

FOLENS Syllabus

Subject Title: 地域持続生物生産技術学 [Regional Sustainable Bio-Production Science]							
Subject Category:	Bio-Environment	Department	MI	Credit	2	Code	059122
Semester	First/Spring	Day(s)/Period(s)	Fri.3				
Class Format	Lecture			Location			
Instructor	藤井 義晴 [FUJII Yoshiharu]						
Office	2N-405			Email	yfujii@cc.tuat.ac.jp		

■ Outline & Target

Sustainable agriculture based on ecology, biological interaction will be discussed. Allelopathy and chemical ecology, concepts and its application to agriculture through domestic or natural plants will also discussed and successful example by teachers will be demonstrated. Presentation by students will be encouraged.

■ Standard

- Understanding of sustainable agriculture based on agro-ecology.
- Safety and toxicity of agro-chemicals. approach for the development of new herbicide.
- Learn about organic agriculture, their myth, safety and problems.
- review of organic chemistry in order to understand agrochemicals and allelochemicals.
- Learn about allelopathy (plant to plant, plant to insect, plant to microorganism interaction)
- Learn about the risk and benefit of introduced and invasive alien plants.
- Learn and discuss about the introduction of beneficial plants.

■ Course description

- 1) Introduction and orientation
- 2) Agroecology, concept and overview
- 3) Agro-chemicals, their overuse, and new trials
- 4) Organic farming, organic food are not always safe
- 5) Organic chemistry and natural products chemistry as a basis for allelopathy (next week)
- 6) Allelopathy 1 (Definition, history and scientists)
- 7) Allelopathy 2 (Isolation of allelochemicals)
- 8) Allelopathy 3 (Application by cover plants and chemicals)
- 9) Traditional and introduced plants
- 10) Risk assessment of invasive alien plants
- 11) Traditional way of agriculture
- 12) Preparation of Presentation by students (country report)
- 13) Presentation by 1st group, comments and discussion

- 14) Presentation by 2nd group, comments and discussion
- 15) Presentation by 3rd group, comments and final discussion

■ Prerequisites

Nothing

■ Textbook(s)

No

■ Reference publication(s)

Allelopathy New concepts and methodology, Science Publisher, 2007

■ Evaluation standards

Percentage of attendance (70%), Presentation (30%)

■ Message from instructor(s)

Report of each country after my lecture will be evaluated by other students.

■ Course keywords

Agroecology, natural resources, alien plants, allelopathy,

■ Office hours

Friday, 15:00 - 17:00, e-mail (yfujii@cc.tuat.ac.jp)

■ Related URL

<http://www.niaes.affrc.go.jp/techdoc/inovlec2004/1-3.pdf>

■ Language

English

■ Last update

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