



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Feed Hygiene							
Course Code		VHB630		Couese Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	150 (<i>Hours</i>)	Theory	1	Practice	2	Laboratory	0
Objectives of the Course		Teaching significance of hygiene in feeds related to animal health and product quality. Teaching critical control points and principles in feed hygiene.							
Course Content		Identification of contamination sources of feeds and their impairment in feed quality. Importance of contamination sources. Having information about the storage conditions and HACCP principles in feed factory.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study, Problem Solving					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70

Recommended or Required Reading

1	Ergün, A., Tuncer, Ş.D., Çolpan, İ., Yalçın, S., Yıldız, G., Küçükersan, M.K., Küçükersan, S., Şehu, A. (2004) Yemler, Yem Hijyeni ve Teknolojisi, Pozitif Matbaacılık, Ankara.
2	Ergül, M. (1988). Yemler Bilgisi ve Teknolojisi, Ege Üniversitesi Basımevi, İzmir.
3	Kılıç, A. (1988). Yemler ve Hayvan Besleme, Bilgehan Basımevi, İzmir.

Week	Weekly Detailed Course Contents	
1	Theoretical	Identification of contamination sources in feeds. Demonstrating harmful effects of feed contamination.
	Practice	Criteria for determination of feed quality. Health availability of feed.
2	Theoretical	Contamination caused by feed insects.
	Practice	Criteria for determination of feed quality; nutritional status of feed.
3	Theoretical	Physical contamination in feeds, their harmful effects on health and production performance of animal.
	Practice	Criteria for determination of feed quality; consumer demands.
4	Theoretical	Chemical contamination in feeds, their harmful effects on health and production performance of animal.
	Practice	Discussion of harmful effects of contaminated feed on animal health and production performance.
5	Theoretical	Microbial contamination in feeds, their harmful effects on health and production performance of animal.
	Practice	Discussion of usage availability of grains which are not suitable for human consumption.
6	Theoretical	Factors affecting microbial contamination of feeds.
	Practice	Evaluation of hygiene status in grain and grain products. Identification of substances which are not accepted as feedstuff with physical and chemical methods.
7	Theoretical	Effects of microbial contamination in feeds (Midterm exam)
	Practice	Factors causing contamination in grains and grain products and cautions must be taken in prevention.
8	Theoretical	Water quality. Significance of water on animal health and performance. Critical control points in water hygiene.
	Practice	Evaluation of exam results. Discussion of results.
9	Theoretical	Discussion of harmful effects of vectors including insects and mice on grain and grain products.
	Practice	Microbiological diagnose in feeds. Diagnose of feed samples in laboratory conditions.
10	Theoretical	Preventative cautions taken against to microbial contamination.
	Practice	Evaluation of hygiene status in forages. Identification of substances which are not accepted as feedstuff with physical and chemical methods.
11	Theoretical	Methods used in health protection and harm control.



11	Practice	Determination of aflatoxin levels in feeds by using flourecent lamp.
12	Theoretical	Critical hazard points in feed production, storage of feedstuffs.
	Practice	Determination of chemical and physical conditions (pH, temperature, humidity) causing moulting in feeds. Requirements for recovering of these conditions.
13	Theoretical	HACCP applications in feed factories.
	Practice	Determination of harmful effects of feed contaminants (insects, mouse, birds, human, microorganisms) in feedstuffs (demonstrating harmed feeds)
14	Theoretical	Physical, biological and chemical methods for controlling mycotoxicosis in feeds.
	Practice	Physical, biological and chemical methods for controlling mycotoxicosis in feeds.
15	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	1	14
Lecture - Practice	15	0	2	30
Assignment	10	2	2	40
Reading	14	0	3	42
Midterm Examination	1	10	1	11
Final Examination	1	12	1	13
Total Workload (Hours)				150
[Total Workload (Hours) / 25*] = ECTS				6
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Learning spoilage of feeds.
2	Storing feeds in proper conditions.
3	Rules of keeping and storing of feeds.
4	Contamination caused by feed insects.
5	Chemical contamination in feeds, their harmful effects on health and production performance of animal.

Programme Outcomes (Animal Nutrition and Nutritional Diseases (Veterinary Medicine) Doctorate)

1	Knows information about importance of forage and concentrates in basic animal nutrition for protecting animal health in scientific and technological animal production.
2	Have ability to formulate economical and full-satisfactory rations with considering product quality and health. May inform animal producers about practical/appropriate feeding methods.
3	Can adapt to recent scientific and technological developments in animal nutrition easier and produce proper strategies against to problems on this field.
4	Knows the properties of feeds used in proper and economical rations formulated due to needs of animal species.
5	Can give information to animal producers about properties of common feedstuffs used in Turkey
6	Knows organoleptic, physical diagnostic and chemical analysis methods used in determining feed quality.
7	Have information about processing and the effects of processing on animal yield.
8	Can identify the term "feed hygiene" and have information about the usage availability of contaminated feedstuffs.
9	Can apply the informations related to feed additives in a proper way.
10	Understands the results and factors decreasing production.
11	Knows the nutrition related diseases and their solution recommendations which may be applied in feeding or formulating feeds for preventing nutritonal diseases.
12	Knows about the availability level of feedstuffs after consumed and can perform digestibility trials.
13	Knows the definition of stress, stress sources and effects on health and production level of animals.
14	Have sufficient information on classification, activation and fermentation of rumen microorganisms plus carbohydrate, lipid and protein digestibility.
15	Knows the factors effecting feed intake and negative factors in feedstuffs and prevention of them.
16	Comments on feeding behaviours and related yield parameters.
17	Have information on basic terms related to feed legislation, feeds used in animal nutrition and their legal regulations.
18	Have information about biotechnological research conducted on feeds and animal nutrition.
19	Knows the effects of nutrition on food quality, fertility, immunity and parasite enfestations.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High



	L1	L2	L3
P1		5	
P8	5	5	5
P15	5		

