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Bread Waste Patterns in Algeria: Insights into Sociodemographic Influences and Management Practices**Bouledroua, D.¹, Debbabi, H.¹, Meghit Boumediene, K.², Jribi, S.¹, Ben Ismail, H.³, Doggui, D.⁴ & Sfayhi, D.⁵**¹ University of Carthage, National Institute of Agronomy of Tunisia (INAT), UR17AGR01, Department of Agri-Food Industries, 1082 Tunis, Tunisia² Djillali Liabes University, Sidi Bel Abbès, Algérie³ Faculty of Mathematical, Physical and Natural Sciences of Tunis, LR11ES09, University Tunis El Manar, Tunis, Tunisia⁴ National Institute of Consumption (INC), Tunis, Tunisie⁵ Université de Carthage, Institut National de la Recherche Agronomique de Tunisie, Tunis, Tunisie**Abstract**

Bread waste is a critical issue in North Africa, exacerbated by bread subsidies and cultural consumption patterns. This study explores household bread storage, wastage, and management practices in Algeria, analyzing their associations with sociodemographic variables.

An online survey was performed on 316 respondents (62.8% female, 70% aged from 25 to 60 years old) from September, 2023 to December, 2023. The questionnaire asked questions to determine bread storage and management practices and bread wastage levels, as well as socio-demographic characteristics of respondents. Data analysis was based on percentages and Chi-square tests, using SPSS v25 software.

Findings of Algerian households revealed that bread is primarily stored in freezers (83.8%) and at room temperature (76.5%), with plastic bags being the most common storage medium (47.5%). Bread is typically stored for two days (46.1%), with storage duration significantly associated with age and marital status ($p < 0.05$). Notably, 55.8% of respondents reported discarding stored bread, with this behavior significantly linked to gender, age, and marital status ($p < 0.05$).

Bread management strategies in Algeria include reuse in meals (87.0%), reheating (82.5%), and feeding to animals (83.1%). These practices were significantly influenced by gender, household size, and education level ($p < 0.05$). Furthermore, ethical and religious considerations were the primary motivations for reducing bread waste, cited by 47.9% and 36.6% of respondents, respectively. However, environmental and economic concerns were less prominent motivations, indicating a gap in awareness of the broader implications of bread waste.

Policy recommendations from respondents highlighted the need for educational campaigns (38.8%), quality improvements for enhanced preservation (31.1%), and adjustments to bread subsidies (21.4%) to better reflect production costs. These findings emphasize the importance of culturally tailored interventions that address specific demographic behaviors and motivations to effectively mitigate bread waste in Algeria.

Key Words: bread waste, Algeria, storage practices, sociocultural factors, food sustainability, policy recommendations

