**ANS 2201 INTRODUCTORY LIVESTOCK MANAGEMENT**

**Lecturer(s)** Dr. Mpairwe Denis (B.Sc. Agric., M.Sc. Agric., PhD)

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**Course Type**: **CORE (B.Sc. Agric. II, B.Sc. FST II, B.Sc. Lum II, B. Agribus I, BARI I)**

 **Prerequisites: ANS 1101**

**1. COURSE DESCRIPTION**

**Course Credits (CU)**: **3 CU i.e. 45 Contact Hours per semester**

**Course Duration**: 15 weeks (45 hours) i.e. 30 LH, 15 PH

**COURSE DESCRIPTION**

Introduction: Livestock production systems in Eastern Africa, contribution of livestock industry to the economy; Principles of sustainable livestock management (feeds/feeding, breeds/breeding, animal health and livestock economics); Livestock facilities – housing / farm structures and handling facilities. General livestock routine management procedures: Livestock identification; Livestock records and records keeping; Ageing livestock; Weight determination; Control of parasites – Dipping, sprays, fences foot bath and foot rot treatment e.t.c.; Procedures with diseased or dead animals; Foreign bodies in the digestive tract (Hardware disease); Bloat; Gestation lengths. Dairy cattle management: importance of dairy farming; calf management; heifer management and cow / milk management. Beef cattle management. Range management. Pig management. Sheep and goat management. Rabbit management. Management of traction animals. Artificial insemination. Hides and skins.

**2. COURSE OBJECTIVES**

The **overall objective** of this course is to present an overview, discussion and practical skills to students that will model them into professionals that will provide technical expertise in a range of appropriate skills and techniques needed by those who manage livestock in an efficient way that increases economic return and reduces risk to producers of different operational sizes and enhances environmental quality.

The **specific objectives** are to:

1. provide the students with technical skills (hands-on) and theoretical background about livestock management procedures;
2. equip students with competences for delivery of services to practitioners engaged in livestock management and for those actively working in production of livestock ,
3. equip students with knowledge and skills of assessing economic and environmental issues affecting sustainable livestock farming.

**3. RECOMMENDED REFERENCES FOR READING**

* + 1. Richard A. Battaglia 2001. Handbook of livestock management, 3rd Edition, Prentice-Hall, Inc., Upper Saddle River, New Jersey 07458, USA, 620pp.
		2. McNitt, J.I. 1983. Livestock Husbandry Techniques, Granada Publishing Limited, London, 280pp.
		3. Faulkner, D.E. 1956. Notes on Animal Health & Industry for Africans.
		4. Herbert S.K. Nsubuga 1979. Livestock and Poultry Farming in Uganda Publishing Department, Uganda Bookshop, Kampala.
		5. Pagot, J. 1993. Animal Production in the Tropics and Subtropics, The Macmillan Press LTD. 517pp.
		6. Devendra, C. and McLeroy, G.B. 1982. Goat and Sheep Production in the Tropics, Intermediate Tropical Agriculture Series, Toppan Printing Co. (S) Pte. Ltd. Singapore, 271pp.
		7. NAADS Goat Production Manual (see: <http://www.naads.or.ug/manualsLists.php?category=Goat%20Production%20Manual>)
		8. NAADS Pig Production Manual (see: <http://www.naads.or.ug/manualsLists.php?category=Pig%20Production%20Manual>)
		9. Owen, E., A. Kitalyi, N. Jayasuriya and T Smith (Editors) (2005). Livestock and wealth creation: Improving the husbandry of animals kept by resource-poor people in developing countries. UK: NottinghamUniversity Press
		10. Devendra, C. and McLeroy, G.B. 1982. Goat and Sheep Production in the tropics. Longman Scientific & Technical.

**4. COURSE CONTENT, METHODS OF INSTRUCTION, TOOLS AND EQUIPMENT REQUIRED**

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| TOPIC | CONTENT | METHOD OF INSTRUCTION / Time allocated | TOOLS / EQUIPMENT NEEDED |
| 1. Importance of livestock | * Definition of the term livestock
* The role of the livestock industry to the economy of a country (GDP, AGDP, etc)
* The place of livestock in poverty alleviation and household food security
 | Interactive lecture (1 hr) | Chalk / BB or Markers / Flip charts |
| 2. Llivestock production systems | * Different livestock production systems in Uganda / E. Africa
 | Interactive lecture (1 hr) | Chalk / BB or Markers / Flip charts |
| 3. Principles of livestock management | * Care and welfare of livestock for optimum production
* Management procedures which affect livestock production
* Characteristics which affect livestock management
* General principles for carrying out distressful management procedures
 | Interactive lecture (2 hrs) | Chalk / BB or Markers / Flip charts |
| 4. Livestock facilities | * The need for livestock facilities for confinement and handling
* Different livestock facilities, including:
	+ water construction and use,
	+ creeps and creep feeding,
	+ facilities for feeding concentrates, hay and silage
	+ facilities for confinement and handling for such operations like dipping, sorting, castration, etc
	+ dip design, fence construction,
	+ animal restraint facilities
 | Interactive lecture (2hrs)Hand out giving details of livestock facilities and farm structuresTake-home assignment | Chalk / BB or Markers / Flip chartsLCD / overhead projectors |
| 5. Livestock facilities | * Cleaning and disinfection of livestock equipment
* Importance of animal housing and its relationship to animal health, welfare and behavior
* Factors to consider while setting up farm buildings
* Practical farm walking showing the students different livestock facilities and farm buildings
* Practical on livestock restraint procedures: ropes and rope care, types and properties of rope, knots, splices and halter
 | Interactive lecture (2 hrs)Farm walk (1 hr)Demonstration and practice (2 hrs) | Rope making materials, live animals |
| 6. General routine livestock management procedures(Recap) | * Use of clinical thermometer,
* Livestock identification (ear tags, tattoos, flesh marks, branding and pictures,
* Livestock records
* Ageing livestock, weight determination and gestation lengths,
* Control of external parasites (dipping and dipping compounds; hand dressing)
* Use of foot bath, and foot rot treatment,
* Procedures for diseased or dead animals
* Foreign bodies in the digestive tract (Hardware disease)
* Bloat in ruminants and its treatment

Practical (ear tagging, hoof trimming, dipping and hand spraying, | Interactive Lecture (2 hrs)Hand out about the different routine management procedures of livestockPractical for B.Sc. Lum II, B. Agribus I, BARI I) (6hrs)Take home assignment (common accaricides in used in Uganda | Chalk / BB or Markers / Flip chartsLCD / overhead projectorsEar tags, tattoos, accaricides |
| 7. Dairy cattle management | * Dairy production systems in Uganda and discuss the importance of dairy industry to the economy
* Calf management,

Calf management practicals (housing, castration, hoof trimming, disbudding/dehorning)* Heifer management, and
* Cow/milk management

Practical on milking, milk testing and processing | Interactive lecture (3 hrs)Practical (3 hrs) | Burdizzo, surgical kits, elastrator bands, disinfectants, live animals (calves), etcLive milking animals, milk and milk testing reagents |
| 8. Dairy cattle management | * Artificial Insemination
* Practical on AI: the students are transported to Entebbe at NAGRIC&DB
 | Interactive lecture (1 hr)Handout on AIField trip 6hrs | Transport four 50 seater buses |
| 9. Beef cattle management | * Importance of beef cattle in the economy of the country and household food security and poverty alleviation
* Importance of local cattle in beef production
* Breeds/breeding, feeds/feeding
* Diseases and disease control in beef herds
* Economics of beef production
* Hides and skins production, processing, preservation and marketing
* Practical: Field visit local tanneries and hides and skins stores, exporters (stakeholders)
 | Interactive lecture (2 hrs)Hand out on beef cattle managementHand out on hides and skin managementField visit (6 hrs) | Chalk / BB or Markers / Flip chartsTransport50 seater buses |
| 10.Range management | * Definition of rangelands and Characteristics of rangelands
* Range production systems (pastoralism, nomadism, etc)
* The components of a range ecosystem and their functional aspects
* Range vegetation changes in composition and productivity
* Factors which affect range vegetation changes
* Range degradation and its remedies
 | Interactive lecture (2 hrs)Field trip to visit the rangelands of Uganda (6 hrs) | Chalk / BB or Markers / Flip chartsTransport four50 seater buses |
| 11. Sheep and goat management | * Importance of small ruminants in the economy of a country and household food security and poverty alleviation
* Characteristics of sheep and goat
* Environmental and economic factors affecting sheep and goat production
* Handling small ruminants, bruises and abscesses
 | Interactive lecture (2hrs)Goat management practicals (3 hrs) | Chalk / BB or Markers / Flip chartsBurdizzo, surgical kits, elastrator bands, disinfectants, live animals |
| 12. Sheep and goat management | * Breeds and breeding of sheep and goats
* Lambing / kidding and lamb/kid management
* General management of goats and sheep (identification, castration, hoof pairing/trimming, de-worming/drenching, tail docking, etc.)
* Diseases and pest control
* Economics of goat and sheep production
 | Interactive lecture (2hrs) | Chalk / BB or Markers / Flip charts |
| 13. Pig management | * Pig breeds and breeding
* Moving and handling pigs
* Farrowing facilities and management
* Piglet management (iron, wolf teeth and castration)
* Pig vices
* Pig diseases and their control,
* Pig houses and facilities

Economics of pig production | Interactive lecture (2hrs)Pig management practical (handling, housing, identification, castration) (3hrs) | Chalk / BB or Markers / Flip chartsEar notches, surgical kits,disinfectants, live animals |
| 14. Rabbit management | * Characteristics of rabbits and rabbit breeds in Uganda
* Rabbit Handling and Housing management
* Breeding and management before and after kindling
* Litter management
* Sanitation guidelines
* Common diseases
 | Interactive lecture (2hrs)Rabbit management practical (handling, housing.) (3hrs) | Chalk / BB or Markers / Flip chartslive animals |
| 15. Management of draft animals | * Draft animal species
* Selection of draft animals
* Challenges of using of draft animals
* Feeding and management
* Training and utlisation
 | Interactive lecture (2hrs) | Chalk / BB or Markers / Flip charts |

**5. SUMMARY OF TIME NEEDED**

Interactive lectures and seminars covering theory 30 hrs

On-station field practicals 15 hrs

Field visits 18 hrs

**6. OVERALL COURSE EVALUATION**

Continuous Assessment Examination 20%

* At least 2 tests ( one after lecture 8 and second after lecture 15)
* Marked out of 20 each

Field trips, assignments and practicals 20%

Final examination 60%.