

Organic Livestock Production (602913 , 3 credit hrs)

Department of Animal Production
School of Agriculture
The University of Jordan

Instructor: Prof. M. Abu-Zanat
Time: 8:30-10:00 M, W
1st Semester 2020/2021

Course description

Historical development of organic livestock farming; differences between organic and other forms of animal production; principles and characteristics of organic animal production; management systems: conversion period, breeding, nutrition and feeding, housing, transport and slaughtering; nutritional value of organic meat and potential human health response; and challenges to organic livestock industry.

Course objectives

- To understand basic principles of organic livestock production
- To know the requirements for certification of organic animal production
- To gain knowledge on husbandry of organic animals.
- To know local, regional and global markets for the products of organic animals.

Learning outcomes

At the end of this course the student will

1. Knowledge and understanding

- 1.1. Understand the difference between organic and other forms of animal production.
- 1.2. Understand the principles and characteristics of organic livestock farming.

2. Intellectual, analytical and cognitive skills

- 2.1. Be able to distinguish between organic and other forms of animal production.
- 2.2. Be able to appreciate the nutritional value of products of organic livestock.

3. Subject/specific and practical skills

- 3.1. Be able to practice organic livestock farming
- 3.2. Be able to follow local and international regulations related to organic livestock production

4. Creativity/transferable key skills

- 4.1. Skills to provide extension services to producers of organic animals.
- 4.2. Ability to design an integrated farm for organic livestock production.

Course Outline

Week	Topic	References	LO
1	Introduction - Terminology (conventional, natural, organic) - Characteristics of organic animal production	Sundrum, 2001 Borell and Serensen, 2004	
2 & 3	Historical development of organic livestock production - Standards (IFOAM, Codex, EC, Jordan) - Organic market	Padel et al., 2004 Heckman, 2006 Otto, 2000	
4 & 5	Principles of organic livestock production - Origin of animals - Origin of feed - Disease prevention - Livestock housing - Animal welfare	Diepen, et al., 2007 Borell and Sorensen, 2004 Sundrum, 2001 Hermansen, 2003	

6 & 7	Organic system plan (certification) - Application for certification - Meeting requirements of organic regulations	Baker, 2005	
8-10	Husbandry of organic animals - Dairy - Beef - Mutton and chevon - Poultry	Vaarst et al., 2005	
11	Nutritional value of organic meat and potential human health response - Chemical residues - Hormones - Antibiotics - Organoleptic quality	Reksen et al., 1999	
12-13	Problems in developing organic animal husbandry - Lack of knowledge - Small farms - Problems in livestock feeding - Sanitary regulations - Traceability - Diseases - Lack of training and certification facilities	IFOAM Animal Husbandry Conference, 2012 Information System on Organic Livestock Farming	
14	The future of organic animal's industry	Pathak et al., 2003	
15	Presentations of term papers		
16	Presentations of term papers		

References

- Baker, B. 2005. Organic System Plan Overview. Organic Farming Compliance Handbook: A Resource Guide for Western Region Agricultural Professionals. Online version of the resource guide available at [http://www.sarep.ucdavis.edu/organic/compliance guide/](http://www.sarep.ucdavis.edu/organic/compliance%20guide/)
- Borell, E. and Sorensen, T.J. 2004. Organic livestock production in Europe: aims, rules and trends with special emphasis on animal health and welfare. *Livestock Production Science*, 90(1): 3-9.
- Diepen, V.P., McLean B., and Frost D. 2007. *Livestock Breeds and Organic Farming Systems*. Organic Center wales, UK.
- Gomiero, T., Pimentel, D. and Paoletti, G.M. 2011. Environmental Impact of Different Agricultural Management Practices: Conventional vs. Organic Agriculture. *Critical reviews in Plant Sciences*, 30(1-2): 95-124.
- Heckman, J. 2006. A history of organic farming: Transitions from Sir Albert Howard's War in the Soil to USDA National Organic Program. *Renewable Agriculture and Food Systems*, 21(3): 143-150.
- Hermansen, E.J. 2003. Organic livestock production systems and appropriate development in relation to public expectations. *Livestock Production Science*, 80(1-2): 3-15.
- Lampkin, N. 1997. *Organic poultry production*.
- Mendenhall, K. 2000. *The organic dairy book*. NOFA-NY, Inc, USA.
- Otto, S. 2000. Comparison of European Organic Livestock Standards with national and international standards - problems of common standards development and future areas of interest. *Proceedings of the Second NAHWOA Workshop*, Cordoba, M. Hovi and G. Trujillo, (eds.).
- Padel, S., Otto, S. and Lund V. 2004. Organic livestock standards, Ch 4 in *Animal Health and welfare in Organic Agriculture*, M. Vaarst (ed.). Pages 57-72.

- Pathak, K.P, Chander, M. and Biswas, K.A. 2003. Organic meat: an overview. Asian-Aust.J. Anim. Sci. 16(8):1230-1237.
- Reksen, O., Tverdal, a. and Ropstad E. 1999. A Comparative Study of Reproductive Performance in Organic and Conventional Dairy Husbandry. J. dairy Science, 82: 2605-2610.
- Ricke, C.S., Loo V.j.E., Johnson, G.M. and OBryan, C.A. 2012. Organic meat production and processing. Wiley Blackwell.
- Sundrum, A. 2001. Organic livestock farming: A critical review. Livestock Production Science, 67(3): 207-215.
- Vaarst, M., Padel, S., Hovi, M, Younie, D. and Sundrum, A. 2005. Sustaining animal health and food safety in European organic livestock farming. Livestock Production Science, 94(1-2): 61-69.

Selected Books

Nutrition and Feeding of Organic Poultry
Organic Livestock Farming: Principles, Practicalities and Profits
The Complete Guide to Organic Livestock Farming
Animal Health and Welfare in Organic Agriculture