Natural variability in the nutrient composition of California-grown almonds.

Yada, S 2013
Food Composition And Analysis
30(2):80-85.

Abstract:
The natural variability in nutrient composition among and within commercially important California almond varieties was investigated in a multi-year study. Seven major almond varieties (Butte, Carmel, Fritz, Mission, Monterey, Nonpareil and Sonora) were collected over three separate harvests and from various orchards in the north, central and south growing regions in California. Comprehensive nutritional analysis (20 macronutrients and micronutrients, 3 phytosterols) of 39 almond samples was carried out by accredited commercial laboratories. The macronutrient and micronutrient profiles obtained were notably similar for all the almond varieties in this study. The three-year mean contents of protein, total lipid, fatty acids (saturated, monounsaturated and polyunsaturated) and dietary fiber for these major varieties varied by no more than 1.2-fold. For individual nutrients, statistically significant variety, year and/or growing region effects were observed, which contributed to the natural variability 23 in nutrient composition of the California almonds among and within varieties. Harvest year had a highly significant effect ($P < 0.01$) on the contents of total lipid, monounsaturated fatty acids and dietary fiber. Growing region had a significant effect ($P < 0.05$) on the content of ash and all minerals tested.