EPIDEMIOLOGICAL SITUATION DURING 1990

Rabies in France and in Europe during 1990

Aubert (M)

The epidemiological situation of rabies in France and in Europe during the year 1990 is presented from tables, maps and graphs. Some new scientific and technical acquirements, in the field of epidemiology or control of rabies, are documented.

Controlling Enzootic bovine leukosis in France during the year 1990

Dufour (B)

The results of 1990 campaign in France against EBL are presented with the help of tables and figures. Data are coming from local directions of veterinary Services in French "département" and from a survey performed among sanitary defence committees. The indicators used (infection rates, clinical outbreak, qualification rates) give a measure of the fast advance performed.

Some aspects about the epizootic of hog cholera in Belgium during 1990

Miry (C), Castryck (F), Koenen (F), Broes (A) & Segers (E)

In 1990 a severe epizootic of classical swine fever was suffered in Belgium. From January till October, 113 herds in 4 provinces were infected. Drastic sanitary measures have eradicated the disease again. This paper describes shortly the principal clinical and epidemiological aspects of these outbreak; as well as the diagnostic procedures and the sanitary measures taken in order to eradicate the disease.

Brucellosis in France: situation during 1990

Ganière (J-P)

The sanitary situation in France for cattle, sheep and goat brucellosis is improving on a regular basis. During 1990, the herd infection annual prevalence rate is 0.55 p. I00for cattle, 1.54 p. 100 for sheep and 0.41 p. 100 for goat. Special efforts directed to the screening and the culling of infected animals (with an increase in stamping out herds classified as too much infected) lead to an increase in sanitary slaughters. Nevertheless, only results that will be recorded in 1991 and 1992 will allow to appreciate the consequences of this sanitary policy in the case of brucellosis.

Aujeszky's disease in France during 1990

Toma (B), Vannier (P), Buffereau (J-P), Picard (M), Van der Donckt (J), David (C), Eloit (M), Gonin (P), Salingardes (F), Maire (C), Lery (L), Goyon (M), Tkaczuk-Moquay (V) & David (F)

This paper presents the epidemiological situation for Aujeszky's disease in France during 1990, using tables and figures. The tracers used show that the situations in 1990 and 1989 are very similar.

The campaign against bovine tuberculosis in France during 1990

Bénet (J-J)

During 1990, 497,000 cattle herds, *i.e.* 19.5 millions of cattle have been tested against tuberculosis. Annual prevalence rate of infected herds was 0.37 %, the one for point prevalence on December 31st 0.195 and incidence is 0.17 %. The ratio for infected animals is 2.6 out of 10,000. Number of cattle seized at the slaughter house is still decreasing. The proportion of non-marked animals being seized

has been quite stable since these past ten years: 28 %. The proportion of whole seizure on all the seizures increases during these past 10 years, from 11 % to 20.8 %.
PRRS

Diagnostic approaches, spread and economic impact of Porcine Epidemic Abortion and Respiratory Syndrome in the Netherlands

Van Klink (E.G.M.), Van der Sande (W.J.H.), Komijn (R.E.), Cromwijk (W.A.J.), Schukken (Y.H.) , de Jong (M.C.) & Dijkhuizen (A.A.)

The outbreak of the new pig disease PEARS in The Netherlands is discussed. The difficulty in direct diagnosis and the ways in which attempts have been made to overcome this difficulty in practice are presented, as well as aspects of the spread of the disease. The disease mainly spread fast in relatively pig-dense areas, especially at the start of the outbreak. The economic impact may be considerable, although long term effects are not yet identifiable.

Clinical and pathological aspects of Porcine Reproductive and Respiratory Syndrome (PRRS)

de Jong (M.F.), Cromwijk (W) & Van't Veld (P)

In early 1991, the Dutch pig-industry was struck by the Porcine Reproductive and Respiratory Syndrome (PRRS) among breeding sows and their piglets by the Lelystad agent. After some flu-like symptoms, sows with anorexia, fever or under temperature can be found. Some pigs showed so called blue ears. Abortion (< 109 days), early farrowing (109-112 days) and late farrowing (> 118 days) increased significant. Placentas showed haemorrhages, oedemas and necrosis. Increase of still born and mummified piglets are reported during the next 2 till 4 months. Most pigs, especially young piglets had respiratory disease and died. The pleural and pericardial fluids increased, the lungs do not collapse and show a proliferative and necrotizing pneumonia. In breeding herds, the losses in pig production increased to at last 2 piglets per productive sow per year. In growers and fatteners, the disease tended to be more chronic which seem to lead to an increase of poor doers.

PAPER OF EPIDEMIOLOGY

A method to appreciate the efficiency of a preventive anti-coccidiosis treatment in an experiment with repeated measures

Lopez (C), Chatelin (Y-M) & Mage (C)

This method has been designed to assess the effect at suckling breeders of a highly remnant anti-coccidian treatment on the change in the percentage of animals presenting a positive fecal flotation during the winter months, compared to the effect of traditional treatment. A logit-scaled linear model of infection risk was defined. It enables demonstrating at the end of winter that the preventive treatment had a certain effectiveness and that heifers run a higher risk. These effects varied during the winter.

MEETING OF « ECO-PATHOLOGY » WORKING GROUP (Lyon, March 27th, 1991)

The different types of studies in analytical epidemiology. Statistical models and associated risk indicators

Sanaa (M)

This paper presents the principal designs of analytic epidemiologic surveys and the measures of association between the study factor and disease. The three basic designs of epidemiologic surveys

are cohort, cross-sectional and case controls. The prospective or cohort survey is preferred, in theory, for testing an etiologic hypothesis, because this type of observational study most closely resembles an experiment. Other studies type like case-controls present certain practical advantages that make them attractive under special conditions. Measures of association reflect the strength of statistical relationship between the study factor and the disease. The measures association may involve incidence (rate or risk), prevalence or mortality. The choice of an association measures and its interpretation depend on the survey design.

Statistical strategy of the Eco-pathology Laboratory
Lescourret (F) & Faye (B)
The data processing of eco-pathological surveys on dairy cows is presented in the framework of exploratory analyses. Processing strategies fitting in with these analyses are proposed, through examples of methodological problems (diversity of explanatory factors, duality of the research object - cow/herd, consideration of time as a major variation axis). Models adapted to these strategies are displayed, with emphasis on correspondence analysis with instrumental variables applied to the explanation of milk bacteriology.

Methodological approaches of the statistical treatment of eco-pathological studies at the Animal Eco-pathology Centre
Luquet (F), Bugnard (F), Ducrot (C) & Cimarosti (I)
Different methodological aspects of the statistical analyses carried out by the "Centre d'écopathologie animale" are presented. In the first, several considerations are developed: Center's aims, means (survey, workshop, Software), main steps for statistical analyses. Then, statistical methods used for the analysis of two surveys are explained: the first one, called path analysis, is used when risk factors hypotheses are ordered in time (interest, steps, application to an eco-pathological survey in beef cattle breeding are exposed). In the second survey, two multivariate statistical approaches, French and Anglo-Saxon, are compared to study risk factors (multiple correspondence analysis and multiple logistic regression model). The results obtained in a survey in sheep breeding prove the specificities of each of the analysis methods and their complementarities regarding the research of risk factors.

Comparison of results obtained from different classes separation with an example of multifactorial analysis
Fourichon (C) & Madec (F)
A sensitivity analysis of factorial analysis of correspondence was performed on a set of epidemiological data. Quantitative data were transformed into categorical data with six different methods. The subsequent analysis' results were compared. With data which distribution is close to normal, factorial analysis of correspondence appears to be robust.