

NUTRITIONAL CHARACTERIZATION OF MINOR CEREAL SPECIES

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This research investigates the potential of incorporating minor cereals (blue wheat, purple wheat, spelt wheat, sorghum, and common wheat) in food products to enhance nutritional benefits and promote diversity and sustainability in food systems. The study aims to analyze the nutritional characteristics of white and whole meal flour samples from each cereal type, comparing results between the 2021 and 2022 harvesting years. We have measured those parameters, which have an influence on product samples made from the flours. The color of the flour defines the crumb's appearance, the Hagberg-Perten falling number is related to amylase activity, which controls the crumb structure formation. The colorimetry results reveal a slight decrease in lightness (L^*) in the 2022 samples. pH analysis indicates varying acidity levels, with the highest pH (6.42) in purple whole samples and the lowest pH (4.67) in blue white samples. Protein content, assessed using the Kjeldahl method, shows the highest values (14.0% and 13.8%) in blue and purple whole samples for 2021 and 2022, respectively, while sorghum 2021 records the lowest (8.0%). Moisture content varies, with blue white (2022) and common white (2021) having the highest at 12.7% and 13.03%, respectively. Sorghum whole showed the lowest moisture content in 2022 and 2021 at (9.7%) and (8.61%) respectively. The falling number analysis indicates with purple whole, purple white, and sorghum whole samples having the highest (425.00) in 2022 and sorghum whole (546.33) in 2021, while spelt white (262.67) and blue whole (264.67) record the lowest values in 2022 and 2021, respectively.