

Status of FAO and AEIO Funded Research Projects in Sri Lanka

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Status of IAEA and FAO projects on AnGR in Sri Lanka

- **Institutes carry out livestock research:**
 - a. **Veterinary Research Institute, Peradeniya**
 - b. **Universities**

Mainly :University of Peradeniya

4 active projects on AnGR at varying levels

1.Coordinated Research Project D3.10.23

Integrated Approach for Improving Small Scale Market Oriented Dairy Systems

(Contact: Dr. Anil Pushpakumara)

**This project does not deal directly with AnGR
General improvement of dairy production using nutrition, health, reproduction and breeding**

Status of IAEA and FAO projects on AnGR in Sri Lanka

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2. Coordinated Research Project D3.10.25

Gene-based Technologies in Livestock Breeding: Phase 1 - Characterization of Small Ruminant Genetic Resources in Asia

Contact: Dr.Pradeepa Silva

DNA samples from goat and sheep breeds are collected for analysis of micro satellite markers, as well as basic phenotypic information. This information will help in planning and applying strategies for management of the breeds in the future.

Status of IAEA and FAO projects on AnGR in Sri Lanka

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3. Regional TC project RAS5044

**Integrated Approach for Improving Livestock
Production Using Indigenous Resources and
Conserving the Environment**

Contact: Dr. Basil Alexander

This work has a number of objectives.

- 1) to design and implement a record keeping and genetic improvement programme for local dairy cattle and goats.**
- 2) to characterize local domestic and wild buffaloes.**

Status of IAEA and FAO projects on AnGR in Sri Lanka

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4. National TC project RAS 5044

Maximizing Productivity on Goat Farms through Cost-Cutting and DNA-Based Technology in Selection for Breeding

Contact: Drs. Siril Ariyaratne or Basil Alexander

The objective is

To use conventional and DNA assisted selection approaches to improve productivity of local goats.

Improvement of nutrition and reproduction will also be addressed.

**Status of IAEA and FAO projects on AnGR in
Sri Lanka**

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**Use of Nuclear Techniques for Improving Livestock
Production and Health in Sri Lanka: A Review of
Studies Conducted and Strategies for
Technology Transfer**

B.M.A.O. Perera and H. Abeygunawardena

**Tropical Agricultural Research and Extension
(2000) 3, 1-13.**

Use of Nuclear Techniques for Improving Livestock

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- The use of nuclear techniques commenced in the 1970's with the establishment of a RIA technique for measuring reproductive hormones in the blood and milk of buffaloes, cattle and goats.
- Progesterone measurement to identify the major constraints and to test methods for improving fertility of ruminants in small holder farms.
- In the early 1980's the nuclear-related technique of Enzyme-linked Immunosorbent Assay (ELISA) was established and applied for studies on the immune response of buffaloes to *T. vitulorum* infection.

Use of Nuclear Techniques for Improving Livestock

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- **Subsequently, ELISA techniques were used for studies on sero-epidemiology and control of important viral and bacterial disease of cattle and buffaloes (rotavirus infection, HS, Brucellosis, Rinderpest and FMD)**
- **RIA in use for plasma and milk progesterone measurement. FAO/IAEA "self-coating" system has also now been established. Used in AI follow up work**
- **Diagnosis of non-pregnancy 21 days after AI in buffaloes**

Use of Nuclear Techniques for Improving Livestock

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- ***Babesia* parasites can be attenuated by exposure to ionizing radiation from a ^{60}Co source. When blood from infected calves was irradiated at an energy of 300 - 350 Gray and inoculated into susceptible calves, acceptable levels of immunity developed in the recipients (Weilgama *et al* 1988).**