



# Towards the Realization of Sustainable Agriculture

## ~Our Action and Smart Agriculture Transforming the Future~



Tokushimakita Senior High School

### Present Situation

Using agrochemicals is essential to improving agriculture and sustaining food supplies.

↓but

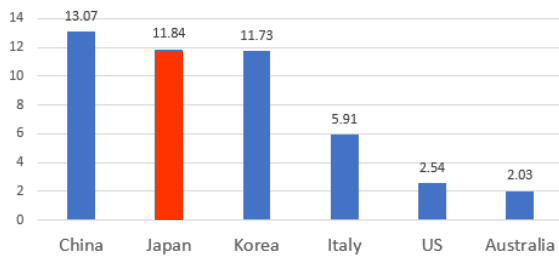
Overuse of agrochemicals has led to water and soil pollution.

- ① Biodiversity is threatened and the food chain is being destroyed.
- ② Health risks are prevalent due to the contamination of water and crops that are consumed.



### Data

Agrochemicals Use per Area of Agricultural Land in Major Countries

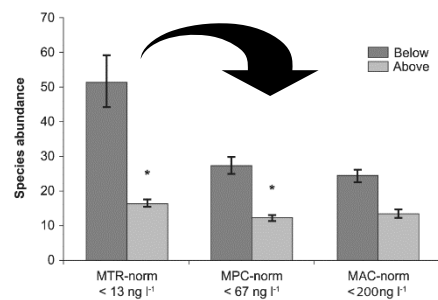


Data from: Food and Agriculture Organization of the United Nations (2018)

FAO: <https://www.fao.org/faostat/en/#data/RP>

PROS ONE: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0062374#pone.0062374-Felsot1>

Water Quality Norms and Aquatic Macroinvertebrate Abundance



Data from: PROS ONE (2013)



**The use of smart agriculture could solve the problem!**



### Advantages of Smart Agriculture

Applying the proper amount of agrochemicals at a suitable time and place

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- ① Reducing the environmental impact  
E.g. About 30-50% of agrochemicals are reduced.  
the Ministry of Agriculture, Forestry and Fisheries
- ② Reducing health risks to us and other animals  
E.g. 92% of insecticide risk and 53% of weedkiller risk are reduced.  
the National Agriculture and Food Research Organization
- ③ Conserving biodiversity



### What can we do as high school students?

**Our goal is for sustainable agriculture to be practiced everywhere.**

#### To Achieve Our Goal

#### 1. Learn

Understand the current issues and the impacts of smart agriculture.



#### 2. Share

Share our knowledge with the world. (Use the Internet effectively)



Source: the Ministry of Agriculture, Forestry and Fisheries

Let's understand Smart agriculture!

**We desire to become a bridge that can tell the world about the potential of smart agriculture.**