FIBER CONTENT OF THE GROWTH DIET AND SURVIVAL OF RELEASED PHEASANTS

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■ INTRODUCTION

The diet fed to pheasants in the game breeding farms is completely different from the diet that the pheasant can find in the wild. Consequently the release is linked with a stress due to the adaptation of the digestive system and metabolism to the new diet that the animal can find in the new habitat (Bagliacca et al., 1996; Mussa et al., 1997). Therefore, the objective of this study was to investigate the effect of different diets given during the rearing phase on the released pheasants' survival.

■ MATERIAL AND METHODS

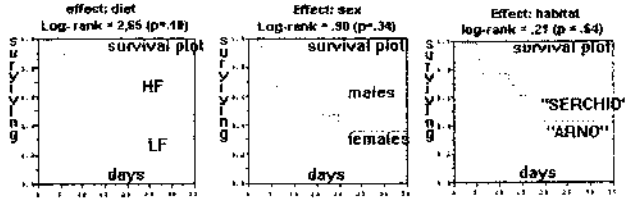
The pheasants were reared in flying pens from 55 days old. Two experimental groups were randomly chosen and each group was *ad libitum* fed with a differently formulated diet: high fibre group HF (a.f.b. crude fibre = 10.80%, ME= 10.97 MJ/Kg) and low fibre group LF (a.f.b: crude fibre = 5.56%, ME = 11.75 MJ/Kg).

In October 1995, every pheasant, 121 days old, was provided with a leg ring and a radio tag RT (TW3-Biotrak) or a poncho P (PCV cm 22*6). After that all the pheasants were released in two different areas of a Tuscan Natural park (around the Arno and Serchio rivers and named "Arno" and "Serchio"). Twice a day, and for the following 35 days, the radio tagged pheasants were positioned in a co-ordinate grid map by the use of telemetry with the technique of the triangulation. The zones of release were observed by the use of binoculars to look for the poncho-wearing pheasants. The survival data were analysed by the Kaplan-Meier technique (White and Garrot, 1990).

■ RESULTS AND DISCUSSION

Survival rate estimation was based essentially on radio-tracking data since localisation of poncho-wearing pheasants was very rare. Only 3 pheasants wearing a poncho were found dead. Survival plots did not show any significant difference between tested parameters, however, different trends were observed in relationship to diet and sex. The fox was the most important predator in the observation areas and this can explain the different trend observed between survival of each sex. The essentially cryptic anti-predator response characteristic of the pheasant females is less effective against terrestrial predators than the take-off at a long distance, characteristic of the males. The phase immediately following the release could be the most critical moment for the concomitance of the stress linked to feed changes with other factors of risk. The tendency to different slopes of the mortality curve was in fact observed in the first two weeks after release. The chemical composition of the food must not be the only element to consider during the rearing phase in order to attain the goal of better brief-middle period survival rates. The thirteenth day after pheasant release we found a neck of a radio-tagged pheasant thatpresented numerous berries of *Solanum nigrum L.* in the oesophagus and gullet. The employment of radio tags was confirmed the only valid tool for survival studies, since death caused by a specific predator, must be always quickly followed by anatomopathological exams to understand the real causes of it.

Figure 1: Effect of diet, sex, and habitat on pheasant survive



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