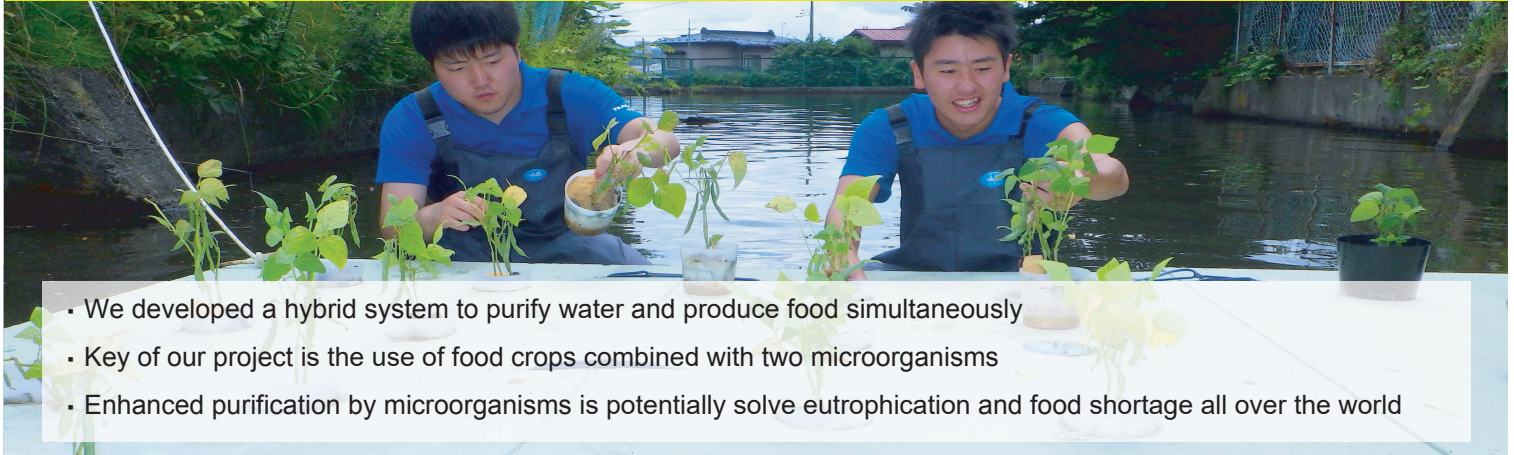


# THE NEW GREEN REVOLUTION

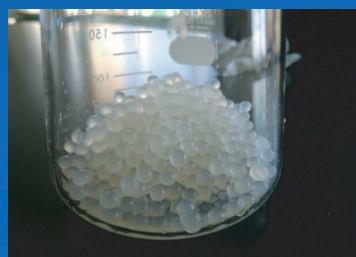
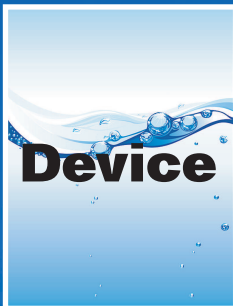


## Hybrid System of Phytoremediation and Food Production in Eutrophicated Ponds/Lakes

Tatsuyoshi Odai and Narumi Sakamoto Aomori Prefectural Nakui Agricultural High School



- We developed a hybrid system to purify water and produce food simultaneously
- Key of our project is the use of food crops combined with two microorganisms
- Enhanced purification by microorganisms is potentially solve eutrophication and food shortage all over the world



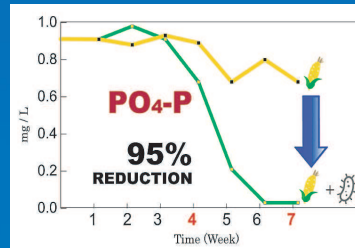
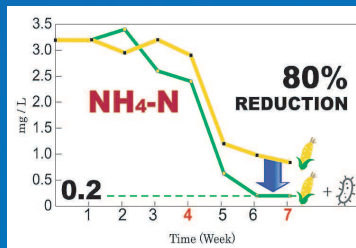
Nitrifying bacteria



Arbuscular mycorrhizal fungi



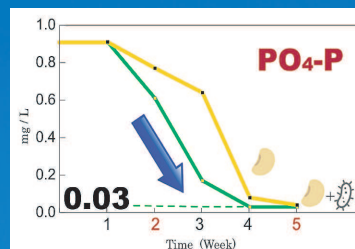
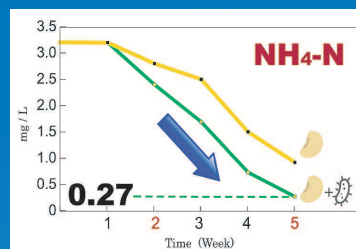
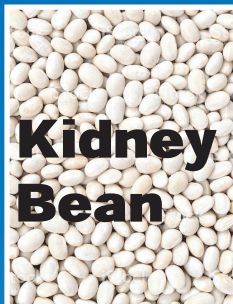
Aquatic root



Water purification by Maize



Growth of Maize

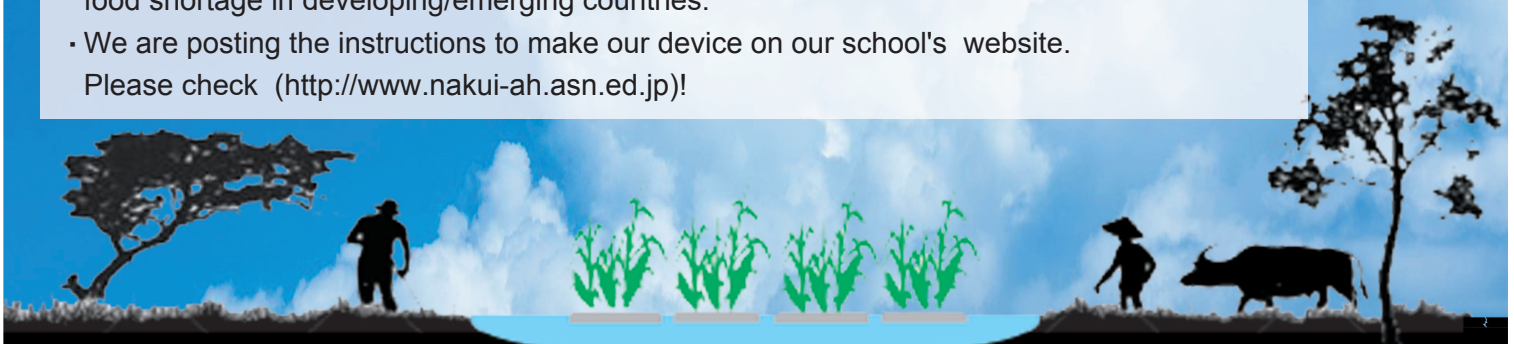


Water purification by Kidney bean



Growth of Kidney bean

- We will continue to disseminate the project to all over the world as a "New green revolution"
- We will spread the system, continue to work towards solving the water pollution, and solve food shortage in developing/emerging countries.
- We are posting the instructions to make our device on our school's website. Please check (<http://www.nakui-ah.asn.ed.jp/>)!







# HOW TO MAKE A SYSTEM

Enquiry : teamflora2018@yahoo.co.jp

## 1 Let's put a medium

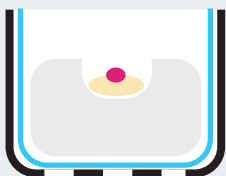


Leave a hole in the bowl.

Put a cloth or net on a pot and make a medium such as soil, sand, rock wool.



## 2 Let's sow seeds



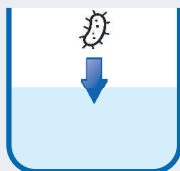
Drill holes in the medium and add seeds and mycorrhizal fungi.



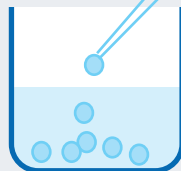
## 3 Let's make nitrifying bacteria beads



Dissolve sodium alginate little by little in hot water to make a 2.5% solution.



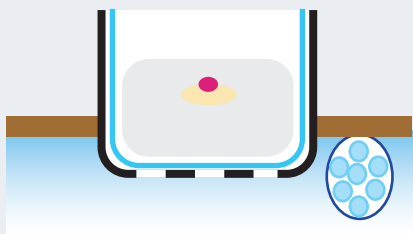
Cool (1) from 30 to 35 , add the same amount of nitrifying bacteria as hot water and mix,



Drop(2) drop by drop in 1.5% calcium chloride solution.



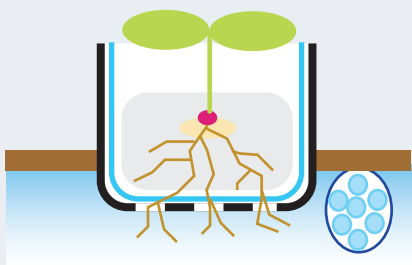
## 4 Let's set a device on the water



Fix pots and beads to the device and float on water. Fix it around with a rope so that it does not flow.



## 5 Let's make various crops



With this system, you can make various crops. Please make it by ourselves and cultivate it !



PET bottle raft for planting

life. love. LION