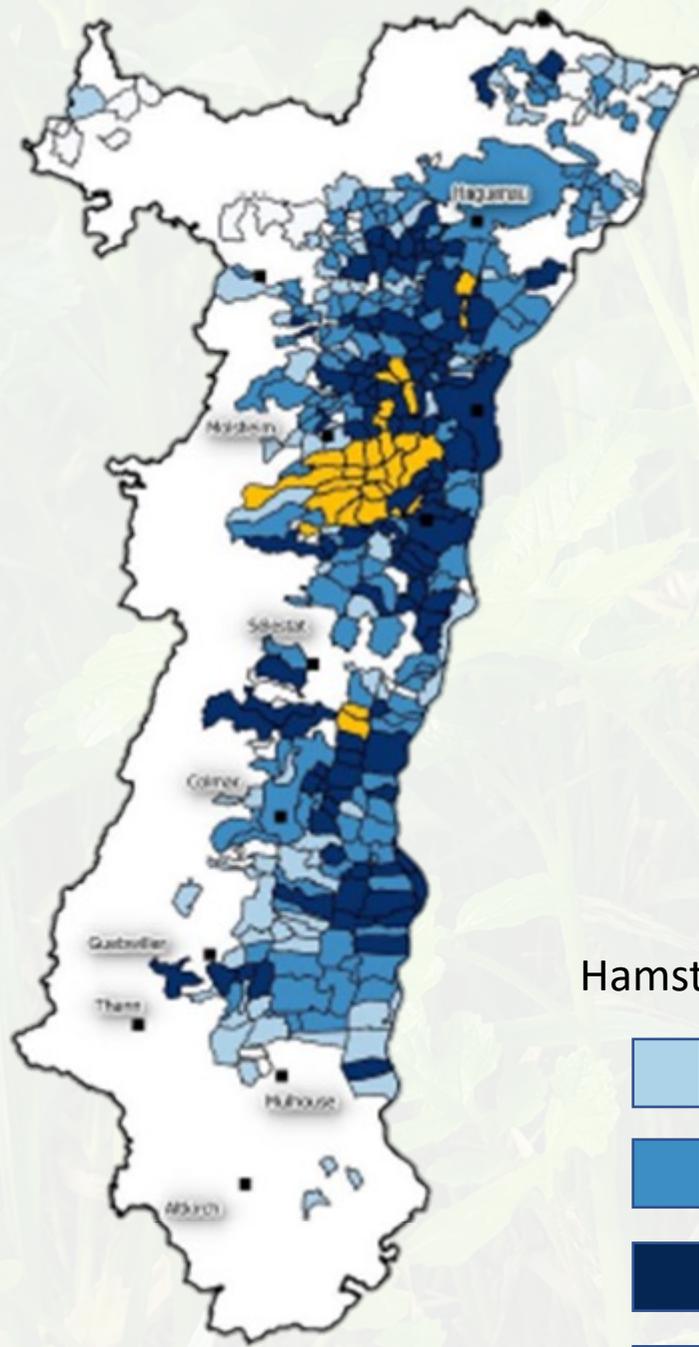


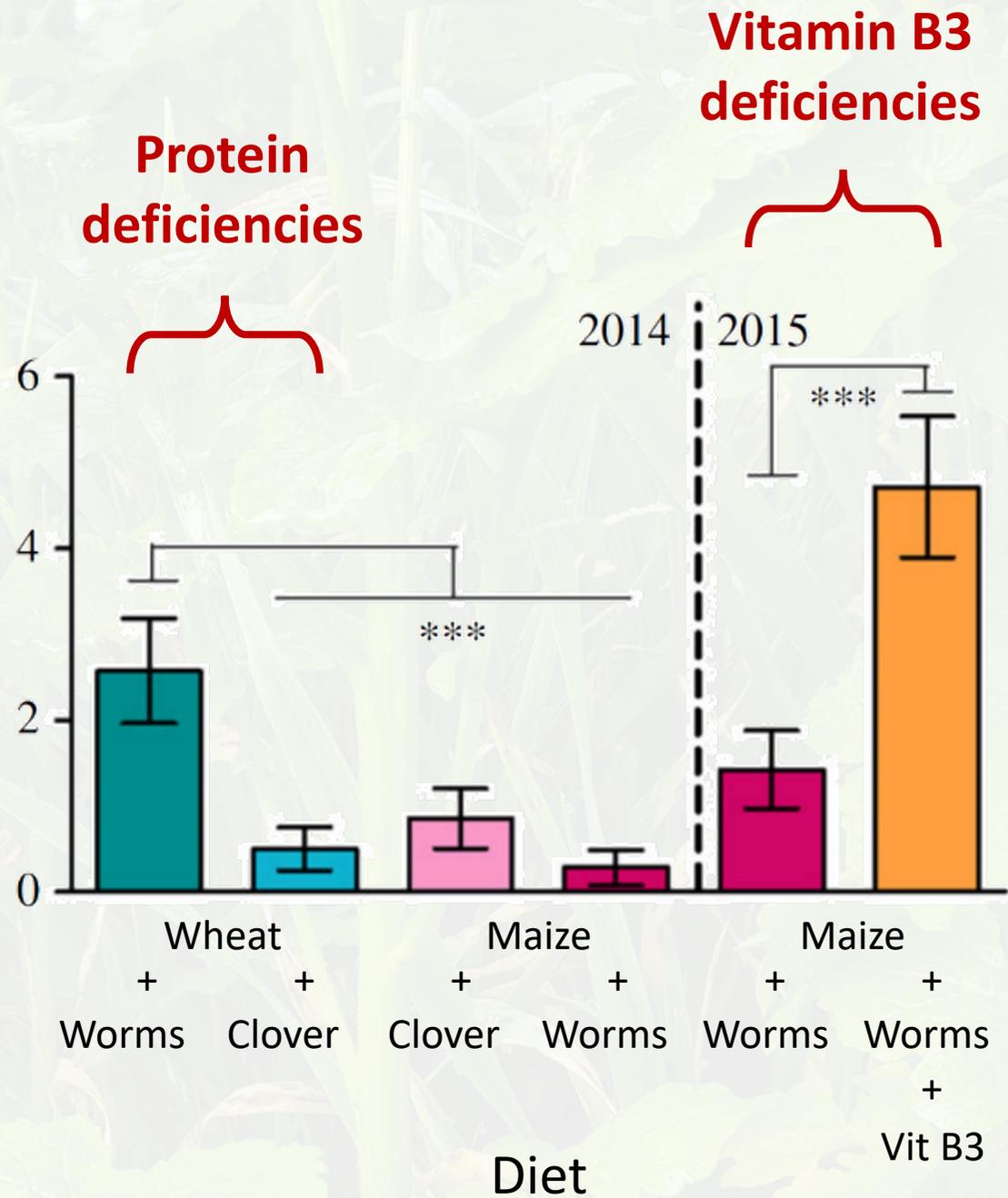
Effect of various crops associations
<https://we.tl/t-CD58KY4nV8>
on the health and reproductive success
of the European Hamster

Timothée Gérard, Hugo Chignec, Caroline Habold

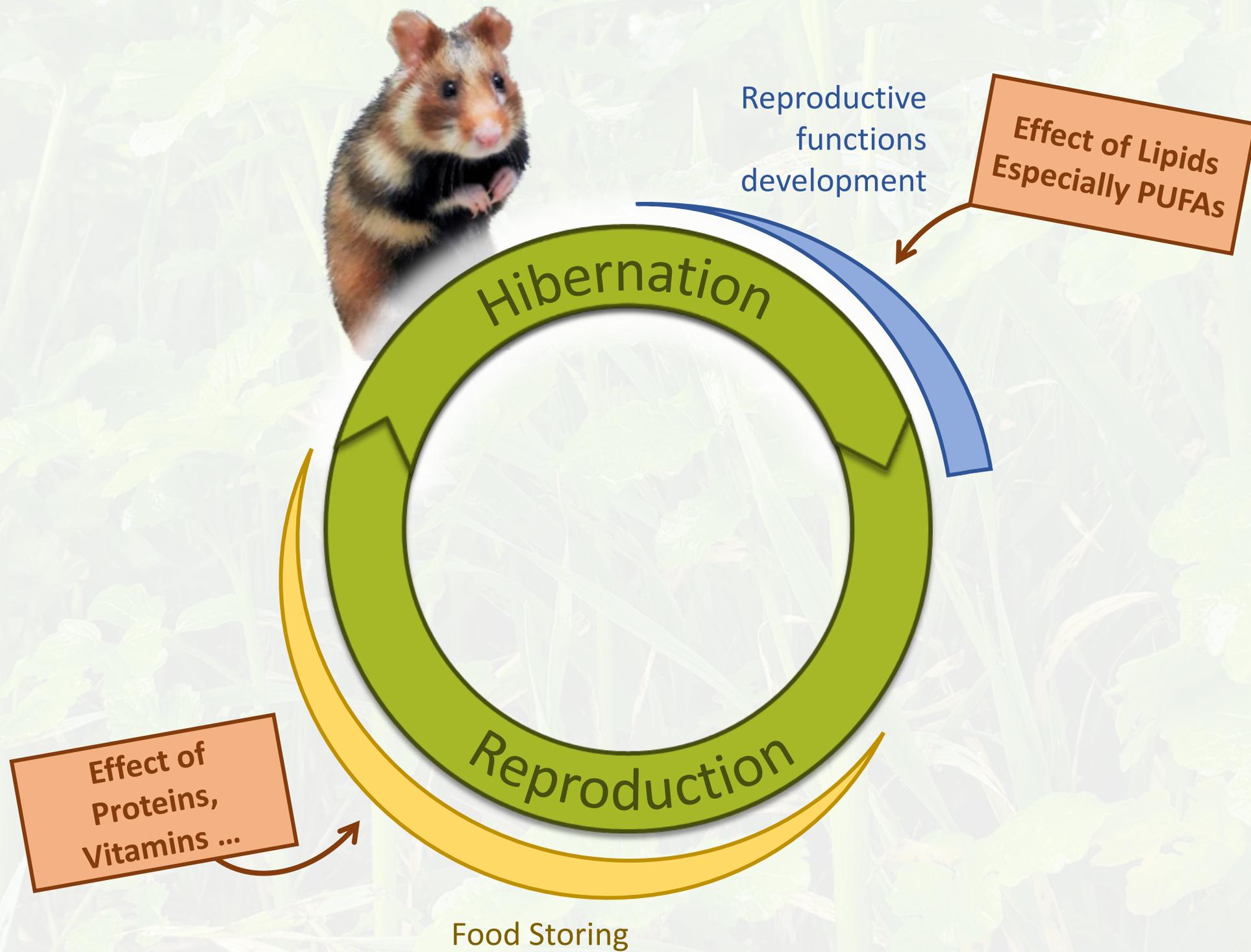
Context :



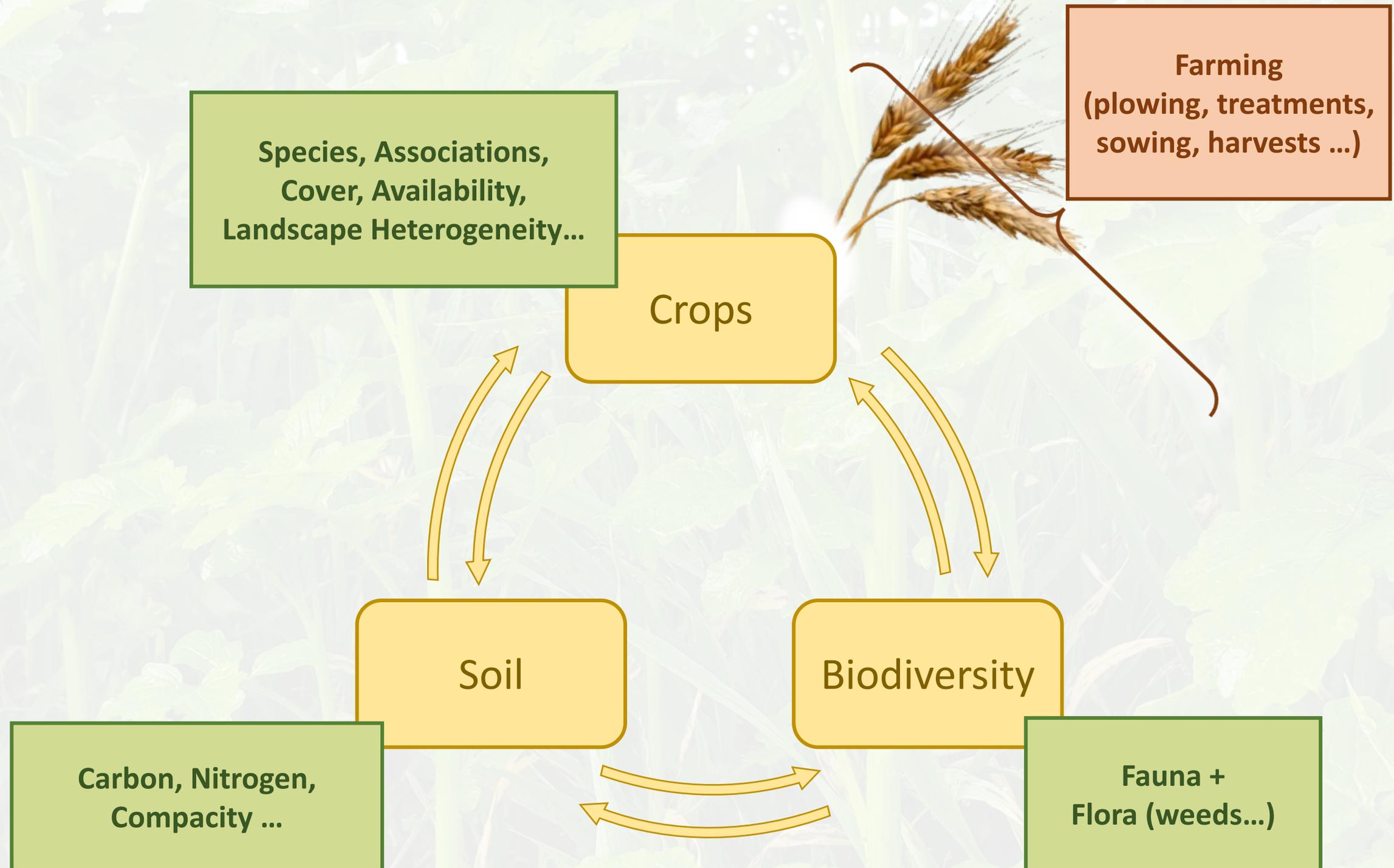
Number of pups



→ Nutrients Impact on Hamsters' life cycle

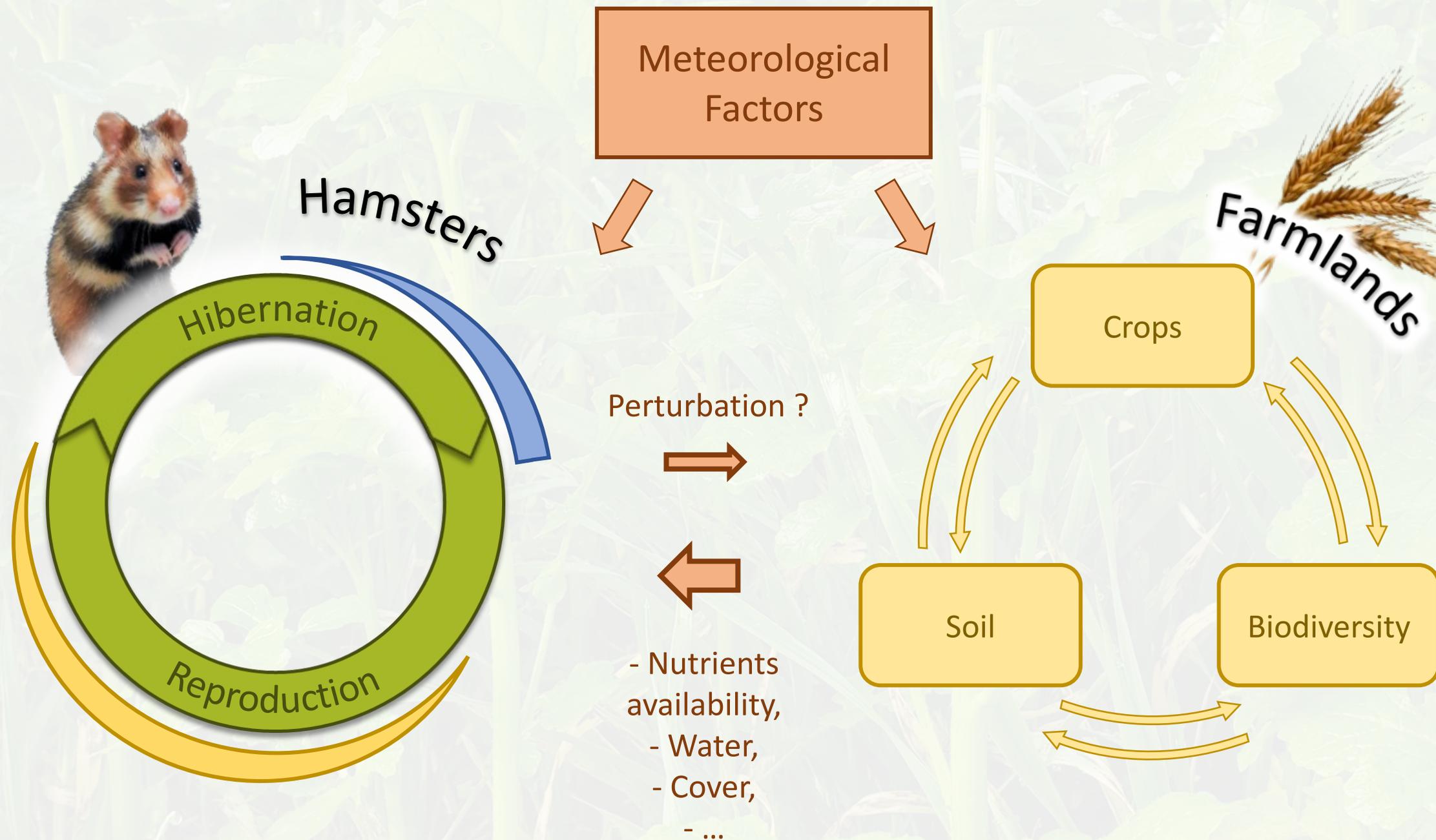


→ Dynamic of the Hamsters' environment



→ Mesocosm study

Excluded Factors :
 - Predation
 - Exposure to chemicals

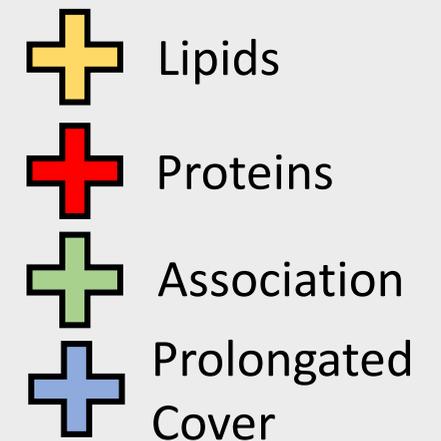


Which farming practices would favor hamsters through the year and maximize reproductive outputs ?



Crops goal :

- Be suited for the hamsters' hibernation and reproduction.
- Provide vegetal cover for as long as possible.
- Be technically and economically viable for farmers



Tested Crops :

$n = 4 \times \begin{matrix} 8 \text{ ♀} \\ 3 \text{ ♂} \end{matrix}$



Wheat
(control)



Wheat + Soy



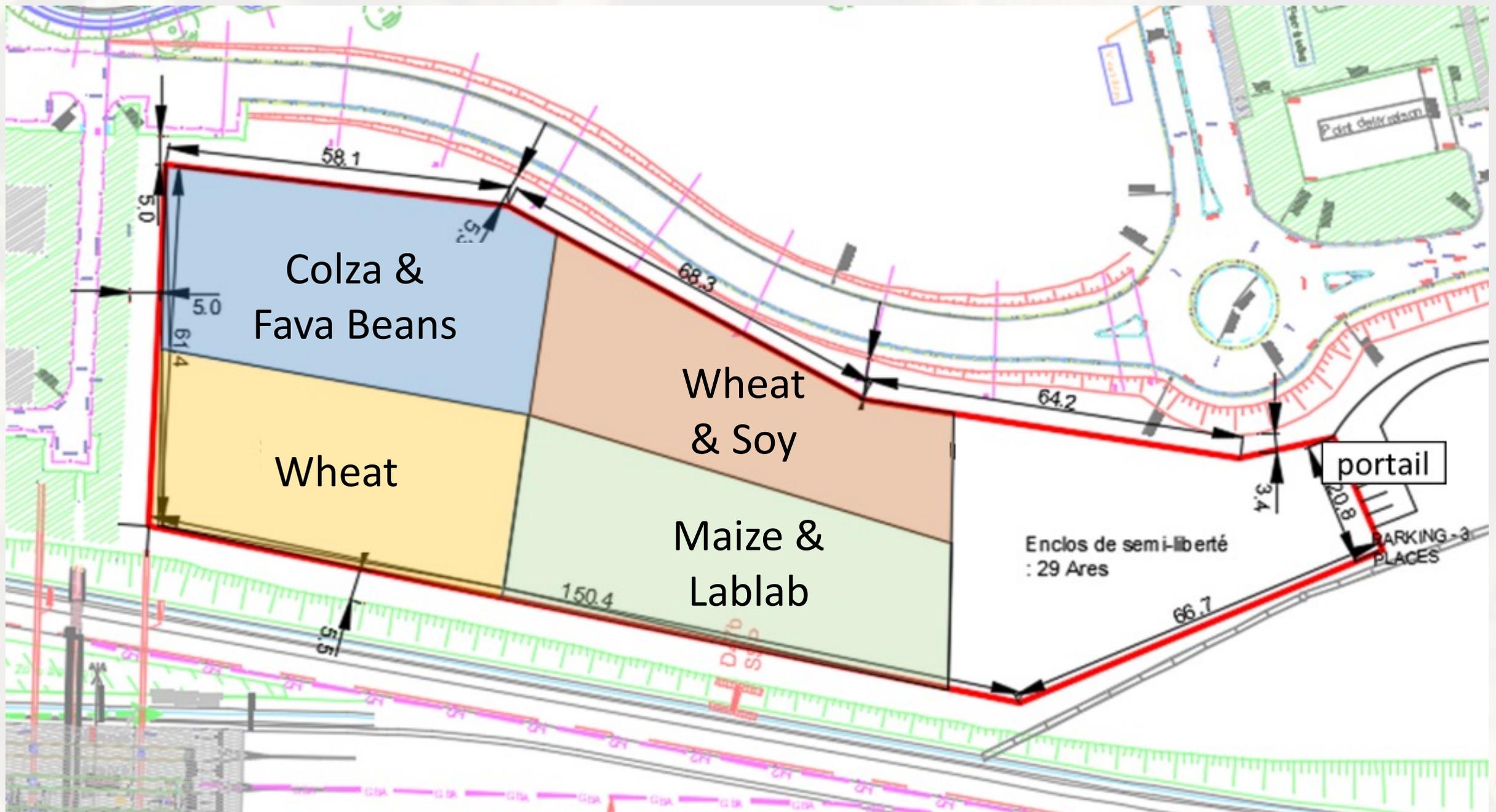
Colza + Fava beans

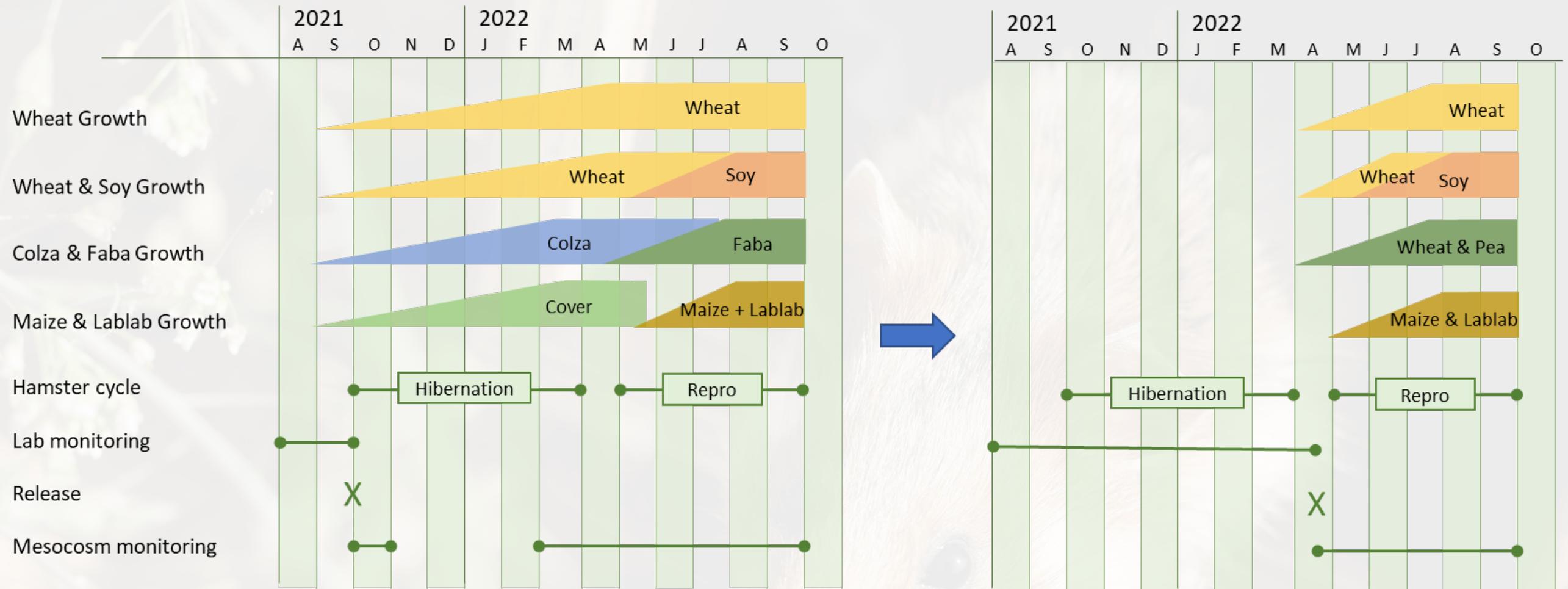


Maize + Lablab



The enclosure :





Due to enclosure delays ;

- Hamsters' hibernation was monitored in the lab,
- Hamsters were released in April,
- Spring variety were sowed instead of the winter ones.

Hibernation Monitoring



- Food Consumption
- Water Consumption
- Torpors
- Mass variation

Reproduction Monitoring

Tools :

- Camera Traps
- RFID Antennae
- Captures



Pups were

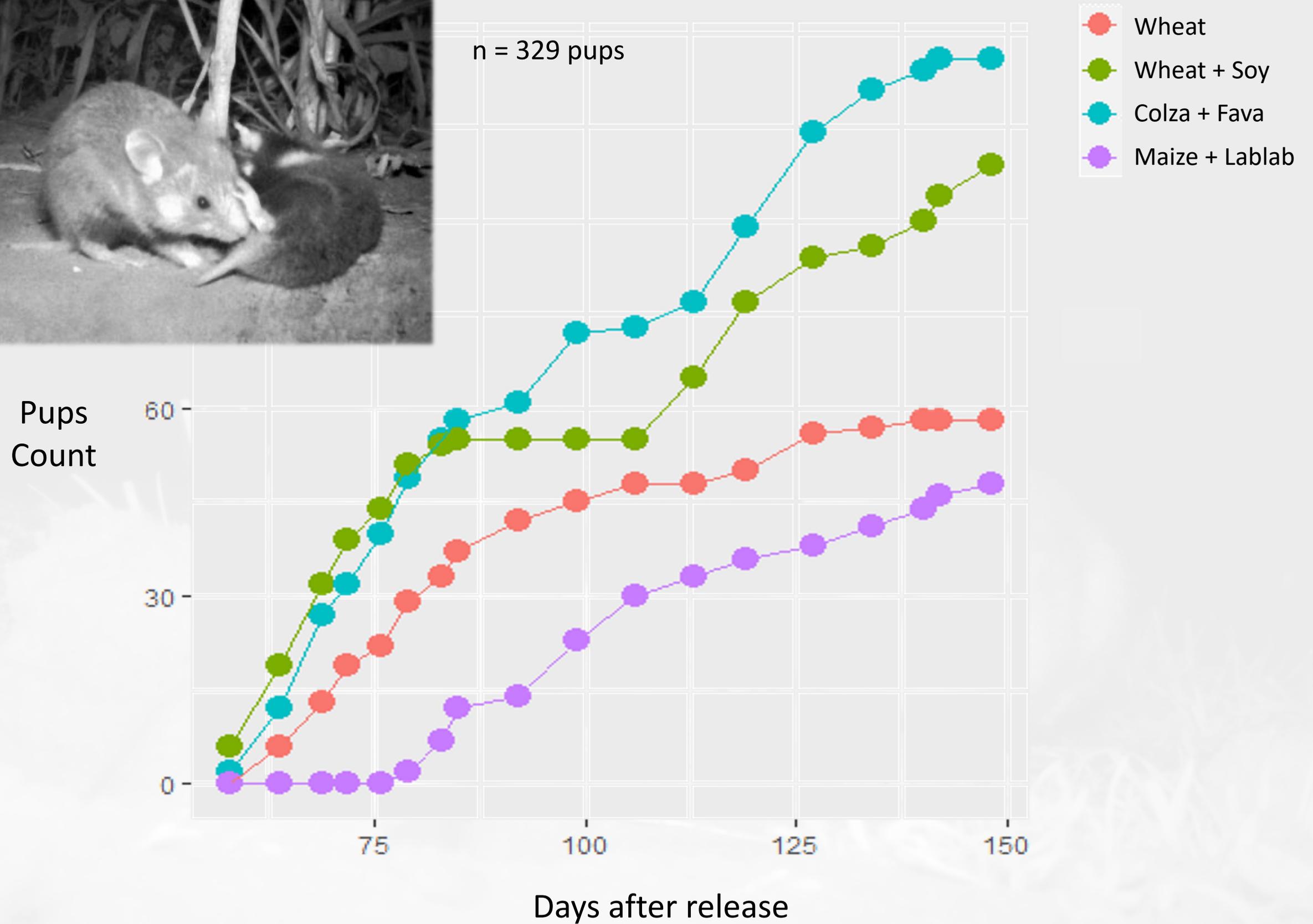
- Identified (RFID)
- Weighed and measured
- Hair sampled
- Brought to the lab when big enough



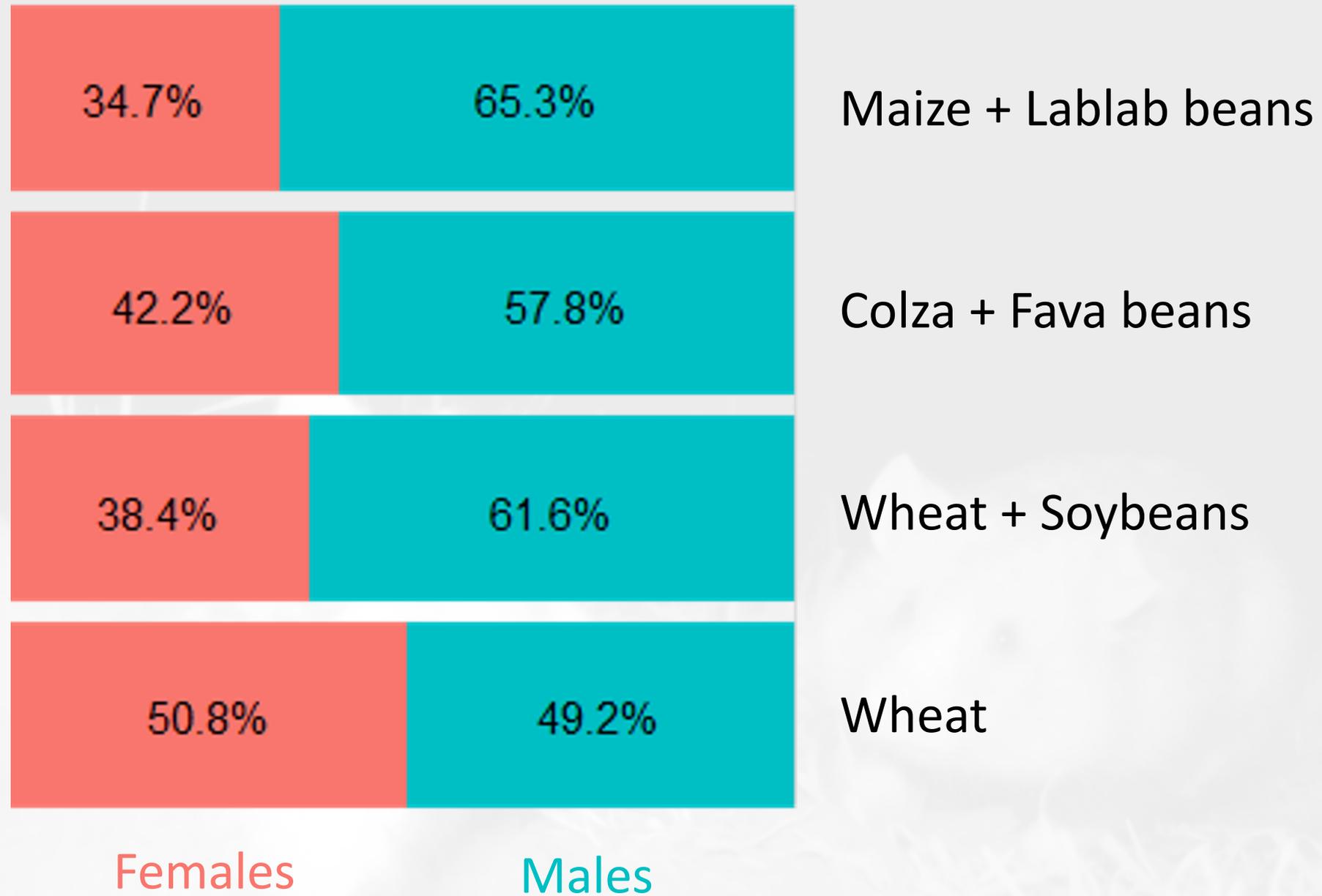
Captured Pups



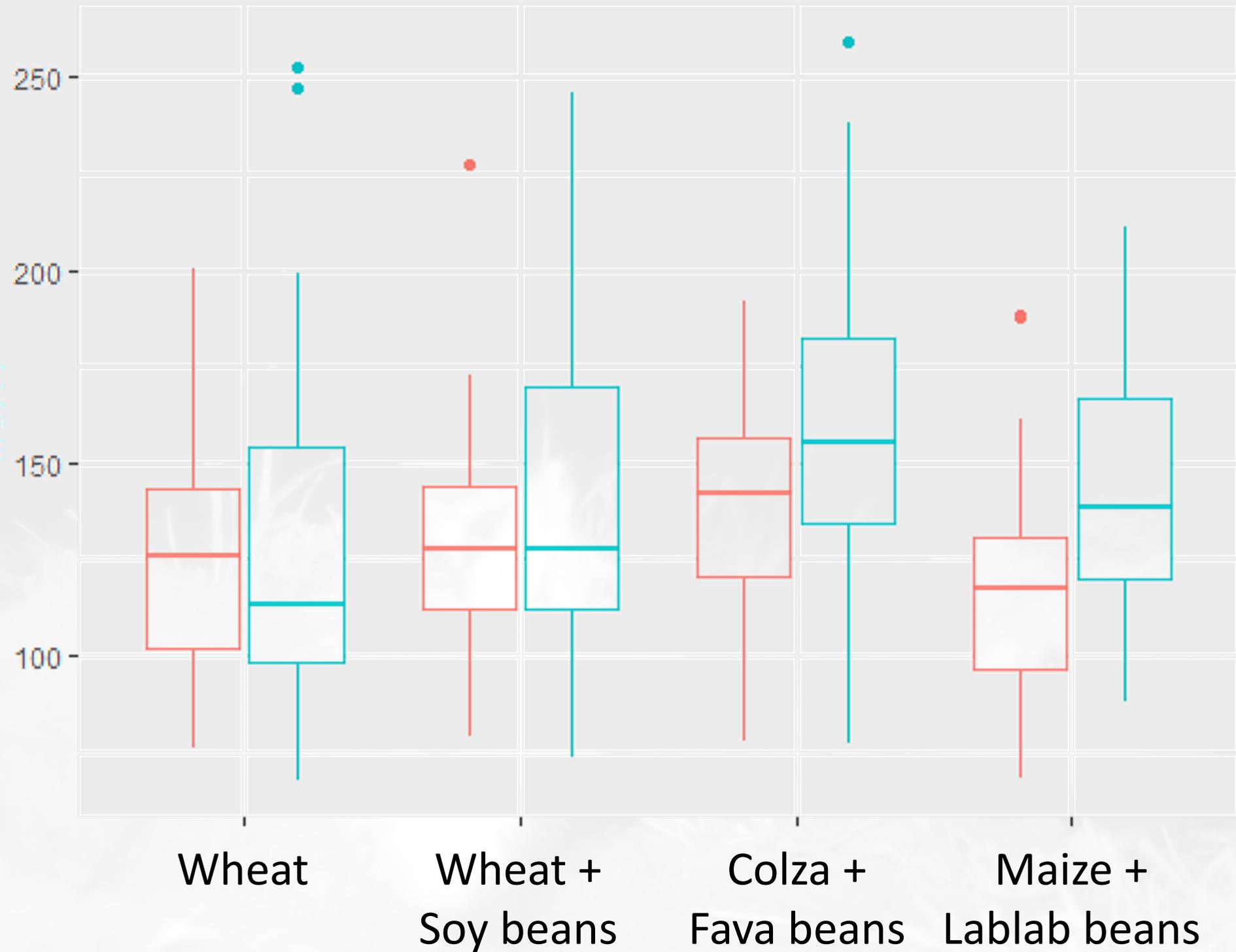
n = 329 pups



Sex ratio



Mass at first capture

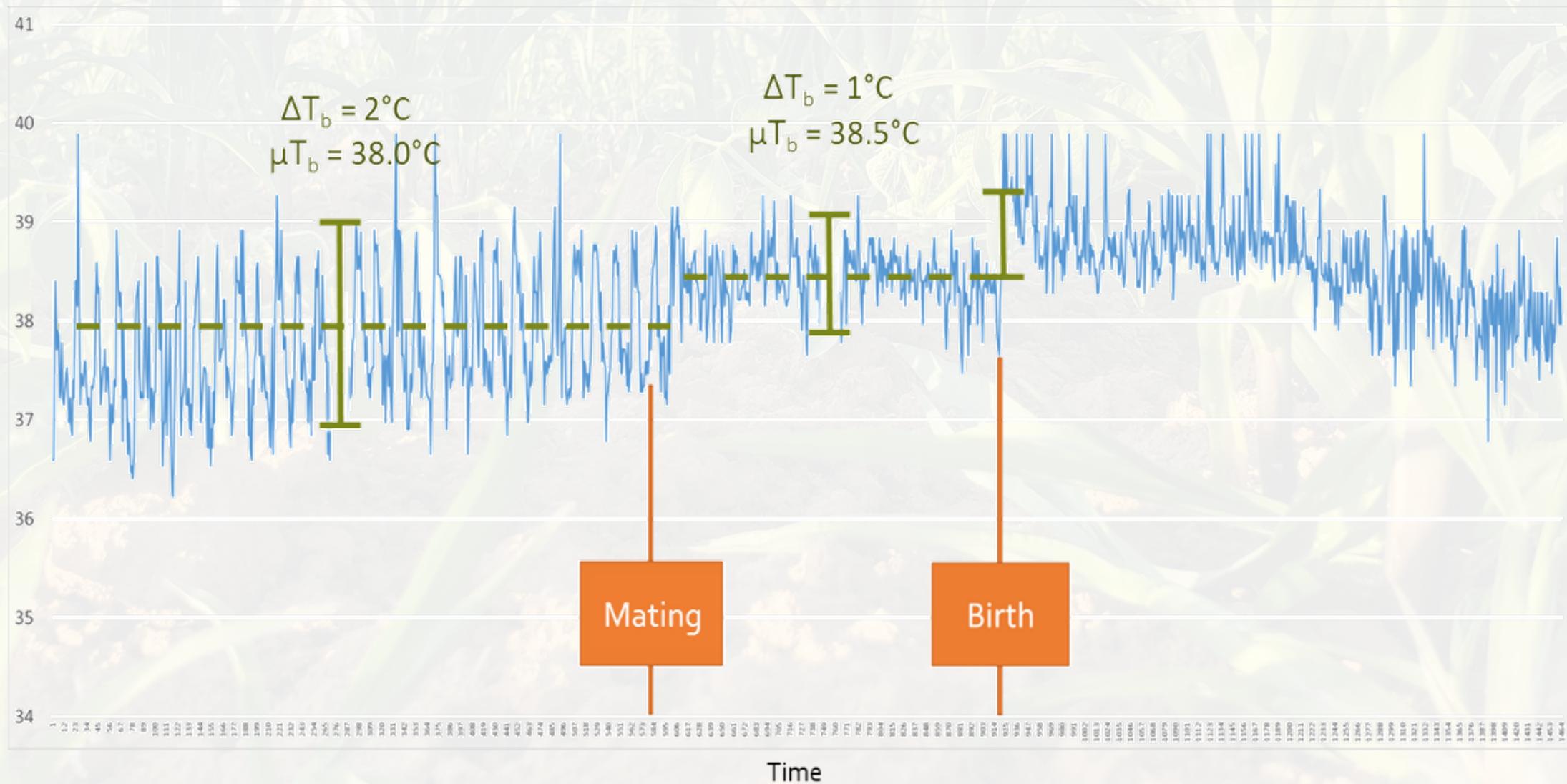


Significative effects of Sex and Group

Sexe
F
M

→ What's Next

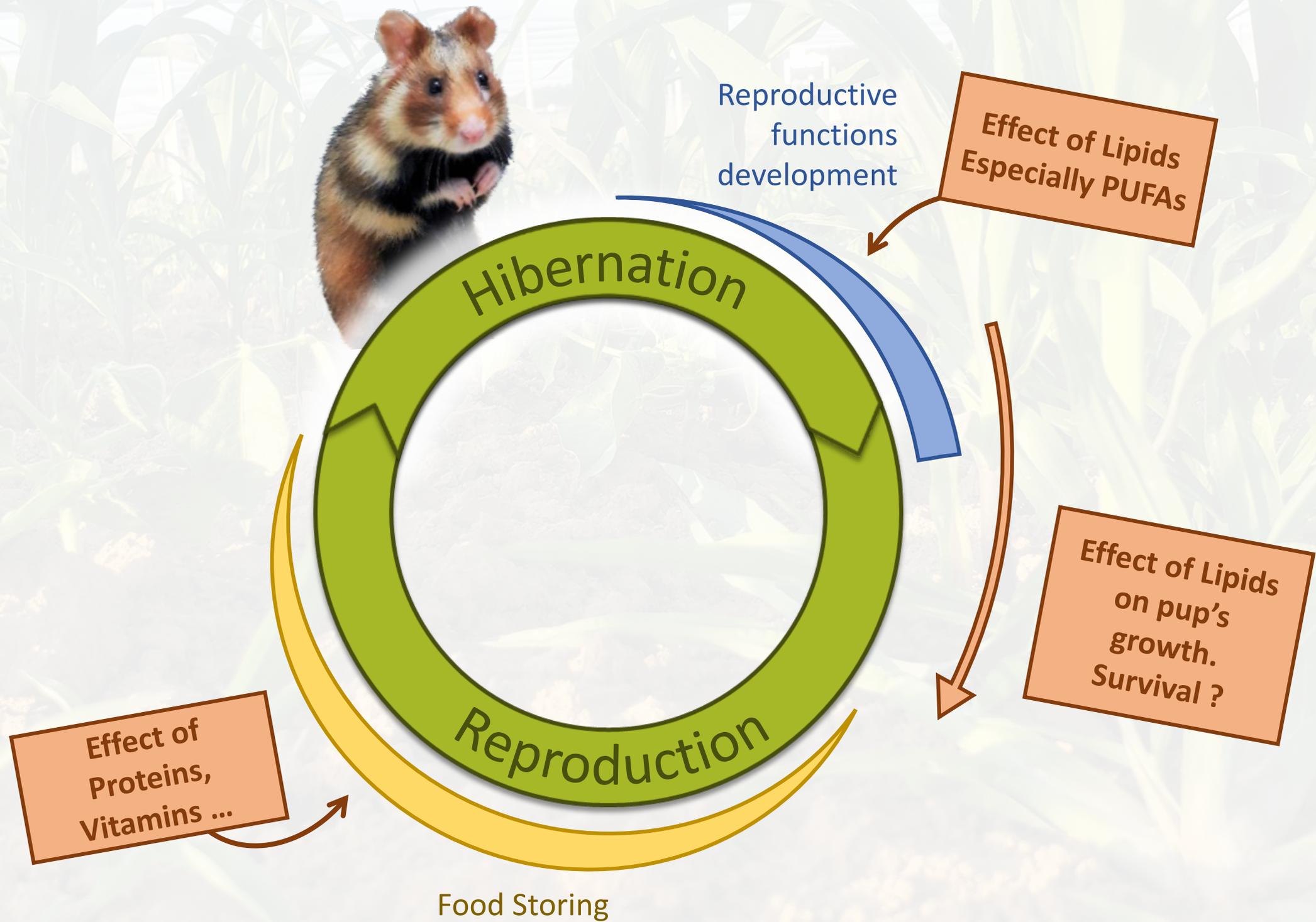
- Identify birth events using the mothers' body temperature



→ What's Next

- Identify birth events using the mothers' body temperature.
- Identify parenthood with genetic tests.
 - Link Adults reproductive success with hibernation quality.
 - Obtain pup's birth date and early life growth
 - Evaluate pups dispersion effort.
- Second year of mesocosm monitoring with :
 - Hibernation *in situ*
 - Fifth crop : A diversified mix

First Conclusion





Thanks !