

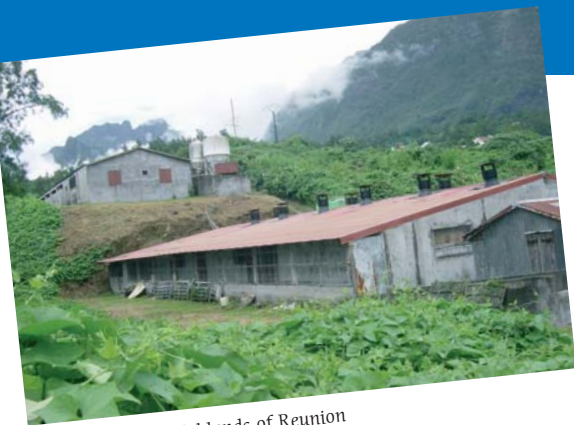
# Pig production in tropical and subtropical regions

## Promoting sustainability to feed populations in the South

**P**ig production provides almost 40% of the meat consumed worldwide. Pig production is expanding in Asia, Latin America and the non-Muslim zones of Africa. It is practised by small-scale pig farmers and provides essential income in rural zones. Faced with the technical, economic, environmental and health risks associated with developing this activity, ecological intensification is an interesting prospect for sustainable smallholder pig farms. CIRAD experts are adopting an interdisciplinary approach to assist this innovation process.



© V. Porphyre, CIRAD



Pig farm in the highlands of Reunion  
© V. Porphyre, CIRAD

### Gaining a clearer understanding of changes on pig farms

**M**ost pig farms in developing countries are small family units, based on very diversified production methods ranging from low-input extensive rearing to industrial off-land production. CIRAD is implementing

projects in a close partnership with research and development organizations from the South, to:

- assess locally-available food and animal resources,
- analyse the technical and economic efficiency of pig production systems in tropical countries,
- characterize the diversity of rearing units by gaining a clearer understanding of their technical, economic and social rationale,
- understand the role of pig production in the pluri-active socio-economic strategies of smallholders in developing countries and in the marketing sectors,
- model development patterns for farms and for the production and processing sectors to assist in their change.



### Contacts

Vincent Porphyre  
CIRAD  
Livestock Systems  
and Animal Product  
Management Research Unit  
Station Ligne Paradis  
7 chemin de l'IRAT  
97410 Saint Pierre  
La Réunion - France

[vincent.porphyre@cirad.fr](mailto:vincent.porphyre@cirad.fr)

Jean-Michel Medoc  
CIRAD  
Environmental Risks of  
Recycling Research Unit  
Cit  diplomatique de Van Phuc  
298 Kim Ma  
99 Hano   
Vietnam

[jean-michel.medoc@cirad.fr](mailto:jean-michel.medoc@cirad.fr)

For further information:  
<http://pigtrop.cirad.fr>

## Promoting the recycling and use of pig waste

Pig rearing units discharge effluents that lead to environmental pollution problems. CIRAD proposes ways of managing pig production unit effluents to protect the environment and fertilize crops. It determines the composition of effluents to rationalize their recycling on crops and to design novel treatment processes; it analyses waste management practices and adapts them to crop management sequences; it helps to improve slurry recycling in agricultural systems for minimum environmental risks; it models environmental impacts in the production sector, using the Life Cycle Analysis method for better decision-support.



Pig farm, North Vietnam  
© V. Porphyre, CIRAD



Sow of the Mong Cai race, with her litter, Vietnam © V. Porphyre, CIRAD

## Accompanying the pig production systems of tomorrow

CIRAD helps the pig production sectors in developing countries to adopt alternative management methods, based on criteria for the ecological intensification of pig farms that are acknowledged by all the local stakeholders. It develops novel methods for sustainable development of pig farms by exploring ecological intensification methods, controlling animal diseases and adding value to products. Its research is designed to optimize use of local resources, improve the energy balance of pig farms for less energy-demanding development and assist stakeholders towards multi-criteria quality labelling of their products.

## Sharing research results

CIRAD proposes its PIGTrop portal on the internet: <http://pigtrop.cirad.fr>, providing access to the latest news and research results on original topics dealing with pig production in developing countries. This internet site is intended for researchers, students, professionals, pig rearers and development agencies interested in the sustainable development of the pig supply chains in developing countries. It presents the results of international research on animal health and emerging diseases, the socio-economic organization of the pig sector, integrated waste management, genetic management of populations, food strategies, optimum use of biodiversity and product quality. Today, PIGTrop is the unrivalled scientific reference portal on pig research for development in tropical supply chains.



Combination of small-scale pig farming and carp fish farming, North Vietnam © V. Porphyre, CIRAD



Combination of pig farming, market gardening and fish farming, Red River Delta, Vietnam © V. Porphyre, CIRAD

## Partners

- National Institute of Animal Science, Vietnam
- Hanoi University of Agriculture, Vietnam
- National Institute of Veterinary Research, Vietnam
- Soils and Fertilizers Institute, Vietnam
- Institute of Policy and Strategy for Agricultural and Rural Development, Vietnam
- FOFIFA, National Centre of Applied Research and Rural Development, Madagascar
- Coopérative des producteurs de porcs de la Réunion
- Fédération régionale des coopératives agricoles, Réunion
- Qualitropic, Pôle de compétitivité Agro-Nutrition en milieu tropical, Réunion
- Lycée agricole de Saint-Joseph, Réunion
- Institut national de la recherche agronomique, France
- Royal Veterinary College, University of London, United Kingdom
- Montpellier SupAgro, France