

FATTY ACID AND TOCOPHEROL CONCENTRATIONS IN ALMOND OIL AND THEIR IMPLICATION IN A BREEDING PROGRAMME

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Fatty acid content and tocopherol concentration of 36 almond (*Prunus amygdalus* Batsch) genotypes from the CITA breeding programme were studied. Wide variability was observed for all studied traits. The analysis of variance showed highly significant differences between genotypes in the fatty acid content and tocopherol concentration. However, the year effect was more important in the tocopherol concentration than in the content of the different fatty acids. The continuous distribution of these oil components suggests their polygenic control. Significant differences in the content of oleic and linoleic fatty acids and in the concentration of α - and γ -tocopherol indicate that high tocopherol concentration is a clearly attainable objective in almond breeding. No significant correlation was found between fatty acid composition and tocopherol concentration. This suggests the possibility of undertaking two breeding strategies in almond to improve oil kernel quality, both by increasing oleic fatty acid and increasing tocopherol concentration, without any bilateral negative effect.