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## **FINAL RESUME ON THE RESEARCH UNIT URZ -Animal Production Research Unit**

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Research evaluation

FINAL RESUME ON THE RESEARCH UNIT  
URZ - Animal Production Research Unit

UNDER THE SUPERVISION OF THE  
FOLLOWING INSTITUTIONS AND RESEARCH  
BODIES:

Institut national de recherche pour l'agriculture,  
l'alimentation et l'environnement - INRAE

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**EVALUATION CAMPAIGN 2020-2021**  
GROUP B

Report published on June, 28 2021

High Council for evaluation of research and higher education



In the name of Hcéres<sup>1</sup>:

Mr Thierry Coulhon, President

In the name of the experts committee<sup>2</sup>:

Ms Sandrine Grasteau, Chairwoman of the  
committee

Under the decree No.2014-1365 dated 14 November 2014,

<sup>1</sup> The president of Hcéres "countersigns the evaluation reports set up by the experts committees and signed by their chairman." (Article 8, paragraph 5);

<sup>2</sup> The evaluation reports "are signed by the chairman of the experts committee". (Article 11, paragraph 2).

Tables in this document were filled with certified data submitted by the supervising body on behalf of the unit.

## UNIT PRESENTATION

**Unit name:**

Agroecology, genetics, and tropical livestock systems

**Unit acronym:**

UR ASSET (for the next period), URZ (for the previous period)

**Current label and N°:**

UR0143

**ID RNSR:**

196617972M

**Application type:**

Renewal

**Head of the unit (2020-2021):**

Ms Nathalie Mandonnet

**Project leader (2021-2025):**

Ms Nathalie Mandonnet

**Number of teams and/or themes:**

1

## EXPERTS COMMITTEE MEMBERS

**Chair:**

Ms Sandrine Grasteau, Inrae, Nouzilly

**Experts:**

Mr Jacques-Eric Bergez, Inrae, Castanet-Tolosan

Mr Pascal D'Hour, Inrae, Saint-Genès-Champanelle (supporting personnel)

Ms Julie Labatut, Inrae, Jouy-en-Josas

Mr Didier Stilmant, Centre wallon de Recherches agronomiques, Belgique

## HCÉRES REPRESENTATIVE

M. Thierry Ameglio

## REPRESENTATIVES OF SUPERVISING INSTITUTIONS AND BODIES

Mr Harry Archimède, INRAE, Centre Antilles Guyane

Mr Jean-Pierre Bidanel, INRAE, département GA

Mr Xavier Fernandez, INRAE département Phase

Mr Stéphane Ingrand, INRAE département Phase

Ms Edwige Quillet, INRAE département GA

Ms Françoise Médale, INRAE département Phase

Ms Christèle Robert-Granié, INRAE, département GA

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The research unit URZ (Animal Production Research Unit) has been created in 1965. Historically governed by INRAE Animal Genetics Division (GA), it is since 1<sup>st</sup> January 2021 jointly governed by INRAE divisions GA and PHASE (Animal Physiology and Rearing Systems). It is one of the six units of the Antilles-Guyane center.

On the 30<sup>th</sup> June 2020, the unit was composed of 24 permanent agents (21 GA, one PHASE and two CEPIA), among which five researchers, eight engineers and eleven technical staff members. At this date, sixteen non-permanent staff are also joining the unit (five PhD students, one engineer in fixed-term contract, ten interns).

### RESEARCH ECOSYSTEM

At the local level, the unit is also sharing a platform with the ASTRO unit since 2015, dedicated to the development of innovative food processes and technologies.

At the national level, the unit is member of the PIA CRB-Anim since 2008, in collaboration with the ASTRE unit, dedicated to the conservation of genetic resources of Caribbean breeds. The unit is jointly coordinating with CIRAD, a network of agricultural innovation and transfer on valorization of animal genetic resources from overseas departments.

At the international level, the unit is engaged in the creation of an international associated laboratory with the Cuban universities of Matanza and Granma, about animal production in an agroecological frame. The unit is also member of two international consortia (International Goat Genome Consortium and international VarGoat consortium) involved in the development of genomic tools in goat.

### HCÉRES NOMENCLATURE AND THEMATICS OF THE UNIT

SVE Life and Environment Sciences

ST Sciences and technologies

SVE2-2: Genetics, genomics, bioinformatics, systems biology, SVE1-3: Biotechnology, environmental science, synthetic biology, agronomy, SVE5-1: Physiology, endocrinology, pathophysiology

ST1-2: Applied mathematics, ST4-4: Chemistry of and for life

SVE3-3: Parasitology, SVE6-2: Epidemiology, SVE3-4: Immunology

Topics of the unit are the improvement of efficiency of farming systems in an agroecological context, studies going from the animal scale (genetics of efficiency and resilience) to the system scale (valorization of local resources and practices).

Taking into account its small size, the unit is not structured in teams, but presents a project organized in three themes. The first two themes are scientific. The first theme is on adaptation and resilience of animals for efficient tropical rearing systems, the second is on multi-criteria optimization of efficiency of tropical farming systems. The last theme is on knowledge and innovation valorization in relationships with partners.

### MANAGEMENT TEAM

Director for the current contract: Ms Nathalie Mandonnet

Director for the new contract: Ms Nathalie Mandonnet

### UNIT WORKFORCE

**Name of the unit: UR ASSET (for the next period, URZ for the last period)**

Active staff	Number 06/01/2020	Number 01/01/2022
Full professors and similar positions	0	0
Assistant professors and similar positions	0	0
Full time research directors (Directeurs de recherche) and similar positions	3	2
Full time research associates (Chargés de recherche) and similar positions	2	2

Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	0
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	19	15
<b>Permanent staff</b>	<b>24</b>	<b>19</b>
Non-permanent professors and associate professors, including emeritus	0	
Non-permanent full time scientists, including emeritus, post-docs (except PhD students)	1	
PhD Students	3	
Non-permanent supporting personnel	1	
<b>Non-permanent staff</b>	<b>5</b>	
<b>Total</b>	<b>29</b>	<b>19</b>

## GLOBAL ASSESSMENT OF THE UNIT

The ASSET unit (previously URZ unit), despite its small size (19 staff), has many forces to develop its project on promotion of efficient livestock systems in highly constrained environment from an agroecological perspective. Within INRAE animal genetics and animal physiology and livestock systems divisions, the unit has a specificity due to its location in humid tropical climate. The multidisciplinary nature of its scientific skills, its technical platforms and its proximity to the other units of the INRAE Center in Guadeloupe are strengths in responding to the questions raised.

The unit has published 104 publications over the evaluation period including 75 articles in journals indexed in the Journal Citations Reports with 64 % of the publications having a member of the unit as first and last author. This represents a strong increase in the quality as illustrated by the percentage of publications in high impact journals raising from 70.4 % during the previous contract to 91.2 % during this contract.

The unit succeeded in obtaining competitive funding at the regional level (seven projects, the unit being coordinator of five) at the national level (six ANR, the unit being coordinator of four) and at the European level (ten projects FEDER, H2020, Interreg, FEADER, FP7, the unit being coordinator of five).

The strong involvement of the unit in research training is illustrated by the number of trained PhD (fifteen out of which ten were defended during the period for eight HDR with 3.3 publications per thesis defended) and the number of Master or engineering trained students (66). However, the average length of the theses is too long.

The unit has a very good international outlook, as evidenced by co-publications with world-wide partners (41% of publications), the ongoing creation of an international laboratory associated with two Cuban universities, the co-supervision of PhD theses with foreign universities (Brazil), the organization of two international conferences (Recolad Paris 2015, Crop and Food Caribbean Society, 2018) and the visit of six scientists from abroad. At the international level, the unit is also a member of two international consortia (International Goat Genome Consortium and International VarGoat consortium) involved in the development of genomic tools in goats. Its international recognition could be however improved by reviewing articles, participation in learned societies and editorial boards of scientific journals, in order to foster invitations to international conferences as well as the hosting of postdoctoral fellows.

The unit has developed links with non-academic partners (civil society and agricultural professionals) through funded projects (ANR or FEDER projects), has engaged in the development of a Mixed Unit of Technology (UMT) with the Technical Institute for Livestock (ITEL) and has produced publications for professionals. However, interactions with the industrial world could be improved.

The organization of the unit (governance, scientific facilitation, management of scientific and technical teams) is very well managed. One point of vigilance concerns the involvement of technical and administrative staff in setting up and running projects.

The issues related to livestock production in tropical zones, which are at the heart of the scientific project, are well identified. The desire to support the evolution of livestock systems towards more agroecological systems in a context of climate change is clear and in line with INRAE's priority objectives. The island context, which could be seen as a constraint, is on the contrary highlighted for its originality and the project proposes to address issues specific to the West Indian context (chlordecone, food independence) for which the unit is particularly well positioned, but also addresses issues of interest in contexts outside the West Indies (heat tolerance, mixed crop-livestock systems). The project is very broad and ambitious with regard to the scientific and technical forces present during the project (expected departure of five scientists).

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