Historical changes in the mineral content of fruits and vegetables

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Journal:
British Food Journal

Year:
1997

Abstract:
The study implies that a balance of the different essential nutrients is necessary for maintaining health. The eight minerals that are usually analyzed are Na, K, Ca, Mg, P, Fe, Cu, Zn. A comparison of the mineral content of 20 fruits and 20 vegetables grown in the 1930s and the 1980s (published in the UK Government’s Composition of Foods tables) shows several marked reductions in mineral content. This investigation shows that there are statistically significant reductions in the levels of Ca, Mg, Cu and Na in vegetables and Mg, Fe, Cu and K in fruit.

The only mineral that showed no significant differences over the 50 year period was P (phosphorus). The water content increased significantly and dry matter decreased significantly in fruit, which is indicative of yield-centric production. The study indicates that a nutritional problem associated with the quality of food has developed over those 50 years.

The researchers recommend that the causes of the differences in mineral content and their effect on human health be investigated.