


Capacity and competence of the National Institute of Animal Husbandry related to manure management



By Vu Chi Cuong

n Brief of NIAH:

n Established in 1952 NIAH's mandated tasks :

- n - Planning and designing national research programs (both short term and long term) in Animal Science.
 - n - Implementation and management of approved national research programs.
 - n - Undertaking studies on animal breeding and genetics to improve animal species.
 - n - Undertaking studies on animal feed, nutrition and related issues including feed analysis, nutrient requirements for different species of animals and feeding regimes.
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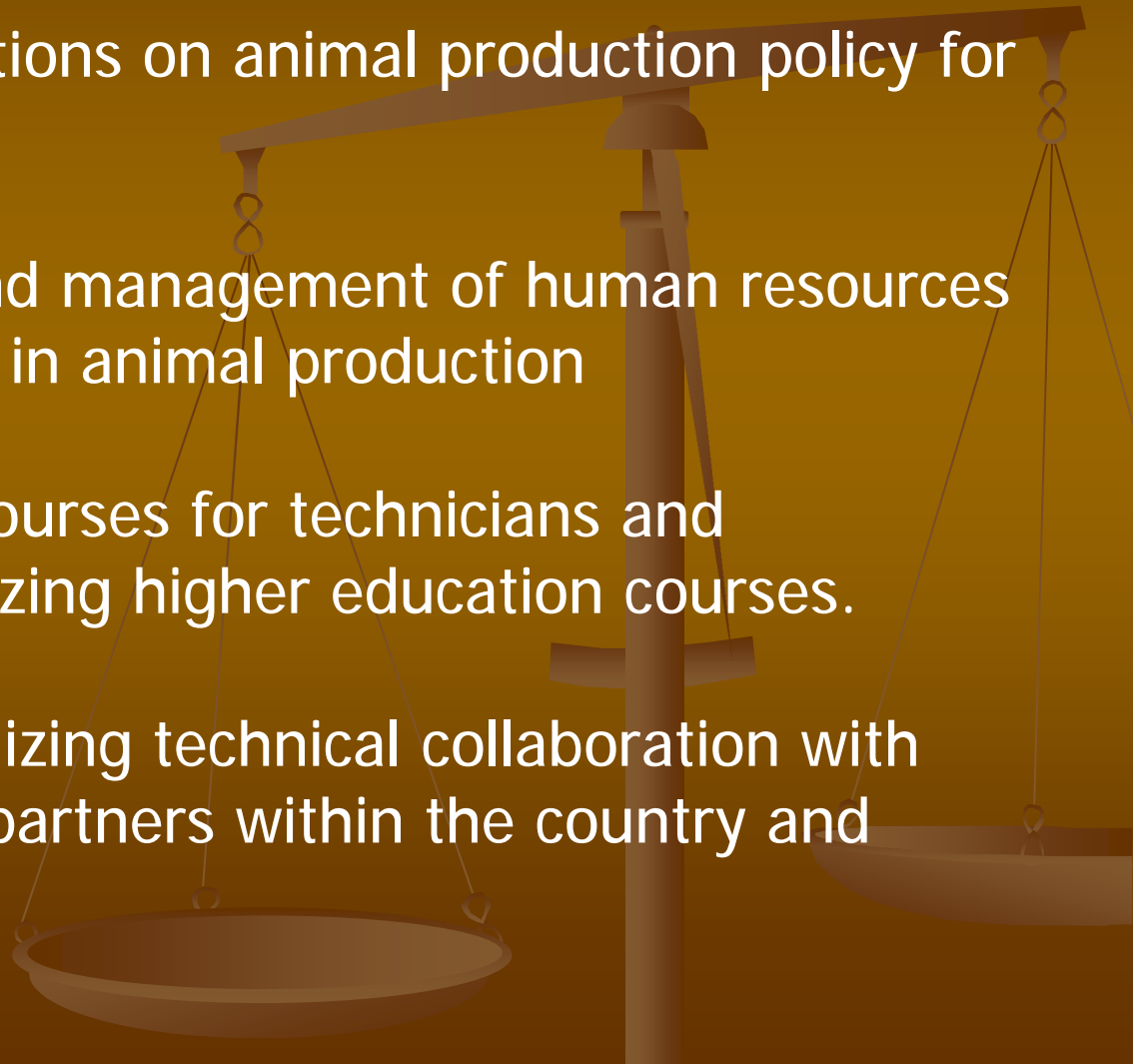
-Undertaking studies on animal housing, manure managements and economic analysis.

-Making recommendations on animal production policy for the Government.

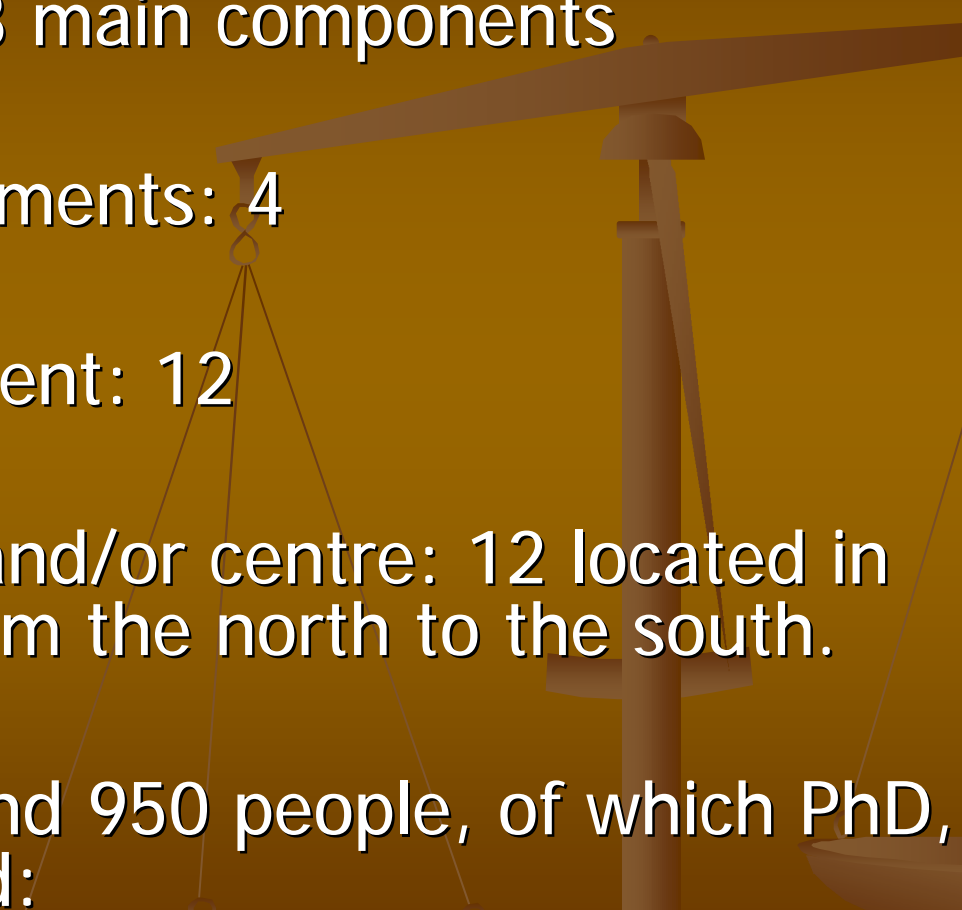
-Efficient utilization and management of human resources and natural resources in animal production

-Organizing training courses for technicians and graduates, and organizing higher education courses.

- Designing and organizing technical collaboration with internal and external partners within the country and internationally.



NIAH organization and structure:

- n - NIAH contains: 3 main components
 - n Supporting departments: 4
 - n Research department: 12
 - n Research station and/or centre: 12 located in whole Vietnam from the north to the south.
 - n - Total staff: around 950 people, of which PhD,
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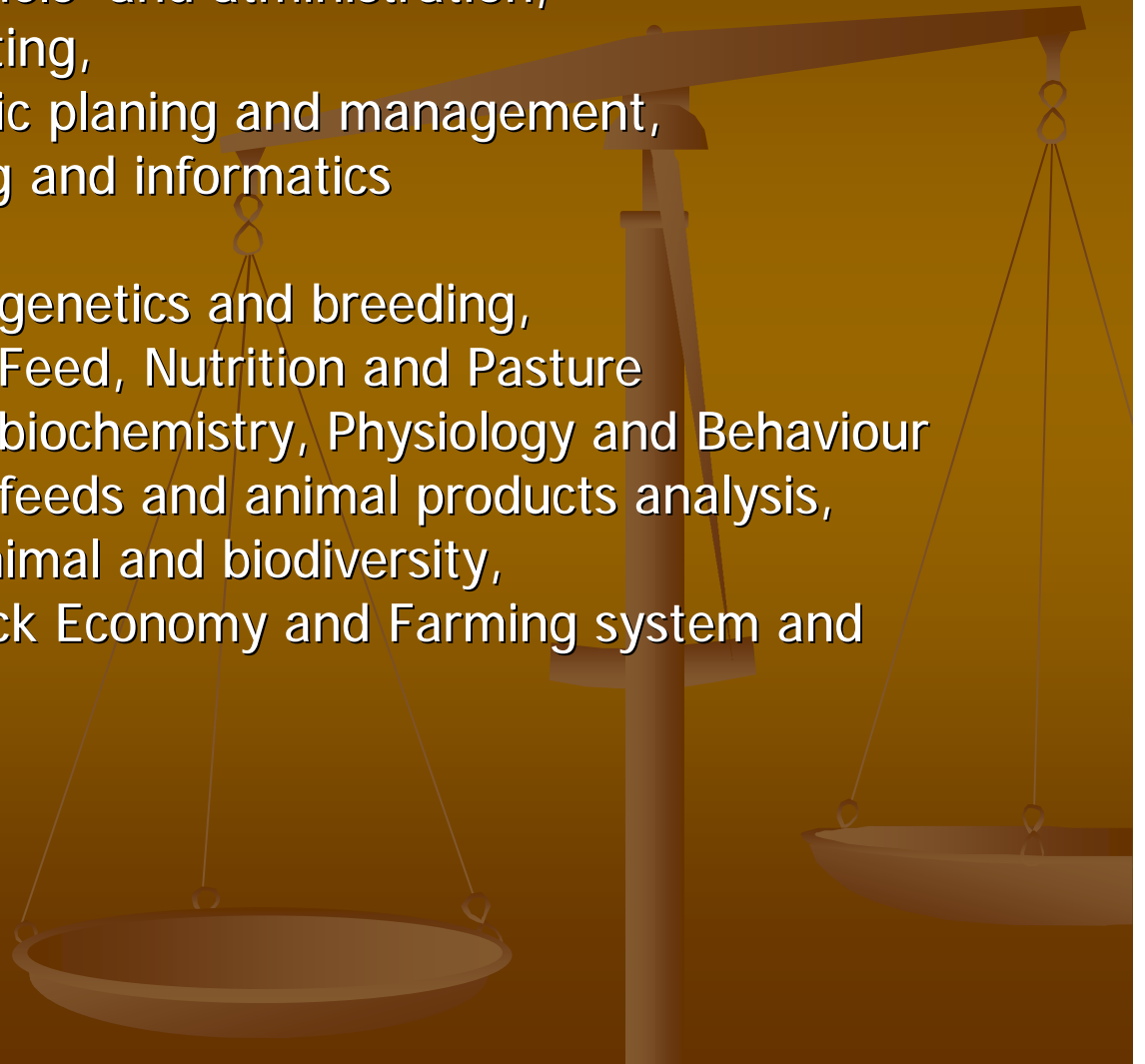
Supporting and research departments

Supporting department

- n 1. Department of personnels and atministration,
- n 2. Department of accounting,
- n 3. Department of sciencific planing and management,
- n 4. Department of Training and informatics

Research departments:

1. Department of Animal genetics and breeding,
2. Department of Animal Feed, Nutrition and Pasture
3. Department of Animal biochemistry, Physiology and Behaviour
4. Department of Animal feeds and animal products analysis,
5. Department of Rare animal and biodiversity,
6. Department of Livestock Economy and Farming system and Environment Research.
7. Laboratory
8. Laboratory



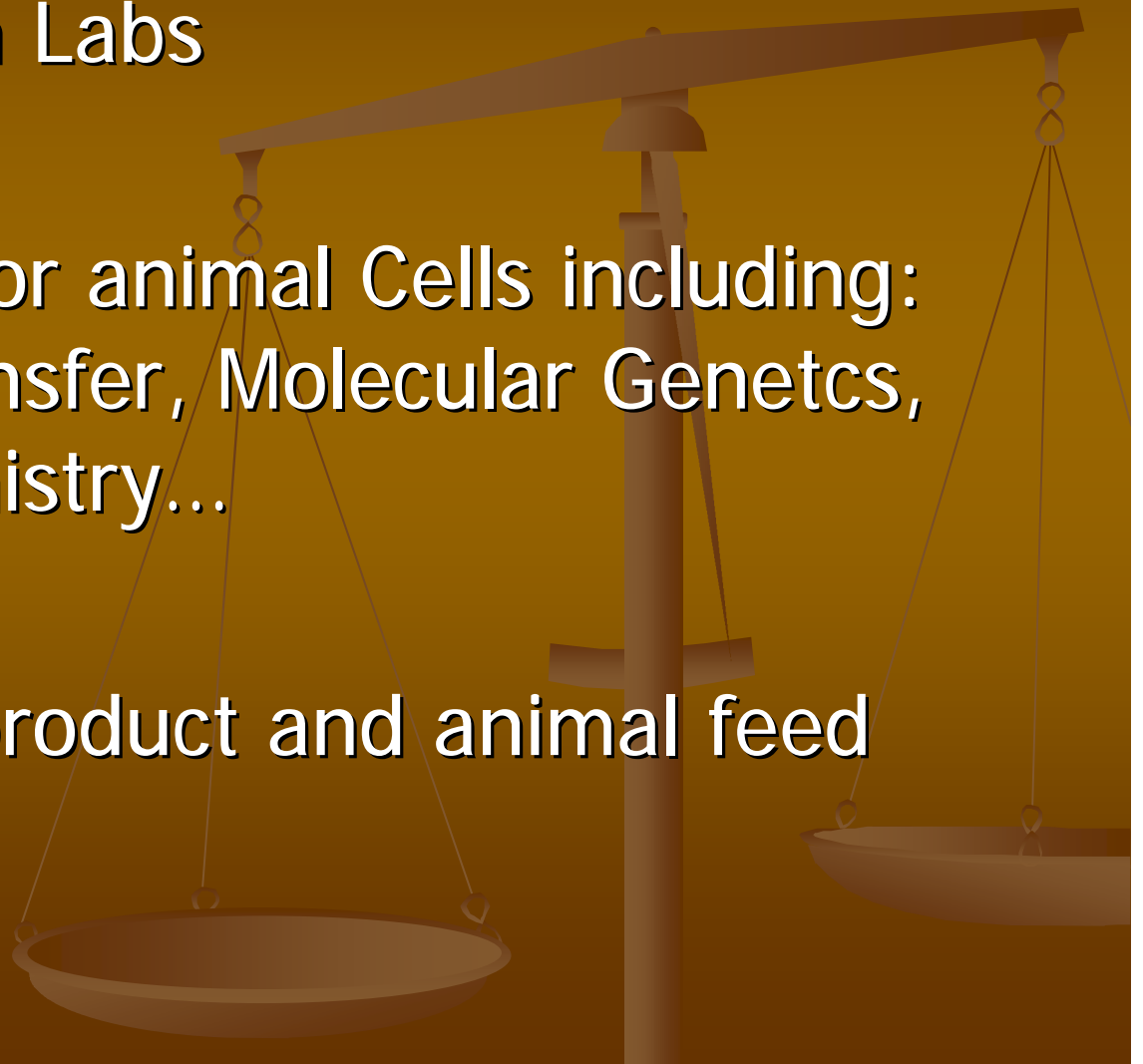
Research centres and station

- n Thuy phuong poultry research centre (3 farms: one for ostrich, one for chicken, one for ducks and muscovy ducks).
 - n Thuy phuong pig research centre (2 farms: one in Hanoi, one in Ninh binh).
 - n Thuy phuong research station for animal feeds
 - n Vanphuc poultry research centre
 - n Daixuyen duck research centre
 - n Thai nguyen livestock research and extension centre for northern mountainous area.
 - n Bavi Cattle and forage research centre
 - n Bavi goat and rabbit research centre
 - n Binhdinhh livestock research and extension centre for central region.
 - n Hochiminh city livestock research and extension centre for southern region
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Laboratory facilities

n NIAH: two main Labs

- National Lab for animal Cells including: AI, Embryo Transfer, Molecular Genetcs, Animal Biochemistry...
- Lab for animal product and animal feed analysis



Laboratory facilities

n - Plant and manure nutrient analyses: one Lab called Lab for animal product and animal feed analysis belongs to Dept. of animal feeds and animal products analysis.



n This lab can analyses DM, OM, CP, CF, NDF, ADF, Ca, P and other microelements in plants and manure.



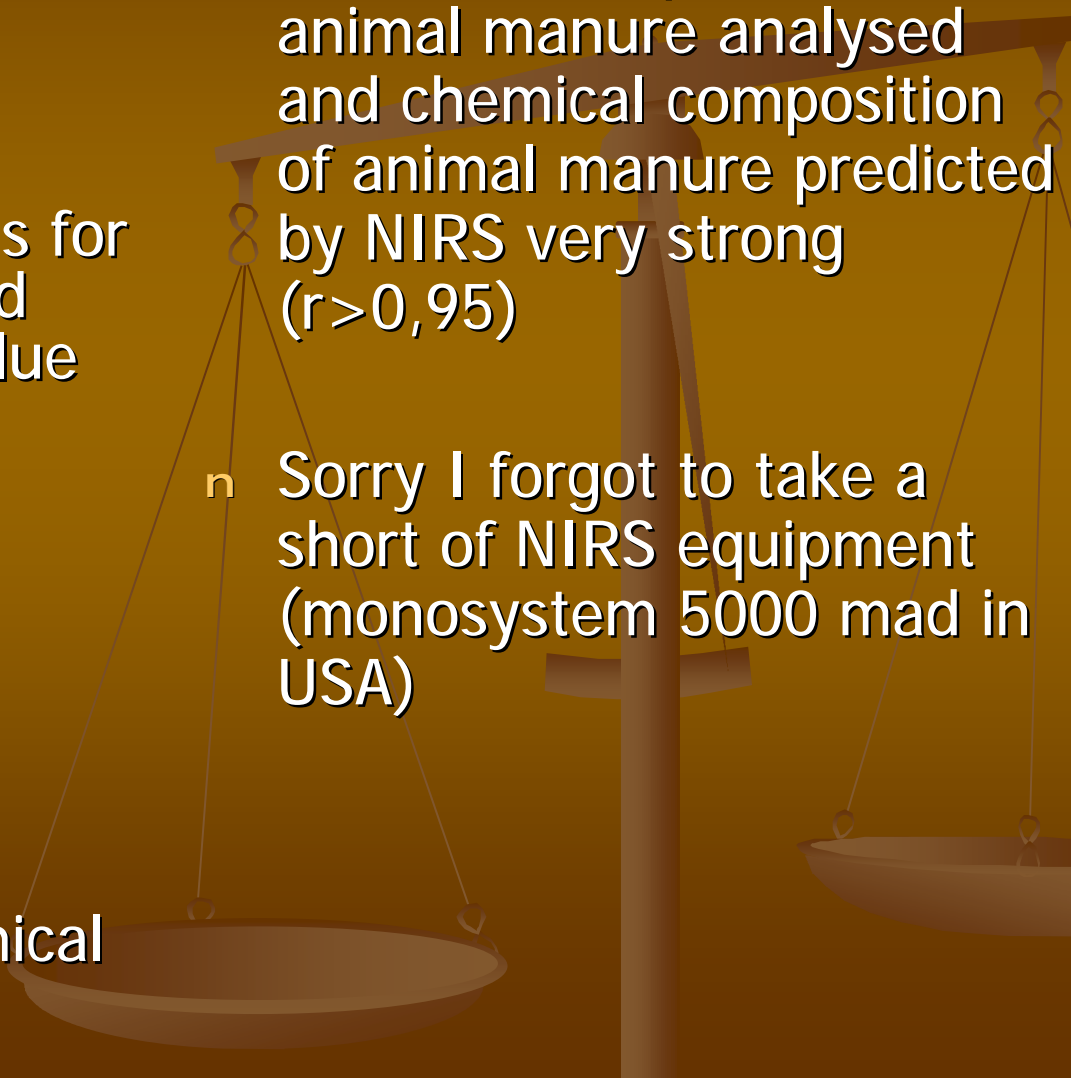
n Procedure: AOAC and Van Soet



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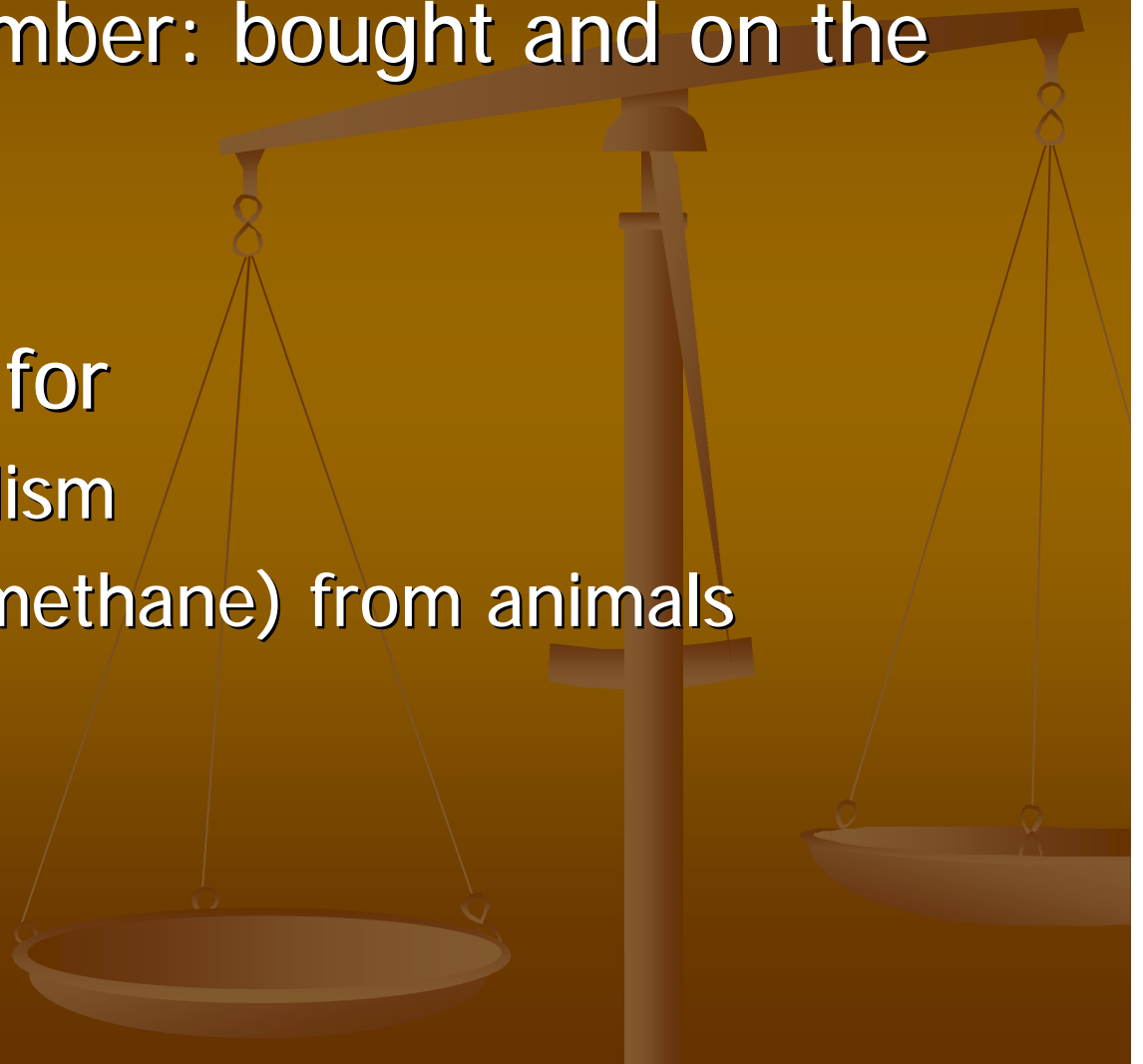
Laboratory facilities

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- n Recently, NIRS (Near-Infrared Reflectance Spectroscopy) installed and used for research
 - n Now calibration equations for chemical composition and digestibility, nutritive value of animal feeds are in progress
 - n Calibration equations for chemical composition of animal manure are in progress. Initial results confirm: NIRS can be accurately used for chemical composition of animal manure
 - n Relationship between chemical composition of animal manure analysed and chemical composition of animal manure predicted by NIRS very strong ($r > 0,95$)
 - n Sorry I forgot to take a short of NIRS equipment (monosystem 5000 mad in USA)
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Equipment coming soon (June or July)

- n Respiration chamber: bought and on the way to Vietnam
- n RC will be used for
 - n Energy metabolism
 - n Gas emission (methane) from animals



Indor experimental facilities:

- n One experimental research station located 500 m from Headquarter of NIAH where : indor experimental facilities, Lab scale, pilot scale.
- n Two research centres: one for pig, one chicken near by NIAH



Field experimental facilities

- n All kinds of animal for research and for breeding purposes.
- n They include:
 - n Cattle (dairy and beef) in Bavi Cattle and forage research centre, Hochiminh city livestock research and extension centre for southern region, Binhdinhh livestock research and extension centre for central region: 500 heads.
 - n Pigs in Thuy phuong pig research centre (2 farms: one in Hanoi, one in Ninh binh. 1300 sows)
 - n Chicken, ducks, muscovy ducks in Thuy phuong poultry research centre (3 farms: one for ostrich, one for chicken, one for ducks and muscovy ducks), Thuy phuong research station for animal feeds, Vanphuc poultry research centre, Daixuyen duck research centre, Binhdinhh livestock research and extension centre for central region, Hochiminh city livestock research and extension centre for northern region: 100.000 heads
 - n Goat, sheep, rabbits in Bavi goat and rabbit research centre: 1000 heads
- Manure stores: each research centre has their own
- n Field plot for crop trial: 100 ha
- n Treatment plants for animal manure i.e. biogas plant, composting facilities (15 ha fish pond).

Involvement in related projects

At the moment: one: Environmental protection and pig production : a challenge for a sustainable development (E3P/AsiaProeco project.

In the past, Sareck -Mekan had done some research on biodigester systems with NIAH.

Staff with competence in research area.

Short list of colleagues.