Individual genetic variation in agriculture: personalized nutrition provides a new value to foods and crops.


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**Food Development**

- Food Database with nutritional information
- Methods of food preparation and cooking: Final nutritional content.
- Nutrients / Non-Nutritive Compounds
- Bioactive Food Components: Phytochemicals

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**GROWTH AND DEVELOPMENT**

**Plant Metabolism: Concept Map**

- PRIMARY METABOLISM
  - Organisms with photosynthetic capacity
  - Photosynthetic pigments
  - Chloroplasts
  - Photosystems
- SECONDARY METABOLISM
  - NADPH and ATP synthesis
  - CO₂ fixation and reduction
  - Nitrate and Sulfate reduction
  - Photosynthesis response and adaptation to natural conditions
- Functions, applications and uses
- Plant-atmosphere gas exchange
- Transpiration
- Water relations

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**Food Safety**

- Human Nutrition
- Health, relationship between nutrition and disease
- Bioactive compounds
- Gastroscopy
- Consumer behavior towards the market of plants, algae and fungi. Some guidelines for the development of demand for these products
- Plants as social and economic development tools

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**GASTRONOMIC BOTANY AND MOLECULAR GASTRONOMY** (Abstract ID 1709)

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**Nutrigenomic: the general approach to gene discovery more applicable to compounds of nutritional importance synthesized or accumulated by plants and other organisms.**


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**Economic and social development**

- Increasing food production, improve nutrition and provide tools based on plant culture and plant production

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**Plants, Applied Plant Biology, is a tool to achieve this goal**

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**Interaction between Plant Biochemistry-Genomics-Human Nutrition**

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**Manipulation or alteration of plant metabolic pathways in order to improve the nutritional quality of crops for human health**