



Scientific Studies of Food Crops on Functional Morphology, Environmental Response, Growth and Cultivation



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Keywords Food crops, Root and tuber crops, Morphology, Functional morphology, Crop growth, Environmental response, Cultivation, Yam, Eddo, Cereal, Legume

Research topics

Purpose

■ The purpose is to understand the chrematistics and mechanisms related to growth, formation of yield and quality, and environmental response in food crops, and to provide useful knowledges for the development of agriculture, food industry and scientific educational society.

Main topics and achievements

■ Morphology and functional morphology in food crops

Morphological characteristics, new structures and/or relationships between the structures and functions had been reported by our groups in yam, eddo, rice, soybean and local crops, etc..

■ Environmental response in food crops

The knowledges related to the effects of environmental factors such as elevated CO₂, high and low temperatures, salt and aluminum stresses, calcium, sandy field, etc. on the growth, morphology and physiology had been also reported in yam, eddo, rice, soybean and local crops, etc..

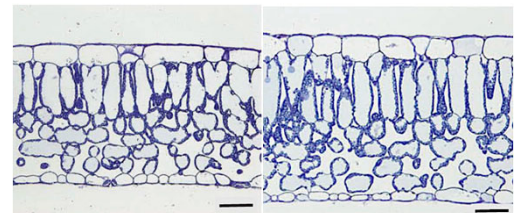
Prospects for collaboration

[Agriculture, Food industry and Scientific educational society]

- Character evaluation of crops, and development of cultivation methods and strategy under various kinds of environments
- Branding of local and traditional crops
- Providing visual information of crops
- Development and dissemination of electron microscopic methods for crop research and education.



Freeze-cracked surface of the amyloplast in an eddo corm.



Effects of elevated CO₂ and high temperature on the inner structures of leaf blades in Chinese yam. Control (left image), Elevated CO₂+High air temperature (right image)



Cultivation experiment of traditional soybeans in sandy field.



Comments

Feel free to contact me if you need any information and are interested in my research field.