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 T_a-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

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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 $> 1000 \ \mu kat/l$ or low if it was $< 1000 \mu kat/l$. 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

L RENDEL

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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