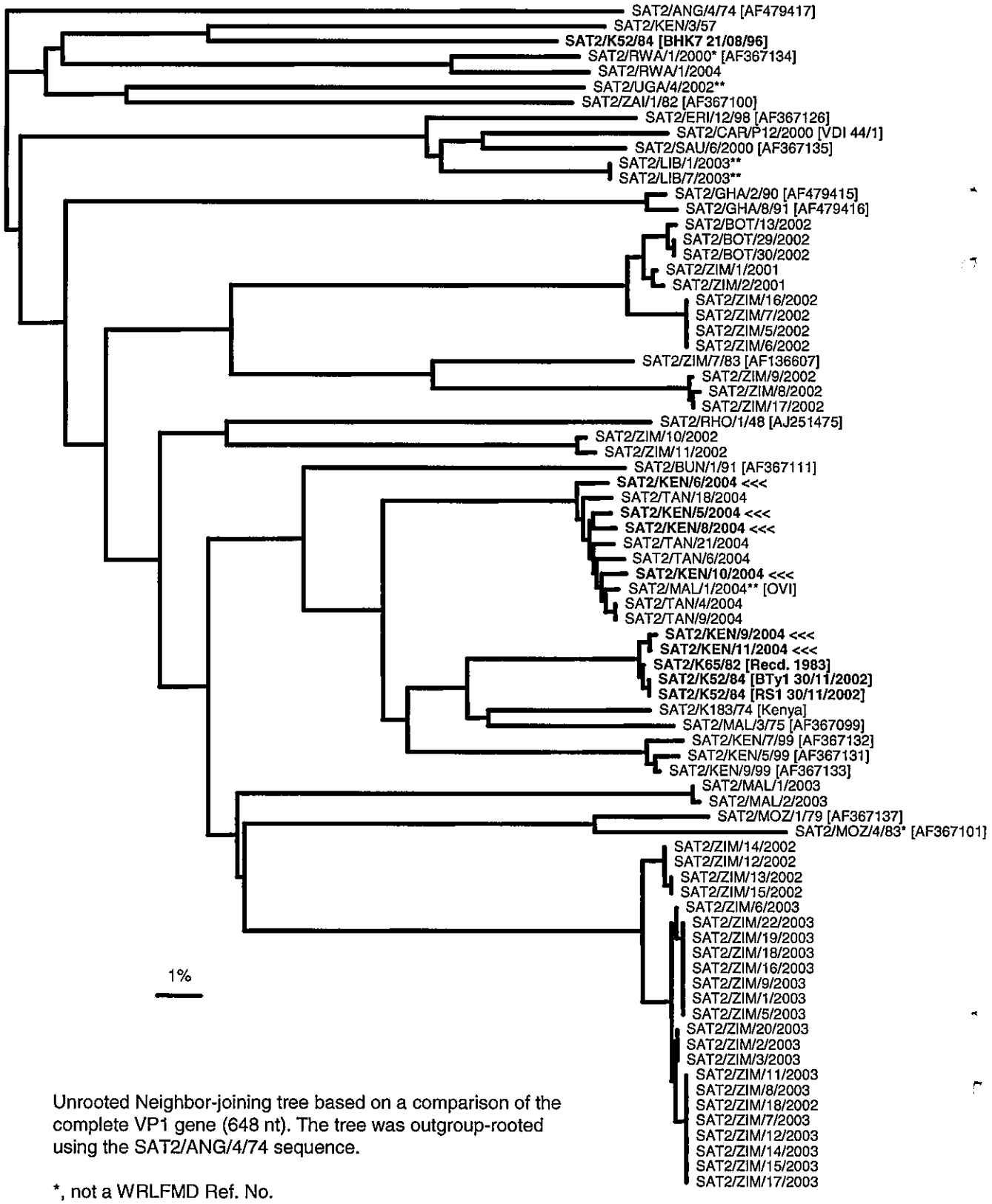


Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene (663 nt). The tree was outgroup-rooted using the SAT1/ISR/4/62 sequence. Some published sequences were shorter (417 nt).

*, not a WRLFMD Ref. No.

N.J. Knowles, R.J. Midgley and J.-F. Valarcher, 13 September 2005

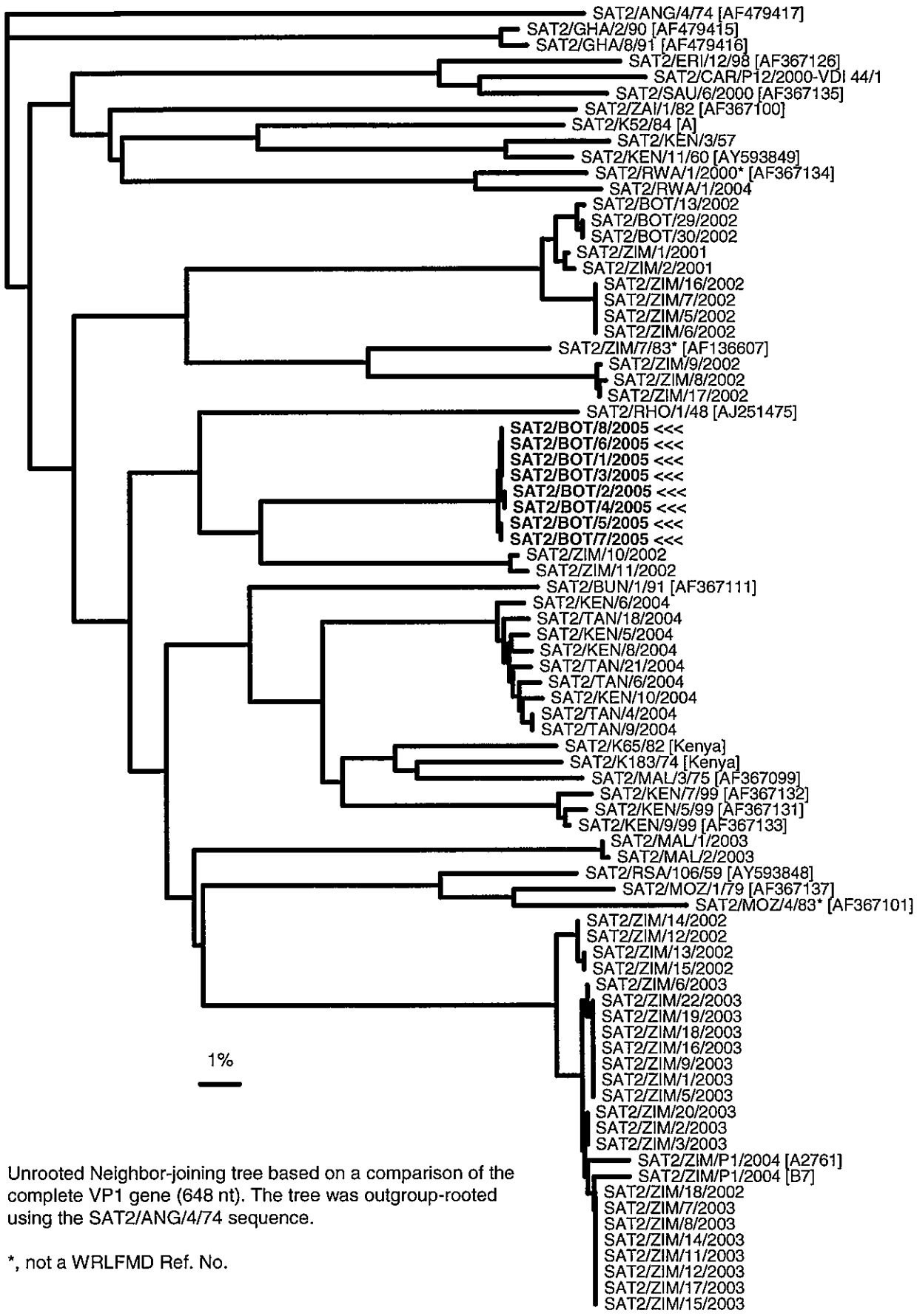
Fig. 5.14. Neighbor-joining tree comparing the complete VP1-coding sequences of type SAT2 FMDV collected in Kenya.



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene (648 nt). The tree was outgroup-rooted using the SAT2/ANG/4/74 sequence.

*, not a WRLFMD Ref. No.
**, Some sequences were shorter (384 to 418 nt).

Fig. 5.15. Neighbor-joining tree comparing the complete VP1-coding sequences of type SAT2 FMDV collected in Botswana.

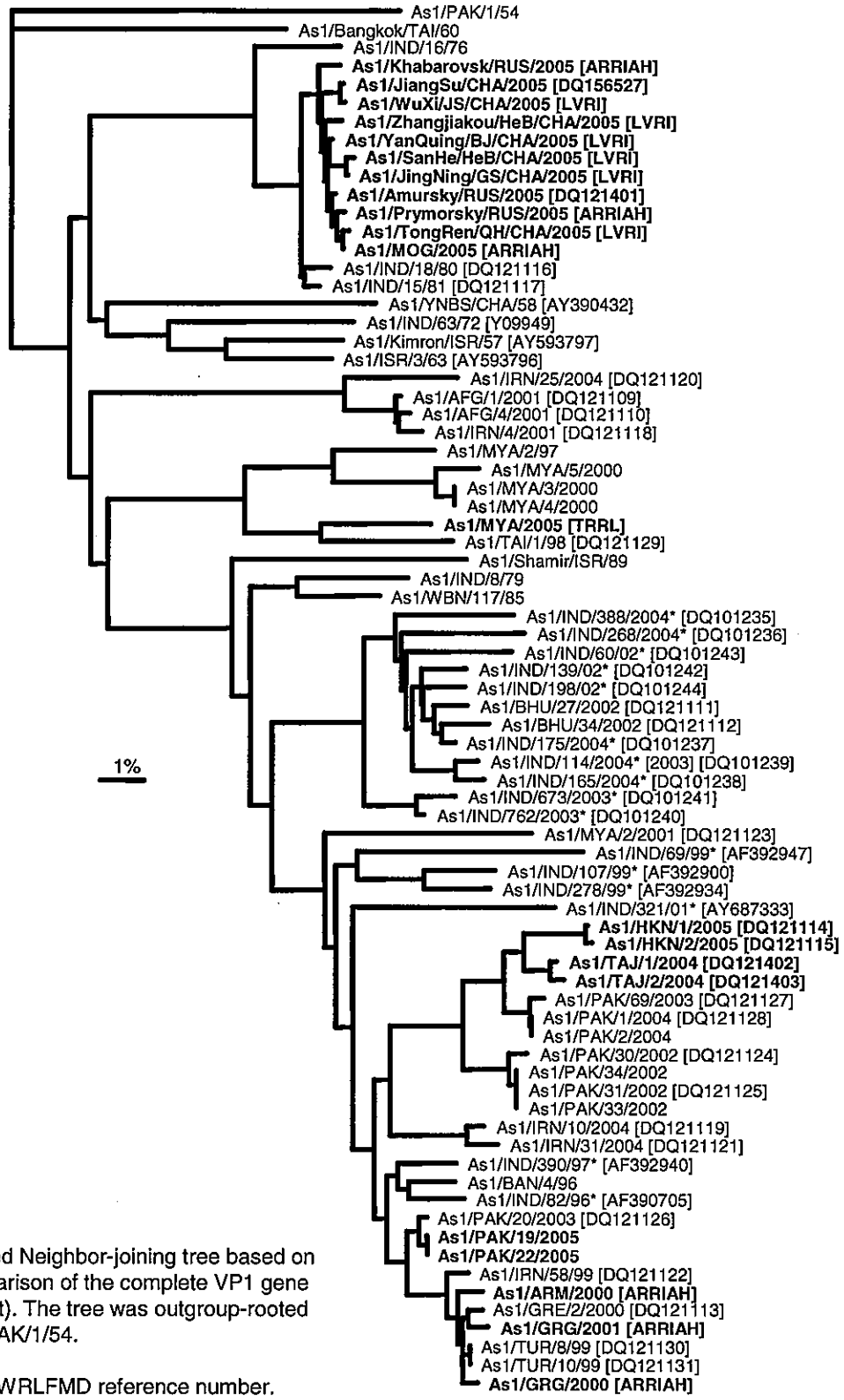


Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene (648 nt). The tree was outgroup-rooted using the SAT2/ANG/4/74 sequence.

*, not a WRLFMD Ref. No.

N.J. Knowles, R.J. Midgley and J.-F. Valarcher, 12 September 2005

Fig. 5.16. Neighbor-joining tree comparing the complete VP1-coding sequences of type Asia1 FMDV collected in Afghanistan, China, Hong Kong, India, Iran, Myanmar Pakistan and Russia. Some of Sequence have been provided by FG ARRIAH (Mongolia and Russia), LVI (China), Pakchong RRL (Myanmar), Plum Island Animal Disease Center (Afghanistan) and PDFMD (India)



Unrooted Neighbor-joining tree based on a comparison of the complete VP1 gene (~633 nt). The tree was outgroup-rooted using PAK/1/54.

* Not a WRLFMD reference number.

N.J. Knowles & J.-F. Valarcher, 28 October 2005

Fig. 5.17. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in South America.

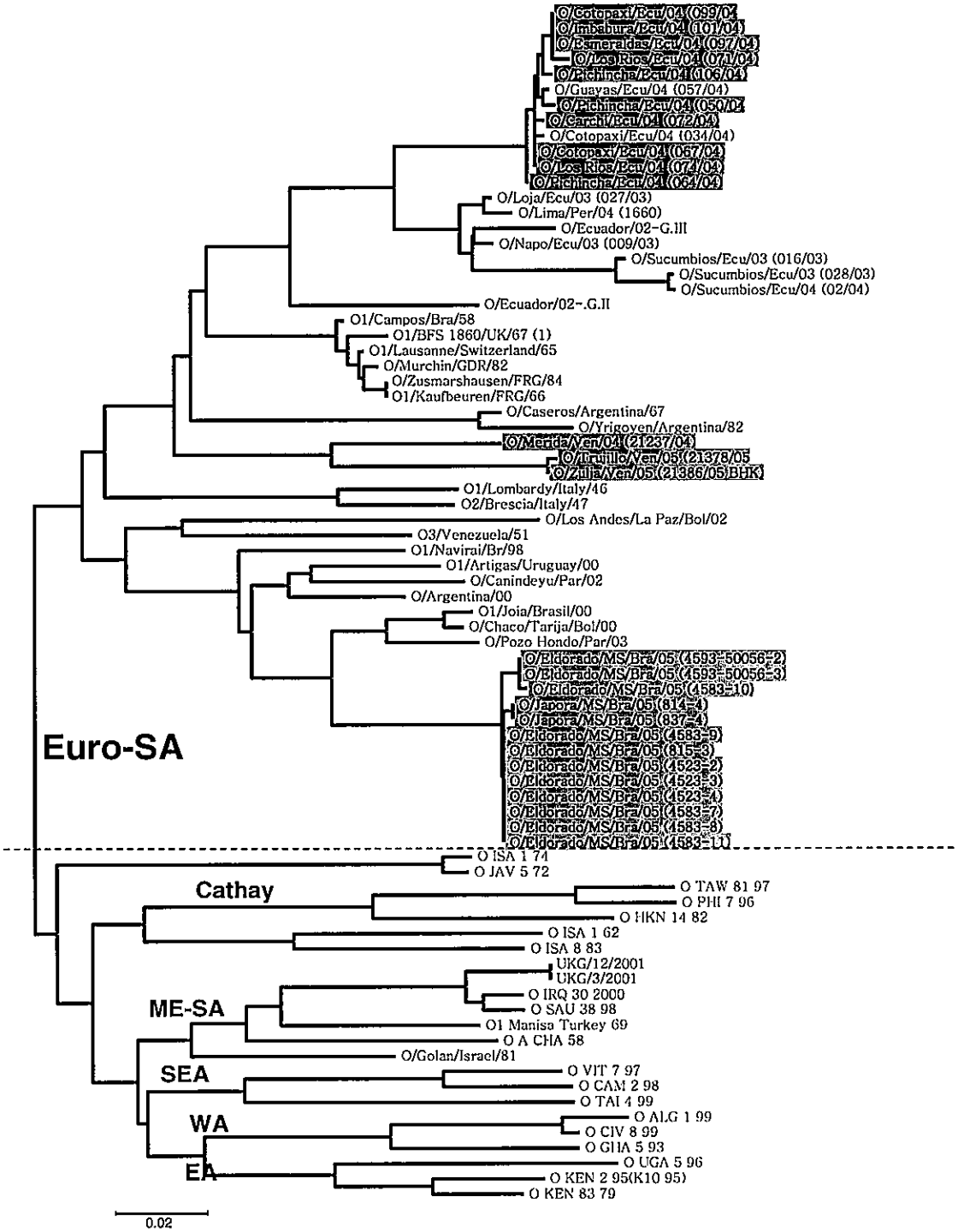


Fig. 5.18. Neighbor-joining tree comparing the complete VP1-coding sequences of type O FMDV collected in South America.

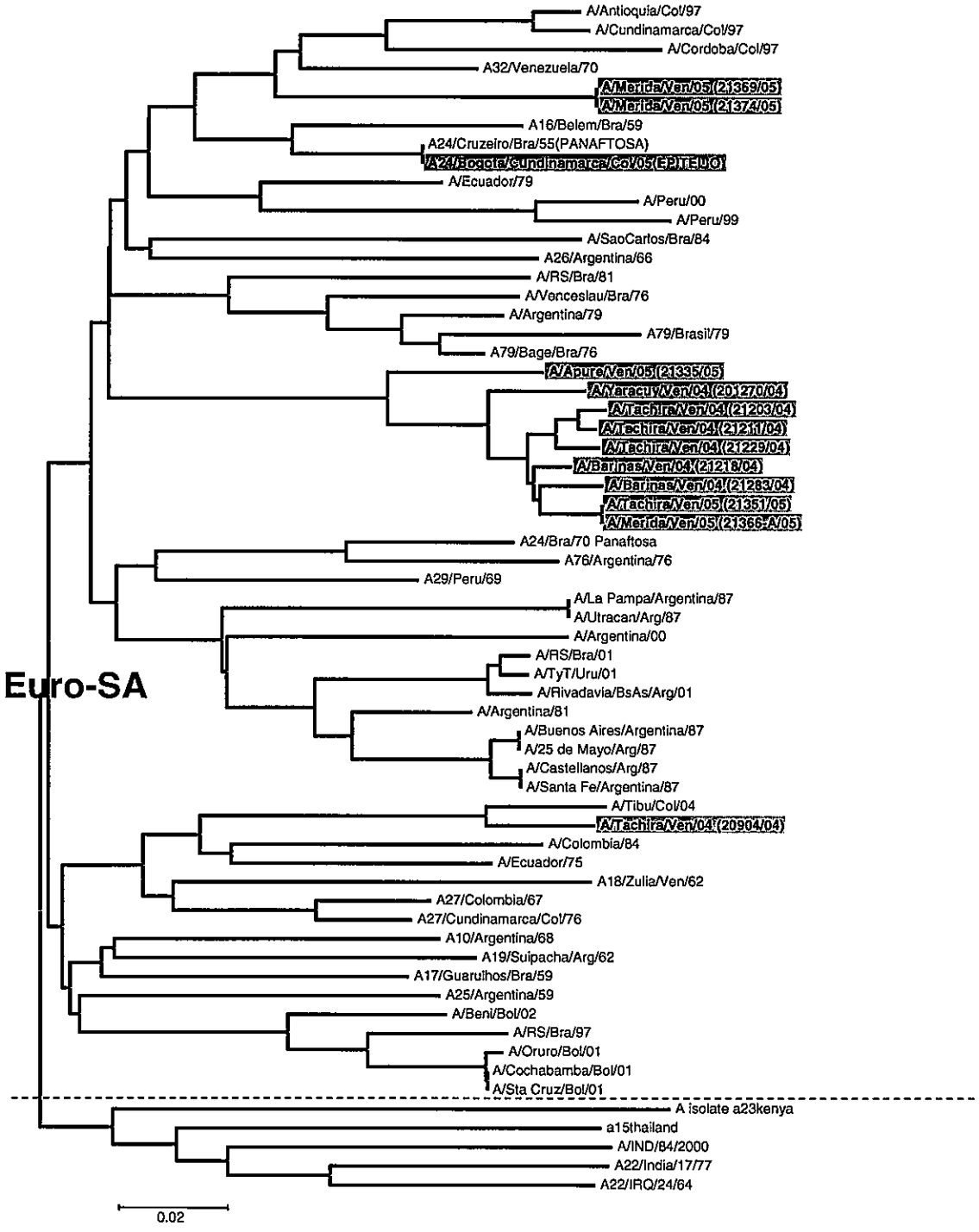
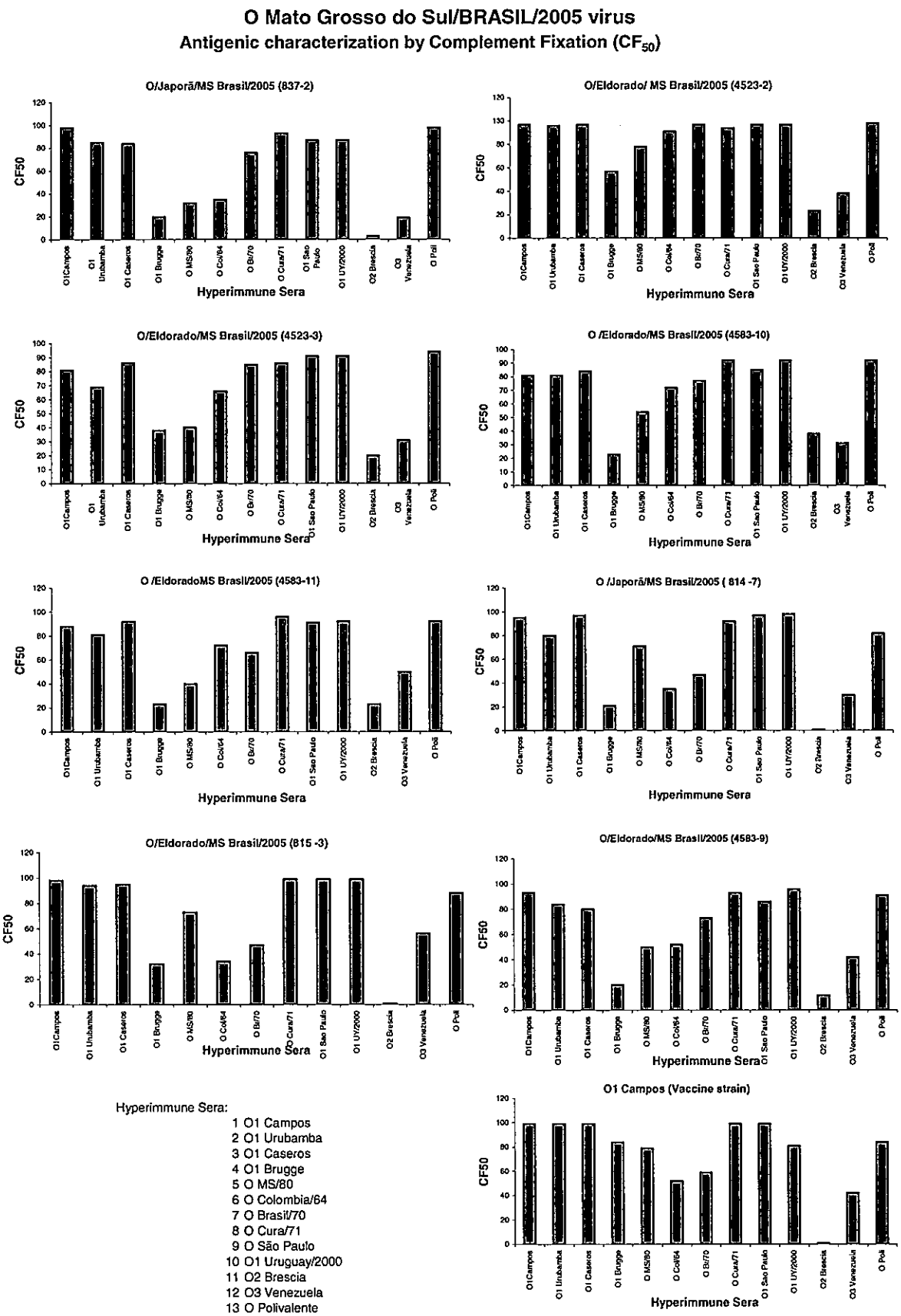


Figure 6. Antigenic characterization of FMDV strains type O collected in Brazil



Hyperimmune Sera:

1 O1 Campos
2 O1 Urubamba
3 O1 Caseros
4 O1 Brugge
5 O MS/80
6 O Colombia/64
7 O Brasil/70
8 O Cura/71
9 O São Paulo
10 O1 Uruguay/2000
11 O2 Brescia
12 O3 Venezuela
13 O Polivalente

Support to FMD Virus observation

-Addressing information gaps that affect vaccine bank management and control programmes
-Report of the EUFMD Secretariat

1

Two Key Problems

- Lack of sample submission to reference laboratories (RLs) from many endemic areas
- Lack of data exchange between RLs

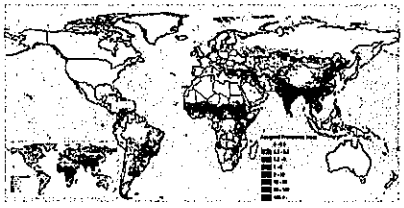
2

Problem identification - 1. Lack of samples

- Lack of collection from field to NRLs
- Lack of submission NRLs to OIE/FAO RRL for virus typing
- Pilot studies –support from EUFMD:
  - Sudan –northern (2005; first samples for >15 years)
  - Kenya (6 of the 7 FMD types present)
  - Niger - mission 20th November 2005
- Indirect Success:, missions - NSP study Zimbabwe 2004 and Hong Kong 2005 – SATs and Asia-1 viruses

3

FMD Burden of Disease (i.e. total incidence) Index - Cattle



4

Experience gained

- Money not only constraint
- Effort to transport samples by air to RRL can be immense
- Missions of (FAO) technical officers can make a big difference – motives of some European labs are not fully trusted
- Isolation of FMD labs in endemic countries – need for supportive network
- Administratively heavy - Time needed

5

Next phase

- Build on experience and effective collaborations
- Where feasable, select key NRLs serving epidemiologically diverse, regional virus catchment
- West Africa; mission 1 (14 days) to Niger, for two catchment zones - Lake Chad and Volta river
  - Mission will identify if low cost support is feasable to achieve regular virus submission
  - Subsequent missions according to progress e.g. Mali
- Sudan; need for similar mission – samples from one outbreak only.
- Potential follow up through small project grants to support surveillance in areas that African and European experts agree are epidemiologically important
- Review progress at each Executive -6 monthly

6

2. Lack of data exchange between Reference Laboratories

- Identified as a problem for many years;
- OIE ad hoc group on vaccine and antigen banks
- CA- FMD & CSF laboratories –Workpackage
- April ad hoc group meeting – 4 OIE RRL represented
- Agreement reached on proposed OIE/FAO network for FMD RRL

7

Supporting timely information exchange – helping the network function

- Complex reasons for lack of information exchange
- Not just RRL – some key NRLs also
- Result:
  - User needs not being met
- No easy solutions –time and care required
- Trust must be built
- NEW initiative –deserves support

8

€+

- Support could be in the form of:
  - Contract for Phase XDX – External Quality Assurance to relevant RLs (with CRL to support EU)
  - Contract to develop a portal for sharing laboratory data between partners (RLs, FAO, OIE,..)
    - access to defined users
    - Searchable
    - Direct data upload into FAO TAD tracking and alert system (EMPRES-i)
  - Contract for typing services – reporting to FAO via web portal when available, e-mail in standard form
  - Support (EUFMD Secretariat or via Contract) to - network
    - Advocacy to bring other RLs into datasharing network
    - RL meetings,
    - Funding reagent exchange – grant to RLs
    - Human resources - Technical support
- FAO/OIE neutrality – resolve problems

9

- Potential budget
- EUFMD MUL Trust Fund
- FAO Regular Program
- (EC MTF/INT/003/EEC)

10

Appendix 12

Equipping the FMD early responders:

Development of a tool kit to support problem-centred training

1. Scope of the paper

This document was prepared by the Working Group established at the 36th General Session of the EUFMD Commission, April 2005. The Session report specifies that:

31. The need for a common training course was endorsed and the Secretariat was urged to pursue the further definition of the precise requirements and the detailed consideration of the structure, content, management and financing of the training programme.

32. The EUFMD Secretariat should urgently convene a working group with clear terms of reference to further investigate the definition of appropriate training. The working group should be convened within one month of the General Session and would be expected to bring forward to the Executive Committee detailed proposals for the structure, content, management and financing of an appropriate training course within six months of its appointment.

EUFMD/FAO is grateful for the support given by the member countries (and DG-SANCO) to support participation of their experts (Annex 1) in the working groups, and for hosting two meetings in London (DEFRA) on 21st May and in Lyon (ENSV) on 13th September. This document was assembled by FAO (Robson and Sumption) with module outlines prepared by national/EC experts, whose interest and efforts are greatly appreciated.

2. Introduction

Training is implicitly needed to implement the 2003 EU directive on FMD. Delivering training is a national responsibility. However, to ensure common approaches across EU with regard to the prevention of FMD, common competencies can be defined for the key roles recognised by the directive. In return a common curriculum can be defined to help develop these competencies. This proposal involves the creation of a "tool kit" for use by those designing national FMD-related training programmes, easily adapted to meet local language and context requirements, and run as whole courses or used as components.

3. Background

The context for training is defined by the EU Directive 2003/85/EC on community measures for the control of foot-and-mouth disease. Further background is available from a survey carried out among EUFMD member countries (36th Session), which lists priorities for training from a national perspective, and a review of training resources prepared by the working group.

This proposed FMD training design document:

- lists some of the basic assumptions that fix the parameters for the proposed FMD training
- outlines module content and training methods based on these assumptions
- sets out resource requirements, a possible timetable and a project structure to develop, test and deliver an initial set of modules

The proposed work is also consistent with FAO's strategic direction in knowledge management and knowledge-sharing in the area of animal health, and more generally agricultural biosecurity.

4. Working Assumptions

The training working group listed some of the working assumptions behind the proposed training programme as follows:

- *Key requirements:* the EU directive implicitly requires training of staff involved in local and national control of FMD in activities such as outbreak control (Article 4-14), establishment of protection/surveillance zones (21-44), diagnosis (71), contingency planning (72), running realtime alert exercises (73), establishment of national and local disease control centres (74-77), establishment of an effective national expert group on the disease, and procedures for handling contaminated animals.

- *Priority groups and subjects:* veterinary-trained staff should be first priority for training. Topics covered should reflect the priorities assigned in the recent EUFMD training questionnaire. Of these, recognising clinical disease (to enable differential diagnosis) was seen as the highest priority. The key initial target group should be levels 2/3 as defined in the training survey (private veterinarians and area veterinary managers working in the public sector). This cohort is large and could involve 3-5,000 professionals across the EUFMD member countries.

- *National disease control:* different approaches could be appropriate for training of national level disease control staff (level 4). At this level, the lower numbers (possibly 100-500 across the region), language ability, the greater need for decision making skills and the need to adapt the curriculum to changes in science and international standards, suggest greater use of interactive, workshop or situation based training.

- *Curriculum:* in order to standardise the training for levels 2/3 and to ensure common approaches to implementing the EU directive, while reaching this large, geographically-dispersed group, the chosen training approach(es) will need to involve a clearly documented curriculum. This can be supported by technology in the form of interactive exercises, audiovisual materials, etc.

- *Training resources*: access to relevant information on-line, in-text books and CD-ROMS (e.g. AVIS) in Europe is assumed to be generally good, so the new training resources required should be restricted to those needed to develop skills in making decisions during realistic problem situations.

- *Languages:* pilot training materials for level 2/3 will be made available initially in English, and subsequently translated into French, Turkish and Russian. Training for Level 4 will be in English or French.

- *Refresher courses and follow up:* even in countries where the disease has occurred within the last 5 years, there is a need to refresh memories of clinical signs (more so where the disease has occurred less recently). Following training, it is assumed that testing at periodic intervals (for instance every 5 years) would be sufficient for level 2/3 staff. Some form of continuing professional development (hours/days at refresher or scientific workshops) might be more appropriate for level 4.

- *Disease experience:* Some kind of live field experience is more important than controlled disease outbreak simulations (such as those run by the IAH), which in turn are more useful than the study of "textbook" examples without live animals. However, it is recognised that running a programme to provide field experience requires considerable resources on the part of the host country, which may divert efforts to control a particular outbreak.

- *Integration of training:* training should fit in with existing training offered by institutions in the country; maximum use should be made of existing disease-related materials (AVIS; IAH; other institutions).

- *Assessment:* assessment of levels of competence attained by trainees should be taken within the context of the EU directive. It is assumed that some form of automated assessment (such as online assessment) will be useful for levels 2/3, because of the higher number of participants in this group. For level 4, the smaller numbers, and more complex material would suggest other forms of assessment – e.g assignments, reports. It may also be appropriate to develop some form of international certification for this group.

- *Rapid iterative development of materials:* initial training design for the first module(s) should be undertaken quickly, and validated through pilot workshop(s) which should also be used to test and develop early versions of technology-based materials, to be held within 12 months.

5. Challenges

How to make the most of existing materials - the project will need to obtain copies of all relevant training materials (given experience in 2001 DEFRA materials may be particularly useful).

How to ensure synergy with other initiatives – the initiative is innovative in the field, and should be relevant for other epizootic diseases, which should generate some new opportunities to develop the approach and possibly, reduce costs in years 2 and 3 (e.g. under the DG-Research funded Epizone project, and relating to FAO's capacity building for avian influenza control).

How to ensure that participants are "warmed up" – some means is needed to ensure that training participants are committed and enthusiastic to take part in formal training sessions. The main options for addressing this are a programme of preparatory work (possibly using distance learning tools); reward and recognition for attendance; and subsequent follow up by managers.

How to address the problems of participant availability and cost of running face-to-face workshops? Again, one option is to use some form of distance learning for parts of the modules – users could log-on to a website (or use a CD-ROM) to take a preparatory session at a time convenient to them. In its online form, this training preparation would be made available over a limited period and could include discussion forum and student assignments. This would have the benefit of cutting down time in workshops and builds commitment. The approach is only feasible on a large scale where internet access is widely available. This is the case in most EU countries.[9]

How to meet diverse needs (orientation for new staff, periodic refresher course, induction at times of emergency, etc) This will need to be addressed in the design of the modules, with definition of a core of essential content to serve the emergency audience, and further layers for other groups.

How to ensure that the tool kit is useful. This will be addressed by involving national authorities in the design stages and extensive testing/piloting to ensure it meets local needs.

6. Outline of module content and methods

Content
The planned training toolkit covers three types of modules:

- Area control (modules 1-4)
- National control (modules 5-7)
- Administrative: localising the training programme (modules 8-9)

	Module	Contents	hours study	audience (training survey classification)
1	early disease recognition and response	*diagnosis; follow up; prevent spread*	40	2/3, 4
2	control at local level – setting up local disease control centres	*teamwork, communications, decision-making/risk-based resource allocation*	40	2/3, 4
3	humane slaughter and carcase disposal (and preliminary disinfection)		10	2/3, 4
4	organising cleaning and disinfection	*why/how; communicate rationale; know if it is being done properly*	10	2/3, 4
5	gathering and analysing local information	*regional and national control; dealing with the press/media*	40	4
6	national control strategies	*vaccination; decision support tools; exit strategies; case studies,*	40	4

[9] For an example of this approach in practice see FAO's FODEPAL project developed by the Latin America Regional Office in Santiago.

		communicate with stakeholders; expert groups; demonstrating freedom from infection		
7	preparedness for outbreaks, contingency planning	*contingency planning and simulation exercises*	40	4
8	localising the training for a new country		-	-
9	trainer guide to using the modules		-	-

A draft set of module curricula are at Annex 2.

Methods
The modules will use the following training methods:

- *Classroom sessions:* depending on the subject to be covered, the classroom sessions may involve some of the following methods: lectures/presentations; facilitated discussions, group work/exercises (eg factors to take into account when designing a simulation exercise), individual work from workbooks or using multimedia (interactive CD-ROM with questions, animation, photographs on investigation, differential diagnosis. This can be used in the classroom or be distributed separately); review and commenting on video case studies of animals in location (to highlight issues of differential diagnosis, investigation, biosecurity do's and don't's).

- *E*-learning: users will be able to log onto a protected website to access electronic presentation materials and/or worksheets as preparation for eventual classroom training. Materials will be available over a limited period, supervised by a facilitator. Participants will be required to submit course work for review (checked electronically, or by the facilitator). Participants will also have the possibility to take part in moderated discussions on a given subject

The toolkit will consist of a number of different training "products" in the form of presentation materials, video, multimedia CD ROMs or online tests, according to the subject of the module in question, with supporting documentation in the form of Trainer's Guides

7. Resource requirements, timetable and project structure/roles

Summary of resources and costs

Item	Resource	Cost ($'000)
classroom materials	training designer	100
multimedia 1 module – all	various	70 – 520
video	various	70
testing	programmer/multimedia design	50
e-learning deployment	hardware, software and facilitator	130
programme management	some project management resource, depending on the extent of programme	70 – 150
travel, general operating expenses and project support costs (2 years)		140
total		**630 – 1160**

[Supporting assumptions for these resource estimates are available at Annex 3]

Partner contributions

- Local workshop costs; provision of facilities, national participants costs to be covered by host Government;
- Local Training Officer; to be provided by countries on part time basis in each country participating in pilot program evaluation or language localisation

Timetable

The development of the tool kit can proceed at a pace to be decided by the EUFMD Executive Committee. One possible approach would be as follows:

Year 1

1. Develop e-learning materials for modules 1 and 7.

2. Set up and run e-learning facility (registration and training management software) in one country for disease recognition (module 1) for pilot cohort (70); follow with e-learning for contingency planning (module 7) in English across EUFMD members (30).

3. Identify video or any other pre-existing materials; make video for modules 1 and 7

4. Develop classroom training materials for modules 1 and 7 in English, with one country willing to localise, and run a pilot to test module 1 in one country (1 week followed by two week gap for modifications, then 2 weeks to complete), and a second institution to host an EU-wide pilot on contingency planning (1 large event).

Project costs for year 1:

- *e-learning infrastructure and facilitation (110)*
- *video (40)*
- *classroom materials (50)*
- *management/coordination (30)*
- *operating costs (70)*

total: $300,000

Outputs – two tested modules, video and training materials, and e-learning infrastructure in place. Pilot training for approximately 100 participants.

[Partner contribution – part time training officer, participant costs; training venues; national trainers]

Year 2

1. Multimedia development for module 1.

2. Develop Online testing for module 1 and module 7.

3. Translate materials for module 1 into Turkish, French and Russian. Work with national partners to run pilots for localised module in one country for each language. Review whether e-learning would be appropriate for each language (in Russia and Turkey, it **may** be possible with support from some regional/provincial institutional partner to provide for computer access), and if so pilot approach.

4. Pilot Classroom deliveries of module 1 in Turkey, France and one Russian-speaking country.

5. Roll out of module 7 to up to 300 participants.

6. Further Module Development and piloting (2, 5 and 6) in one language.

Project costs for year 2:

- e-learning facilitation (20)
- video (40)
- classroom materials (50)
- management/coordination (30)
- multimedia development (70)
- online testing (50)
- operating costs (70)

total: $330,000

[Partner contribution – part time training officer, participant costs, training venues for 3 workshops, training delivery]

Outputs - module 1 delivered to 300 participants (in Turkish, French and Russian) and handed over for local delivery; module 7 delivered to 300 participants; modules 2, 5 and 6 tested with approximately 130 participants

Structure/roles

The current informal Training Working Group includes a range of stakeholders. Moving to the creation of specific training deliverables which make up the tool kit will require clarity of the various roles to be performed:

We propose a structure of:

- *Project steering group* - from EUFMD members - review project progress.

- *Training designer* – resource appointed for the project, to be skilled in instructional design and also to have a sound background in epidemiology.

- *Expert Group* – EUFMD members nominate small group of technical experts to sign off on curricula, training outlines, delivered materials, pilot delivery.

- *Programme manager* – run steering and expert group meetings (as needed); prepares 6 month progress reports to EUFMD Executive/EC; finalise methodology/approach; liaise with national partners to organise testing, localisation, etc; where external suppliers are used, prepare, award and manage contracts to develop materials; set up QA processes.

- *Training material providers* – contracted services - undertake further design, development and testing of materials as appropriate.

- *Delivery partners* – contracted to localise materials (where needed) and deliver training.

8. Conclusion

This outline sets out a menu of options with estimated costs which can be used to help deliver training to underpin the EU FMD directive with one possible timetable. The programme can be undertaken as a whole, or in a staged approach by module/by method.

Annex 1
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Annex 2.
Outline of curricula for Modules

Module 1: "early disease recognition and response" (make diagnosis; follow up; prevent spread)

Content/scope
The module covers

- Revision course on FMD infection and epidemiological aspects (transmission pathways between countries and within countries) required to be understood in this and subsequent modules.
- Initial disease recognition
- Samples to confirm clinical diagnosis/procedures to follow, with EU 2003 directive as the basis (and more specifically 2000/428/EC).
- Tracing backwards and forward, investigative skills (and communications), ~detective skills/epidemiology.
- Prevention of the spread of disease (personal, by the vet), animal movement restrictions, etc., biosecurity measures.

Objectives:
Following completion of this module, participants will be able to:

- recognise clinical signs and undertake differential diagnosis in different species
- age lesions
- establish the probable times window when infection first occurred, and other significant windows (entry, and peak virus shedding)
- take correct samples in line with EU directive to confirm
- correctly identify sources of infection from case study examples
- recommend correct actions to be taken immediately to prevent further spread of disease while awaiting confirmation
- advise on immediate bio-containment - including personal disinfection
- use different communication approaches to elicit information required and to report their findings
- adjust their actions in relation to the scenario found/epidemiological situation

This module should take as a basis the requirements of following EU directive articles

4: Measures in case of suspicion of outbreak
5: Movement onto and off a holding in case of suspicion
7: Temporary control zone
8: Preventive eradication programme
10: Measures in case of confirmation
13: Epidemiological inquiry
14: Additional measures in case of confirmation

Delivery options:

- facilitated workshop involving presentation
- student use of interactive CD
- video case studies (of recent outbreak) and discussion
- on-line assessment exercise

Module 2: Control at a local level (Setting up local disease control centre(s) (LDCC), communication, decision making, risk-based resource allocation)

Content/scope

The module covers:

- Awareness of the different roles which staff in the LDCC must fulfil (allocation of field tasks, tracing, personnel, accommodation, field operations, communications, biosecurity, epidemiology, finance and procurement, licensing, records control, surveillance, IT systems (including GIS). It must be noted that some of these work areas can be combined and dealt with by one individual.

- The importance of clear communication patterns; defined roles and responsibilities, to avoid duplication or gaps; regular updates of staff involved and contact details; reciprocal arrangements with National DCC.

- Definition of responsibility of LDCC manager, who will take final responsibility for veterinary decisions.

- Definition of responsibilities of managers of cells within the LDCC.

- Provision of information and feedback to NDCC, press, stakeholders and operational partners at defined and agreed points in time.

- **Allocation of local and national resource (assuming mobile staff) based on need and national picture.**

- Awareness of training needs and training needs resolution. This involves decision making about achievement of training standards, assessment of abilities and capabilities and balancing immediate needs of the LDCC with National demands.

Objectives

Following completion of this module, participants will be able:

- To identify and communicate relevant information to all team managers and staff within the LDCC on a daily basis (or as required).

- To facilitate problem resolution within the LDCC, as a result of an overall understanding of the process.

- To ensure that all reports to the NDCC or any other organisation or body requesting information are complete and accurate, and are despatched on time.

- To ensure that any changes in policy are implemented as required.

- *To ensure that decisions regarding resource allocations are made on the basis of rational and proportionate assessment of risks and the developing disease picture.*

- *To assess and allocate training needs within the LDCC and ensure that the skills base which is required is matched to the business need, depending on the stage of the outbreak and the availability of staff.*

This module should take as a basis the requirements of the following EU directive articles:

- It seems to me that this module facilitates the co-ordination of every aspect of 2003/85/EC, providing, as intended, local control and provision of information regarding each facet of FMD control as the outbreak progresses.

Delivery options: facilitated workshop involving presentation, active involvement in scenario-based exercises; video case studies (of recent outbreak) and discussion; table top exercises, observation of real LDCCs in action.

Module 6: *National control strategies (vaccination; decision support tools)*
Exit strategies (incl. demonstrating freedom from infection)

Content/scope
The module covers:

- Decision taking process for the appropriate control measures
  - risk assessment of situation in own and adjacent country/zone
    - collection of data on susceptible population,
    - economic links, personal contacts
    - geographical and meteorological conditions
  - pre-emptive culling (area around an outbreak, dangerous contacts, animal welfare requirements, carcass disposal, cleansing and disinfection, decontamination of products/equipment)
  - emergency vaccination
    - decision to use either suppressive or protective vaccination

        - regional approach, seize of vaccination and surveillance area
        - **declaration of the free area**, measures to prevent incursion of disease into free area, supporting evidence (OIE!)
        - suppressive vaccination (coordination of pre-emptive cull and vaccination, biosecurity)
        - protective vaccination, coordination of vaccination campaign, selection of herds to vaccinate, decision on small herd,
- Rules applicable in surveillance area surrounding the vaccination zone, possibilities of reducing the surveillance area, formulation of a request to Commission for reducing the surveillance area to the necessary minimum
- Design and implementation of a large scale serological surveillance
    - preparation of the post-vaccination survey
        - establishment of the logistics for sampling and testing,
        - designation of additional labs (see EUFMD guidelines)
        - selection of priority herds for sampling (with a view to trade in products)
        - Decision on small herds
    - classification of herds
        - Decision taking on surveillance results,
        - follow-up, re-sampling confirmatory tests,
        - final decision on herd classification
- Organisation of slaughter under controlled conditions of herds with confirmed positives for NSP
- Rules on the movement of vaccinated and unvaccinated animals and their offspring from vaccination areas
- Collating data in support of a claim for regaining the free status (EC and OIE requirements)

Objectives:
Following completion of this module, participants should be able to prepare:
- a decision on a particular control strategy, in particular with emergency vaccination by collecting and weighting arguments for one or the other control strategy
- an action plan for the implementation of post outbreak/ vaccination surveillance
- a detailed skeleton for a report to the OIE in order to regain disease free status
- a draft scenario for a possible simulation exercise

Delivery options:
- facilitated workshop involving presentation,
- student simulation of various strategies
- discussion; on-line assessment exercise

Outline for Module 7

Module 7: contingency planning and simulation exercises

Content/scope
The module covers
- Methods applied and requirements for drafting and development of contingency plans
- Development of up-to-date operations manuals
- Methods to increase disease awareness
- Planning real alert exercises/simulation exercises concerning resources (staff, time equipment)
- Development and application of realistic exercise scenarios for real alert exercises/simulation exercises
- Establishing of national, regional and local disease control centres (avoiding duplication to Module 2)
- Task orientated real alert exercises/simulation exercises (e.g. communication exercise like animal disease reporting, cleansing and disinfection, application of geographical information systems etc.)
- Quality assurance and standardisation of real alert exercises/simulation exercises
- Collaboration of neighbouring Member States or countries
- Data requirements, data bases and communication/information systems in real alert exercises/simulation exercises

Objectives:
Following completion of this module, participants will be able to:

- Develop and implement contingency plans considering different outbreak scenarios
- Planning of sufficient facilities, equipment, personnel and other appropriate material for rapid eradication
- establish vaccination plans including using vaccination criteria in densely populated areas
- use appropriate communication methods between animal disease control centres of different administrative levels
- coordinate FMD control measures between crisis units
- collaborate with competent authorities of neighboured Member States or countries
- prevent avoidable damages to the environment in event of an outbreak
- recommend correct actions to be taken immediately to prevent further spread
- plan and carry-out real nation-wide or regional alert exercises/simulation exercises
- select appropriate scenarios and data for real alert exercises/simulation exercises
- use different communication approaches within real alert exercises/simulation exercises
- select appropriate areas real alert exercises/simulation exercises
- revise and adjust contingency plans and real alert exercises/simulation exercises according to the actual situation in the field
- calculate costs for real alert exercises/simulation exercises

This module should take as a basis the requirements of following EU directive articles

1: Subject matter and scope
72: Contingency plans
73: Real-time alert exercises
Annex X: Criteria for the decision to apply protective vaccination and guidelines for the emergency vaccination programmes
Annex XVII: Criteria and requirements for contingency plans

Delivery options: facilitated workshop involving presentation, student use of interactive CD; national and international animal disease reporting systems, animal health databases, herd and identification databases; on-line assessment exercise

Annex 3: notes on detailed resource estimates

Assumption
Material development for major area modules (1, 2) and national modules (5,6,7) – will require 200 hours study materials – 40 hours preparatory e-learning; 120 hours classroom; 40 hours worth of multimedia.

Supporting costing assumptions and detail for resource estimates are provided for:

- classroom materials development
- Multimedia
- Video
- Assessment tools
- E-learning delivery infrastructure and facilitation
- Programme management

classroom materials development
Presentations and materials to support facilitated discussions courses for use at distance - through e-learning - or in a workshop/classroom. Use pre-existign materials wherever possible. Discussion and facilitation in groups online.

Resource: training designer with animal health experience for 18 months

Cost: **$100,000**

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Multimedia
Multimedia materials costing, per 40 minute lesson (approximately 20 screens), assuming curriculum is already defined for 12 lessons per large module (equivalent to 8 hours)

Subject expert for content creation - $1800
Instructional design (storyboarding, etc) - $3000
Production and transfer to web/CD - $1200

12 lessons @ $6000; for first module = $70,000. (based on experience of FAO's WAICENT Outreach group)

NB: if multimedia is required for **each** module, cost of content could be up to $400,000 and the ~80+ lessons would require coordination (9 months contract - $50,000)

Cost (1 module): **$70,000**
Cost (other modules): **$450,000**

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Video
Video case studies – 10 x 15 minute video segments (some filmed on location of actual cases; others role-played with a farmer; some during exercises) – will need to be carefully scripted.

Aim for hand-held digital camera footage (some with lighting, where animals are indoors) and possibly also sound equipment for role playing. Four countries/different animal production systems.

Planning and preparation - $15000

Estimate a ratio of useful minutes to minutes filmed of 1:20. This would require up to 30 days work on location @ $1500 per day (for camera/sound person; project/subject specialist and local expert/lighting) - $45,000.

Editing and preparation for use $10,000

Total cost: **$70,000**

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Assessment tools

Tools to capture student responses. These could be in the form of an interactive quiz – test your FMD knowledge, spot the deliberate mistakes, etc – to be developed at one per module.

Cost (5 tests): $50,000

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e-learning additional delivery costs

install server and run FODEPAL-like e-learning pilot for 2 area modules and 1 national - $20,000

course registration and management software for distance learning (FODEPAL as the backbone) – $50,000

facilitator to run modules 1,2 and 7 e-learning components as a pilot over a period of 8 months - $60,000

cost: $130,000

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Programme management

Management costs will depend on phasing of programme – if full programme over a 3 year period, upper estimate; if less intense and/or over shorter period - (1/2 modules, some multimedia, etc) – take lower estimate

Cost: $70-150,000

Appendix 13

Report on the Closed Session of the FAO EUFMD Research Group at Greifswald, Insel-Riems, Germany. 20-23 September 2005

Kris De Clercq

Item 1 – Election of the Chairman
Item 2 – Adoption of the Agenda
Item 3 – Update on the EUFMD Commission
Item 4 – FMD risk and the review of priority antigens

Item 5. Regional risk situation: Risk of FMDV from Central Asia to Turkey

- EUFMD should play an active role in the information exchange about FMD in central Asia (including Afghanistan and Pakistan), Iran and Turkey.
- The FAO and OIE animal health projects working in this geographical region should seek to improve exchange of information including increased detailed surveillance and reporting, including identification of species, virus strains, number of animals, precise location of clinical disease and virus isolation, etc. focusing on border areas.
- Turkey should be encouraged to continue to organise sero-surveillance in Thrace region and EUFMD should continue to support these studies.
- Turkey should be encouraged to extend active surveillance studies in Eastern Anatolia.

Item 6. Review of support required to FMD Laboratories for quality assurance

- The pilot study for external quality assurance revealed differences in the sensitivity of virus isolation systems, even where apparently similar cell lines were in use.
- Western Balkan, Former Soviet Union including Transcaucasian Countries mainly rely on antigen detection ELISA, liquid phase blocking ELISA plus or minus NSP ELISA for their diagnostic needs.
- Next year's proficiency testing will concentrate on a wider distribution of the existing live virus proficiency panel used in the pilot study along with a distribution of a serology and antigen detection ELISA panel based on inactivated materials.
- The serology proficiency panel should be applicable to both non-structural and structural protein antibody tests and the priority serotypes are O, A, Asia 1 and SAT 2.

Item 7. Progress on technical questions relating surveillance post-emergency vaccination

- Progress on technical questions relating to surveillance post-emergency vaccination
- Suggestions made by the EUFMD RG for modification of the PVS guidelines were not adopted. The OIE position was that requests for modification must come from a member country.
- The EUFMD executive committee should consider if there is any need to change the current OIE guidelines and terminology to better reflect the European approach to PVS.

Progress report on NSP test validation and gaps remaining

- Studies to address knowledge gaps in validation data from sheep, goats, water buffalo and pigs should be supported, in particular data should be generated on the specificity of NSPEs in vaccinated animals of those species.

Use of NSP for detecting infection in vaccinated pigs in Hong Kong

Data on the use of NSPEs for detecting infection in vaccinated pigs, based on specimens collected in the Hong Kong Special Administrative Region (HK-SAR) were presented.

- The findings support that clinical disease in pigs might be required to generate a good antibody response to NSP.
- The relative sensitivities of the UBI "testing system" and the Cedi test were equivalent and both were better than the Bommeli CHEKIT ELISA.

Post-vaccination surveillance guidelines and their application

Serosurveillance can substantiate rather than demonstrate freedom from infection after an outbreak. Different combinations of tests can be used in series to improve the overall diagnostic specificity but sensitivity remains a limiting factor in achieving the required level of confidence within small herds.

- Probang-sampling followed by RT-PCR is insufficiently sensitive unless three serial samples are tested.
- Possible solutions to the "small herd problem" include: (i) not vaccinating them; (ii) vaccinating them but increasing the number of small herds "sampled" to increase the probability of detecting infection or (iii) applying a vaccinate-to-kill policy.
- The algorithm combining initial cedi test, retest of positives by cedi and final confirmation by the svanova ELISA currently provides the best available serodiagnostic system within Europe, with respect to diagnostic specificity after vaccination. Combinations, including in-house tests proven to provide equivalent performance, may also be appropriate.

Designing post-vaccination surveillance

Preliminary results were presented on the use of a new software tool to optimise herd sensitivity whilst maintaining a minimum herd specificity by altering the numbers of samples taken per herd and the cut point at which a farm would be considered positive.

- The current NSPEs are fit for purpose to substantiate freedom of FMD at a 5% prevalence at herd level and 2% prevalence between herds.

Alternative view – application of NSP

The number of sera were determined that would have to have been tested during the 2001 FMD outbreak in the Netherlands, if the surveillance provisions of the 2003 EC directive had been in force at that time and a vaccination to live policy had been enforced within 2 km of each infected premises. Assuming the absence of infection, approximately 10% of the vaccinated farms would have tested positive after two rounds of herd sampling. A decision tree was presented based on a previous EC directive 200/428/EC on control of SVD; according to this approach singleton seropositive animals would be culled and the herd would be retested.

Overall Recommendations

- The 3 inter-related issues raised in these papers should be dealt with separately, i.e. (i) demonstrating freedom from infection, (ii) defining what PVS findings would constitute a new FMD outbreak and (iii) removing animals from seropositive herds to mitigate risk.
- The risk remaining after applying different surveillance strategies should be evaluated.

A EUFMD workshop on design and interpretation of post vaccination serosurveillance

Objectives:

Given the current FMD-free status without vaccination in Europe and the possibility of a future outbreak with vaccination-to-live used as an emergency measure and being followed up by post vaccination serosurveillance to return to the favoured status of free without vaccination:

(1) design and implementation of a serosurvey : (a) to detect infected herds/flocks or (b) to prove freedom from infection
(2) how to interpret and follow-up seropositive animals and/or herds/flocks
(3) how laboratory test results can be used for rational decision-making
(4) to identify the resources required to undertake the preferred strategy

Participants

(1) Decision-makers: CVOs, heads of NDCCs and others
(2) Technical: laboratory-based experts and veterinary epidemiologists
(3) Representatives of DG-SANCO and OIE

Outputs: report which will assist the working group to finalize guidelines for specific epidemiological situation

Item 8. Sero-monitoring of virus circulation and FMDV vaccination in the Caucasus

Three presentations were made by Drs Carsten Potzsch, Emiliana Brocchi and Matthias Greiner on the serosurveillance conducted in the vaccination buffer zone in the trans-Caucasus region (Armenia, Azerbaijan and Georgia). The objectives of the serosurvey were to estimate the level and describe the geographical distribution of antibodies to structural (SP) and non-structural proteins (NSP) and to interpret the findings in relation to the effect of vaccination and evidence for circulating infection. In the buffer zone the trivalent vaccine produced by

ARRIAH, Russia was used in the previous two years. The survey was designed as a two stage (selection of villages and animals within the village) random sampling with emphasis on young animals. The study was aimed at the detection of 10% intra-herd and 10% inter-herd prevalence.
For Armenia, the overall sero prevalence for O, A and Asia were 83% 92% and 93% respectively. The figures for Azerbaijan were 69%, 93% and 90% and for Georgia 47%, 42% and 34%. In Georgia the village level SP prevalences were highly variable whilst in Armenia and Azerbaijan the distribution was more homogeneous and positive sera scored high antibody titres.

The overall NSP prevalence for Armenia was 15%, for Azerbaijan 8% and for Georgia 3%. The distribution gave evidence of spatial clustering. There was no association between age and NSP seroprevalence, suggesting that repeated vaccination with unpurified vaccines cannot explain alone the finding of NSP sero-reactors.

- Follow up investigations should be conducted in villages where positive NSP results were found with emphasis on young stock.
- Investigations should be extended countrywide to provide baseline information.

Item 9. Developments in FMD control decision support systems
Decision making is becoming more difficult and complex with increasing availability of information and increasing demands from stakeholders and the general public to get every decision right. Decision support systems (DSS) can be used in planning for epidemics, risk mapping and resource allocation as well as exploring different strategies such as stamping out, vaccination and combinations of these.

The use of mathematical models during outbreaks to predict spread has proved more controversial.

Item 10. Laboratory bio-security
- Under special conditions it will be of advantage to allow laboratories not meeting the security standards for FMD laboratories adopted in 1993 to carry out the laboratory diagnosis of FMD with methods, which do not require the propagation of virus. However, these exceptions should not compromise the efforts to exclude the escape of FMDV from laboratories in FMD – free countries.
- A working group should study the differences between the FAO guidelines for FMD labs and the requirements of the OIE containment group IV and prepare a proposal for a possible revision of the OIE requirements.

Item 11. Virus inactivation studies – progress report
A short summary of the known data on FMDV inactivation kinetics in milk and milk products was given. What is known about FMDV survival in meat and meat products and the input required for an analysis from a risk assessment point of view was described. Preliminary results of a risk assessment on the risk of FMDV in pork from vaccinated animals were presented. A scenario tree for the analysis was demonstrated and it was concluded that the risk of FMDV in pork from vaccinated pigs was low, however, the uncertainties inherent in the assessment is significant.
- It is recommended that relatively large scale studies are done in order to provide statistically significant data. The studies should be designed so they can provide D and Z-values of FMDV inactivation in products of interest.
- It should be considered if large parts of the studies could be performed in countries with endemic FMD.

Item 12. Risk assessment/management papers for review

- In all recent European outbreaks wildlife were not implicated in the spread of FMD and the outbreaks could be controlled without any specific action devoted to wild species, native or exotic.
- Although a high proportion of gazelle have been seropositive after being involved in FMD outbreaks in Israel, the prevalence of antibodies dropped indicating that the virus did not circulate on its own within the gazelle population.
- A meta-analysis used to quantify the transmission rate from FMD carrier animals was presented. The analysis showed that the risk to infect cattle is very low, but the risk of infection of other susceptible species might be 11% per month per carrier. Analysis of the percentage of carrier cattle after infection showed on average 61% carriers at 28 days post-infection with a half time of about 6.3 months.

Item 13. FAO EUFMD RG Workplan 2005-2007

Appendix 14

FAO EUFMD RG WORKPLAN 2005-2007

Theme		Task (*blue italic = associated task*)	Who	Draft/frequency	Completion
1. Global Surveillance	1.1	Global surveillance maps/models	Liaison person (**DP**) to actions between CA, FAO and OIE	Yearly progress report	Ongoing
	1.2	*Establish regular risk reporting – virus types circulating in Iran, Pakistan, Afghan...*	*FG, MH, DP (link)*	*3 monthly*	*Should be ongoing*
	1.3	Improving delivery of viruses from risk areas (WG1)	***Secretariat, WRL***	Yearly report on gaps/progress	Ongoing
	1.4	*Vaccine strain matching*	*Contact point: DP CRL , CA,OIE/FAO network of ref labs, ImproCon project*		
	1.5	Priority antigens for the European Ag banks	***WRL***	6 months Every 2 years	Ongoing
	1.6	Minimum size of vaccine stocks in EU vaccine banks – position paper	**AD**, (Paul Barnett), KS, AEF	Outline Progress report 2006	2007 (pre-General Session)
	1.7	Type C vaccination/eradication position paper	**KS**, DP, KDC, SoA (+FAO colleagues)	Draft1 –January	Open Session - 2006
2. Prevention		Strategy for prevention of FMD entry into Europe – group should review risks and interventions	**FM/MB,** AEF, (KS)	2006 –progress report	2007 (April)
3. Sero-monitoring		Design sero-monitoring in vaccination zones –Thrace and Trans-Caucasus - refine, re-design - support future official status (Thrace)	**MB**, KDC, DS, SiA, MG, (CP)	by Feb- 2006. Results – Open Session	Ongoing
4. EQA FMD Diagnostics		Establish EQA support for 2006– virus detection and serology (inc. clear demarcation of funding under CRL and FAO support)	**DP**, KDC, HY, GG, BH	Meet to co-ordinate with CRL.	Open Session (ongoing)

				Agreement/contract – end Nov	
5. PVS		Post vaccination surveillance – Position papers guidelines * link to OIE ad hoc groups - Test/optimise guidelines through simulation at workshop (using selected scenarios) - Complete analysis on sheep and pigs, buffalo	**KDC***, DP*, AD, EB*, DS, MG, AEF* **Secretariat** GG, KDC, DS	 Spring 2006 WS OS 2006	end 2005 OS 2006
6. DSS		Decision support systems – develop position paper on validity, applicability, gaps	**Secretariat** (links also with CA)	OS 2006	
7. Biosecurity		Biosecurity guidelines – follow up required: - paper should be updated by paper recommending updates covering other situations - review gaps between standards of FAO and OIE	**BH,** SoA, HY, AEF	First report –end 2005-	OS 2006
8. Virus inactivation		Inactivation studies	**SoA**, MG, AD, SiA (IAH-Don King, MB)	interim Nov 2005 OS 2006	
9. Pen-side test		Pen-side tests position paper (prev WG13)	**DS,** HY, BH, MB, (Naci Bulut, Nigel Ferris)		OS 2006
10. LCP		Laboratory Contingency Plans Scaling up diagnostic capacity (prev WG11): Workshop on upscaling serology –only interesting for eastern European countries, particularly that are not candidate countries Need information on capacity of laboratories (needed for EUFMD – Executive Com)	**Secretariat** (link to CA - Tony Garland) **Secretariat, GG, CA**	Send guidelines from Cordoba around immediately CA will send around as Manual (check timetable- end 2007)	 Survey by April 2006 – to include LCPs and EQA, existing capacity.
11. Diagn. Reagent Bank		Diagnostic reagent banks (prev WG10): - clear recommendation needed; update position paper with latest RG paper	**BH,** AD, EB, AEF		Spring 2006

		so this could be used in tender			
12. Potency test		Potency test evaluation (Turkey) - *FMD_ImproCon* - Position paper on potency tests in pigs - do we require vaccines to be tested in pigs, and are there new alternatives? *link to China – *Update monitoring vaccination campaigns (Chania paper) and Workshop on vaccine QA (OIE/EP) – in West Asia*	**Link person (SiA, KDC)** *AD, BH, SoA, AEF, (Paul Barnett*)* **FAO/OIE**	OS 2006	
13. Sample transport		Sample transport guidelines – update text; include new options	BH (Nigel Ferris) (OIE –Jim Pearson)	Update Vilmos P paper for 2005 report	1/12/05
14. Training		*Training /knowledge management*	*Secretariat*		
15. Meeting		Open meeting Israel 17-20/10/2006	**HY, Secretariat** KDC, AD, DP	by end November 2005	
16. Meeting		Closed meeting (October 2007) (Netherlands, Italy,....)	**Secretariat**		

SiA: Sinan Aktas; SoA: Soren Alexanderson; EB: Emiliana Brocchi; MB: Mark Bronsvoort; KDC: Kris De Clercq; AD: Aldo Dekker; GG: Georgi Georgev; MG: Matthias Greiner; BH: Bernd Haas; FM: François Moutou; DS: Donal Sammin; HY: Hagai Yadin; DP: David Paton; KS: Keith Sumption; CP: Carsten Pötzsch; AEF: Alf-Eckbert Füssel; FG: Francis Geiger; MH: Manzoor Hussein; EC: Erika Carlsson; WRL: World Reference Laboratory; CRL: European Community Reference Laboratory.

CA = Co-ordination Action – FMD and CSF laboratories (DG-Res).

Appendix 15

STATEMENT 1

MTF/INT/011/MUL - TF number 904200

EUROPEAN COMMISSION FOR THE CONTROL OF FOOT-AND-MOUTH DISEASE

Financial Report as at 21 November 2005

	US$	US$	Eur	Eur
Balance as at 1 January 2005		168,822		134,651
Interest received	3,974		3,167	
Contribution from member countries (As per statement 2)	305,643	309,617	243,597	246,765
Expenditure				
Commission Secretary	157,354		125,411	
Consultant	20,643		16,452	
Admin. Support Personnel	71,931		57,329	
Contracts	46,061		36,711	
Duty Travel	53,982		43,024	
General Operating Expenses	18,239		14,536	
Expendable Equipment	14,444		11,512	
Non-Expendable Equipment	60		48	
Total Expenditure		(382,714)		(305,023)
Balance as at 21 November 2005		95,725		76,293
Balance restated at UN Exchange rate of 21 November 2005				81,845

STATEMENT 2

TRUST FUND No. 9042.00 - MTF/INT/011/MUL -
Inter-Regional - Euopean Commission for the Control of Foot-and-Mouth Disease

Status of Contributions as at 21 November 2005
(expressed in US$)

ORACLE CODE: TF-AGADD-TFAA970089122

Member Governments	Outstanding 31/12/2004	Contribution due for 2005	Received up to 21/11/2005	Arrears and transaction costs on contributions abolished b/	Outstanding 21/11/2005
ALBANIA	13.00	3,000.00	2,992.16	20.84	0.00
AUSTRIA	16.31	9,200.00	9,216.31		0.00
BELGIUM	12.99	15,300.00	15,277.65	35.34	0.00
BULGARIA	8.22	9,200.00	9,194.99	13.23	0.00
CYPRUS	3,000.00	3,000.00	3,000.00		3,000.00
CROATIA	2,609.00	3,000.00	3,000.00	9.00	2,600.00
CZECH REPUBLIC	0.00	9,200.00	9,186.97	13.03	0.00
DENMARK	8.37	15,300.00	15,286.74	21.63	0.00
FINLAND	8.50	9,200.00	9,200.00	8.50	0.00
FRANCE	16.82	30,500.00	30,500.00	16.82	0.00
GERMANY	8.45	30,500.00	30,503.45	5.00	0.00
GREECE	10.00	9,200.00	9,188.31	21.69	0.00
HUNGARY	-9,200.00	9,200.00	0.00		0.00
ICELAND	403.00	3,000.00	3,403.00		0.00
IRELAND	20.00	9,200.00	9,200.00	20.00	0.00
ISRAEL	15.35	3,000.00	3,008.04	7.31	0.00
ITALY	1,695.78	30,500.00	0.00		32,195.78
LITHUANIA	5.00	3,000.00	3,000.53	4.47	0.00
LUXEMBOURG	0.00	3,000.00	0.00		3,000.00
MACEDONIA	5,633.26	3,000.00	3,001.03	32.23	5,600.00
MALTA	13.51	3,000.00	2,991.99	21.52	0.00
NETHERLANDS	8.29	15,300.00	15,295.18	13.11	0.00
NORWAY	0.00	9,200.00	9,187.17	12.83	0.00
POLAND	0.00	15,300.00	0.00		15,300.00
PORTUGAL	8,690.15	9,200.00	0.00		17,890.15
ROMANIA	13.29	15,300.00	0.00	13.29	15,300.00
SERBIA and MONTENEGRO (ex YUG.)	9,210.00	9,200.00	0.00	10.00	18,400.00
SLOVENIA	42.32	3,000.00	3,042.32		0.00
SPAIN	20.87	15,300.00	15,282.00	38.87	0.00
SWEDEN	15,325.00	15,300.00	30,595.00	30.00	0.00
SWITZERLAND	8.56	15,300.00	15,308.56		0.00
TURKEY	0.00	15,300.00	15,286.98	13.02	0.00
UNITED KINGDOM	0.00	30,500.00	30,495.00	5.00	0.00
YUGOSLAVIA a/	81,511.30	0.00	0.00	81,511.30	0.00
TOTALS	**119,127.34**	**381,700.00**	**305,643.38**	**81,898.03**	**113,285.93**

a/ The arrears of the former Socialist Federal Republic of Yugoslavia are abolished in accordance with the resolution of the 71st Executive Committee.
b/ Transaction costs arising on previous years' contributions will not be included in the 2006 call for funds letters as contributions outstanding.

STATEMENT 3

MTF/INT/004/MUL - TF number 909700

FOOT AND MOUTH DESEASE - EMERGENCY AID PROGRAMME

Financial Report as at 21 November 2005

	US$	US$	Eur	Eur
Balance as at 1 January 2005		41,232		39,362
Interest received		790		630
Expenditure				
Consultancy	0		0	
Duty travel	0		0	
Expendable Procurement	0		0	
Support Costs	0		0	
Total expenditure		0		0
Balance as at 21 November 2005		**42,022**		39,492
Balance restated at UN Exchange rate of 21 November				35,929

STATEMENT 4

MTF/INT/003/EEC - TF number 911100

FOOT AND MOUTH DISEASE

Financial Report as at 21 November 2005

	US$	US$	Eur	Eur
Balance as at 1 January 2005		55,284		44,036
Interest received	2,201		1,754	
Contribution received	0		0	
		2,201		1,754
Expenditure				
Consultancy	(5,004)		(3,988)	
Duty Travel	33,110		26,389	
Contracts	32,200		25,669	
General Operating Expenses	3,826		3,049	

2005 UNITED NATIONS OPERATIONAL RATES OF EXCHANGE

Entity	Currency name	ISO Curr'cy Code	1 Jan2005	1 Feb 2005	1 Mar.2005	1 April 2005	1 May 2005	1 June 2005
European Union	Euro	EUR	0.737	0.765	0.757	0.771	0.773 15 June	0.797 0.83

Appendix 16

LIST OF PARTICIPANTS

72nd Session of the Executive Committee of the European Commission for the Control of Foot-and-Mouth Disease

The Hague, the Netherlands
29 & 30 November 2005

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