

aparente sustentabilidade ambiental – como uma opção interessante para enfrentar este desafio.

OBJETIVOS: Estudar o perfil nutricional e a sustentabilidade ambiental resultante da produção e consumo de duas fontes proteicas para a alimentação humana: a carne bovina (CB) e a farinha do inseto *Tenebrio molitor* (TM).

METODOLOGIA: Na componente ambiental, com base em resultados da metodologia de Avaliação do Ciclo de Vida, calcularam-se e compararam-se as pegadas de carbono (PC) da produção (abordagem do “berço à porta”) dos dois animais. Relativamente à componente nutricional, retiraram-se os dados de Tabelas de Composição de Alimentos e de artigos publicados sobre as espécies referidas, e estabeleceu-se que o inseto estaria na forma de farinha. Utilizando o teor proteico como termo comparativo, definiram-se para as vertentes nutricional e ambiental as unidades funcionais de 30 g e 1 kg de proteína, respetivamente. Como cenário alternativo, incluiu-se um “bife” estruturalmente semelhante à CB, constituído por água e farinhas de TM e soja.

RESULTADOS: A nível ambiental, calcularam-se PC de 133 e 14 kg CO₂ eq/kg proteína para a CB e o inseto, respetivamente. As atividades que mais contribuem para o impacto são, respetivamente, a fermentação entérica e a produção de ração.

Nutricionalmente, o inseto apresenta uma proteína completa e um elevado teor em ácidos gordos mono e polinsaturados. À exceção da vitamina B12, o teor de micronutrientes do inseto foi superior relativamente à CB. No cenário alternativo, a composição nutricional aproxima-se da CB, excetuando a presença de fibra e hidratos de carbono, e o teor superior de ácidos gordos polinsaturados.

CONCLUSÕES: O TM apresenta uma PC, expressa por quilograma de proteína, 10 vezes inferior à da CB. Nutricionalmente, verificou-se a viabilidade do inseto. A influência da alimentação nas alterações climáticas é inquestionável, pelo que o potencial nutricional e ambiental dos insetos não pode ser desprezado.

CO31. ESTIMATION OF DIETARY EXPOSURE TO ACRYLAMIDE OF THE PORTUGUESE POPULATION

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INTRODUCTION: Acrylamide exposure, mainly resulting from food cooking and processing, has been associated with a higher risk of health problems, due to its probable genotoxic effects.

OBJECTIVES: Estimation of acrylamide dietary exposure of the Portuguese population.

METHODOLOGY: A representative sample of the Portuguese population (n=5811), aged 3 months to 84 years, was evaluated within the National Food, Nutrition and Physical Activity Survey, 2015-2016. Dietary data were collected by 2 nonconsecutive days of food diaries (children) or 24-hour recalls. Lower (LB) and upper bound (UB) occurrence data of acrylamide in food (mainly in cereals and potatoes) were extracted from EFSA publications. The usual intake of acrylamide was calculated with SPADE software. The margins of exposure (MOE) were analyzed using the benchmark dose lower confidence limit for a 10% extra risk for peripheral neuropathy and neoplastic effects (BMDL₁₀). MOE < 10,000 indicates human health concern.

RESULTS: Mean dietary exposure to acrylamide ranged from 0.44 (LB) to 0.54 µg/kg (UB) for the total population. Male compared to female presented higher exposure levels (0.47-0.59 µg/kg, vs. 0.41-0.49 µg/kg). In all scenarios, according to the age groups, young children (1-2 years) was the group with the highest exposure (1.92-2.09 µg/kg). The mean MOE for neuropathic effects ranged from 977 (LB) to 802 (UB) and 433 to 348 for the 95th percentile. For neoplastic effects,

MOE ranged from 386 to 317 and 171 to 138 for the mean and 95th percentile of exposure, respectively. Young children was the group with lower MOE (126-113 and 50-45, for 95th percentile of exposure for neuropathic and neoplastic effects).

CONCLUSIONS: The current dietary exposure to acrylamide in the Portuguese population is of concern mainly regarding neoplastic effects. Our results point to the need of reducing the exposure to acrylamide, especially in young children.

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CO32. ENERGY SHARE OF ULTRA-PROCESSED FOOD GROUPS IN PORTUGAL: THE UPPER PROJECT

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INTRODUCTION: Ultra-processed foods (UPF) have been associated with adverse health outcomes. In order to design effective nutritional education programs and food policies, it is important to identify the food groups that most contribute to this consumption, in different age ranges.

OBJECTIVES: To estimate the dietary share of UPF and to explore which are the most consumed by age groups in Portugal.

METHODOLOGY: Participants were from the Portuguese National Food, Nutrition and Physical Activity Survey (IAN-AF) 2015-2016, aged 3m-84y(n=5,811). CAPI face-to-face interviews were performed including two dietary days (diaries, in children, or 24-hour recalls). UPF were identified using NOVA classification. Dietary share of UPF in total energy intake (%UPF) and food groups contribution, in each age range, were obtained. Weighted data descriptive statistics were provided on the share of UPF and its NOVA food groups for total population, stratified by age.

RESULTS: For children, 37%UPF (SE 0.64), being mostly yogurt/milk-based drinks (7.63%; SE 0.30), packaged sweet snacks (4.43%, SE 0.29) and industrial cakes/desserts (4.04%; SE 0.34). For adolescents, 36%UPF (SE 0.80), especially industrial breads/toasts (4.58%; SE 0.43), packaged sweet snacks (4.52%; SE 0.33) and industrial cakes/desserts (4.48%; SE 0.35). For adults, 24%UPF (SE 0.42), mainly yogurt/milk-based drinks (3.40%; SE 0.09), sausage/other processed meat products (3.24%; SE 0.10) and industrial cakes/desserts (3.21%; SE 0.15). For elderly, 16%UPF (SE 0.56), principally industrial cakes/desserts (2.49%; SE 0.31), yogurt/milk-based drinks (2.11%; SE 0.18), sausage/other processed meat products (1.90%; SE 0.16).

CONCLUSIONS: Intervention programs aimed at reducing consumption of ultra-processed foods should prioritize children and adolescents, for whom may focus primarily on yogurt/milk-based drinks, as well as packaged sweet snacks and cakes/desserts. Although adults and elderly have a lower UPF consumption, it is also relevant to focus on cakes/desserts, processed meat and milk-based drinks.

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