

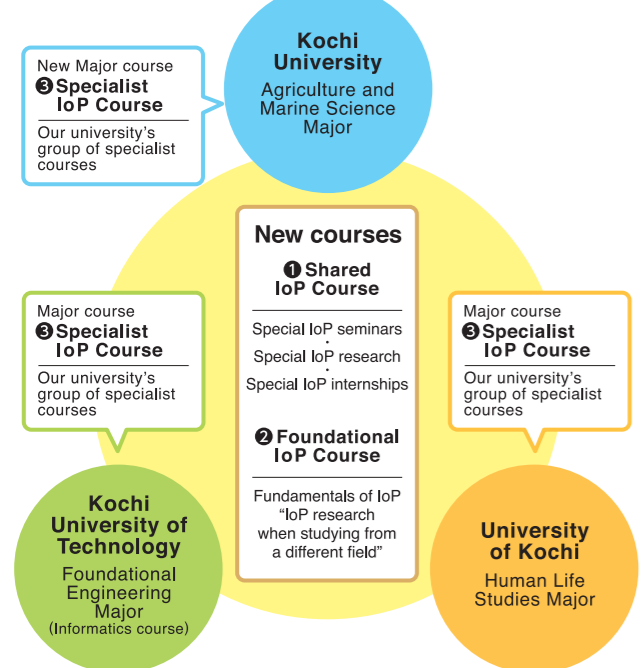
# Learning locations in Kochi related to the IoP School

## IoP Link Program (Special Master's Program)

### A new Master's program from 3 universities

The "IoP Link Program (Special Master's Program)" has been implemented through the combined efforts of Kochi University, Kochi University of Technology, and University of Kochi, in which you study a comprehensive selection of theory and technique from each university's IoP-related specialist field (Agriculture, Information, and Health and Nutrition).

### Example curriculum



### Curriculum

Enrollment	Course	Type	Course name
Compulsory	① Shared IoP	Lectures	Special IoP seminars
Compulsory	① Shared IoP	Research	Special IoP research
Optional	① Shared IoP	Practical training Exercises	Special IoP internships
Compulsory	② Foundational IoP	Lectures Practical training	Fundamentals of IoP "IoP research when studying from a different field"
Optional Compulsory	③ Specialist IoP	Lectures Practical training Exercises	Our university's group of specialist courses

Starting 1st April 2020

## Tosa Food Business Creator Individual Innovation Industry (Tosa FBCIII)



### For people involved in the food industry!

Through lectures and on-site-level exercises in food processing, quality control, marketing, and more, you can develop the knowledge and skill needed for research and development (R&D) in the food industry. An advanced research course (S Course) is also offered, in which seminar-style practical research and development is carried out.

### Course Introduction

**[BB Course]** Total 121 hours  
Lectures + On-site Practicals + Experimental Technique

**[S Course]** Generally every other Saturday (2 years)  
Business project  
Research and development project planning + Research + Academic presentations, etc.

**[Part-time Course]**  
Choose from the BB Course lectures (Less than 40 hours)

[Contact] **Kochi University Next-Generation Local Creation Center**  
Tosa FBCIII Planning Administration Department  
TEL:088-864-5158 E-mail:tosa-fbc@kochi-u.ac.jp

## Kochi Prefecture Agriculture Leaders' Education Center

### We support agriculture studies! Seminars For People Aiming to Work in Agriculture For People Aiming to be Farmers

In order to start from the basics in Kochi, you can learn about "Environmental Control Techniques," the practical training for advanced techniques that were put together by Kochi Prefecture to bring up agricultural income. Training is available for people learning advanced techniques and wishing to become farmers, such as public seminars from specialist lecturers (Recurrent Seminars) and inspection training demonstration greenhouses for increasing yield and decreasing labor.

### Basic Courses

Introductory Course for Studying in the City [Kochi Agri School]  
Hands-On-Style Short-Term Training [Kochi Agri Hands-On Camp]  
Basic Training [Long-Term Training for People Wishing to Work in Farming]

### Observational Meetings / Inspections / Practical Training

Center Observation [A DAY that is Open]  
Yield-Increasing / Labor-saving Demonstration [Inspection Training]  
Improving Techniques after Working in Farming [Re-study Training]  
Farm Work Safety [Agriculture Machinery Training]

### Public Seminars According to Specialist Lecturers (Recurrent Seminars)

Future Orientation for People from Farmhouses [Advanced Technology Seminar]  
For People who Want to Learn about Distribution [Distribution Marketing Seminar]  
For People Aiming to Make Agricultural Management more Efficient [Labor Management Seminar]  
For People Considering a Privatization Opportunity [Agricultural Management School]

### Contact

**Kochi Prefecture Agriculture Leaders' Education Center**  
665 Kuroishi, Shimanto-cho, Takaoka-gun, Kochi  
TEL:0880-24-0007 E-mail:aftc2014@ken.pref.kochi.lg.jp  
URL:https://www.nogyo.tosa.pref.kochi.lg.jp/?sid=2011  
facebook:https://www.facebook.com/kochiAFTC/

Scan here for Agriculture Leaders' Education Center Website



Get to know plants.  
Learn how to Manage it.  
Agriculture will change!



For anyone who wants to learn about agriculture  
**Participation is free!**

Internet of Plants  
**IoP 塾**  
【 the IoP School 】



Contact us for further information on the courses

**Kochi Prefecture Next-Generation Facility Horticultural Agriculture Industry-Academia-Government Cooperation Council Human Resource Meeting**

Administrative Office Sub-Committee

**Kochi University Monobe Campus General Office Advanced IoP Business Department**

200 Monobe Otsu, Nankoku-shi, Kochi 783-8502  
TEL:088-864-5171 FAX:088-864-5174  
E-mail:km20@kochi-u.ac.jp URL:https://kochi-iop.jp/

The details for the new course establishment every year can be found on our website.

Website two-dimensional bar code



# Do you have any questions or things you would like to know about agriculture?



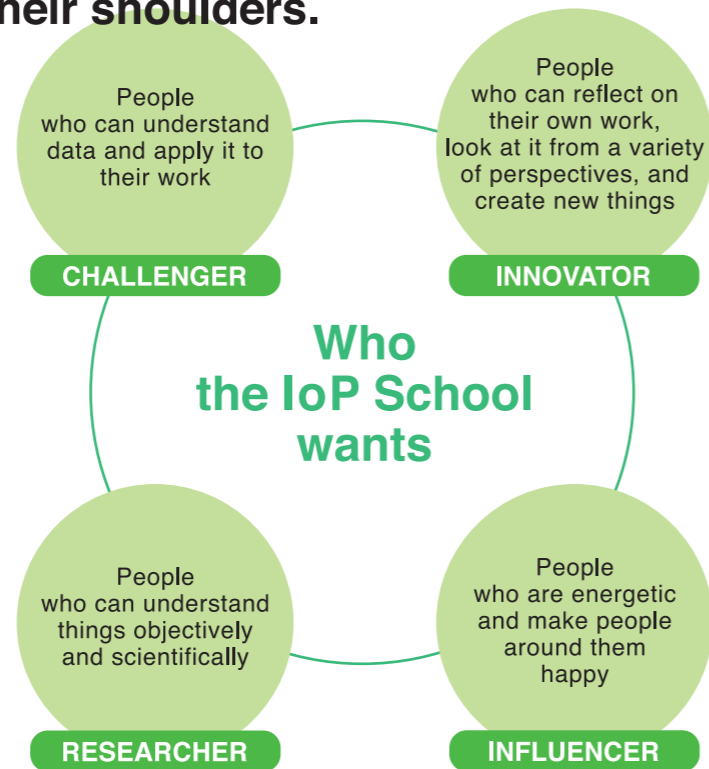
## The IoP School will answer all your questions!

Let's raise new farmers to carry the future of Kochi on their shoulders.



### IoP School Human Resources Education Image

We will raise producers, related company technical developers / dissemination heads, administrative officers, promoters, who can all understand gardening on a scientific level and widen their use of data, as well as all the scientific fields which are the basics of the Kochi Prefecture Next-Generation Facility Horticulture centered on agriculture.



# Study the physiology of plants, and cultivate next-generation gardening and management techniques.



## A Basic Course in Plant Physiology

An introduction to plant physiology for growing crops

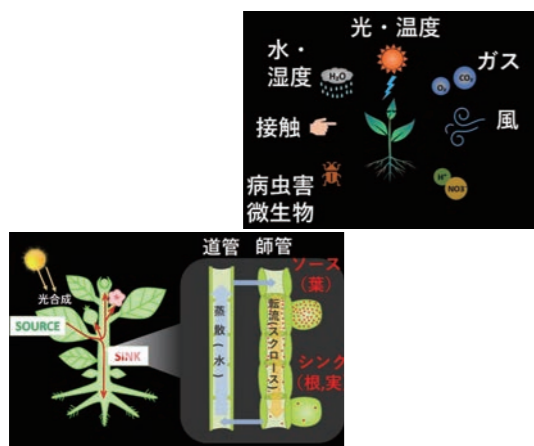
Was the science and biology you learned at school interesting? In this course, we will be looking back on the basics of middle school and high school plant physiology and explaining points which are important in growing crops. Basics aren't very interesting or fun on its own. However, as you gradually come to understand plants and their relationship with the environment, you will find it interesting again and feel motivated to challenge the next stage.

### Main Topics

- Light and Photosynthesis
- Water Absorption and Transpiration
- Respiration and Energy Production
- Required Nutrients and Physiological Damage

### Important Point!

- 1 Let's think about the shape and physiology of the plants from the perspective of plant evolution!
- 2 Although there are many terms and definitions, don't get too caught up with it. Instead, focus on the meaning and structure behind it.



Kochi University  
IoP Project and Promotion Department  
Specially Appointed Assistant Professor  
Field: Agronomics

Jouji Miyazawa



## To Begin the Course

An easy-to-understand introduction to solve the riddle of the mysteries behind the living structure of plants

It's said that photosynthesis is important... But what is photosynthesis in the first place? What is sunlight? What is energy? If you don't water plants they will wither... But what is the water even used for? You might think it's obvious once you know it, but let us explain it, so you can rethink about the surprisingly difficult structure of the life of plants.

### Main Topics

- What is photosynthesis? What is sunlight?
- What is water? Why do we give plants water?
- How do plants flower?
- Do plants possess intelligence?

### Important Point!

- 1 The life structure of plants is complicated and difficult to understand, but we will explain it as simply as possible by using science knowledge that you learned in elementary and middle school.



Kochi University  
Faculty of Agriculture and Marine Science  
Professor  
Field: Tropical Pomology

Tsuneo Ogata



## A Basic Knowledge Course for Practice

An introduction to basic environment management techniques and cultivation of greenhouse-grown vegetables in Tosa

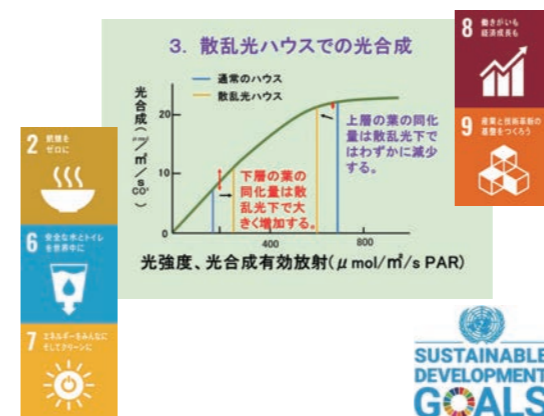
We will be introducing the current state of the environment management techniques and the cultivation of greenhouse-grown vegetables, and the visualization of indoor growing conditions, supported by Tosa craftsmanship. From now on, consider cultivation and environment management techniques from the perspective of plant physiology, scientific data, and sustainable protected horticulture.

### Main Topics

- Light and Carbon Dioxide Management
- Temperature and Humidity Management
- Saline Management
- Kochi's Weather Conditions and Protected Horticulture

### Important Point!

- 1 If you connect cultivation management and crop physiology with production data, what can you see?
- 2 By making use of the data on Kochi's status, their own cultivation and management, and the presence of SDGs, try challenging yourself with the convenient work of protected horticulture.



Kochi University  
IoP Project and Promotion Department  
Specially Appointed Associate Professor  
Field: Protected Horticulture

Kouji Maeda



## Basic Theory of IoP

Innovation where you take the lead part

Agriculture is a manufacturing industry that utilizes the products of photosynthesis, which exists in all facets of crop physiological ecology, swayed by forces such as the weather. However, the visualization of physiological ecology information (Past - Present - Future) is not being realized in everyday farming location, and this useful information isn't be utilized for your ingenuity. Let's try setting in motion innovation where you take the lead part by working with IoP to make information visible, useable, and shareable.

### Main Topics

- How to evaluate environment and crop physiological ecology
- Visualization of crop physiological ecology
- Functions to be expected in IoP
- IoP aiming to innovate agriculture from the bottom up

### Important Point!

- 1 Get to know the dynamic movements between greenhouse environments and crop physiological ecology!
- 2 Think about whether or not IoP can prove useful for your own ingenuity!

Kochi University  
Faculty of Agriculture and Marine Science  
Specially Appointed Associate Professor  
Field: Agricultural Meteorology

Masaharu Kitano



## On Familiar Weather

An introduction to microclimates for growing crops

In the autumn wind, Or over the other side, I will look for you. Have you ever composed a haiku? Even if it were a love poem, it is very common to include expressions related to the seasons, because the weather is always around us. In this course, we will be answering your questions on the small climates (microclimates) that surround us, and thinking about them in relation to the climate in locations where crops are grown.

### Main Topics

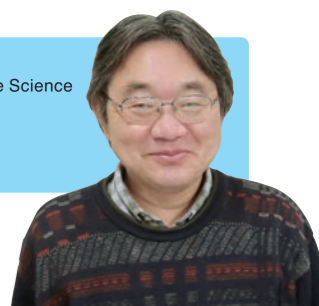
- Familiar weather as seen in poems and calendars
- The relationship between geology and climate
- Meteorological elements near the ground
- How weather is currently measured and explained

### Important Point!

- 1 Become aware of the weather around us from haikus, the 24 solar terms, and the 72 climates!
- 2 Weather can be completely different even in two areas that are close to each other! Why is that? We will explain from the perspective of geology and groundcover!

Kochi University  
Faculty of Agriculture and Marine Science  
Professor  
Field: Microclimates

Makito Mori



# Student voices

### Producer

**Reason for taking the course**

I have been farming for 5 years. I decided to take the course, because looking at how the plants are responding to humidity and fertilization management is something that we do every day. I would like to deepen my knowledge so that I can understand more what kind of management techniques will result in the improved yield or products.



Producer  
**Mr. Fumio Ochi**

**Pros (What was useful)**

I have been cultivating crops, following the instructor's advice until now. Now, I understand why that work is needed. With regards to the cultivation techniques I used until now, it became an opportunity for me to improve and try out new tips on my own. I was able to obtain basic knowledge that will allow me to expand my cultivation techniques.


**Future expectations**

Although I think that IoP activity will bring up the level of greenhouse farming, a high level of cultivation knowledge is needed in order to make good use of it. I think it would be good if it could become an opportunity for us producers to easily face the hurdle of next-generation cultivation techniques that is not constrained to conventional methods.

### Company

**Reason for taking the course**

I had been thinking that I wanted to evaluate the effect of a nutritional membrane filtration device on a crop's yield and quality. This school was a great opportunity I had hoped for. They systematically explained things. Then, considering how the environmental factors interact, you have to study plant physiology as a whole and not just stop at nutritional knowledge.



Taiyo Co., Ltd.  
E&A Business Department  
**Mr. Yasuhiro Hamada**

**Pros (What was useful)**

There was plenty of time for questions. With 3 teachers, the course is diverse and there is a wide range of questions they can answer. Each teacher responds, taking the questions seriously (And with pleasure). We were able to receive precious advice based on our past experiences and examples of trial-and-error as producers.

**Future expectations**

I would like it to keep being a place, where you can easily ask question, sign up at the last moment, and still significantly learn about the topics on the day. I also hope they can give presentations on the results of IoP-related research and exchange opinions on a similar level with actual users.

### New and aspiring farmers

**Reason for taking the course**

I am currently studying at the Agriculture Leaders' Education Center to become a farmer. I signed up for the course, because I wanted to know more about advanced agriculture.



Kochi Prefecture Agriculture Leaders' Education Center Trainee  
**Mr. Kenji Kumon**

**Pros (What was useful)**

You can learn about a wide range of subject areas, from basic knowledge about plants to modern protected horticulture farming that uses IoT and AI technology. It's incredibly helpful because they clearly explain the cause of the various phenomena that occur in plants in the scientific field, and how to deal with them.

**Future expectations**

Because it's difficult to take part after completing the training at the Leaders' Education Center, I would be grateful if they could consider expanding outside of Shimanto-cho!

### Technical Instructor

**Reason for taking the course**

As I wanted to deepen my understanding of basic theories and new information regarding core knowledge in a wide range of fields, and because it would be useful for future dissemination activities.



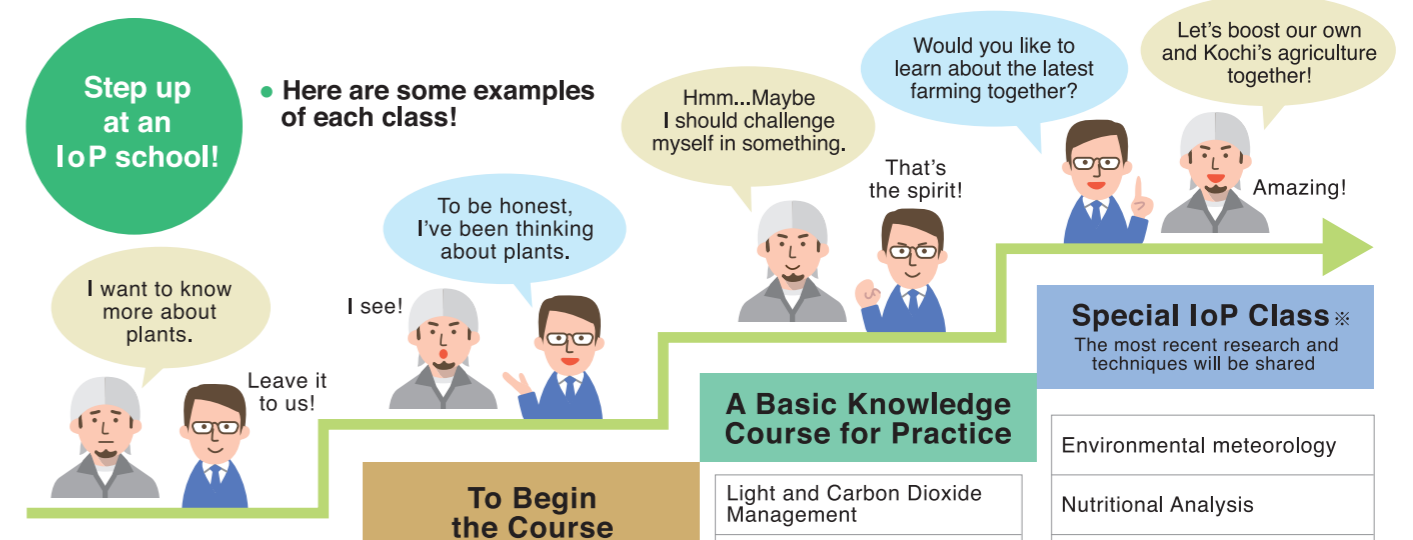
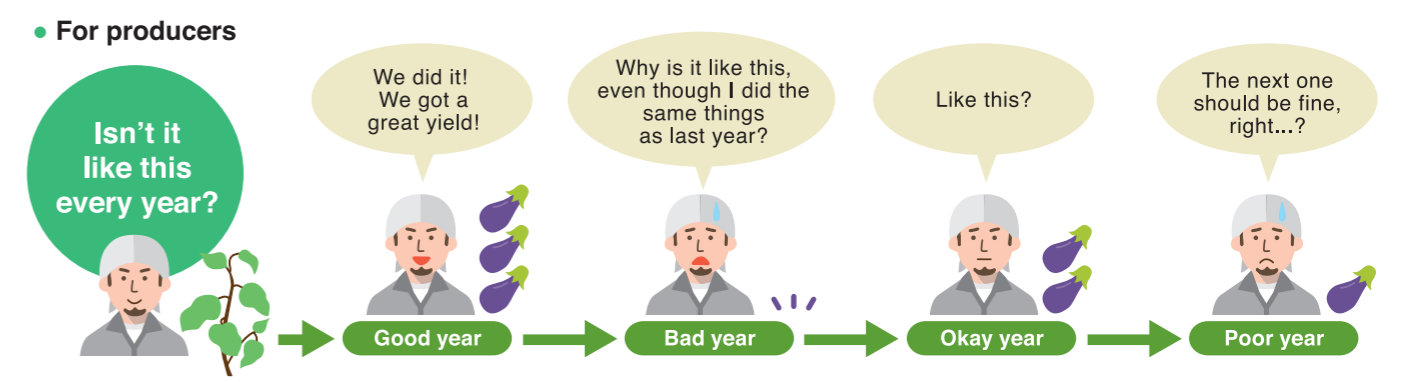
Susaki Agriculture Development Center  
Konan Agricultural Improvement Dissemination Center  
Dissemination Instructor  
**Ms. Ayaka Sakai**

**Pros (What was useful)**

It was very easy to understand because we were able to hear 3 lecturers from different fields talk about the same topic. Also, because I was able to re-study the basic theories and technical backgrounds, my work activities became more profound. It was especially helpful regarding plant physiology and ecology, as I can apply them from any angle.

**Future expectations**

I feel that it will become a complete course that connects activities reciprocally, such as by providing fellow course-mates with a place to exchange ideas. I also think it would be good if more people could access this course by having a system that is available even in remote locations.



• Each class lasts 20~60 minutes

• You can freely participate in all of the classes or part of the class.

• Class titles and their contents can change every year and at every location, so please check the IoP website for the latest information.

