



INSTITUTE OF AGRICULTURAL SCIENCES FOR SOUTHERN VIETNAM



Institute of Agricultural Sciences for Southern Vietnam

has its over 95 years of development history. It was established on the basis of the "Institut des Recherches Agronomiques de l'Indochine" which had been founded in 1925.

In 1977 the Institute was renamed the Institute of Agricultural Technology for Southern Vietnam. In 1981, the Institute was merged with the Sub-Institute of Agricultural Science and Technology of Viet Nam in Ho Chi Minh City and was called Institute of Agricultural Technology for Southern Viet Nam.

From 1990 to June 2013, the Institute was renamed "Institute of Agricultural Sciences for Southern Vietnam" (IAS) responsible for crops and animals sciences.

Since June 2013 up to date, IAS has been responsible for the research and application of advanced technologies in crop breeding/cultural techniques, soil sciences, plant protection, farming system and agricultural economy in southern Viet Nam.



Functions & Responsibilities

Institute of Agricultural Sciences for Southern Vietnam is a multidisciplinary research institution, responsible for the following activities:



Rice
(*Oryza Sativar*)



Maize
(*Zea mays*)



Cashew
(*Anacardium occidentale* L.)



Cassava
(*Manihotesculenta*)



Soybeans
(*Glycine max* (L.) Merr.)



Tomato
(*Solanumlycopersicum* L.)



Potato
(*Solanumtuberosum* L.)



LingzhiMushroom
(*Ganodermalucidum*(Curtis)
P. Karst)



Dendrobium
(*Dendrobium Sw.*)



Strawberry
(*Fragaria × ananassa*)

Maintenance of plant nucleus genetic stocks, germplasm conservation, research and application of biotechnology; selection and breeding plant varieties/hybrids.

Research on insects and diseases and control methods for crop production; agronomy; agro-forestry farming systems; agro-ecological environment protection, agro-products processing and storage.

Research on soil and fertilizer, micro-organism, environmental pollution, climate change.

Research on the market economy, development of agricultural and rural infrastructures.

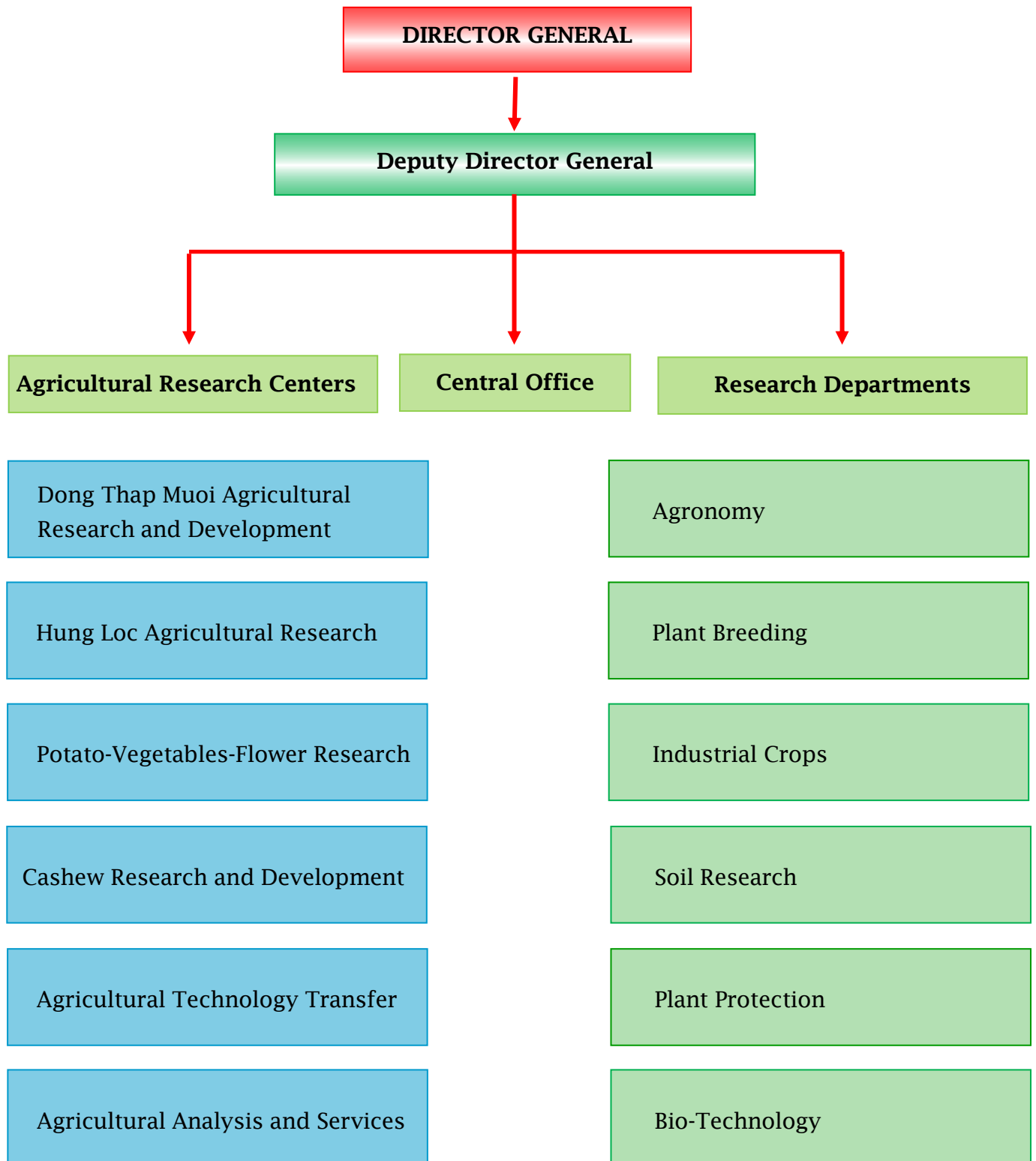
Research on the policy, developmental strategies and on techno-economic value chain in agriculture.

Implementation of technology transfer on plant varieties/hybrids, technical packages; agro-products processing and storage.

Post graduate and non-degree training for researchers and technical staff in agriculture.

International cooperation on research, development projects and training.

Organizational structure



Human Resources

Presently, IAS has 216 staff, with more than 176 graduates and post-graduates, in which there are 17 PhD and 72 MSc.

Main Research Fields

Plant Genetics and Breeding

Collection, preservation, evaluation, documentation of plant germplasm and breeding of rice, maize, cassava, cashew, black pepper, legumes, potato, vegetables varieties/hybrids for southern Vietnam and others are implemented to address biodiversity, effective utilization of gene pools in crop improvement.

Genomics and functional genomics are well studied in addition to modern tools of proteomics, transcriptomics, bioinformatics to promote performance of molecular genetics, genetic engineering applied in crop breeding.

Introgression of the target genes from related wild species and land-races aims at enhancing biodiversity and enlarging

gene pools for crop breeding in addition to mutation, somatic and gametic variation, quantitative genetics tools to meet the demand of promotion of high yielding genotypes with tolerance to biotic and abiotic stress, high nutrient quality for biofortification.

Advanced backcross, marker-assisted selection, genetic gain assessment, QTL analysis, sequencing of target DNA fragments, primer designing, fine mapping are carried out to continuously improve the protocol of crop breeding.

Multi-location yield trials are carried out to analyze G x E interaction, then pilots on new varieties/hybrids are also set up in target areas.



Soil Sciences & Environment

Studying physical, chemical and biological characteristics of soils with the aim of fertility improvement & sustainable utilization of agricultural lands.

Studying how to prevent soil and water environments from erosion and pollution for sustainable agricultural development.

Suggesting the way how to manage balanced fertilization regimen for better crop yield and production.

Studying soil micro-organisms in agriculture.



Azotobacter sp. Beauveria sp.



Trichoderma – beneficial Fungal soil inoculant



Plant protection

Studying integrated pest management for various cropping patterns.

Applying biological control in agriculture production and prevent from environment pollution.



Biotechnology

Exploiting soma clonal variation and embryo manipulation for crop improvement.

Research and development on target gene constructs for crop improvement.

Implementing DNA recombinant technology on rice, soybean, cotton, maize and others to produce "biotech crops" met the demand of the country searching for yield, biotic and abiotic stress tolerance (resistance), raising high quality, high nutrition of crop products.

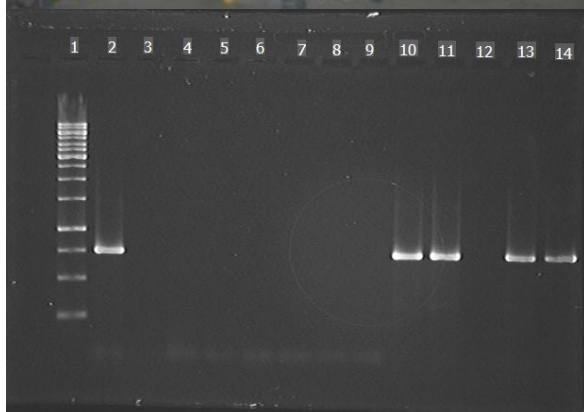
Bioassay implementation of transgenic plants and GM products.

Promoting of micro-propagation technique to produce clean and abundant seeds.

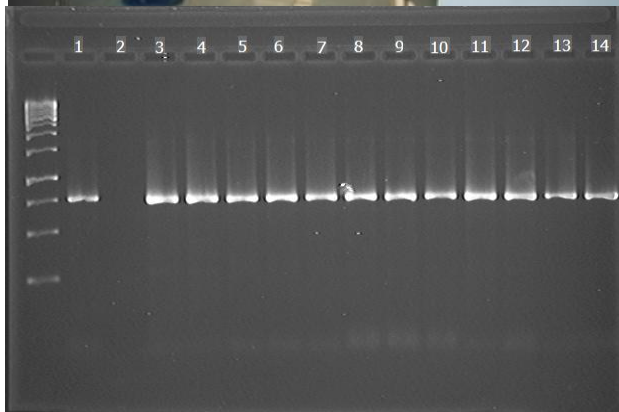
Research and development on promoters, reporters, selectable markers tended to produce "clean DNA" in gene transformation.

Carrying out basic research on molecular biology related to genomics, transcriptomics, proteomics.

International projects (themes) are implemented in target sites mentioning biotic and abiotic stress tolerance, nutritional quality, etc...



PCR product of tomato samples in LâmĐồng
Lane 1: 1 Kb ladder, Lane 2: positive control, Lane 3:
negative control, Lane 4-14: DNA of tested tomato samples



PCR product of tomato samples in ĐắCẮắ
First lane: 1 Kb ladder, Lane 1: positive control, Lane 2: negative
control, Lane 3 -14: DNA of tested tomato samples

Forward Primer 5'-GTA TGC GAG CAA GGA GCA AG-3'. Reverse Primer 5'-AAT TCG TCA CCC TCA ACA GC-3'

Development of Technical Packages

Implementing sustainable agricultural development.

Establishment of necessary protocols for agricultural practices for target crops for various ecosystems in southern Vietnam.

Safe agro-products production through the application of bio-organic techniques and GAP, with of focus on vegetables.



Agricultural systems

Studying solutions how improve and to establish sustainable agricultural systems with high economic efficiency for different agro-ecological zones in southern parts.

Studying specific value chains of crops to determine efficient solution on how improving the farmer's income for livelihood in agricultural development.



Training

With the potential of scientific staff, with the degree and scope of operations, in addition to the tasks of

scientific and technological research, the Institute is also tasked the post graduate training in 05 key areas:

- 9420201 Bio-Technology**
- 9620103 Soil Sciences**
- 9620110 Crop Science**
- 9620111 Plant genetics and Breeding**
- 9620112 Plant Protection**

So far, there have been 44 candidates from institutions, universities and provinces have successfully defended their PhD Thesis at the Institute Council.

Presently, there are 16 registered PhD students conducting their research proposals. Every year, tens Institute organized training courses for technicians, field tours and conferences to train farmers on new techniques.

In addition to training programs in the country, the Institute is also focused on training abroad through international cooperation programs. Every year, the Institute sent staff to attend training courses of MSc, PhD and joining the short-term training courses abroad.



International Relation

International cooperation is an important facilitator in the scientific research activities of the Institute. Institute of relationship soon put extensive cooperation with international organizations, government institutions and non-governmental, agricultural enterprises and economic organizations.

The objective of international cooperation programs in order to attract more funds for research through the channel, collaborative scientific research, scientific training, research capacity building, technology transfer and exchange experiences.

The scope of its activities, the Institute has set cooperation relationship with more than 40 international organizations, government institutions and non-governmental, and nearly 30 enterprises and economic organizations abroad.



Australian Government
Australian Centre for
International Agricultural Research



Japan International Cooperation Agency



INTERNATIONAL RICE RESEARCH INSTITUTE



For quality of life





Technology Transfer

- Maize hybrid MN-1, MN2, MN585, Max7379 have been transferred and development widely in South Eastern Region, Central Highlands and Mekong delta.
- Upland rice variety LC 227, LC 408 have been transferred and grow widely in South Eastern Region and Central Highlands
- Early rice varieties such as VN121, ĐTM126 and ĐTM14-258, ĐTM 17-1 have been transferred to difficult regions with limited water, sulphate acid soil in southern Vietnam.
- Many models of high tech agriculture in vegetables production under plastic houses in tropical low land, heavy rainfall conditions in southern Vietnam.
- Transferring technology of vegetable growing on white sand for soldiers on Truong Sa islands.
- New grafted cashew varieties have been released for Cashew Development Programme in the Central Highlands and PN1, AB29, AB05-08 cashew varieties for South Eastern Region and Central Highlands.
- Soya bean varieties HLĐN20, HLĐN910, HLĐN904, HL07-15, HLĐN25, HLĐN29, TH29-3-7 for South Eastern Region and Mekong Delta of Vietnam.

- Mungbean variety HL115, HLĐX6, HLĐX7, HLĐX10, HL89-E3, V94-208 for South Eastern Region and Mekong Delta of Vietnam
- Tomato varieties NT2, NT8, NT9, NT10 for South Eastern Region and Central Highlands
- More than 85% of cassava growing areas in South Eastern Region have been planted with new varieties by IAS, such as KM140, HL-S10, HL-S11, HL-S14
- Packaged – rice straw for cattle feeding in dry season.



Agricultural Research Centers

1. Dong Thap Muoi Agricultural Research and Development Center (DTMARDC)

Located in the Plain of Reeds, Long An province, with an area of 100 ha, devoted mainly to research on lowland rice, jute and farming systems of lowland rice areas

2. Hung Loc Agricultural Research Center (HARC)

Located in Dong Nai province, South Eastern region, with an area of 89 ha, devoted mainly to research on upland crop varieties, cultural practices and upland crop farming systems

3. Potato, Vegetable & Flower Research Center (PVFC DaLat)

Located in Lam Dong province, Central Highlands, with an area of 3 ha, devoted mainly to research on potato, vegetables and flowers

4. Cashew Research and Development Center (CRDC)

Located in Binh Duong province, with the area of 30 ha, devoting mainly to research and development cashew

5. Center for Agricultural Technology Transfer (CATT)

Located in 121 Nguyen Binh Khiem street, district 1, Ho Chi Minh city

6. Center for Agricultural Analysis and Services (CAAS)

Located in 121 Nguyen Binh Khiem street, district 1, Ho Chi Minh city





Board of Directors

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