THE INSTITUT AGRONOMIQUE NÉO-CALÉDONIEN

Targeted research for a sustainable agriculture in a protected environment

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IAC
INSTITUT AGRONOMIQUE NÉO-CALÉDONIEN

www.iac.nc

A LOCAL AND ORIGINAL

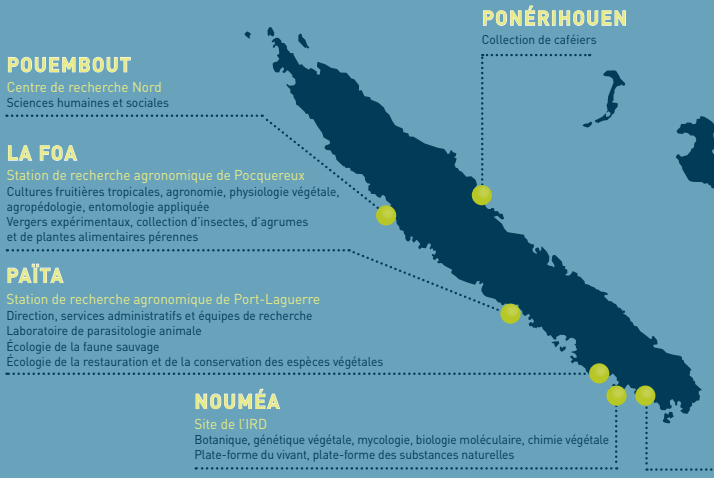
The Institut Agronomique néo-Calédonien (IAC) is a targeted research institute which supports New Caledonia's development in the fields of sustainable agriculture, environmental protection and the maintenance of rural populations.

Missions

- → **Produce and distribute scientific knowledge** and innovations that meet local needs above all
- → **Produce expert reports** and decision-making tools that benefit public and private stakeholders
- → **Contribute to the training** of younger generations, particularly New Caledonian managers
- → **Develop scientific cooperation** at the local, regional and international level
- → **Nurture public debate** in order to assist New Caledonia in dealing with the challenges of today and tomorrow.

Key figures

- **120** staff (70 permanent) including researchers, engineers, PhD students, technicians, workers and administrative officers.
- **650** million franc budget (5.5 million euro)
- **60** to **80** scientific publications each year



INSTITUTE

Ressources

The IAC scientific teams explore the living world at the landscape, plot, cell and gene level, relying on a unique research network located as close as possible to the agricultural and environmental issues:

- → **7** research stations in the 3 Provinces
- → **3** specialised laboratories (Parasitology, Entomology and Plant Physiology)
- → **1** 18-hectare experimental orchard, greenhouses and nurseries
- → **2** technological platforms (in partnership with the IRD, Ifremer, UNC, the Pasteur Institute)

Collections

- → **Native ornamental plants:** 200 natives species and over 300 hybrid species created from the Oxera genus.
- → **Traditional food plants:** 22 varieties of banana tree and 24 varieties of bush hibiscus spinach
- → **Citrus and fruit trees:** Over 100 citrus tree varieties and cultivars and 120 varieties of other fruit trees in the orchard
- → **Invertebrates:** Nearly 2,500 species of arthropods and 100 species of livestock parasites
- → **Coffee trees:** 60 varieties and cultivars

*en partenariat avec l'IRD, l'Ifremer, l'UNC, l'Institut Pasteur

Expérimental orchard

MARÉ
Station de recherche agronomique d'Atha
Physiologie végétale, agronomie des plantes alimentaires, plantes et cultures traditionnelles

MONT-DORE
Station de recherche agronomique de Saint-Louis
Botanique, physiologie végétale, agronomie des plantes maraîchères, annuelles et ornementales. Collection de plantes ornementales indigènes et alimentaires

A LONG-TERM SCIENTIFIC

To meet the major challenges of productive and sustainable agriculture, in a preserved environment, the IAC has developed an innovative scientific strategy, built in consultation with local partners.

→ 3 major research axes combining about 30 priority actions

Axis 1: Knowledge and improvement of agricultural systems

The research conducted in Axis 1 aims to improve agricultural systems so as to make them part of an agriculture that is productive, sustainable and that respects the environment.

- → **Characterise and showcase native plant resources** that are of food, ornamental or agronomic interest, in order to increase the country's food security and open up new industries.
- → **Design agricultural systems that are appropriate** to New Caledonia's soil and climatic conditions, economic in terms of inputs, energy and use of natural resources, and capable of ensuring adequate income for farmers.
- → **Innovate in health protection** by practising integrated control of crop pests and parasites that affect livestock production: research on bioactive molecules, development of vaccines, etc.

Field of bush hibiscus spinash |

STRATEGY

Axis 2: Biological and functional diversity of terrestrial ecosystems

New Caledonia's ancient geographic isolation has fashioned a remarkably rich biodiversity. While this heritage is substantially endangered today, the research conducted in Axis 2 aims to produce knowledge to help better preserve and promote it.

- → **Know the biodiversity** from genes to populations in order to understand the structure and function of New Caledonia's terrestrial ecosystems.
- → **Assess the threats and impacts.** These studies concern disruptions that affect biodiversity, species adaptation, population monitoring, invasive processes or forest dynamics.
- → **Develop tools for environmental conservation,** conservation of endangered species, and the restoration of degraded habitats in order to assist partners in their management policies.

Axis 3: New rural ways of living and a common destiny

Research in human and social sciences has a crucial role to play in order to understand the changes affecting the rural world and supply the partners with resources for guiding their public policies.

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- → **Assess rural activity and its transformations:** tribal agriculture, rural exodus, local knowledge about agricultural systems and ecosystems, etc.
- → **Understand the rural and social dynamics** and assess how they contribute to piecing together the issues involved in the common destiny.
- → **Identify the methods of governance** and public action, related in particular to mining activity and land disputes in the rural context.

SHARED SCIENCE

The IAC fulfils its mission of supporting development by offering a range of expert services and by developing decision-making tools. The scientific and technical knowledge that comes from research activities is also widely distributed to the scientific community, local development stakeholders and the general public.

Range of publications

- → Scientific publications (peer-reviewed journals)
- → Research reports
- → Expert reports
- → Communications at international symposia
- → Publications in trade journals
- → Agronomy and technical data sheets
- → Activity report
- → Reference works (including IAC editions)
- → Technical guides

Services and expert reports in support of development

- → **Parasitology diagnostic** assays and tests (livestock, wild fauna)
- → **Identification** of plant and animal species
- → **Valorization** native plants in landscaping
- → **Conservation** of plant resource
- → **Harvesting** plant samples
- → **Promoting** integrated agriculture
- → **Management** in biodiversity and ecosystem
- → **Control** of invasive species
- → **Draft** in regulatory documents and specifications
- → **Assessments** in social and economic supports for public policies

Numerous scientific cooperation arrangements

Locally, the IAC maintains scientific collaborations with the other research institutes present in the territory (IRD, UNC, Ifremer, IPNC and CNRS) as well as with various local technical agencies (Chamber of Agriculture, Province departments, Adecal (Land Pole), Arbofruits, UPRA, CEN, etc.).

Cooperation with Japanese and Australian teams.

The IAC is a foundation member of the **Cresica* consortium** (Cooperation for research, higher education and innovation in New Caledonia) which brings together various research stakeholders around joint projects of scope and interest for New Caledonia

Internationally, the IAC is engaged in numerous cooperation projects involving French universities and research agencies in the Pacific region (Australia, New Zealand, Fiji, Vanuatu, Hawaii, etc.).

* Cresica members: IAC, UNC, IRD, Ifremer, Institut Pasteur, CNRS, Cirad, BRGM

A rich website

In accordance with its mission of sharing knowledge, the IAC distributes its knowledge broadly to the general public through its website. Attractive and often updated, the site presents news, research activities, expert reports, works available, publications that can be downloaded, events, etc.

www.iac.nc

Over 2000 recent publications and archived documents are accessible via the GIAIC platform (IAC Archive Management)

IAC
INSTITUT AGRONOMIQUE NÉO-CALÉDONIEN

Established in 1999, under the sharing of powers promised by the Noumea Accords, the IAC is a targeted research institut with the status of joint association of local and national authorities and a board of directors including New Caledonia, the three Provinces, the French Government, the Cirad and the Chamber of Agriculture.

GOUVERNEMENT DE LA NOUVELLE CALÉDONIE
PROVINCE SUD
PROVINCE NORD
cirad
AGRICULTURES & TERRITOIRES
CHAMBRE D'AGRICULTURE NOUVELLE-CALÉDONIE

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