Georg-August-Universität Göttingen 6 C 4 WLH Universität Kassel/Witzenhausen Module M.SIA.A14: Organic livestock farming under temperate conditions Workload: Learning outcome, core skills: Attendance time: Advances in animal nutrition and animal health: Students get to know scientific tools for quantifying, assessing and evaluating problems Self-study time: within organic livestock production. 120 h Animal welfare: Students have a basic understanding of animal welfare, familiarize with different organic husbandry systems, practical problems and scientific concepts including how to assess animal welfare both at farm and system level. Sustainable forage production systems: Students are able to assess the relationships between sward management and structural (yield, botanical composition) and functional (nutrient efficiency) sward characteristics. Courses: 1. Animal Welfare (Lecture) 1,33 WLH Contents: · Principles of animal welfare in relation to organic farming; scientific methods of welfare assessment 2. Advances in animal nutrition and animal health (Lecture) 1,33 WLH Contents: Organic livestock production in Europe Possibilities and limitations within organic farming to ensure a high level of animal · Strategies within animal nutrition to increase the efficiency in the use of limited esources · System-oriented versus technical approaches 1.33 WLH 3. Sustainable forage production systems (Lecture) Contents: Design and management of a sustainable forage production · Management of forage quality and biodiversity on grassland · Minimizing nutrient losses towards water and atmosphere Examination: Written examination (90 minutes) 6 C M.SIA.A14.Mp: Organic livestock farming under temperate conditions **Examination requirements:**

Knowledge of basic terms relevant to organic livestock systems; insights into aspects of feeding, healthcare, welfare, forage production and forage quality assessment; linkages

and interdependencies between the discussed fields.

One written exam with all three parts.

Admission requirements: none	Recommended previous knowledge: Basic knowledge (B.Sc. level) of animal sciences
Language: English	Person responsible for module: Prof. Dr. Albert Sundrum
Course frequency: each summer semester; Witzenhausen	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester:
Maximum number of students: 35	

Additional notes and regulations:

Literature:

Advances in animal nutrition and animal health:

• Vaarst, M., Roderick, S., Lund, V., Lockeretz, W. (eds.) 2004: Animal health and welfare in organic agriculture. CABI Publishing

Animal welfare:

- Appleby, M.C., Hughes, B.O. (eds) 1997: Animal welfare. CAB International, Wallingford;
- Vaarst, M. et al. (eds.) 2004: Animal health and welfare in organic Agriculture. CAB International, Wallingford

Sustainable forage production systems:

- · Hopkins, A. 2000: Grass, its production and utilization. Blackwell Science, Oxford, UK;
- Cherney J.H. 1998: Grass for dairy cattl.e CABI Publishing, Exon, UK;
- Frame, J. 1992: Improved Grassland Management. Farming Press Books, Ipswich, UK.