APPROVED

AGRI S7017: Poultry and Pig Production Systems

Module Details

Module Code:	AGRI S7017
Full Title:	Poultry and Pig Production Systems APPROVED
Valid From::	Semester 1 - 2021/22 (September 2021)
Language of Instruction:	English
Duration:	1 Semester
Credits::	5
Module Owner::	• Siobhan Jordan • Breda Brennan • John Kelly
Departments:	Agriculture, Food and Animal Health
Module Description:	This module should assist a learner to manage a modern commercial farm. It should enable him/her evaluate and make decisions on the feeding, breeding, housing and management requirements of pigs and poultry.

Module Learning Outcome	
On successful completion of this module the learner will be able to:	
#	**Module Learning Outcome Description**
MLO1	Describe the pig and poultry industry structure and how they are improving sustainability.
MLO2	Discuss pig and poultry husbandry principles and skills.
MLO3	Discuss diseases, disorders and parasites within pigs and poultry production systems.
MLO4	Describe the detail and importance of nutrition within the pig and poultry production systems.
MLO5	Review pig and poultry housing requirements and management systems.
MLO6	Evaluate the main management options for the wastes generated from pig and poultry facilities.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named DkIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).*
No recommendations listed

Module Indicative Content
Pig and poultry industry structure Industry population figures and trends in Ireland, and the top European producing countries. National performance and key performance indicators including economic indicators. Slaughtering, processing and marketing in Ireland. Main developments in the industries and likely future trends. Estimating the impact of production fluctuations on the value to the Irish economy. Understand the role of producer and processor partnerships, marketing strategies, schemes, quality and traceability, specifications and pricing. Latest developments in improving sustainability.
Pig and poultry husbandry principles and skills. Pig and Poultry anatomical and physiological systems and their functioning. Reproduction and breeding within Pigs and Poultry. Husbandry factors for optimum performance in pigs including gilt, boar and dry sow performance, optimum lactating sow and litter performance, optimum weaner and finisher performance. Poultry production systems to include egg, meat and breeding stock production and optimum performance within these systems Understanding of the day to day skills associated with the different production systems with the pigs and poultry.
Diseases, disorders and parasites within pigs and poultry production. Diseases, disorders and parasites of pigs and poultry and their respective curative and preventative measures. Traceability requirements in pig and poultry husbandry. Understanding of antimicrobial resistance (AMR) in the treatment of animals.
Nutrition within the pig and poultry production systems. Digestion and metabolism in pigs and poultry. Roles and function of the major organs of the pig and poultry digestive system. Nutrition requirements and intake potential of common commercial units in terms of energy, protein, fibre and minerals. Understand the nutritional value of feedstuffs pertinent to pig and poultry production. Understand the effects of nutrition on metabolic diseases and disorders in pigs and poultry. Feed conversion efficiency, nutritional requirements, cost efficient diet management in pigs and poultry. Formulate feeding regimes for a common production systems. Manage feed stuffs in accordance with best practice and current legislation.
Pig and poultry housing requirements and management systems Housing options, plans and costs. Design and planning. Meeting animal welfare and environment requirements of housing pigs and poultry. Housing climate control and lighting - their role in pig and poultry production, Pig and poultry equipment and labour saving devices associated with husbandry tasks. Equipment for mixing and delivering feed and managing water. IT management programs and control of various systems required for production systems. Energy usage and management.
Management of pig and poultry manure Collection and storage of slurry or manure in pig and poultry production. Nutrient content and value of pig slurry. Handling and spreading systems. The implications of legislation on air and water quality and how this affects the handling of slurry and manure. Calculating quantity of slurry and manure produced on a farm, and calculate the storage requirement and actual on-farm capacity, and determine the maximum customer import capacity. Adding value to manure.
Practicals: Slurry nutrient values, demonstration of environmental control systems. Site visits to pig, poultry and egg production units to understand husbandry skills. PC labs to review performance reports and interpret key performance indicators.

Module Assessment

Assessment Breakdown	%
Project	30.00%
Practical	20.00%
Final Examination	50.00%

Module Special Regulation

Assessments

Part Time On Campus

No Course Work

Project

Assessment Type	Project	**% of Total Mark**	30
Marks Out Of	100	**Pass Mark**	0
Timing	n/a	**Learning Outcome**	1,5
Duration in minutes	0		

Assessment Description
Written Report on a either Poultry or Pig Production project, for example how to set-up a poultry unit for impending delivery of birds or a report on site visit of integrated pork to bacon unit.

Practical

Assessment Type	Practical/Skills Evaluation	**% of Total Mark**	20
Marks Out Of	0	**Pass Mark**	0
Timing	n/a	**Learning Outcome**	2
Duration in minutes	0		

Assessment Description
Following delivery of key skills, student completes skills assessment.

Final Examination

Assessment Type	Formal Exam	**% of Total Mark**	50
Marks Out Of	100	**Pass Mark**	0
Timing	End-of-Semester	**Learning Outcome**	1,3,4,5,6
Duration in minutes	0		

Assessment Description
An end of module exam to examine LO 1 and 3-5

Reassessment Requirement

A repeat examination
Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

Module Workload

This module has no Full Time On Campus workload.

Workload: Part Time On Campus					
Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner Workload*	*Hours*
Lecture	Contact	Interactive lectures related to pigs and poultry production.	Every Week	2.00	2
Practical	Contact	LO 2	Every Week	0.50	0.5
Online Contact	Contact	Online tutorial support	Every Second Week	0.50	1
Independent Study	Non Contact	No Description	Every Week	2.00	2
Directed Reading	Non Contact	No Description	Every Week	2.00	2
				Total Weekly Learner Workload	7.00
				Total Weekly Contact Hours	3.00

Module Resources

Recommended Book Resources

Arnold de Vries, Marrit van Engen, Kees Scheepers. Pig Signals (English edition), p.56, [ISBN: 9789087400323].

Arnold de Vries, Marrit van Engen, Kees Scheepers. Piglets (English edition) A practical guide to successful piglet production, p.56, [ISBN: 9789087400323].

Marrit van Engen, Kees Scheepers. Sows (English edition) A practical guide to lactation management and fertility, p.48, [ISBN: 9789087400125].

Mark Roozen, Kees Scheepers. Finishing pigs (English edition) A practical guide to growth, health and behaviour, p.48, [ISBN: 9789087400132].

Paul Smith, Hugh Crabtree, Nick Bird. (2009), Perfecting the Pig Environment, p.90, [ISBN: 9781904761815].

Colin Trengrove Whittemore. (1979), Practical Pig Nutrition.

Monique Bestmanm Marko Ruis, Jos Heijmans, Koos van Middelkoop. Poultry Signals, 2011, p.112, [ISBN: 978-90-8740-0].

Supplementary Book Resources

Mc Donald, et al.. (2011), Animal Nutrition, Prentice Hall.

M R Muirhead, T J L Alexander, Dr J Carr (Ed). Managing Pig Health: A Reference for the Farm - 2nd Edition, [ISBN: 9780955501159].

John Gadd. (2011), Modern Pig Production Technology: A Practical Guide to Profit, [ISBN: 9781907284472].

Luigi Faucitano, Allan L Schaefer. Welfare Of Pigs: From Birth to Slaughter, [ISBN: 978-908686066].

Maarten de Gussem, Koos van Meddelkoop, Kristof van Mullen, Ellen van't Veer. (2013), Broiler Signals: A practical guide for broiler focused management, p.120, [ISBN: 978-90-8740-1].

Maarten de Gussem, Koos van Meddelkoop, Kristof van Mullen, Ellen van't Veer. (2013), Egg Signals: A Practical Guide to Improving Egg Quality, p.164, [ISBN: 978-90-8740-2].

Various. (2012), Laying hens - A Practical Guide for Layer Focused Management, p.120, [ISBN: 9789087401245].

Recommended Article/Paper Resources

Irish Farmers Journal.

Farmers weekly.

Today's Farm.

Other Resources

website, www.agiculture.gov.ie. www.agiculture.gov.ie.

website, www.animalhealthireland.ie. www.animalhealthireland.ie.

website, www.nadis.org.uk. www.nadis.org.uk.

website, www.partners-in-reproduction.com. www.partners-in-reproduction.com.

website, www.teagasc.ie. www.teagasc.ie.

Link, Library Catalogue,
http://tinyurl.com/ogzdl4z