PHENOTOOL : An information-sharing platform for livestock phenotyping methods and tools

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An information-sharing platform for livestock phenotyping methods and tools

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Introduction

In recent years, the field of animal phenotyping has undergone a radical transformation, largely driven by technological advances. The new technologies have enabled faster, more accurate, and more comprehensive data collection on phenotypic traits, leading to a deeper understanding of animals and their environments. In this context, the PHENOTOOL platform emerges as a crucial resource. Developed within LIPH4SAS research infrastructure, PHENOTOOL aims to catalog the available phenotyping equipment and provide centralized access to these resources.

LIPH4SAS Infrastructure

LIPH4SAS is a national distributed (10 INRAE entities) research infrastructure dedicated to the phenotyping of livestock species (ruminants, pigs, fishes). It carries out experiments and collects phenotypes and samples for the livestock sciences research community, with a focus on the transition to more sustainable agricultural and food systems based on the principles of agroecology (AET).

Objectives

The main objective is twofold: 1) to enable access to the phenotyping devices available within the INRAE LIPH4SAS infrastructure; 2) to highlight the most relevant phenotyping tools for key traits related to livestock AET by using the information that can be shared from the database developed by the GIS Avenir Elevages (Pairault *et al.*, EAAP 2024, poster 43-24). PHENOTOOL will enable researchers to quickly identify the most relevant tools for their specific needs, facilitate the planning and implementation of their projects, and connect them with the teams that have the relevant tools and expertise.
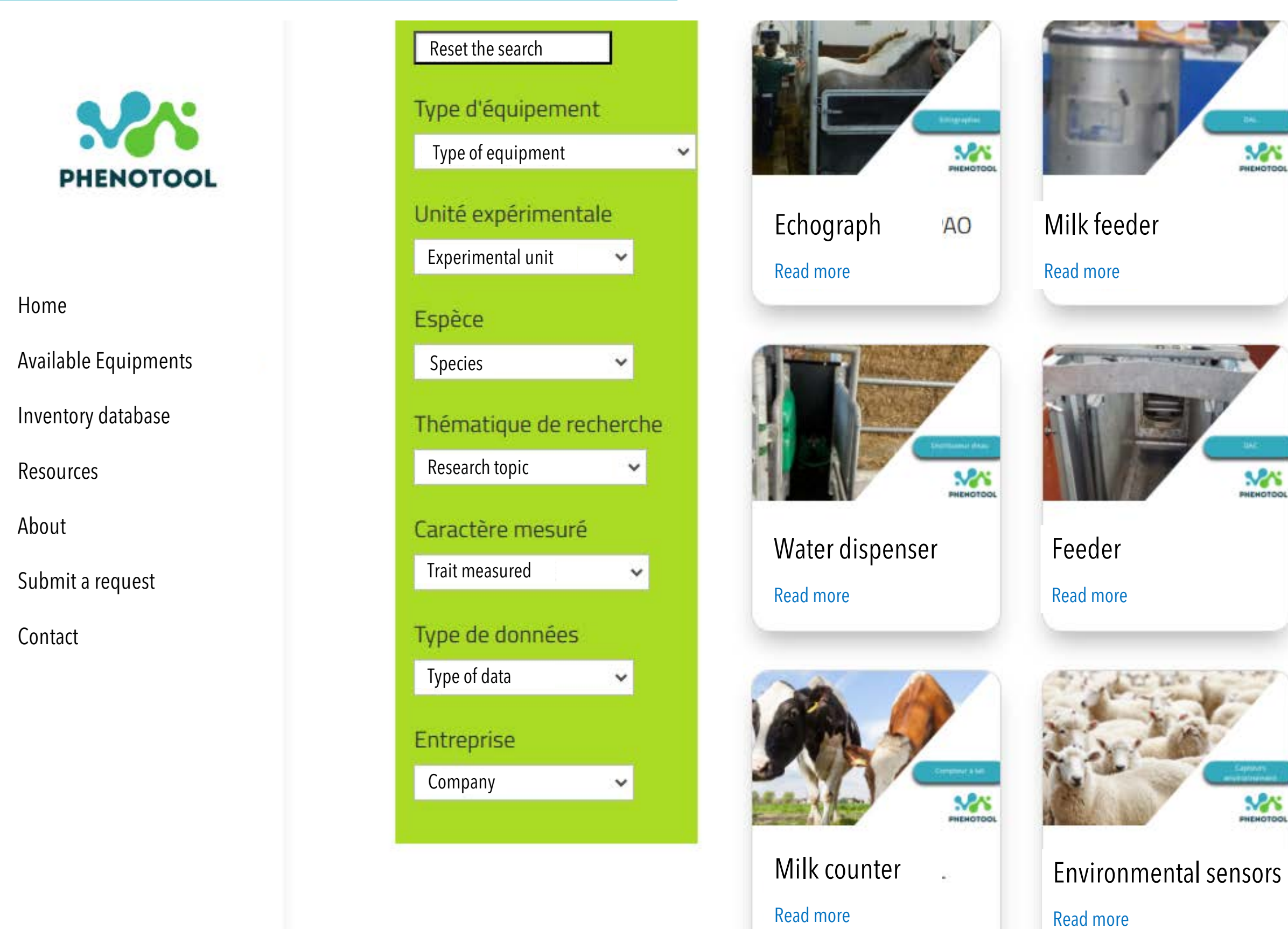
PHENOTOOL Environment

The PHENOTOOL platform has been developed with a strong focus on user-friendliness and functionality. Its web interface, accessible at www.phenotool.fr, is built using the WordPress CMS, ensuring an intuitive user experience. This interface allows users to easily access the databases provided, which currently contain 183 equipments, giving access to essential information on these devices.

In addition, PHENOTOOL offers a range of detailed information for the equiments available within LIPH4SAS infrastructure. This information includes:

- A detailed description of each instrument (description, main features and potential use in animal phenotyping research).
- Technical specifications of each piece of equipment, allowing researchers to assess compatibility with their specific experimental needs.
- Training resources for each listed instrument, facilitating learning and effective use of the equipment.

PHENOTOOL TOOLS

- Description of the equipment
- Measured traits
- Research theme
- Company
- Data types
- Training materials
- Number of equipments
- Animal species
- Localization Sites (France)
- Type of equipment

PHENOTOOL : current interface

PHENOTOOL

- Home
- Available Equipments
- Inventory database
- Resources
- About
- Submit a request
- Contact

Reset the search

Type d'équipement
Type of equipment

Unité expérimentale
Experimental unit

Espèce
Species

Thématique de recherche
Research topic

Caractère mesuré
Trait measured

Type de données
Type of data

Entreprise
Company

Echograph — AO
Read more

Milk feeder
Read more

Water dispenser
Read more

Feeder
Read more

Milk counter
Read more

Environmental sensors
Read more

Next steps

PHENOTOOL is still in the process of upgrading.

The next steps of PHENOTOOL development include an English version, the description of terms and condition of access to LIPH4SAS facilities …

Regular updates will be made to incorporate user feedback and to stay at the forefront of technological advances in the field of animal phenotyping.

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