

In vitro testing of blast transformation, immune rosette formation, and IF-detectable IgG-positive cell counts indicated a 40-50 p. 100 decrease of immunological responsiveness relative to the control. Toxin neutralizing titres to necrotic enteritis/NE/vaccine were in fact significantly lower in the sera of T₂-treated pigs.

In the given conditions of experiment, T₂ developed a distinct immunosuppressive action in the early phase of immune induction in growing pigs by interfering with the function of both T- and B-lymphocytes.

Erythrocyte glutathione peroxidase (GSH-Px) polymorphism in Finnsheep

F. ATROSHI *, S. SANKARI, S. OETERBERG and M. SANDHOLM

Department of Pharmacology and Toxicology () / Department of Biochemistry
College of Veterinary Medicine, Helsinki 55, Finland
and Department of Animal Breeding, Agricultural Research Centre, Vantaa, Finland*

Erythrocyte glutathione peroxidase (GSH-Px) was studied in 200 *Finnsheep*. The concentration of GSH-Px varied between 500 to 1 800 μ kat/l red cells and the distribution revealed a bimodality despite the same diet and selenium intake. The peroxidase activity of the sheep erythrocytes was classified high if it was $> 1\,000$ μ kat/l or low if it was $< 1\,000$ μ kat/l. Inheritance studies of GSH-Px types revealed that they are controlled by a pair of autosomal genes, the genes for GSH-Px high being dominant to the genes for GSH-Px low. These two groups of sheep were then compared for other blood parameters and production characteristics. It is proposed that the low GSH-Px may represent an adaptation to low selenium intake.

SESSION II

PROBLÈMES D'ÉLEVAGE SOUS LES TROPIQUES

Cattle production in the tropics and improvement through breeding

J. RENDEL

*Animal Production and Health Division
Food and Agriculture Organization of the United Nations
Via delle Terme di Caracalle, 00100 Rome, Italy*

Results from breeding and improving dairy and beef cattle in the tropics are reviewed. It is concluded that for improved dairy production, climate *per se* is no serious constraint to the use of European-type cattle in tropical highlands or in dry, hot areas provided that management is good. In hot, humid areas, European-type cattle do not adapt well, and local well-adapted breeds or crosses should be used. Suitable breeding policies are outlined. Under conditions of smallholder production, the extensive system with crossbred cattle, once-a-day milking and calf suckling has a role to play. Beef production is generally carried