



**UNIVERSIDADE FEDERAL RURAL DE PERNAMBUCO**  
**PRO-REITORIA DE PÓS-GRADUAÇÃO**  
Programa de Pós-Graduação em Recursos Pesqueiros e Aquicultura  
(PPG-RPAq)

<b>Programa da Disciplina</b>	
<b>Disciplina:</b> Elements of Fish nutrition	
<b>Área:</b> Aquicultura	<b>Crédito:</b> 2
<b>Código:</b>	<b>Carga Horário:</b> 30h
<b>Objetivos:</b> The nutritive value of protein ingredients; advantages and bottlenecks; Sustainability issues	

**Ementa:** Identify a mixture of ingredients that satisfy the intended species' dietary requirements and tolerances and that can be manufactured to the desired pellet specifications. Proteins ingredients will be examined.

**CONTEÚDO PROGRAMÁTICO**

- AquaFeeds: current issues in sustainability and availability of protein ingredients
- Animal proteins nutritional properties and nutritive value
- Vegetable proteins nutritional properties and nutritive value
- Single Cell Protein Ingredients nutritional properties and nutritive value

**BIBLIOGRAFIA INDICADA**

Fish nutrition 2021. 4th Edition. Ronald W. Hardy, Sadasivam J. Kaushik (Eds.) ISBN: 9780128231593

Nutrition et alimentation des poissons et crustacés. 1999. Robert Métailler, Guillaume Jean, Pierre Bergot, Sadasivam Kaushik (Eds.) INRA press.

FAO, 2022. Benchmarking species diversification in global aquaculture. 2022 Cai, J.N., Yan, X., Leung, P.S. ISBN : 978-92-5-135642-5 FAO Fisheries and Aquaculture Technical Papers 605

**COMPLEMENTAR:**

Parisi G., Tulli F., Fortina R., Marino R., Bani P., Dalle Zotte A., De Angeli A., Piccolo G., Pinotti L., Schiavone A., Terova G., Prandini A., Gasco L., Roncarati A. & Danieli P.P. (2020) Protein hunger of the feed sector: the alternatives offered by the plant world, Italian Journal of Animal Science, 19:1, 1205-1227, DOI: 10.1080/1828051X.2020.1827993

Bani P., Danieli P.P., De Angeli A., Fortina R., Gasco L., Marino R., Parisi G., Prandini A., Tulli F., 2020. Protein hunger of the feed sector: the alternatives offered by the animal world. It.J.Anim. Sci. DOI: 10.1080/1828051X.2020.1827993