

Vietnam Institute of Agricultural Engineering and Post-Harvest Technology

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FUNCTIONS

The VIAEP is a key national scientific and technological institution in agricultural engineering and post-harvest technologies. It has functions as follows: Fundamental and applied research, technology transfer, participating in quality management, post-graduate training and international cooperation in agriculture and rural development.

The background features a collage of images: a clock in the top left, a key on a card in the middle left, and a stack of books in the bottom left. The word 'TASKS' is prominently displayed in red at the top center.

TASKS

1. Basic Research

2. Survey

3. Applied Research

4. Equipment for Manufacturing & Testing

5. Technology Transfer

6. Control and Evaluation of quality

7. Post-graduate Training

8. International Cooperation

Organization structure

- **VIAEP includes 500 staff:**
 - 1 Professor**
 - 4 Associate Professors**
 - 2 Doctors of Science**
 - 21 Ph.D**
 - 23 Masters**
 - 349 University Graduates**
 - 100 Others**



A background collage featuring a clock in the top left, a key on a card in the middle left, and a stack of books at the bottom left. The text is overlaid on the right side of the image.

3 Functional Departments

1. Department of Science, Training & International Cooperation
2. Department of Administrative Organization
3. Department of Accounting



12 RESEARCH DEPARTMENTS

1. **Department of Automation**
2. **Department of Crop Cultivating Mechanization**
3. **Department of Harvesting Mechanization**
4. **Department of Salt Producing Mechanization**
5. **Department of Animal Husbandry Mechanization**
6. **Department of By-product Treatment**
7. **Department of Technology & Equipment for Food Processing**
8. **Dept. of Post-harvest Microbiology**
9. **Department of Physiology & Biochemistry of Agro-products**
10. **Department of Technology and Equipment for Food Preservation**
11. **National Electrical Mechanical Laboratory VILAS-019**
12. **Pilot workshop for Food Processing & Preservation**

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7 SUB-INSTITUTE AND CENTRES

1. **Sub-Institute of Agricultural Engineering and Post-harvest Technology (in HCM city)**
2. **Centre for Experimental Application and Technology Transfer in the Central (in Hue city)**
3. **Centre for Technology Transfer & Consultancy on Investment**
4. **Centre for Aero-Hydraulic Machines, Irrigation and Drainage Mechanization**
5. **Centre for Food Quality Control & Standardization**
6. **Centre for Measurement, Testing and Evaluation of Agricultural Machinery**
7. **Centre for Prototype Manufacture**



SCIENCE - TECHNOLOGY RESEARCH ACTIVITIES



BASIC RESEARCH

Research and manufacture of a system of equipment and complete set of machines for mechanization of main agricultural crops such as rice, maize, soy bean, peanut, etc; industrial crops and fruit trees.



*Completely mechanized for rice,
maize and sugar-cane production*

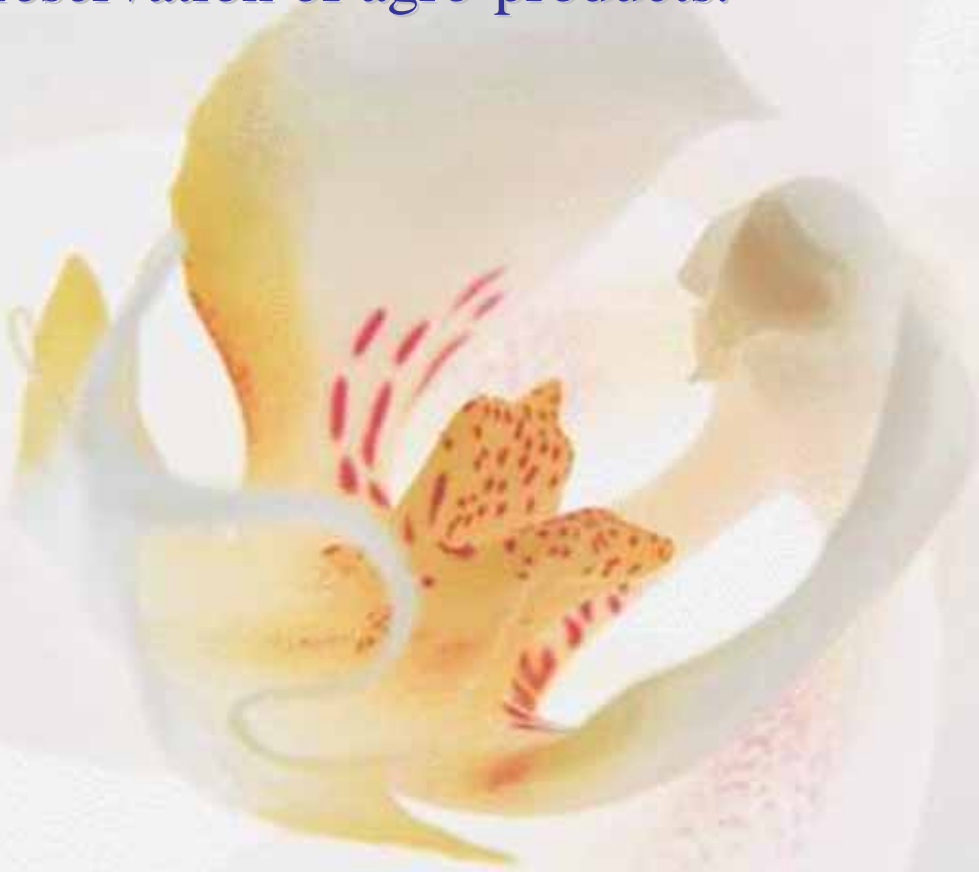
BASIC RESEARCH

Applied research in biology, bio-technology, technology for food, agro-products and foodstuff.



BASIC RESEARCH

Study on bio-pesticides to replace chemical ones for crops-care and preservation of agro-products.



BASIC RESEARCH

- Study on production of Bio-insecticides in Bathurin S and Bathurin D (first prize of National contest in Technical Creation in 2000-2001)



BASIC RESEARCH

Study on by-products treatment from residues in agriculture, processing industry and other kinds of plants.

1. Use of longan and litchi kernels for animal feed
2. Use of coffee shell for biological fertilizer
3. Use of rice husk as fuel for fluidized-bed combustion

Recycle natural resources and protect agricultural environment

BASIC RESEARCH

Study on preservation, processing and diversification of agro-products and foodstuff to increase their value and to reduce post-harvest losses.



BASIC RESEARCH

Adopt and improve technological processes as well as appropriate equipment/machines for preliminary processing, storage and processing of agro-products.

Plum storage

Potato preservation

Rice, maize, soy- bean,
peanut preservation

Fruit, vegetables, spices
preservation



Based upon the system of modern laboratories and equipment, VIAEP has the capability of meeting the requirements on the agricultural engineering and post-harvest technology

APPLIED RESEARCH

Research, design and manufacture machines equipment; establish technological processes on:

Cultivating mechanization

Crops-care

Irrigation

Harvesting

Preservation

Processing

Renewable energy



Cultivating Mechanization

Research and develop all kinds of machines for land preparation for rice, maize, sugar cane and industrial crops:

- * **Tilling equipment**
- * **Sowing, transplanting**
- * **Improved tractor & power tiller for paddy field**



Cultivating Mechnization

To meet the requirements of characteristics of each region, the Institute has studied, applied various machines such as:

- Improved 4-wheel tractor for water field operation.
- 2-wheel power tiller



Cultivating mechanization

Implements and machines for paddy transplanting and seed sowing.



Crops-care - Irrigation

All kinds of pumps such as hand manual pump, high pressure spiral pump, axial-flow pump and centrifugal pumps have been widely applied for different areas of plains, midland, mountains, etc.



Crops-care - Irrigation

Systems of sprinkling, dripping, absorbing irrigation.

Many floating pumping stations and system of sprinkling irrigation along rivers have been transferred to many localities nationwide and abroad.



Harvesting mechanization

Research design and manufacture rice combine harvester with capacity of 1 ha/day.



Máy gặt đập liên hợp GLH-0,2

Harvesting mechanization

Models of maize sheller, soya-bean thresher, peanut decorticator, grass cutter have been applied in production.



Storage

Preservation of agro-products and foodstuff has been improved and gradually completed. Hundreds of equipment and technologies have been applied in production. Losses of post-harvest have remarkably reduced.



Processing

Processed products have widely been diversified and sold at markets nationwide.

Processing lines for seed, animal feed, coffee, green tea, cassava starch, soft drinks and many other products have been installed and operated, aiming at improving agro-products value.



The above-mentioned processing lines are being widely applied in factories and the production units nationwide.




Development of Renewable energy

Solar dryers, generators and windpumps have been adopted for years.



Technology Transfer



Based upon the output of R&D projects, many technologies and technical achievements have been transferred effectively into production.

Localities adopting technology transfer are:

Provinces in plain

Mountainous

Coastal

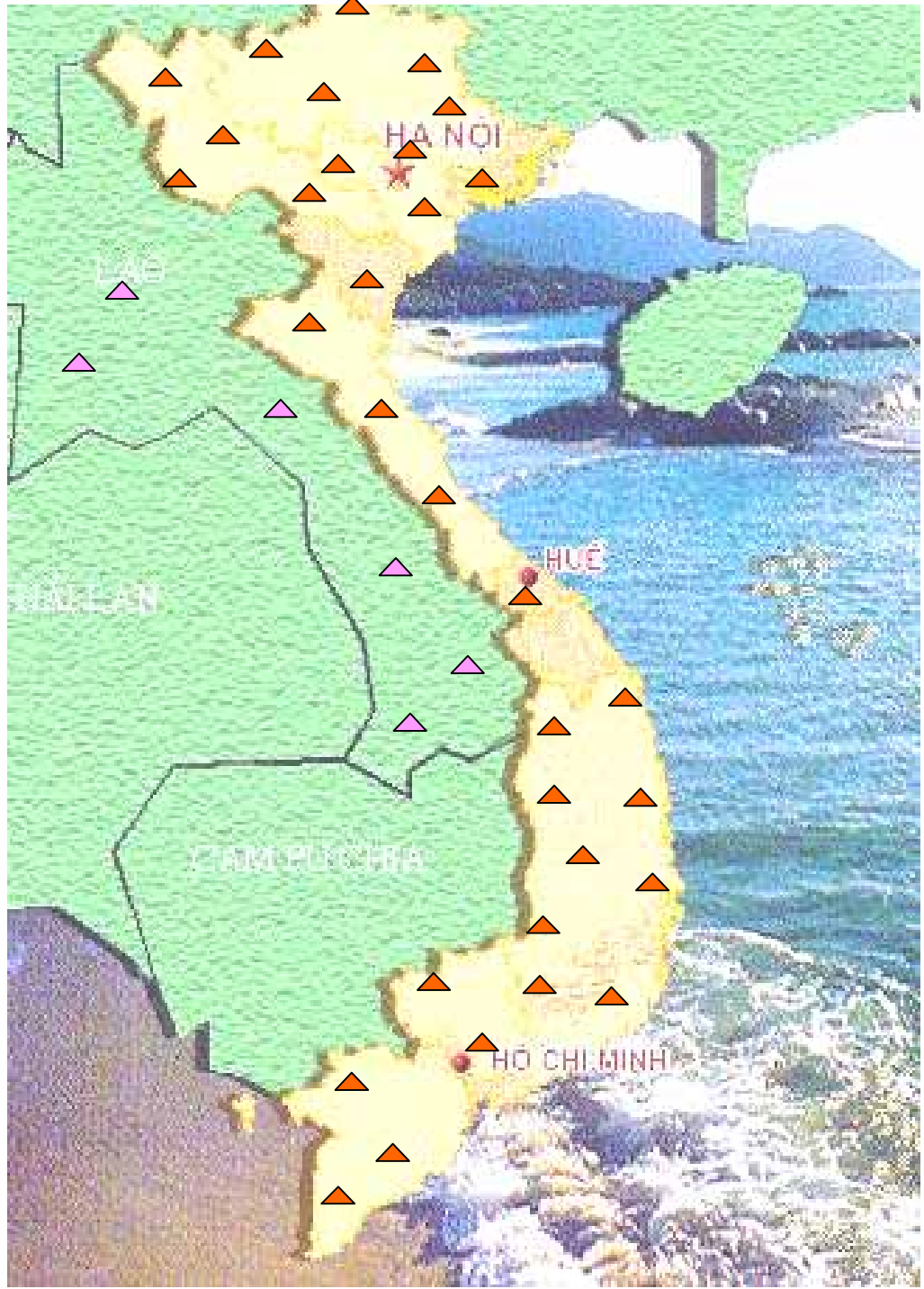
Island

Remote areas





**Map of Localities applying
Science-technology
developed by VIAEP.**



Quality Control and Evaluation

Testing and standardizing quality for almost 1.000 probes per year:

nutrition

mechanic

microorganism

Organoleptic



Quality Control and Evaluation

Completing methods to analyze criteria on food safety and hygiene

Antibiotics

Insecticides

Hormones

Heavy metals

Preservatives



Testing and evaluation of equipment machinery

Testing and evaluating over 100 kinds of:



Tractors

Agricultural machines

Equipment for processing lines

Select 50 production lines of machines and equipment

Testing and evaluation of equipment machinery



National Electrical Mechanical Laboratory VILAS 019 of VIAEP has achieved the National and International Standards ISO/IEC 17025



*Compiled and participated in promulgating
11 TCVN (National Standards),
12 Sectoral Standards*

Testing and evaluation of equipment, machine

VILAS 019 of VIAEP has become an official Member of the Mutual Recognition Agreement (MRAs) in Asia Pacific Region (APLAC) and worldwide (ILAC).

Meeting the demands of measuring, testing and calibrating mechanical, electric, non-electric and environmental parameters according to Vietnam and International Standards such as ISO, ASTM, JIS, BS

VIAEP is the standing Office of the key National Science and Technology Program in the period of 2001-2005

“Science-Technology for Industrialization and Modernization in Agriculture and Rural Development”

The key Program under the Ministerial level

“Preservation and Processing of Agro-Forestry Products”





In the period of 2001-2005

VIAEP is the leader of 10 national R&D Projects and 7 national pilot projects

13 R&D projects of Ministerial level

**Participating in other 11 R&D projects
at National and Ministerial levels**

**Many R&D projects in cooperation with
various localities nationwide**

Training

Training of Professional Doctor in Agricultural Engineering
And Post-Harvest technologies.



*Cooperation, post-graduate training
in Vietnam and abroad*

International Cooperation

VIAEP has established regular relationship with the International Organizations:

CiAT **AIT** **IUFoST**
CAAMS **ACiAR**
IRRI **IFPRI**
AusAID **JICA**



Relationship with specialized Institutions over 20 countries



International Cooperation

*VIAEP is the coordinating agency for Science Technology
on ASEAN Food and Foodstuff*

**Official Member of the Centre
for Asia - Pacific in
Agricultural Engineering and
Machinery (UNAPCAEM)**

*Federation of Institutes of Food Science and Technology
in ASEAN (FIFSTA)*

EMULATION ACHIEVEMENTS

Distinguished Achievements:

- Labour Order – the 3rd class (1981)
- Labour Order – the 2nd class (1985)
- Labour Order – the 1st class (1995)
- Challenge Banner by the Government (1994)
- Challenge Banner by the Government (1996)
- Award by the Vietnam State (2000)
- Independence Medal – the 3rd class (2001)

VIETNAM INSTITUTE OF AGRICULTURAL ENGINEERING AND POST-HARVEST TECHNOLOGY

VIAEP Headquarter - 2005

Trung Hoa, Cau Giay, Hanoi



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