# Environmental Conservation Agriculture

## Lecturer(s)

Masakazu Komatsuzaki, Tatsuo Sato, Madoka Sutoh, Eri Matsuura

| Code | KZ4003 | Numbering | KZ-MUL-332-AIM |
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## Course overview

The lecture contains (1) an understanding regarding the fundamental knowledge of nutrient cycling function of an agro-ecosystem in Japan and the world and (2) an understanding of the consideration to balance with environment and productivity from the viewpoint of sustaining agriculture that considered mitigation of the environmental impact.

## Keyword(s)

Sustainable & conservation agriculture, Fertilizer and pesticides, Paddy field, Organic farming, Breeding

## Learning objectives

Students can obtain the conceptual frameworks of environmental conservation agriculture throughout the lecture and discussion.

## Lesson plans & homework

1. Farm machinery and cover crops in upland fields 1 (MK)
2. Farm machinery and cover crops in upland fields 2 (MK)
3. Ecological benefits of organic farming 1 (MK)
4. Ecological benefits of organic farming 2 (MK)
5. Meaning of environmental conservation agriculture (TS)
6. Reduction of chemical fertilizer and pesticides. (TS)
7. Nutritional strategies to reduce the environmental impact of animal production 1 (MS)
8. Nutritional strategies to reduce the environmental impact of animal production 2 (MS)
9. Conservation agriculture management and system design 1 (EM)
10. Conservation agriculture management and system design 2 (EM)
11. Sustainability evaluation of conservation agriculture 1 (EM)
12. Sustainability evaluation of conservation agriculture 2 (EM)
13. Good agriculture practice 1 (EM)
14. Good agriculture practice 2 (EM)
15. Local community development through the conservation agriculture (EM)

[Homework]

Texts and/or references will be shared using MS TEAMS. Self-learning (approximately 90 minutes/class) will be required for preparation. Students are encouraged to learn more about environmental conservation agriculture by reading academic papers and reference books.

[Active learning]

Group discussions will be held in each class.

## Notes

Contact: AIMS Steering Committee (Dr. Nobuo SAKAGAMI) is anytime available through MS TEAMS.

## On-line / face-to-face / blended

Blended (available for on-line AIMS students)

## Device requirements

Laptop PC

## Evaluation criteria

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|---|---|
| **A+ (90-100):** | able to suggest an action plan for environment-friendly agriculture |
| **A (80-89):** | able to assess the process for environment-friendly agriculture |
| **B (70-79):** | able to discuss what is environment-friendly agriculture |
| **C (60-69):** | obtain basic knowledge on environment-friendly agriculture |
| **D (0-59):** | unable to understand environment-friendly agriculture |

## Grading

Learning results are evaluated by reports on the assigned subjects (not evaluated by final examination).

## Textbook(s)

ISBN: ; Title: ; Author(s): ; Publisher: ; Year:

## Reference book(s)

ISBN: ; Title: ; Author(s): ; Publisher: ; Year:

## Diploma policy

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|---|---|
| **Large perspective of the world** | very important |
| **Knowledge and skills in a specific field** | very important |
| **Problem-solving ability** | important |
| **Communication skill** | important |
| **Practical English skill** | slightly important |
| **Attitude as a conscious member of society** | slightly important |
| **Focus on regional revitalization** | slightly important |

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|---|---|---|---|
| **Active learning** | Yes | **PBL** | - |