O.I.E. Regional Commission for Europe

Final Report of the Xth Conference
London, 28 September-1 October 1982

The Xth Conference of the O.I.E. Regional Commission for Europe was held in Church House, Westminster, London from 28 September to 1 October 1982. The Conference chairman was Mr W.H.G. Rees, Chief Veterinary Officer of the Ministry of Agriculture, Fisheries and Food.

Seventy-seven delegates and observers attended the Conference. The following countries were represented: Australia, Austria, Belgium, Canada, Czechoslovakia, Denmark, Finland, France, the German Democratic Republic, the Federal Republic of Germany, Italy, the Netherlands, New Zealand, Norway, Portugal, the Republic of Ireland, Romania, Sweden, Switzerland, United Kingdom, U.S.A. and U.S.S.R. The European Community was also represented.

The Conference included a veterinary exhibition.

28 September 1982

OPENING CEREMONY

The Conference was opened by Mrs Peggy Fenner, M.P., Parliamentary Secretary, Ministry of Agriculture, Fisheries and Food. She welcomed the delegates and spoke about the significant and growing contribution made by the O.I.E. in the animal health field over the last fifty years. The biennial regional conferences provided a useful forum for a full exchange of views by the Chief Veterinary Officers of Member Countries. Mrs Fenner mentioned in particular the special regional problems of epidemiology and the control of contagious diseases of livestock. She referred to the three main functions of the O.I.E., and selected for special mention the importance of collecting and disseminating information concerning the occurrence and development of highly contagious animal diseases in Member Countries. This service was particularly important because of the size and value of national herds and
flocks and the large and increasing amount of movement of animals and animal products between countries.

Mrs Fenner also referred to the long-established tradition of co-operation between Government Veterinary Departments in the Regional Commission. This co-operation had played a major part in achieving the high health status of livestock populations. Although many diseases had been largely overcome, new problems had emerged and there was a major role for the O.I.E. to play in monitoring and advising on methods of tackling them.

Dr. F. Walla, President of the O.I.E. Regional Commission for Europe, thanked the Parliamentary Secretary for opening the Conference. He welcomed the President of O.I.E., Dr. Gee and the Director General, Dr. Blajan and paid a warm tribute to Professor Polak, his predecessor as President of the Regional Commission for Europe. Dr. Walla explained that the annual General Session in Paris concentrated on worldwide disease problems and, as a result, problems of special significance in the different regions could not receive the detailed consideration they deserved. The Regional Commissions were set up principally to remedy this deficiency.

Dr. Walla said that advances in science and technology meant that much more information about disease was available as a result of the highly sensitive methods now in operation. There was a danger that we might become overwhelmed with information requiring interpretation at a time when all countries were becoming much more cost-conscious. Dr. Walla felt that the best method of dealing with this situation was to have closer international collaboration involving full exchanges of information and experiences in the animal health field. That was one of the main purposes of this conference.

Dr. R.W. Gee, President of the O.I.E., referred to the cultural and philosophical links between Europe and the other continents and said that the O.I.E. had a permanence that welded 103 countries together with a single discipline of veterinary science. The clear objectives of improved animal health or reduced animal disease were improved world food supply, less restrictive livestock and food product movement and hence freer trade.

Dr. Gee reminded delegates that although agriculture in Europe had changed over the years with the growth in industrialisation, there had been little change in the remainder of the world. In other continents, humans were still dependent on the season and good weather and the health and well-being of their livestock. As an example, he mentioned that Australia and Indonesia were currently experiencing the worse drought for decades. The relevance of this situation to Europe and the O.I.E. was that Europe was part of the world and O.I.E. drew the different continents closer together.

Dr. Gee spoke about the dramatic advances in vaccine research made in Europe which could have a significant effect on animal health improvement. He believed that the new technologies must have equally important implications for diagnosis and that it might be that there was as much to be gained
from these new technologies as from new vaccines. At the same time, the excitement engendered by the new vaccines should not be allowed to obscure vaccines that had been tried and tested. Rinderpest was the classical case and we now needed to get vaccine programmes on the move as was resolved in Paris last May.

As disease eradication was the ultimate objective, preventive medicine should only be regarded as an interim tactic. Dr. Gee said it was unreasonable to overburden agricultural and food production with vaccination programmes but the latter could only be terminated when disease pressures had subsided and when impeccable diagnostic resources were available. All this presupposed an efficient veterinary administration able to respond promptly to disease introduction, discovery or recrudescence.

Dr. Gee stressed the importance that many countries outside Europe placed on the sale of their livestock products to the European region as soon as their standards of animal health were accepted internationally. The O.I.E. Code for the safe movement of livestock and their products was of prime importance and everything possible should be done to encourage safe and free trade and to remove unnecessary trade barriers.

**Dr. L. Blajan**, Director General of the O.I.E., thanked the United Kingdom Government for hosting the Conference. He recalled that the United Kingdom had been successful in reducing the incidence of certain diseases in their country particularly rabies, anthrax, brucellosis, bovine tuberculosis, Newcastle disease and foot and mouth disease. At the same time, a number of important problems had still to be resolved in Europe. These included swine vesicular disease and leptospirosis which were two of the items to be discussed by the Conference. The third agenda item was the identification of protein of animal origin. Dr. Blajan mentioned the opportunities for fraudulent substitution of meat and the need for urgent attention and vigilance by the veterinary services in Member Countries in order to protect the consumer. The fourth agenda item would consist of reports by delegates on current animal health problems in their respective countries.

Finally, Dr. Blajan suggested that it would be useful to know what measures had been taken in Member Countries to implement the conclusions and recommendations adopted at previous conferences. He felt it would be appropriate to start such an arrangement at this Conference as the absence of this information meant that there was some loss of interest in the Commission’s work.

The Conference then approved the provisional programme and confirmed the rapporteurs for Agenda Items 1, 2 and 3.

**Item 1 : SWINE VESICULAR DISEASE (SVD)**

**Review paper.**

This was prepared by the United Kingdom and presented by Mr. J.G. Loxam, the rapporteur for the session. The paper summarised the clinical
signs, diagnosis, epidemiology and control of the disease. In its acute form, swine vesicular disease (SVD) is indistinguishable from foot and mouth disease and can only be differentiated with the aid of laboratory tests. The emergence of mild SVD with transient clinical signs has resulted in cases of the disease not being identified. Detection often occurs only after a careful veterinary investigation as a consequence of positive blood test results disclosed in serological surveys. The epidemiology of the 1982 outbreaks in the United Kingdom demonstrated the importance of serological surveys in identifying undisclosed foci of infection. A variety of sensitive and specific laboratory tests are now available to provide a reliable basis for surveillance, differential diagnosis and confirmation of SVD. Of these, the counter-immunoelectro-osmophoresis is ideal for screening sera for diagnostic, epidemiological and routine surveillance purposes. The epidemiology of SVD is related to the persistence of the causal virus in meat and in the environment. As a result, strict control on the feeding of waste food, marketing of pigs and disinfection of vehicles transporting pigs is needed.

Italy presented a report which described the evolution of SVD from 1966 to 1981 and gave additional information on diagnosis, epidemiology and vaccination trials. The persistence of virus on pig farms and in contaminated lorries, together with carrier animals, were important factors in the spread of disease. Vaccination of swine was not part of the national SVD control programme but an inactivated vaccine prepared at the reference laboratory of Brescia had been tested on a large number of animals in isolation stables. Further trials were necessary to establish the suitability of such vaccinations as a means of protecting swine and for preventing virus spread.

Oral reports were presented by delegates from the Federal Republic of Germany, France and the Netherlands as follows:

(a) Federal Republic of Germany. SVD was first reported in 1973 since when only sporadic outbreaks have occurred apart from one year when 11 cases, all of which were linked together, were reported. The feeding of improperly processed waste food containing scraps of imported pig meat has been responsible for some outbreaks. The disease is notifiable and confirmed outbreaks are controlled by stamping out, movement controls, disinfection using caustic soda and high pressure apparatus.

(b) France. SVD occurred in 1972 in south-west France. In 1973, a further 12 outbreaks occurred but clinical disease had not been recorded since 1975. A serological survey of 4,000 pig sera collected at random from abattoirs in 45 departments during 1977 showed 3% positive. It was concluded that subclinical disease existed and a further survey in 1982 when 6,021 sera were collected from abattoirs in 12 departments revealed 57 positives (0.95%). The delegation concluded that SVD was circulating in France at a low level and only causing subclinical infection.

(c) The Netherlands. The sole outbreak of SVD occurred in 1975. It was caused by feeding improperly processed waste food containing pig meat of
foreign origin. The disease is notifiable and confirmed cases would be controlled by stamping out. In the winter of 1979-80, a total of 3,280 blood samples from 36 slaughterhouses were tested with negative results.

The following are the main points that emerged from the subsequent discussion:

(a) **The interpretation of serological results.** Differences in the interpretation of serological results occurred between countries.

(b) **The survival of SVD virus.** The problem of virus survival in pork and pork meat products was discussed. The Italians are currently investigating this issue but have met difficulties in obtaining strains that give adequate distribution in the body. Virus was not found in the muscle during viraemia or at the peak of clinical disease but this may have been due to strain variation. The Italian and United Kingdom delegations agreed that virus had persisted in faeces for 22 to 30 days after infection.

(c) **Environmental contamination.** Delegates agreed that contaminated vehicles were an important cause of disease spread and acknowledged that there were problems in the cleansing and disinfection of vehicles. The United Kingdom delegates reported that SVD virus had been recovered from a vehicle after disinfection. Cleansing and disinfection was a problem especially if bedding, faeces and urine found between the floor and vehicle base were inaccessible to sprays and disinfectants. It was now the practice to dismantle floors and disinfect vehicles thoroughly. Vehicle drivers who entered pens on infected farms might also be responsible for spreading the disease and in order to prevent this, vehicle cabs, pedals and drivers clothing should be disinfected.

In the evening, the United Kingdom Government gave a reception in Lancaster House for delegates and their wives. The guests were received by Mrs Peggy Fenner, M.P., Parliamentary Secretary, Ministry of Agriculture, Fisheries and Food.

29 September 1982

Item 2 : LEPTOSPIROSIS

Review paper.

This was prepared by France and was presented by Dr. A.J.R. Gaumont, the rapporteur for the session. The paper summarised aspects of the clinical findings, laboratory diagnosis, epidemiology, treatment and control measures for leptospirosis. The serological evidence of leptospira infection is widespread in domestic stock in most European countries but on a clinical basis, its prevalence in general is low. The role of cattle as carriers of *hardjo* infec-
tion has been accepted and modes of transmission established. The laboratory diagnosis of leptospirosis is the only method of confirming clinical suspicions and of screening the many cases of inapparent infection. However, this presents considerable problems. Serological diagnosis enables satisfactory screening of acute infections but is of limited value in the diagnosis of chronic cases. If a reliable and simple method for diagnosing renal carriers cannot be developed, the use of antibiotics should be considered to cure the animals. Dihydrostreptomycin is the most effective drug for eliminating renal infection in chronic carriers. Vaccination is the only practical method available for the control of infection within a herd of pigs or cattle.

Reports were presented by the delegates of United Kingdom, U.S.S.R., France and Italy as follows:

(a) United Kingdom (Northern Ireland). Serological examination of sera from live animals and the direct incident light fluorescent antibody technique on tissue material from dead animals allows suitably equipped laboratories to diagnose acute leptospirosis in animals with accuracy. The problem of diagnosing the chronic renal carrier requires further research and there is a need for the development of improved isolation media.

(b) United Kingdom (Great Britain). It is apparent that hardjo is an emerging cause of both clinical and subclinical infection of dairy and beef cattle in Great Britain and Northern Ireland. Difficulty in diagnosis will continue to hinder accurate assessment of the true prevalence of clinical disease and its subsequent economic loss. Present understanding of the epidemiology of this disease leads to the conclusion that vaccination is the only practical method of control.

(c) U.S.S.R. Leptospirosis is characterised by a high infection rate, the carrier state of leptospires and by low morbidity and mortality rates. Control measures in breeding animals should be based on diagnosis in a well-organised laboratory and on the existence of a vaccine with adequate immunogenicity. Additional measures including screening, isolating, treating or slaughtering not only of diseased animals but all carriers should be considered in a control policy.

(d) France. A survey performed between 1977 and 1981 to identify leptospira agglutinins in livestock was based on the use of the agglutination-lysis method. The prevailing serovars were listed in order of importance for pigs, icterohaemorrhagiae, australis, grippotyphosa; for cattle and horses, grippotyphosa, australis, icterohaemorrhagiae and to a lesser degree, canicola in horses. The number of positive sera from pigs and cattle decreased between 1977 and 1981 but there was a significant increase in the number of positive sera to sejroe in 1977 and 1978.

(e) Italy. Leptospires have been isolated from a variety of free-living and domestic species in Italy and several disease syndromes have been identified. Pomona and tarassovi were a serious problem in pigs for many years but
application of control measures has markedly reduced the prevalence of infection. Infection with *hardjo* and *pomona* in cattle is a serious problem and the prevalence of infection is gradually increasing. *Hardjo* may also infect sheep and buffalo and may be a cause of reproductive disease in the latter species.

Additional comments were made by delegates from Austria and the Federal Republic of Germany as follows:

(a) **Austria.** Although *pomona* is endemic in pigs in surrounding countries, Austria has remained free from infection. Routine examination of sera from both healthy and diseased animals has failed to reveal the presence of either *pomona* or *tarassovi* titres but *icterohaemorrhagiae* may occasionally cause problems. A low prevalence of *sejroe* titres occurs in cattle.

(b) **Federal Republic of Germany.** Few cases of leptospirosis have been identified in cattle and pigs. However, there have been no systematic investigations to establish the prevalence of infection. *Sejroe* titres have been detected in sheep.

The following is a summary of the discussion:

(a) **Vaccination.** The delegation of the Federal Republic of Germany enquired about the effectiveness of vaccination as a control measure and as a means of eliminating infection in chronic renal carriers. The United Kingdom delegation replied that a serological response to vaccination persisted for only 3 to 4 months. Vaccination would not terminate renal infection but it was very successful in preventing infection in vaccinated animals. It therefore had decided advantages over antibiotic therapy as a means of control.

(b) **Use of dihydrostreptomycin.** The United Kingdom delegate drew attention to the use of dihydrostreptomycin as a prophylactic measure to eliminate the carrier state in individual animals. The French delegation pointed out that the use of antibiotics was included in Article 4.1.2.1. of the O.I.E. Code and might be useful in preventing the import of exotic serovars. The United Kingdom delegate proposed that the use of dihydrostreptomycin would be a more practical and effective method than serology.

(c) **Inadequacy of diagnostic techniques.** Considerable concern was expressed about the inadequacy of present diagnostic techniques. The French delegation stressed that the use of an arbitrary titre level for diagnostic purposes was unsatisfactory but was the only practical method available at present. The United Kingdom delegation stated that antigen batteries were often non-representative for the serovars present in a particular geographical region. The delegation of the Federal Republic of Germany were concerned that no suitable alternatives to serology were presently available for the screening of large numbers of animals.
Item 3: METHODS FOR THE IDENTIFICATION OF PROTEINS OF ANIMAL ORIGIN FROM DIFFERENT SPECIES

Review paper.

This was prepared by the Federal Republic of Germany and presented by Dr. D. Protz, the rapporteur for the session. The literature concerning the serological and electrophoretic methods of protein identification was reviewed and the limitations of the various methods were highlighted. Serological techniques had the disadvantage that the antisera prepared in one species of animal often failed to react reliably with the proteins from other species. Non-specific reactions were common and complement fixation would only determine the animal group. Amongst electrophoretic analytical methods, isoelectric focussing is particularly effective for identifying animal species from samples of raw meat, fish or other products. Compared with serological methods, focussing identifies animal species closely related genetically. Since it is independent of antisera, it constitutes a very useful additional test particularly for identifying game and fish. It identifies certain exotic species from meat samples, provided that the corresponding reference extracts are available. Differentiation of animal species from specimens which have been subjected to heat is unsatisfactory with any of the methods discussed.

Reports were presented by the delegates of Austria, Switzerland and France as follows:

(a) Austria. The standard electrophoresis of meat extracts on polyacrylamide gel was unsatisfactory when used to examine samples from meat shipments in order to verify their species of origin. Electrofocussing gave better results but could not be used as an exclusive method for ascertaining species of origin. Serological methods using immunodiffusion based on slide precipitation were recommended. The main problem was to accumulate a sufficiently large collection of standard meat-extracts and of absorbed specific sera of all species including exotic animals.

(b) Switzerland. Isoelectric focussing allows imported meat to be checked at frontier posts. It is possible to differentiate between meat originating from different livestock species, game and fish. Buffalo can be distinguished from ox and various species of deer but the technique cannot be used to separate wild boar and pig or dog and wolf. It is considered that the identification of meat from different animal species is an important animal health control measure.

(c) France. Electrofocussing on a polyacrylamide gel gives good results but is limited by unsuitability on heated products. The detection of foreign protein in meat products is important and a comparison of the gel method, electrophoresis on starch gel and various serological methods was made. The techniques of electrophoresis and serology have also been used to detect cow's milk in goat cheese.
Additional reports were presented by Australia and the United Kingdom as follows:

(a) **Australia.** The report described the problems of maintaining standards for the export of meat and suggested a system of random examination of cartons of meat by core sampling. The immunodiffusion method is the routine method for species identification used in Australia but it is unable to differentiate between closely related species. Isoelectric focussing is used to differentiate between cattle and water buffalo and sheep and goats. Two additional methods — radio-immuno-assay and the enzyme-linked immunosorbent assay (ELISA) — have been developed for routine monitoring.

(b) **United Kingdom.** The ELISA has been developed but requires specific antisera. It has the advantages that only very dilute antisera are needed and it is not influenced by the problems of meat products mixed with vegetable proteins. In addition, only simple equipment is required and the test can be set up to provide a colour change which indicates a positive reaction. The problem of standard and specific antisera may be solved by the use of monoclonal antibodies which will be available once the appropriate cell line has been established.

In the discussion, the following points were brought out:

(a) **Standard reference protein extracts.** These were essential for use in the various laboratories to ensure that results could be directly compared between countries.

(b) **Heat-treated meat.** There was a serious limitation in the detection of denatured protein by most of the available methods.

(c) **Techniques.** Although serological methods are less specific, they are simpler and more generally used for routine screening. These methods are of particular use in the public health field where the number of likely species for substitution is limited. The ELISA technique gives reliable results and is not subject to the usual limitation of the precipitation techniques. Isoelectric focussing techniques have advantages as they can identify related groups of animals but they are expensive and require carefully controlled standards. All techniques have limitations of cost, manpower, reliable standards and none of the methods were capable of handling heat-treated proteins.

(d) **Antisera.** Commercially available antisera are limited to common species and it can be difficult to prepare antisera from exotic ones. It was suggested that dead animals could be an appropriate source of antigen for injection into rabbits.

All countries felt that serological methods were of value for routine examinations but the more precise methods of isoelectric focussing had a place in the event of problems or when animal health reasons necessitated a definite identification of species.
From 6 to 7 p.m., a press conference was held by the chairman of the Conference, the Bureau of the Commission, the President of the O.I.E. Committee and the Director General of the O.I.E. and attended by several journalists specialized in agricultural matters.

30 September 1982

FIELD STUDY TOUR

The day was devoted to a study tour to two research institutes, the Central Veterinary Laboratory, Weybridge (CVL) and the National Institute for Research in Dairying, Shinfield, Reading (NIRD).

During the coach journey from London to CVL, delegates were given an outline of the laboratory's history and a description of the aims and objectives of the work undertaken there. On arrival, they were welcomed by the Director, Mr. A.J. Stevens and met Departmental Heads and other members of staff. Delegates were shown a series of exhibits giving examples of some of the studies that had been completed at the laboratory including mastitis surveillance, parasitic gastro-enteritis, campylobacters and E. coli and adhesins. Delegates were given a choice of demonstrations to visit including the role of the badger in tuberculosis, current work in the field of leptospirosis, environmental monitoring for radio isotopes, the automated testing methods for brucellosis, warble fly and sheep scab control and two short video tapes on maedi-visna and enzootic bovine leucosis.

The tour continued through Surrey via Runnymede of Magna Carta fame to the River Thames at Windsor where delegates embarked on a river launch. Lunch was served during a short cruise on the river.

On arrival at the Bernard Weitz Centre at NIRD, delegates were welcomed by the Director, Professor J.W.G. Porter, who gave a brief explanation of the aims and work carried out at the Institute. The Weitz Centre is principally concerned with the practical operation of a large-scale dairy unit and delegates were able to see a large rotary milking parlour, cattle handling facilities, mechanical feeding methods and methods of slurry handling and processing.

After tea, at which delegates met some of the Institute's staff, the Director of the Reading Cattle Breeding Centre, Dr. P.H. Lamont, spoke about the work being carried out on artificial insemination in cattle and pigs at that centre.

1 October 1982

Item 4: CURRENT ANIMAL HEALTH PROBLEMS

General reports covering a range of animal health problems were presented by delegates from Poland, Portugal, the United Kingdom, the Netherlands and Spain.
Specific animal health reports were presented on contagious bovine pleuropneumonia by France, Aujeszky’s disease and varroasis of bees by the Federal Republic of Germany, Aujeszky’s disease, classical swine fever, contagious equine metritis and sylvatic rabies by Italy, Newcastle disease in pigeons by Portugal, varroasis of bees by the U.S.S.R. and vesicular stomatitis by the U.S.A.

An oral report on FMD was presented by the German Democratic Republic.

AUJESZKY’S DISEASE

Aujeszky’s disease (AD) appeared in a number of reports and was selected for further discussion to allow an exchange of information to take place on the problem of epidemiology and control in Member Countries.

Additional comments on Aujeszky’s disease were presented by the delegates from Italy, Federal Republic of Germany, German Democratic Republic, France, United Kingdom, Sweden and the Netherlands as follows:

(a) Italy. The disease was endemic in the north and centre of the country and was made notifiable in July 1980. Additional measures, including purchase of stock from disease-free farms, use of farm quarantine, removal of stray dogs and cats, disposal and heat-treatment of meat from infected animals, a ban on swill feeding and disinfection were imposed to reduce disease spread. Both inactivated and attenuated vaccines were employed to prevent the economic losses from the disease.

(b) Federal Republic of Germany. Between April 1979 and March 1980, 512 cases occurred in swine herds, 81 in cattle herds and 45 dogs and 17 cats were also infected and legislation passed in May 1980 made the disease notifiable. 133 herds were infected during August 1982. Vaccination with official permission is an alternative or additional method available for control. Only inactivated vaccines are used but this gives rise to a number of fundamental questions relating to virus multiplication, excretion and the development of latent carriers. Eradication by a stamping out policy with removal of seropositive animals is the only practical method but is a problem in vaccinated herds.

(c) German Democratic Republic. Experience had shown that the removal of seropositive animals from a herd was ineffective in eliminating disease. At a specific time, Aujeszky’s disease could only be eliminated by a stamping out policy of the entire infected herd even though only 50% of the pigs would be serological reactors. Other control measures included restrictions on movement of animals, heat-treatment of meat and treating vaccinated herds in a similar way to infected herds.

(d) Great Britain. 32 cases of Aujeszky’s disease had occurred until now in 1982 with four new foci of disease resulting from the movement of weaners from infected herds. The disease became notifiable in 1979 and in May 1982,
new legislation was introduced which provided for movement controls on infected farms. Vaccination is prohibited in Great Britain but vaccines are licensed in Northern Ireland. A poll of pig producers is proposed for 1982 and, if there is support from the industry, an eradication programme by slaughter and compensation might be introduced. The epidemiological problems associated with a stamping out policy were well recognised.

(e) France. The scientific aspects of the disease needed to be balanced with economic realities and the feasibility of disease control. Aujeszky's disease had been notifiable for 5 years with restrictions on the movement of pigs from infected farms. In the high production areas such as Brittany, the use of an inactivated vaccine to reduce the levels of infection was financially advantageous. Additional measures were needed in other regions to prevent the introduction of disease and regulations are proposed making it obligatory for breeding pigs to be sold only from Aujeszky's disease free herds.

(f) Sweden. Up to 10 cases have occurred annually in the past two years. Three serological surveys were carried out in 1968/69, 1974/75 and 1981/82. The early surveys revealed up to 26.7% seropositives in the infected areas but no positives in the free areas. The most recent survey has shown no evidence of spread to the free areas. An inactivated vaccine has been used in newly introduced animals in two herds only but vaccinated animals cannot be marketed. A cost-benefit analysis is being carried out to evaluate the various possible approaches to disease control.

(g) The Netherlands. The disease has existed in some parts of the country since 1975 but because of the subclinical forms of the disease there are no regular report systems or movement controls although vaccination with an inactivated vaccine is promoted in certain areas. Studies are taking place on the use of intranasal vaccines as these may produce an improved local immunity and might overcome the problem of maternal antibodies.

The following information emerged from the discussion:

(a) Vaccination. Italy uses both attenuated and inactivated vaccines, whereas vaccination is prohibited in Great Britain. In the Netherlands, a vaccination scheme is promoted whilst in the Federal Republic of Germany, inactivated vaccines are only permitted after official approval. The potential of intranasal vaccines has still to be evaluated. Vaccinated pigs can be infected by a higher dose of virus than that needed in susceptible pigs but there will only be mild clinical signs of disease. The excretion of virus from vaccinated animals may be less and will not be sufficient to infect immune animals, although there is a cumulative effect of virus in the environment. Protective vaccination reduces the probability that disease will be introduced into a herd, reduces virus spread and reduces economic losses.

(b) Heat-treatment of meat. In a number of countries (Italy, German Democratic Republic), heat-treatment of meat of animals from infected herds was recommended as a control measure.
(c) **Carrier sows.** Vaccinated animals may become latent carriers and information from the Federal Republic of Germany delegate indicated that the virus genome will probably persist throughout the lifetime of the vaccinated animal. Virus had been isolated up to 18 months after infection. Immunosuppression resulted in reactivation of the genome and excretion of virus then took place from the nasal passages.

(d) **Control.** The delegate from the German Democratic Republic emphasised the importance of a herd stamping-out policy and the difficulties of eradicating disease in vaccinated herds where most animals would be seropositive. The delegate from the Federal Republic of Germany felt that the current neutralisation tests were relatively insensitive in demonstrating low levels of antibody which might be associated with latent carriers. The ELISA would be as sensitive as the neutralisation tests.

The consensus of the delegates was that the eradication of Aujeszky’s disease is a difficult problem and much more epidemiological information was needed together with an evaluation of the various control measures.

**CONTAGIOUS BOVINE PLEUROPNEUMONIA (CBPP)**

After the report on the situation of CBPP in the south of France presented by the French delegation, the Conference has approved the proposal made by the President of the O.I.E. Committee that France and Spain should present a report on the situation of the disease in their respective countries at the next General Session of the Committee in May 1983.

**RINDERPEST**

Dr. Blajan, Director General of the O.I.E., recalled that during the last General Session, the Committee had adopted a resolution which gave him a mandate to find the necessary funds to organise a rinderpest eradication campaign in Africa. Unfortunately, there had been a negative response from the European countries to a request for financial aid.

Dr. Blajan indicated that rinderpest had reappeared in East Africa and it was known that the disease persisted within the confines of Ethiopia, Sudan and Somalia. Political problems which occurred in these regions followed by cattle movements had resulted in spread to two large regions of the Sudan. The disease was now spreading towards the Egyptian frontier whilst to the west it was menacing Chad and the Central African Republic. A considerable extension of the epizootic must be foreseen if international assistance is not forthcoming. An eradication campaign should be implemented as soon as possible in line with the O.I.E. recommendations.

Dr. Blajan stressed the important role which the European Member Countries of O.I.E. could play by convincing bilateral agencies and international organisations such as the E.E.C. that rinderpest eradication was vital. Doubts had been expressed by some experts that rinderpest could not be era-
dicated. If, however, the vaccination campaign which should last for a period of 5 years must be followed by an epidemiological surveillance system with intervention when necessary until rinderpest was definitely eradicated, under these circumstances, the eradication of rinderpest was possible.

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The Conference then adopted the final report with amendments and agreed to the conclusions and recommendations as shown in the Annex.

CLOSING CEREMONY

In his final address to the Conference, Dr. Walla, President of the O.I.E Regional Commission for Europe, thanked the United Kingdom authorities for holding the 1982 Conference in London and congratulated them on the administrative arrangements.

He referred to the high quality of the reports. The Conference had heard a great deal of very useful information about the three main subjects that were discussed and delegates now had a much better understanding of the methods of control of infectious animal diseases employed by Member Countries. The main points were summarised in the conclusions and recommendations.

Dr. Walla thanked the rapporteurs and all the delegates who presented papers and took an active part in the discussions. He then declared the Conference closed.

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From 6.30 to 8.30 p.m., a reception was given on board HQS Wellington by the O.I.E., which was attended by more than one hundred people and honoured by the presence of Mrs Peggy Fenner, M.P., Parliamentary Secretary, Ministry of Agriculture, Fisheries and Food.
Annex

CONCLUSIONS AND RECOMMENDATIONS

ITEM 1
SWINE VESICULAR DISEASE

1. The Conference concluded that:

   (a) In its classical form, swine vesicular disease must be considered to be clinically indistinguishable from foot and mouth disease.

   (b) In recent years, a milder clinical syndrome has been reported in some countries and this does not appear to be due to any change in the virus which is detectable by serological means.

   (c) Differential diagnosis from foot and mouth disease, which is vital, is dependent on laboratory tests. A variety of sensitive and specific diagnostic tests is now available.

   (d) In most countries, the feeding of unprocessed waste food containing infective material remains the main source of primary outbreaks.

   (e) The massive amounts of virus shed following rupture of vesicles, the persistence of the virus and its resistance to disinfectants and environmental factors make its elimination extremely difficult.

   (f) Contamination of vehicles as a result of transport of infected pigs renders the vehicle an important means of dissemination of infection.

   (g) Serological surveys have proved to be of value in detection of undisclosed infection particularly if positive results are followed by comprehensive epidemiological investigations.

   (h) There appears to be some variation in interpretation of serological test results in different countries.

   (i) In most countries, stamping out remains the method of choice for controlling SVD.

2. The Conference therefore recommends that:

   (a) SVD should be a notifiable disease in all countries.

   (b) The disposal of waste food should be controlled by legislation and regulations for its processing and feeding to livestock must be effectively implemented.

   (c) Particular attention should be paid to disinfection procedures particularly of vehicles used for the transportation of livestock.

   (d) Countries which have experienced outbreaks of disease should undertake serological surveys, particularly in high risk areas, to identify undisclosed foci of infection.

   (e) Measures should be taken through the O.I.E. Norms Commission to standardise the interpretation of results from serological tests.

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ITEM 2
LEPTOSPIROSIS

1. The Conference concluded that:

(a) Research in the last 20 years has shown that leptospiral infection is endemic in domestic species in many countries and a wide range of serovars are involved. It is therefore desirable to control international trade to prevent the importation of exotic serovars into a country.

(b) Information is now available that serology is an inadequate criterion with which to identify carrier animals. The prophylactic use of dihydrostreptomycin as recommended in Article 4.1.2.1. of the O.I.E. International Zoo-sanitary Code seems to be a more practical and effective method than serology approach to prevent the importation of exotic serovars.

(c) Control of leptospirosis on a national level presents very important problems to some countries.

(d) Endemic infection in domestic species constitutes a public health risk which has received insufficient attention.

2. The Conference therefore recommends that:

(a) Dihydrostreptomycin might supercede serology as a means of controlling leptospirosis for the purposes of international trade of breeding animals.

(b) Further research should be implemented by the Member Countries to determine the efficacy of other antibiotics for the termination of the carrier state in individual animals. The role of antibiotics as a means of preventing transmission of leptospirosis via semen should also be evaluated.

(c) Vaccination should be encouraged at a herd level and accompanied by appropriate zoo-sanitary control.

(d) Closer co-operation between O.I.E. and W.H.O. with respect to this zoonosis should be encouraged. The need for the further development of reference laboratory facilities for the serovar isolation and identification of leptospirosis in farm animals is stressed.

(e) The appendices to the O.I.E. Code should be updated with respect to new diagnostic techniques in leptospirosis.

ITEM 3
METHODS FOR DETERMINING ANIMAL SPECIES
FOR MEAT AND MEAT PRODUCTS

1. The Conference concluded that:

(a) The requirements of animal and public health control and the need to protect animal species make it essential that meat, meat products and milk products in which there is trade should be properly identified.
(b) As international trade in meat, poultry, game and fish increases, false declarations become increasingly more common.

(c) It is essential to apply test methods that make it possible to identify the species of origin of these products.

(i) For quality inspection of the products, which are included in points (a) and (b) above, tests which confirm the claims made are sufficient.

(ii) However for import inspections, methods must be used which not only control the quality of the products but make it possible to identify the animal species.

(d) For meat where false declarations are made, the animal health aspect is particularly important. The problem of consumer protection when cheap meat is falsely declared as a more expensive product has not been solved.

(e) Apart from the usual protein identification methods which are suitable for determining animal species from samples of muscle or milk products, the ELISA and isoelectric focussing methods are seen as being particularly effective.

(i) Isoelectric focussing is a direct and very specific method. Identification of the animal species is based on the sample material without the use of homologous antisera. Diagnosis is based on a comparison procedure using reference extracts of muscle. Since antisera are not required, the identification of exotic domestic and wild species and identification of fresh and salt water fish is possible.

(ii) The ELISA method depends on the availability of specific antisera. Parts of the process can be automated so that it is particularly suited for large numbers of routine tests.

(iii) Other biological protein differentiation methods using precipitation are also currently used. Apart from the fact that specific species antisera must be available, the precipitation methods often are not sensitive enough for the identification of genetically closely related species.

(iv) With none of the methods mentioned in (i), (ii) and (iii) is it possible to identify species from fully denatured heat-treated proteins.

(f) All groups working with isoelectric focussing can identify down to zoological species using raw muscle. The evaluation of the limits of this method varies since different techniques and parameters are used. The method is also suitable for the identification of proteins that would not normally be present provided that reactive proteins or their specific breakdown products can be extracted.

2. The Conference therefore recommends that:

(a) Veterinary Services of the various countries are called upon to intensify their inspections of imported meat, poultry, game and fish with regard to identification of animal species. Similar tests should also be carried out on such products held under custom control for immediate re-export (bonded warehouse).
(b) The isoelectric focussing method should be introduced as an additional official method particularly for veterinary legal purpose. Research to improve the specificity of biological and chemico-physical methods should be intensified. To cover public health requirements, the automated ELISA method using monoclonal antibodies should be encouraged.

(c) Groups using the isoelectric focussing method should coordinate their techniques to increase the reproducibility of the results.

(d) The necessary reference extracts for this method should be centrally produced and supplied to interested research organisations.