hatchability as follows: high or low temperature and humidity in eggs storing place, long-termed storing, wrong hatching technique, wrong nourishment, shaking during manipulation with eggs.
On the Tešedíkovo farm were weight differences between Tešedíkovo geese and Tč crosses up to 28 days of age significant in favour of Tešedíkovo geese, between 56 and 84 days of age significant in favour of Tč crosses. There were no significant differences between named typed in older age.
Kočí and Kočíová (1993) found out, that growing is determined firstly by its origin followed by nourishment factors.
Following slaughtering analyse of goslings we ascertained, that butcher yield of T geese was 72,23 %, T ganders 70,08 %, cross geese Tč 76,61 % and Tč ganders 75,35 %.
Hudský et al. (1974) has stated yield of Rhyne geese within span 69,5 - 70,4 %.
Dissected trunk weight in Tešedíkovo of T geese was 2460 g, Tč geese 2602 g, T ganders 2700 g and Tč ganders 2774 g. This corresponding with results Hudský et al. (1974), has stated, that dissected trunk weight of Rhyne geese was 2320 - 3017 g.
In the growing test we has tested crossbreeds of following combinations: TxBa, Tčx Tč, TčxBa. After analyse its growing intensity we found out, that the best results were reached from combinations: TxBa, TčxBa and TčxTč, resp.
Average daily increasing expresses for all period of growing test reached within males values from 68 to 72 g, females 61 - 64 g. Ács et al. (1995) has state, that genotype of geese had significant influence on body weight. This confirmed Puchajda et al. (1997), when compared gained results of Italian and Bilgoraj geese.

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THE INBREEDING ANALYSE IN BREEDING SERVICE USED BULLS OF SLOVAK SPOTTED BREED OF CATTLE IN SLOVAKIA

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Summary

In the set of 82 sires of Slovak spotted breed of cattle an their crosses devided into four groups according to genotype and fylogenetic relationship we analysed relationship of sires. The coefficient of relationship R_{xy} varied 0,00 - 0,20. In the whole set of sires there was only 2,44 % inbreeding sires with F_x = 3,13 and 6,25. Dimension of values we found did not cause any negative impact comming out of inbreeding.

***Key words**:* cattle, sire, genotype, coefficient of relationship and inbreeding.

Introduction

The inbreeding in the breeding of farm animals in an important factor of successfulness of the breeding work. Its evaluation and control of the level is permanently necessary and actual from the point of view detailness discription and estimation of breeding value and followed acceteration of genetic progress.
The breeding structure of the bulls used in breeding service in Slovak Republic is varians and at once for present period is characteristics. The farmers chosen the breed and the sires according to the result of offspring test but mainly for breeding value in milk and meat perforence.
Working out the effektive breeding programmes with utilization of our and foreigner breeds with attention to inbreeding can safe systematic and dynamic changes in breeding structure of used sires. If there is sustainable great population of cattle there is not risk of nonplaned nondesirable inbreeding.The inbreeding can occure in the populations which are regarding as a gene reserve or in smoll populations. Mainly in the last years when A. I. Is used plenary, the new biotechnical methods are used, by which the number of sires in breeding services are decreased hut there is increasing of genetic gain on one side and at once it can cause increasing relationship and level of in breeding on the other side.
The aim of this article is to analyse the relationship and breeding stucture of sires used in breeding services in some regions of Slovakia.

The present, very often caled closical breeding programmes in the cattle breeding comes from the works of RENDEL and ROBERTSON (1950), SKJERVOLD (1974). They supposed to reach in the population optimal genetic gain by means of A. I. of sires positively proved. According to of these autors, creation of breeding programmes is connected with estimation of genetic gain and to reach its optimum by model caltulation, by analyses of conditions to reach suitable breeding strutcure of individuals in real population and economic effectiveness worked out breeding programmes.
Obtained genetic gain PŘIBYL and PŘIBYLOVÁ (1996) regarding as the most important factor successfullness of breeding work, because it determine tendency, way and aim of breeding work in future.
The breeding work is directing program which cover system of necessary steps to improve productive abilities of farm animals which deside to fulfil the aims of breeding. The aim of each breeding program is to cover all steps of breeding work into one system to provide in real condition with adegnate economical effect of breeding type and standart.
In the process of high productive stock creation are proved sires very important and they play decesive role in intensity of breeding work intelation to breed and to productive orientation.
Breed of cattle are in premonent dynamic movement. Their evolution is influenced by requirements of market, economical and veterinary condition etc. The sires have to be selected in relation to growth, evolution, health, fertility, exterier, meat and dairy perforence. The source of these informations are parents, sibs, own performance and performance of offspring. These condition were solved by HACKENBERGER and FEWSON (1998). They found the portion of total effect of breeding work in pied cattle is for dairy performance 26 %, meat 25 % and 49 % for other marks.

Material and methods

The material for solving the established aim was obtained from breeding evidence of Slovak biological servces, breeding station of bulls Nitra - Luzianky. We used the pedigree with whole evidence up to third generation of ancestors. The sires used in breeding we devided into four groups according to genotypes:
1) S 100, 2) S x M < 50, 3) S 50 x M 50, 4) S x M > 50, where Slovak spotted cattle is marked as S and dairy breeds (lowland red and black holstein etc.) as M.
The itensity of inbreeding and relations among sires mentioned genotypes we evaluated by means of coefficient F_x and colateral coefficient of relationnship R_{xy} according to the WRITGHT (1922). Calculated values were worked by vario - statistical formules.

Results

Obtained results an relationship in analysed set of sires filed up according to genotypes are presented in table 1 and 2.
In the most numerous group of Slovak spotted sires (82) (table 1) we found coeficent of relationship relatives sires R_{xy} = 0,16 with relatively trigh coefficient of variability (57,5 %) even it was lower then was in the group from (S x M > 50 %) where 80,76 % and R_{xy} = 0,20. There we suppose that lower number of sires caused higher relationship and higher variability. In the group of sires S 50 x M 50 we did not find any relationship, because there were only two sires.
Relationship of individual sires expressed by coeficient R_{xy} varied in limit 0,01 to 0,50 what is reason for high variability of this evaluated marker. By means significance test of differention in coefficients of relationship in groups of tested sires we found low statistically nonsignificant (P > 0,05) differention of this marker (table 2).
In the evaluated set of sires we found value intensity of inbreeding 3,13 and 6,25 only at two sires (UT 003 and STN 032), which represent 2,44 % of total sires used in breeding.

Discussion

The process of cattle improvement is based on the principales of selection and optimal reproduction the most suitable individuals of the population. The new biotechnical procedure in fertilization of cows are able to limit a number of individuals participating on creation of new generation. Similary either high intensity of sires selection can cause negative results in creasing homozygovity which we can absorved not only in small but also in a larger populations as it was state by WILKE (1991) and others, according them is necessary to look after inbreeding permanently. We agree with such opinion on the base of our analyse and obtained results in relationship of sires.
Detected relationship which we evaluated by coefficient of relationship R_{xy}= 0,00 -0,20 we hold as high mainly in comparison with results of BOLDUAN (1966) who calculated R_{xy} of the black and white sires in values of 1,28 ; 1,51 ; 1,64 % and also SCHWARK (1966) who find R_{xy} = 2,64 % in the set of 100 sires of that breed. Our results are partialy simillar to that which found REEB (1982) who calculated for set of sires F_x = 0,39 - 12,5. The intensity of in inbreeding with value of 3,13 - 6,25 % we found in our set of sires. We agree with opinon of KŘISTEK (1996) who stated that used inbreeding when intensity is up to 6,25 did not negatively influenced the population.
According to obtained results we suppose that conception of used breeding plans at present cannot have negative influence in population because of inbreeding. Judging of relationship according to pedigrees up to third generation of ancestors is suitable, but in spite of this knowledge of real origin of sires should be altogether with breeding value the main results of breeding work.

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Table 1. Relationship of the sires according genotype

Genotype	R_{xy}			
	n	$\overline{x}$	s	v
S 100	82	0,16	0,09	57,51
S x M < 50	16	0,15	0,08	53,42
S 50 x M 50	2	0,00	0,00	0,00
S x M > 50	8	0,20	0,16	80,76

Table 2. Test of differention significance R_{xy} in breeding groups of sires

Genotype	S x M > 50	S 50 x M 50	S x M < 50
S 100	0,03-	0,00-	0,01-
S x M < 50	0,05-	0,00	
S 50 x M 50	0,00-		

- P > 0,05

Diagr. 1 **Parameters of the interio status in pigs**