Table of contents

4. How to measure nutrients in plant foods?

4.1. Harvest and pre-treatments of food samples

4.2. Analysis of minerals

4.3. Analysis of phytonutrients

4.4. Preparing phytonutrient extracts

4.5. Detection of phytochemicals in food extracts

4.6. Metabolomics: next generation phytochemical analysis

5. How to change the amounts of compounds with nutritional value in plants?

5.1. General explanation of effects of cultivation practices on plants

- 5.1.1. Light
- 5.1.2. Temperature
- 5.1.3. Water and nutrients
- 5.1.4. Soil and substrate
- 5.1.5. Relative humidity and gas exchange
- 5.1.6. Phytohormones and plant volatiles
- 5.1.7. The dilution effect

5.2. The effects of plant fertilizers on the nutritional value of plants for humans

- 5.2.1. Calcium
- 5.2.2. Potassium5.2.3. Iron
- 5.2.4. Zinc
- 5.2.5. Selenium
- 5.2.6. Iodine

5.3. Effect of soil health on the nutritional value of plants for humans

- 5.3.1. Examples of scientific difficulties in relating soil health and human health
- 5.3.2. Links between soil health, plant health and human health

5.4. Effect of Organic farming on the nutritional value of plants for humans

5.5. The effects of light quality and quantity on the nutritional value of plants for humans

- 5.5.1. Intensity
- 5.5.2. Spectrum

5.6. Examples of the impact of cultivar choice on the nutritional value for humans

- 5.6.1. The effects of genotypical/cultivar differences on plant mineral content
- 5.6.2. The effects of species (genotypical/cultivar) differences on phytochemical concentration
- 5.6.3. The effects of grafting on plant nutritional value

5.7. Postharvest

- 5.7.1. The living plant product and quality
- 5.7.2. From preharvest to postharvest quality

6. Conclusions and Future Outlook