

MODULE 4. CONTENT

Elaborated by BAUN – University of Balıkesir

MODULE 4. USE OF DISCARD FISHERIES TO PRODUCE PET FOOD

AUTHORS

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STRUCTURE FOR MODULE CONTENT

The content will be what the trainee/student will learn throughout the module after starting to take it.

TEACHING SPECIFICS

- SETTING (INDOOR/OUTDOOR/DISTANCE/BLENDED): Online (E-learning)
- DURATION (HOURS): 20h
- MATERIALS: Presentation, questions, case studies, self-study
- NO. OF LEARNERS/REPRESENTATIVES: Depending on the number of participants
- INDIVIDUAL OR GROUP WORK: Both, depending on the number and distribution of participants

INFORMATION ABOUT THE TOPIC

There is annual sales revenue of €50 billion in 2021 for pet food and related services. The sales value of pet food products in 2021 was €27.7 billion. It can be said that pet ownership has an impact on this, along with the Covid pandemic. The pet industry created 10,000 direct jobs per year with a total of 110,000 employees in 2021. In indirect jobs related to the pet sector, 50,000 people find employment. The pet food industry in Europe provides employment to approximately 100,000 people. It is also estimated to create an additional 900,000 new jobs in related pet care industries.

There is a growing awareness in Europe of pet food, pet equipment and supplies, specialty food products and organic pet food. With the increase in pet ownership, the increase in the pet industry, pet care and feed market continues. In some countries in Europe, pet food is recognized as a premium product segment. Because pet owners are very worried and meticulous about the nutrition of their animals, they prefer to buy quality feeds. The popularity of pet food products is increasing in Europe and manufacturers are seeking to develop new innovative products. In order to provide a better life for pets, pet owners also pay maximum attention to the materials they use. Manufacturers are also trying to offer natural, organic and unprocessed feeds for pet animals in response to this demand. In recent years, the pet feed market in Europe is slowly and gradually shifting towards plant-based feeds and uses animal-derived feeds less.

Dogs and cats are traditionally fed offal that are housed on farms or homes and are not used for human consumption. In the past, dogs were used as guards or for hunting, and cats were used to control rodents. However, in industrialized countries, dogs and cats are today mainly kept as companion animals and fed commercially produced high-quality feed. Since cats and dogs are carnivores by nature, their feeds consist of high amounts of animal-derived substances that are also used in human nutrition. But in recent years, it raises the question of the impact of animal-derived dog and cat feed on the use of scarce resources and the environmental footprint of meat consumption by cats and dogs. Since the contribution of dog and cat foods to general greenhouse gas production is the subject of

public debate, it is taken into account in the nutrition of these animals. For this reason, the use of discarded fish that are not suitable for human consumption may become an important issue for BARF for cats and dogs.

CAUSES AND DESCRIPTION OF HOW IT MANIFESTS

Module 4 provides an introductory part describing the pet (dog and cat) sector in Europe. The module's content addresses definition of the basic nutrition procedures and nutrient requirements of the pets. The module will contain with the description of the biologically appropriate raw food (BARF) for cat and dog nutrition, definition of the BARF, contents of the BARF, *the benefits and the main risks of BARF feeding*, and *the legal limitations for BARF feeding in the EU*. The module's also addresses the contents of discard fisheries and fish processing wastes and all aspects of the production of BARF for pets from discard fisheries including processing technology steps and biosecurity of the MARI PET BARF that were formulated by using discard fisheries. They are an important part of MARI PET syllabus.

PRINCIPLES, BASIC TERMS, AND MEASURES WITHIN THE SPECIFIC MODULE

The module consists of six sub-topics:

- Overview of the pet (dog and cat) sector in Europe
- Basic knowledge about pet nutrition and nutrient requirements of cats and dogs,
- Presentation of the Biologically Appropriate Raw Food (BARF),
- Production of BARF for pets from discard fisheries
- Processing technology for BARF from discard fisheries
- Risk Assessments and Precautions for Pet Owners

Inspiration for further action and how to implement the knowledge about BARF from discarded fisheries into the real world through use of case studies. These six sub-topics consist of detailed information for each topic.

TRAINING MATERIAL FORMAT (TASKS, CASE STUDIES, EXERCISES) WITH A SHORT DESCRIPTION

The training material for module 4 consists of a written chapter (25 pages) supported by a presentation (31 slides) that includes questions to the four sub-topics presented.

INSTRUCTION FOR ASSESSMENT

Quiz assessment to be taken on Moodle

LINK TO ONLINE RESOURCES AND SPECIFIC IMAGES

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14. <https://www.ndvsu.org/images/StudyMaterials/Nutrition/Cat-and-Dog-Nutrition.pdf>
15. <https://en.engormix.com/pets/articles/the-difference-between-dog-t33740.html>
16. Davies, R.H., Lawes, J.R., Wales, A.D., 2019. Raw diets for dogs and cats: a review, with particular reference to microbiological hazards. *Journal of Small Animal Practice* (2019) 60, 329–339
17. FEDIAF Factsheet, 2018. Nutritional needs of cats and dogs <https://europeanpetfood.org/pet-food-facts/factsheets/>
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<https://www.bigdogpetfoods.com/guides/what-is-barf#:~:text=BARF%20stands%20for%20Biologically%20Appropriate,popular%20raw%20diet%20for%20dogs.>)

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STEP-BY-STEP GUIDE

FIRST ACTIVITY

WARM-UP: 3 SLIDES

It includes warm-up questions about the module content to summarize why this module prepared.

FIRST PART - INTRODUCTION – 1 SLIDE

The introduction is the first part of Module 4 explain *the use of discarded fish that are not suitable for human consumption may become an important issue for raw pet food, barf production. It also includes general statistics about the pets and discard fish.*

SECOND PART – OVERVIEW OF THE PET (CATS AND DOGS) NUTRITION-4 SLIDES

The second part gives an overview of the pet (cat and dog) nutrition, nutritional requirements of pet animals, specific nutrients and intolerances for food, and use of BARF for pet nutrition.

THIRD PART –BARF FOR CAT AND DOG NUTRITION – 2 SLIDES

The third part provides knowledge about the use of BARF for cat and dog nutrition, description and content of the BARF.

FOURTH PART – DISCARD FISH FOR BARF PRODUCTION– 9 SLIDES

The fourth part describes discard fish for BARF production, contents of discards, preparation for BARF production, processing technology for 'MARIPET BARF' from discard fisheries, formulation of MARIPET BARF examples by using discard fish and Risk Assessments and Precautions for producers and pet owners.

SECOND ACTIVITIES – QUESTIONS - 5 SLIDES

EU BARF production from discard fisheries., what about your country?

Critical thinking activity: Design a discard fish based BARF manufacturing process steps with a supply chain management plan, taking into account potential barriers .

Role play/ research activity: Find videos that simply describe how BARF production from discard fish for pets can look like in the near future and what jobs it can create

Case study activity: Read through the case study of your choice from the case study module for module 4 and fill in the worksheet either alone or with a partner.

Final activity: Watching video about BARF production from discard fish.

Assessment of the Module with ten questions.

FACILITATOR'S NOTES

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TITLE	ESTIMATED TIMING	FACILITATOR NOTES	MATERIALS NEEDED
Questions	30 min	Individual , followed by online class discussions and entrance to e-learning platform to test module and answer the evaluation questions	MARIPET website and e-learning platform registration, Internet connection

Add here:

- N/A

APPENDIX 1: REFERENCES

The following table summarizes the documents referenced in this document.

Location	Description
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<URL or file path to where document is located>	The module syllabus presented as a text file
<URL or file path to where document is located>	The module presentation, which also includes questions

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