PO.
RESUMOS POSTERS

PO1. ASSESSING THE IMPACTS OF CLIMATE CHANGE-RELATED STRESSORS ON THE NUTRITIONAL QUALITY OF *DIPLODUS CERVINUS*

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INTRODUCTION: Climate change constitutes one of the main threats to marine ecosystems, with seawater temperature rise and pH decrease having significant and negative impacts on nutritional quality of seafood. Concurrently, changes in the lipid and mineral composition of organisms should affect their value as a nutritive source in human consumption.

OBJECTIVES: To evaluate the impacts of ocean warming (+4 °C, i.e. 23 °C) and acidification (ΔpH=−0.4 units equivalent to ΔpCO_2~1000 µatm) on the nutritional value of juvenile zebra seabream (*Diplodus cervinus*).

METHODOLOGY: Juvenile *D. cervinus specimens* (4.8±0.9 g total weight) were exposed to four scenarios during 61 days (Control - T=19°C, pH=8.0; Warming - T=23°C, pH=8.0; Acidification - T=19°C, pH=7.7; Warming+Acidification - T=23°C, pH=7.7; n=12 *per* treatment). Biometric data, chemical composition (dry matter, ash, total lipids, crude protein and gross energy), fatty acid profile and essential elements (K, Mg, Na, Mn, Cu, Fe, Zn and P) were determined in fish body.

RESULTS: Ocean warming was revealed as the stressor with greatest influence on nutritional quality of juvenile *D. cervinus*, mainly on the lipid profile, leading to a decrease in ω3 and ω6 fatty acids, including the essential linoleic acid, which can only be obtained through food intake. Moreover, warming acting alone or in combination with acidification promoted an increase on Fulton's condition index, but a decrease of the hepatosomatic index. No significant differences were observed between treatments with respect to chemical composition and mineral content.

CONCLUSIONS: Overall, such extreme conditions of climate change, is expected to greatly affect the nutritional value of marine fish, mainly affecting their fatty acid composition, particularly the EPA+DHA level and the Σω3/Σω6 ratio. Overall, this study provides new insights to understand and foretell the climate change impacts on nutritional quality of seafood and highlights the importance to perform a risk-benefit analysis of fish consumption.

PO2. DE INFESTAÇÃO A DEGUSTAÇÃO – COMO INDUZIR UMA MUDANÇA DE PARADIGMA?

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INTRODUÇÃO: Este grupo de trabalho, composto pelas mais diversas áreas de conhecimento, vê nos insetos uma possível solução para problemas já identificados pela ONU nos seus Objetivos de Desenvolvimento Sustentável para 2030, como sendo a fome mundial, as alterações climáticas e a saúde e bem-estar, com recurso à inovação alimentar. A questão que se coloca é: como induzir esta mudança de paradigma alimentar?

OBJETIVOS: O projeto *Bugs in My Plate* pretende promover a inclusão de insetos na alimentação humana.

METODOLOGIA: Análise do problema com base na matriz PESTLE investigando as vertentes políticas, económicas, sociais, tecnológicas e legais do uso desta fonte alimentar alternativa. Estudo de mercado através de inquéritos *online*, focado na aceitação de produtos alimentares com insetos por parte do público em geral.

RESULTADOS: Elaboração de dois protótipos: uma roda dos alimentos para 2050, onde se reduziram os setores "carne, pescado e ovos" e "laticínios" em virtude do novo setor "insetos" e uma barrinha proteica à base de grilo liofilizado.

CONCLUSÕES: Prevê-se que em 30 anos a espécie humana se depare com um problema de escassez alimentar. Um dos fatores limitantes será produzirem-se fornecedores de proteína animal em quantidade suficiente para suprir as necessidades diárias da população humana que atingirá os 10 mil milhões. Concluímos que a tecnologia industrial terá de evoluir para que a produção de insetos seja economicamente viável e que o fator repulsa precisa de ser combatido na população ocidental. Assim, este grupo de trabalho, sugere que o foco recaia sobre as vantagens nutricionais dos insetos, bem como se recomenda que esta transição seja gradual, tal como na diversificação alimentar das crianças. Por fim, sugerimos que a inclusão destes produtos no mercado seja focada em nichos que se revêm nos valores de sustentabilidade, bem-estar animal e densidade nutricional da oferta alimentar.

PO3. DOES REDUCING SALT CONTENT IN CHILDRENS' SOUP HAVE AN IMPACT ON PLATE WASTE?

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INTRODUCTION: During childhood, reducing salt and increasing potassium consumption is considered health beneficial once it helps decreasing blood pressure and reducing the risk of cardiovascular disease. Minimizing plate waste (PW) should be one of the main priorities for schools, alongside the need to improve the nutritional profile of the food supply.

OBJECTIVES: To analyze the sodium and potassium content in soup before and after reducing the amount of salt added to the soup and to evaluate its relationship with PW in a school canteen.

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METHODOLOGY: In the study, all soups served in the school canteen to children aged between 3 and 10 years old were included, representing a total of 76 soups. At Phase I it was quantified the sodium and potassium content in soup and the plate waste of soup was evaluated for five days. At Phase II, the salt added to the soup was reduced by 49% and all parameters were again evaluated. Sodium and potassium content were determined using atomic emission spectrophotometry method and PW was assessed using the aggregate weighing method.

RESULTS: The median sodium content at Phase I was 154 ± 37 mg/100 g and it decreased at Phase II to 96 ± 17 mg/100 g ($p<0.001$). The median plate waste at Phase I was 8.6 ± 1,8% and it decreased to 5.3 ± 0,8% at Phase II ($p<0.001$). It was found a moderate positive association between sodium content and PW ($r=0.669$, $p<0.001$).

CONCLUSIONS: The quantity of salt added to the soup at Phase I was superior to the recommendations. The reduction of sodium content in soup should be a priority at schools and as it's not expectable for plate waste to increase this should represent an encouragement to do so.

PO4. EVALUATION OF SATISFACTION WITH THE SALT CONTROL C EQUIPMENT FOR DOSING SALT FOR COOKING IN CANTEENS

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INTRODUCTION: Excessive salt consumption is a risk factor for cardiovascular disease. Canteens play a fundamental role in food education from children to young adults, becoming an excellent place to intervene in the reduction of salt consumption. Salt Control C (SC-C), an innovative instrument to monitor added salt for cooking in canteens, achieved a salt reduction of more than 30% in meals.

OBJECTIVES: Evaluate the satisfaction of canteen cooks with SC-C.

METHODOLOGY: Pilot study of an 8-week intervention in canteens of a public university. The intervention was the use of SC-C to dose the salt for cooking. At the end of the intervention, a satisfaction questionnaire was applied to the canteen cooks (n=2). The questionnaire included 8 questions about satisfaction with the SC-C in terms of controlling salt for cooking, the taste of meals, the state of conservation of the materials, ease of use, the promotion of healthy eating habits, safety conditions, hygiene conditions and overall satisfaction. The questions had a scale with 5 options from not at all satisfied to completely satisfied.

RESULTS: The use of SC-C to control salt during cooking was 50% very satisfied and 50% not satisfied. Satisfaction with the SC-C regarding the taste of meals, state of conservation of materials, ease of use, promotion of healthy eating habits, safety conditions, hygiene conditions and overall satisfaction 100% responded that they were very and totally satisfied.

CONCLUSIONS: SC-C had a high level of satisfaction from the canteen cooks.

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PO5. MONITORIZAÇÃO DO TEOR DE AÇÚCAR E VALOR ENERGÉTICO DE SUMOS, NÉCTARES E REFRIGERANTES PRESENTES NO MERCADO PORTUGUÊS EM 2021

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INTRODUÇÃO: Segundo a iniciativa COSI (Childhood Obesity Surveillance Initiative, 2019), 26,9% das crianças portuguesas apresentavam excesso de peso e 12% obesidade. Entre 2008 e 2016, o consumo de refrigerantes aumentou 13,7% em crianças do ensino primário. O Inquérito Alimentar Nacional (2016) indica um consumo de 220 g/dia de néctares por 42% dos adolescentes. Em Portugal, foi instituída, em 2017 a Estratégia Integrada para a Promoção de uma Alimentação Saudável, que inclui medidas para reduzir a ingestão de açúcar.

OBJETIVOS: Avaliar os teores de açúcar em refrigerantes, néctares e sumos disponíveis no mercado nacional, comparando-os com a recomendação da EIPAS e monitorizar o respetivo valor energético.

METODOLOGIA: Foi recolhida informação nutricional de refrigerantes, néctares e sumos disponíveis na loja online de uma cadeia de supermercados em Portugal, em 2021.

Os teores de açúcar recolhidos foram comparados com as recomendações da EIPAS: 2,5 g/100 mL. Foram também recolhidos os valores da energia.

RESULTADOS: Dos 372 produtos, 286 apresentaram informação para energia e açúcar. Eliminaram-se seis sumos da recolha por informações online incorretas face à rotulagem. As medianas dos valores nutricionais foram, por 100 g de produto: 25 Kcal e 6,3 g (refrigerantes), 42 Kcal e 9,5 g (néctares) e 46 Kcal e 9,6 g (sumos) para a energia e açúcar, respetivamente.

CONCLUSÕES: Apenas 15,4% dos produtos considerados se enquadram nos teores de açúcar recomendados pela EIPAS. Considerando cada grupo separadamente, estavam de acordo com as recomendações 29,7%, 0% e 10,4% para refrigerantes, néctares e sumos, respetivamente.

Estes resultados demonstram que será ainda possível a contínua reformulação dos alimentos destas categorias, apesar dos resultados positivos decorrentes do presente esforço de reformulação já em curso no âmbito da EIPAS.

Adicionalmente, conclui-se que a qualidade da informação disponível nas lojas online necessita de melhorias, dado que 24,7% dos produtos considerados não apresentam informação completa ou correta, presente na rotulagem.

PO6. NUTRITIONAL SUSTAINABILITY AND CO2 EMISSIONS: AN INFODEMIOLOGICAL ANALYSIS IN EUROPE

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INTRODUCTION: Food systems have the potential to nurture human health and support environmental sustainability; however, they are currently threatening both.