

## **Evaluation of innovative agricultural practices for Common hamsters: Results of 5 years of survey in the fields: the final results of the LIFE Alister program.**

The LIFE+ biodiversity project, LIFE Alister aimed at finding innovative farming practices that could profit hamster populations whilst ensuring good agronomic development.

Experimental plots were conducted with innovative practices tending to improve wheat and corn cultures. The original idea was to have a cover very soon after wheat harvest, and to sow corn over it the following spring. Wild hamsters were trapped, marked and followed during 5 years of the experiment in order to assess the effect of these measures for the species. The agronomic techniques were not totally managed, so the difference between control and experimental plots was not so clear. Nonetheless, studying hamster during 5 years unable us to gather information on its biology and ecology.

With the help of camera traps, we assessed a reproduction rate of  $0.90 \pm 0.95$  litter per females (n=62 females) and a litter size of  $2.67 \pm 1.47$  young/litter (n= 81 litters from 52 females). Although the method used to obtain the number of young per litter can be discussed, our findings show a weak reproduction success. As regards to movement patterns, we found that in spring, after hibernation, 86% of marked hamsters stayed in the field when it was cultivated with wheat. In corn fields on the other hand, 50% of marked hamsters left the plot. Moreover, we measured higher mortality rates when hamsters left their original field. After harvest, although the cover doesn't seem to suit anymore, 71% of our marked hamsters stayed in the field. It is therefore of utmost importance to provide a good shelter and food suitable for hibernation at this period. Further agronomic experiments need to be encouraged and we discuss some interesting perspectives.

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