

Module	Sustainability in organic livestock production under temperate conditions							
Code	A09							
Coordinator	Prof. Dr. U. Knierim							
Language	English							
Stud. Workload	180h, of which 60h contact							
Credits	6							
Frequency (WS / SS)	Yearly, SS							
Part module 1	Animal welfare							
Instructor 1	Prof. Dr. Ute Knierim							
Contents 1	Ethics, scientific concepts and methods in animal welfare research, comparative animal husbandry							
Objectives 1	Students gain an understanding of the ethical and biological basis of animal welfare and of scientific animal welfare concepts and methods. They achieve an overview over common housing and management systems, their welfare advantages and disadvantages with special reference to organic husbandry.							
Literature 1	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							
Part module 2	System approach in livestock production							
Instructor 2	Prof. Dr. Albert Sundrum							
Contents 2	Basics of system theory; how to define an open system; how to assess the performance of a system; emergent properties of farm systems; differences between technical and systematic approaches in livestock production with respect to different production goals; possibilities and limitations of a systematic approach to improve animal health and the efficiency in the use of limited resources.							
Objectives 2	Reflection on the differences between different approaches in livestock production from a scientific and from a practical perspective and their implications on the implementation of production goals in dependence on different farm types							
Literature 2	Bertalanffy, von L. (1968). General System Theory - Foundations, Development, Application. George Braziller, New York, 295 p.; Bawden, R.J. (1991). System thinking and practice in agriculture. J. Dairy Sci., 74, 2362-2373.; Fromm, J. (2004). The emergence of complexity. Kassel university press; Sundrum, A. (2008) System approach in organic livestock production (in preparation).							
Study system usability	see Examination order							
Entrance requirements	Entrance requirements see § xx Admission Order International Agriculture, Basic knowledge (B.Sc. level) of animal sciences							
Instruction type	Lecture		Seminar	Excursion	Practice	Tutorial		Project
Duration [contact h]			60					
Examination type	Oral test	Written test	Homework	Sem. Speech	Protocoll	Work report	Proj. Report	Proj. Pres.
	x		x	x				
Grade composition	50% oral test; 50% homework or seminar speech							