meat. To compute the production cost an equation was constructed, where the traits were included as variables. Using this equation the production cost per kg lean meat can be computed at different levels of the variables. To obtain the proper mathematical expression of the financial effect of changes in the variables, the partial derivative of the equation was computed for each of the traits referred to. These expressions directly show the financial value of each trait per unit of change at different levels of the variables. The stability of the economic weights has been investigated. The frequence and points of time of the monetary returns from breeding as well as the influence on the genetic gain of different or incorrect economic weights have been discussed.

ESTIMATION OF ECONOMIC VALUES OF PERFORMANCE CHARACTERS IN PIG AND SHEEP BREEDING

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Hybridisation programmes are mostly realized by means of three levels of herds where breeding animals used in elite herds are deciding. In the consequence of the high reproduction rate in the pig it is possible to produce 700-800 final hybrids per sow and year in elite herds. In Czechoslovak conditions 73 p. 100 of the total cost is expended on the own fattening, 21 p. 100 on sow breeding in commercial herds (i.e. 94 p. 100 on the third level of final hybrids production), 5 p. 100 on multiplier herds and 1 p. 100 only on elite herds. It is therefore possible to evaluate the effectiveness of the hybridisation programme on the basis of results achieved in the last production level.

In the sheep with much lower reproduction rate is the situation qualitatively different. In a specialized large scale unit for lamb production within the closed system of breeding about 20 p. 100 of the total cost is expended on the breeding of pure lines, 45 p. 100 on the breeding of F_1 females and 35 p. 100 on the own fattening. The calculation of a profit function is here therefore much more complicated. An example of the construction of a multifactorial function is presented. It includes four groups of basic production parameters and five categories of animals only compared with the practical situation where 22 categories are necessary.

THE USE OF PRODUCTION SYSTEMS ANALYSIS IN DEVELOPING SELECTION GOALS AND METHODS

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Production systems analysis is described, its present applications are discussed and its uses in determining selection goals and methods are discussed. The key features of systems analysis are the statement of a well-defined objective, the accurate representative of real-life production programs and the use of alternative procedures by decision makers. Measurements that have been suggested to describe selection goals are discussed and compared with the objectives specified in systems analysis. Selection procedures that have been used for these various measurements are also discussed and compared with methods that could be used in systems analysis.

PROCÉDURES DE DÉFINITION DES OBJECTIFS DE SÉLECTION

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L'objectif d'une sélection est un ensemble complexe de nombreuses exigences exprimées sous forme soit de pondérations liant les caractères, soit de gains génétiques à réaliser pour certains caractères ou ensembles de caractères. Un index doit représenter le meilleur compromis possible entre ces informations.