

SITUATION OF WILD BOAR POPULATIONS IN WESTERN POLAND

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Abstract: On the base of the investigations carried out during ten years, the population of Wild boar inhabiting 8,000 ha forest area in western Poland has been characterised. Such parameters as reproductive ratio, mortality and longevity are described. The reproductivity ratio of population depends on the high degree on the age structure of females. This population consisted of 49% of piglets, 35% 1-2 years old animals and only 16% older than 2 years. Total productivity of population reached about 190% of number of sows. The mortality ratio of piglets during the first 3-5 months of life was about 27% of number of young born. The average length of life was estimated to 1.5 year.

Keywords: Wild boar, *Sus scrofa*, Suidae, Population dynamics, Reproduction, Hunting.

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The main reason of the Wild boar populations increase in last decades is the change within the populations themselves resulting from the adaptation of the species to the landscape changes caused by the intensification of agriculture and especially by the development of big-area cultivation structure and the spreading of maize cultivation. This has given wild boars perfect feeding and shelter conditions. In effect the reproductiveness of the population increases. The fact that nowadays wild boars are the typical element of landscape in which even small woods adjoin fields, is confirmed by, among other things, high hunting results in regions poor in woodlands but where the land cultivation is at high level. For example in the Poznan region, wooded only in 21%, about 25 boars per 1,000 ha of woodland are hunted every year, whereas in the Krosno region, wooded in 47.3%, and in the Przemysl region, wooded in 41.7%, only 1.5 boars per 1,000 ha of woodland are hunted annually (Fruzinski, 1992).

In the last few decades the number of hunted wild boars systematically increased. In 1992 it reached 122 thousand boars. Since 1975 the yearly boars' harvest has exceeded the population size before the reproduction time, in some years even by 50% (Fig. 1). This has not decreased the population size, as nowadays the realized population increase far exceeds 100% of the population spring state (before the reproduction time).

The reason of this state of affairs is a distinct

increase in fecundity of wild boars and the participation of the youngest age classes in mating. About 30% of female piglets (8-10 months old) takes part in reproduction, though they give birth to a relatively small number of young animals. To one female of that age fall 3.9 embryos. With the 1-2 years old females on average 4.3 embryos are found and the participation of those females in mating is 70%. With the 3 years old and older females on average 6.3 embryos are found and almost all the females (97%) take part in mating (Fruzinski & Konig, in press; Fruzinski, *op.cit.*).

Taking into account the number of females of different age classes in a pre-reproductive population, this gives an increase of about 190% of the population state. Because of the substantial majority of females in population, high reproductiveness is well-founded (Fruzinski & Konig, *op. cit.*). The big participation of the youngest sows in mating, as well as other factors, causes the period of giving birth to the young to last the whole year. Although the majority of litters still falls to April (26.6%), March (20.8%) and February (16.6%), it should be stressed that piglets are born from January (9.5%) to December (0.8%) (Fruzinski & Naparty, 1992).

The natural mortality refers almost exclusively to piglets in the first 4-5 months of life and reaches 27% of born animals. The additional mortality, resulting from shooting-off makes the general mortality in the first year of life as high as in non-hunted populations (Jeziarski, 1977;

Meynhardt, 1980). The mortality rate of piglets amounts to 31% for males and 26% for females, the mortality rate of yearlings reaches 77% for males and 62% for females. For older age classes the rate is similar and amounts to 73% for males and 63% for females. As a result of high mortality the average life length is 1.5 years (Fruzinski, *op.cit.*) and is lower than in a non-hunted population (24 months for females and 21 months for males; Jezierski, *op.cit.*). The above presented demographical data of the Wild boar population in western Poland have recently been strongly disturbed in result of swine pest in 1992.

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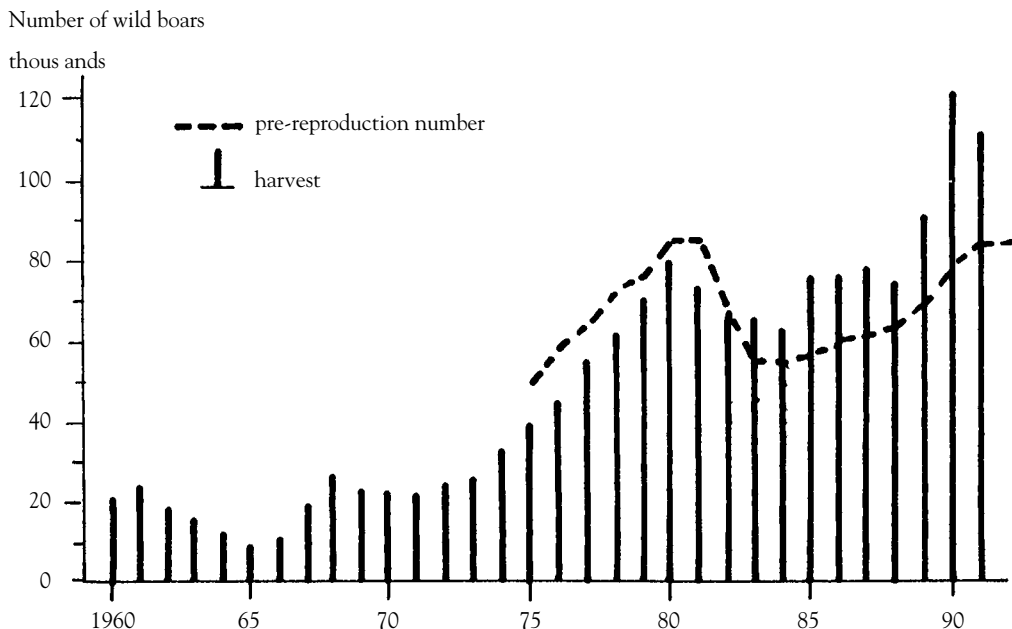


Figure 1 - Long term annual estimation survey of pre-reproduction and harvest numbers in a Wild boar population.