



# Productive and environmentally friendly crop cultivation

Agricultural  
Science and  
Technology

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Key words cultivation, crop, micro-nano bubble, resource-recycling



## Summary

### Backgrounds

- We would like to make effective use of the micro-nano bubble generation technology developed in Japan in the agricultural field.
- We would like to aim for environmentally friendly resource-recycling crop cultivation.

### Purpose

- By incorporating micro-nano bubble technology into the agriculture, we aim to cultivate crops that are more productive than conventional farming methods.
- Based on biological analysis focusing on soil microorganisms, we propose environmentally friendly resource-recycling agriculture.

### Major achievements

- We have found that the use of micro-nano bubbles for rice cultivation increases the growth-promoting effect of plants.
- We have found that organic cultivation has a higher number of microorganisms in the soil and more active nitrogen and phosphorus cycling compared to conventional cultivation.

## Prospects of collaboration

### 【Collaboration with industry】

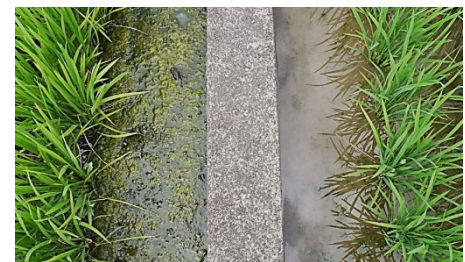
- Our goal is to develop a productive micro-nano bubble generator and usage in agriculture.

### 【Cooperation with local agriculture】

- We aim to contribute to local agriculture by using micro-nano bubbles to cultivate and brand crops with high productivity and added value.
- We would like to scientifically clarify the characteristics of environmentally friendly resource-recycling agriculture and promote it in the community.



Cultivation of rice plants in a greenhouse using micro-nano bubbles.



Rice plants by conventional or organic farming methods.  
(Left:) Conventional farming method  
(Right) Organic farming method



## Selling Point

We aim to incorporate industrial elements into agriculture and develop agriculture that will be interesting to young people.

We aim to clarify the characteristics of resource-recycling agriculture that is friendly to the global environment.