INTRODUCTION

The biggest problem of the Hungarian sheep farming is the low prolificacy, and the reproduction traits are the economic reserves (Nábrádi et al., 1998) of the farm. The number of marketable lambs per ewe could be increased by using breeds with high prolificacy in the crossbreeding (Kukovics, 1985) resulting 0.6-1.0 extra lamb (Kukovics, 1999) per lambing. In order to improve the meat production characteristics of the lambs several breeds were imported to the country among which the Suffolk and the Ile de France (Kukovics, 2000) resulted the best quality lambs in crossbreeding. For increasing the productivity of the ewes and improving the meat quality of the lambs development of one prolific- and two meat breeds nucleus flocks were started in mid 70’s (Harcsa et al., 1999), and were still going on at the end of 1990's.

MATERIAL AND METHODS

Breeds. Some livestock of Suffolk breed was imported from Iowa and Illinois in 1973. In 1982, breed consisted 185 ewes, 45 rams, 48 yearling ewes, 52 ram hoggets, and the breed and submitted to registration as Tetra Suffolk. Now there are 185 breeding ewes in the nucleus. Also in 1973, some Ile de France livestock were imported from France. In 1982, there were 95 ewes, 25 rams, 42 yearling ewes, 39 ram hoggets, and 123 suckling lambs, when the registration procedure was initiated as a breed. At present the breed flock is consist of 1 900 breeding ewe in the nucleus. Development of the Prolific Tetra breed started in 1970. From among the several breeds the followings were finally chosen: Romanov A, B, C, F Finn landrace A, B, which were used in crossings with merino ewe stocks. The structure of the crossings were: Romanov R2 = RomanovVA.C 87.5%; 12.5% Merino; Finn R1 = 75% FinnA,B, 25% Merino; Finn Romanov F1 = 50% Romanov, 50% Finn. In 1982, the flock consisted of 4250 elite ewes, 315 rams, 1700 yearling ewes and 650 ram hoggets. Nowadays 1,200 breeding ewes are producing in the nucleus.

Statistical analyses. In this study the lambing %, prolificacy %, and the prolificacy indices % were examined considering the last ten years, using SPSS for Windows program.

RESULTS AND DISCUSSION

The changes in reproduction traits of the three registered breeds could be followed on the Figure 1-6. In Suffolk breed the reproduction data were fluctuated: the lambing percentage never reach the 85%; the prolificacy ranged between 117 and 188%. In the case of the Ile de France the lambing percentage was around 90%, the prolificacy changed between 125 and
154%. The Prolific Tetra breed had the best data: lambing percentage 90.7%; the average prolificacy value was 175.2%.

Figure 1. The reproduction results of the Suffolk population at Szendrő in the last decade

Figure 2. The reproduction results of the Ile de France population at Szendrő in the last decade

Figure 3. The reproduction results of the Prolific Tetra population at Szendrő in the last decade

Figure 4. Changes in the lambing percentages of the registered breeds at Szendrő.
CONCLUSION
The environment (feeding level) had a strong significant effect on the reproduction data of the three breeds. However the fluctuation of the prolificacy were not the same in the studied breeds, there were not too much difference between the Suffolk and the Ile de France concerning the average data of the 10 years period: 124.2 and 120.9 %, respectively. The Tetra Prolific breed reached the level of “prolific breed”, having 158.9 % of utilised offsprings for 100 ewes.
The (American) Suffolk and the Ile de France could be considered as acclimatised breeds, and the development of the Prolific Tetra sheep has been finally finished by the year 1998.

REFERENCES