KERNEL CHEMICAL COMPOSITION OF THE WALNUT GENETIC RESOURCES GROWN IN THE HIGH ATLAS MOUNTAINS OF MOROCCO

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More than half of the cultivated walnuts (*Juglans regia* L.) in Morocco are seedlings, resulting from the prevailing way of seed propagation known by farmers. Principal Component Analysis (PCA) was used to compare protein, oil content, fatty acid composition and tocopherol isomers among 14 selected clones from the High Atlas Mountains. The results showed a high genetic variability of these components among genotypes, confirming the high genetic diversity of walnut in the Atlas Mountains. Thus, the application of a chemometric approach appears to be useful to evaluate the genetic diversity in walnut. The studied genotypes tended to be characterized by high oleic acid and medium values of γ-tocopherol. Three genotypes with a high oil quality were identified, characterized by high oleic acid content and low values of linolenic acid. No evidence was found to suggest the existence of separate populations within the walnut genotypes from High Atlas Mountains.