

Academic Year of 2024  
Doctor's Program  
The United Graduate School of Agricultural Sciences, Tottori University  
Application Guidelines  
For  
Special Admissions for Privately Financed International Students  
- April & October Admission –

The United Graduate School of Agricultural Sciences (UGSAS), Tottori University, was founded in 1989 offering an independent three-year Doctoral course. The UGSAS is organized on the bases of the three Master's Courses of Tottori, Shimane and Yamaguchi Universities, in the research facilities at the three universities. The UGSAS is operated in close alliance and cooperation with the Master's Courses of the three constituent Universities.

This graduate school aims to develop researchers and competent professionals who have the capabilities, in-depth knowledge, and advanced skills that enable them to pursue issues in agriculture and related fields, who can contribute to the development of science and technology and meet the demands of regional communities and international society. Our Graduate School seeks foreign students, (1) who have the basic knowledge and academic ability required in each major field of Bioproduction and Bioenvironmental Sciences, Bioresource and Life Sciences and Global Dryland Science; (2) who are motivated to acquire a higher level of expertise and skills and engage in original research by leveraging such expertise and skills; and (3) who are eager to contribute to the development of science and technology and the demands of regional and international communities.

This admission also serves as application for privately financed international students who wish to apply for the following special programs.

- The Special Program for Dry land Agricultural Sciences with reference to SDGs

This Special Program in Dryland Agricultural Sciences with Reference to SDGs cultivates human resources capable of contributing to the country's development under our educational research system from agriculture and environmental conservation in drylands to the regional developments based on SDGs.

- The Special Program for Bioresource Utilization Science of Fungus and Mushroom

This Special Program is designed to provide academically advanced education to study bioresource utilization science of fungus and mushroom and aims to contribute to the development of superior human resources, promoting research on bioresource utilization science of fungus and mushroom.

## **The Admission Policy of the United Graduate School of Agricultural Sciences, Tottori University**

The United Graduate School of Agricultural Sciences, Tottori University was founded in 1989 as an independent three-year Doctoral Course at Tottori University. The participating universities are the graduate schools (Master's Course) of three universities, Tottori, Shimane and Yamaguchi, in the Chugoku district of Japan.

The United Graduate School of Agricultural Sciences, Tottori University, widely accepts people who: (1) have the basic knowledge and scholastic ability equivalent to the master's degree, which is required in each of the Courses of Bioproduction and Bioenvironmental Sciences, Bioresource and Life Sciences, and Global Dryland Science; (2) seek to obtain higher and broader expertise and skills and more comprehensive viewpoints, and further desire to engage in original studies through the application of these skills; (3) seek to acquire high morality based on social responsibility, contribute to the development of science and technology, and cater to the needs of the local and international communities; and (4) seek to obtain professional and advanced capacities to identify and solve problems and communicate effectively and lead the research activities in the specialized area to deal with problems

faced by the local and international communities.

In order to accept applicants who meet these requirements, the United Graduate School of Agricultural Sciences, Tottori University will select candidates based on a multifaceted and comprehensive evaluation of application documents (including research plan) and oral examination.

Each course seeks the following qualities in students:

The Course of Bioproduction and Bioenvironmental Sciences:

A strong interest in problems in production, distribution, consumption, and production environment in agriculture and forestry, as well as in other areas related to forest and watershed environments, and the desire to solve such problems.

The Course of Bioresource and Life Sciences:

A strong interest in the diverse vital functions found in animals, plants, fungi, etc. and the desire to challenge advanced bioscience studies focusing on the identification of such vital functions at molecular and genetic levels, as well as their utilization as resources.

The Course of Global Dryland Science:

A strong interest in problems surrounding the environment and food in drylands across the world and the desire to utilize the broad viewpoint, expertise, and professional skills in international activities.

## **1. FIELDS OF STUDY AND NUMBER OF STUDENTS FOR ADMISSION**

(1) Fields of Study:

Applications for any field of Bioproduction and Bioenvironmental Sciences, Bioresource and Life Sciences and Global Dryland Science are accepted, provided that each applicant selects a suitable academic major supervisor at UGSAS.

(2) Number of Students for admission:

A limited number of students funded privately or by the other sources (hereafter "Personal Funds").

## **2. QUALIFICATIONS**

(1) Nationality: Applicants with personal funds who are living outside of Japan at the time of application.

Applicants should be nationals from countries which have a diplomatic relation with Japan.

(2) Age: There is no age limitation for applicants with personal funds.

(3) Academic career: Applicants should have or be expected to earn a master's degree by the end of March 2024 to enroll in classes in April 2024. Applicants should be expected to earn a master's degree by the end of September 2024 to enroll in classes in October 2024.

(4) Health: Applicants should be in good mental and physical health.

(5) Language proficiency: A good working level of English or Japanese is required.

(6) Arrival in Japan: Successful applicants who wish to enroll in classes in April 2024 must arrive in Japan between April 1 and 7, 2024. Successful applicants who wish to enroll in classes in October 2024 must arrive in Japan between October 1 and 7, 2024.

(7) Note:

(A) Applicants must have a recommendation from the dean of the faculty (or someone higher in position) of the university or institution.

(B) Applicants must be available for an interview with the members of the oral examination committee via videoconference or other means to take an oral examination.

### 3. APPLICATION FOR ADMISSION, EXAMINATION SCHEDULE, AND ADMISSION DECISIONS

	Deadline	Remarks
Application	Applicants who wish to enroll in classes in April 2024: June 1 (Thu), 2023- November 24 (Fri.), 2023 Applicants who wish to enroll in classes in October 2024: June 1 (Thu.), 2023 – May 24 (Fri.), 2024	Submit the application through the desired major supervisor to the UGSAS.
Examination	An examination schedule (for an oral exam) will be reported to the applicant through the prospective major supervisor within 30 days of the submission of the application. Applicants who wish to enroll in classes in April 2024: An oral exam is scheduled sometime between July 3 (Mon.), 2023 and December 15 (Fri.), 2023. Applicants who wish to enroll in classes in October 2024: An oral exam is scheduled sometime between July 3 (Mon.), 2023 and June 28 (Fri.), 2024	An oral exam will be conducted as specified in Section “5. Procedure for the Selection of Graduate Students.”
Admission Decisions	Admission decisions will be reported to the applicant through the prospective major supervisor within 30 days of the oral exam.	Acceptance letters will be mailed to successful applicants.

### 4. APPLICATION PROCEDURE

An applicant should submit the following documents through the desired major supervisor during an application period. Applications directly mailed to UGSAS are not accepted.

Documents:

- (1) Application Form (Use Form No. 1-2)
- (2) Photograph: One photograph (4 cm x 3 cm) should be pasted on the application form. Photograph should be taken from the front, from the chest up, bare-headed, and taken within the last three months.
- (3) Curriculum Vitae (Use Form No. 2)
- (4) A certificate for the master's degree or a certificate issued by the applicant's graduate school indicating that the applicant will be receiving or has received a master's degree by the end of March/ September 2024.
- (5) Evaluation: This evaluation must be written by the dean of the applicant's graduate school (Form No. 3 can be used).
- (6) Application Fee: 30,000 JPY (paid in cash).
- (7) Master's Thesis
  - (A) Applicants who have completed a master's course:
    - (a) A copy of the master's thesis, or published manuscript equivalent to the thesis.
    - (b) A summary of the master's thesis in English (about 1,200 words). Use A4 paper and attach a cover sheet (Form No. 5).
  - (B) Applicants who anticipate receiving a master's degree:
    - (a) Describe your research program in English (A4 size, about 5,000 words). This report may include tables and figures.
    - (b) A summary of the research program in English; details are the same as in ((A)-(b))
- (8) Research Proposal: Describe your research proposal (goal, objectives, experimental design). Use A4 paper and attach a cover sheet (Form No. 6)

- (9) Letter of Application: Describe why you chose our graduate course, and state your future goals. Use A4 paper and attach a cover sheet (Form No. 7)
- (10) Short essay on Self-assessment (Use Form No. 8): Describe your self-assessment of the Admission Policy of the United Graduate School of Agricultural Sciences in about 500 words.
- (11) One copy of the record showing English ability such as TOEFL, TOEIC or IELTS objectively
- (12) Letter of Permission for Application (Use Form No. 9): If you are working for a public or private institution, arrange a letter of permission from your supervisor at your place of employment.
- (13) Copy of passport or Certificate of citizenship issued by the applicant's municipal authority.
- (14) Recommendation Letter signed by someone who knows the applicant very well.

Notes:

- ① These documents should be either typewritten or printed neatly in English or Japanese. Application forms can be downloaded from the Website (<http://rendai.muses.tottori-u.ac.jp/english/recruit/index.html>).
- ② Applications will not be accepted unless all documents are fully and correctly completed and delivered by the due dates.
- ③ None of the documents submitted will be returned to the applicants.
- ④ Each applicant should select a professor as the prospective major supervisor and contact the professor when preparing the application documents. Any application without nominating a professor as the major supervisor will not be accepted.
- ⑤ The application fee is nonrefundable once paid.

## 5. PROCEDURE FOR THE SELECTION OF GRADUATE STUDENTS

- (1) Graduate students will be selected through a comprehensive evaluation of the oral examination, the documents submitted, and other elements.
- (2) During an interview for the oral exam conducted via videoconference, at least three members of the oral exam committee (who are one or more faculty members of each of the constituent universities and which include the prospective major supervisor) will spend about 50 minutes reviewing the master's thesis and the research proposal (roughly 30 minutes for the description of the Master's thesis and 20 minutes for questions and answers).
- (3) The method of the oral exam is subject to approval by the board of representatives following the submission of the Notice of the Method of the Oral Exam (Form No. 12) by the prospective major supervisor to the dean of the faculty.

## 6. ADMISSION PROCEDURES, ETC.

- (1) Period of Admission Procedures:
  - (A) Successful applicants who wish to enroll in classes in April 2024 are expected to complete the procedures by the beginning of March 2024. They will be notified of the period at a later date.
  - (B) Successful applicants who wish to enroll in classes in October 2024 are expected to complete the procedures by the beginning of September 2024. They will be notified of the period at a later date.
- (2) Fees on entrance
  - (A) Admission fee: 282,000 JPY (proposed).
  - (B) Tuition: 267,900 JPY (proposed) for the first semester (annually 535,800 JPY). Tuition may be revised each school year.
  - (C) ① Personal accident insurance for students pursuing education and research (Hereafter "Gakkensai"): This

insurance compensates for physical injuries suffered students in their intra-curricular activities both on and off campus, and extra-curricular activities on campus. All students enrolled have to pay the premium of 2,600 yen for three years.

② Insurance for International Students (Type E) : This insurance covers (1) Personal compensation responsibility : in case of causing injury to another person or damaging the property of others, (2) Rescuer expenses, etc. : compensate for the payment of transportation and accommodation expenses in case family members come to Japan to support the insured if he/she is hospitalized due to injury or illness for more than 3 days. (3) Movable property for daily use : in case of incurs a damage because his household goods are subject to fire or robbery in Japan. (4) Tenant Liability : in case of causing damage to a rented room due to an accident involving fire or water leakage in Japan. (Unlike "Gakkensai", there is no restriction on time and place) All International students enrolled have to pay the insurance premiums (3 years): 9,270 yen

[Additional Benefits]

The National Health Insurance scheme is a fundamental part of Japan's medical care system. It is designed to cover a portion of the medical expenses incurred by citizens.

To apply for National Health Insurance, go to your local municipal government offices and follow the required procedures as instructed. After joining the scheme, you will only be responsible for paying 30% of any medical expenses you incur. (Exceptions apply in some cases.)

## 7. EDUCATION

The successful applicants will be enrolled as full-time graduate students and under supervision and instruction in English or Japanese. Each student is supervised by faculty members of the three constituent Universities with a professor as a major supervisor and two professors as sub-supervisors. Although each student studies at a constituent University where the major supervisor resides, the student can use the training and research facilities at the other two constituent Universities.

## 8. NOTE

- (1) If false statements were made in the application dossiers, admission shall be rejected even after having been accepted by the United Graduate School.
- (2) With enrollment, new students are advised to become well informed about the Japanese climate, customs, manners, and other cultural aspects in general before coming to Japan. It is strongly advised that they study the Japanese language. Knowledge of the Japanese language is very helpful to newcomers to Japan.

More detailed information and all correspondence about this program is available from the following:

The United Graduate School of Agricultural Sciences, Tottori University  
4-101, Koyama-Minami, Tottori, 680-8553, Japan  
Tel: +81-857-31-5446 Fax: +81-857-31-5683 (81 is the international code for Japan)  
E-mail: ag-rengaku@ml.adm.tottori-u.ac.jp

Address of Constituent Universities:

\*Tottori University

Faculty of Agriculture, Tottori University, 4-101, Koyama-Minami, Tottori, 680-8553, Japan  
Tel: +81-857-31-5446 Fax: +81-857-31-5683 (81 is the international code for Japan)

\*Shimane University

Graduate School of Natural Science and Technology, Shimane University, 1060, Nishikawatsu, Matsue, 690-8504, Japan

Tel: +81-852-32-6492 Fax: +81-852-32-6499 (81 is the international code for Japan)

\*Yamaguchi University

Faculty of Agriculture, Yamaguchi University, 1677-1, Yoshida, Yamaguchi, 753-8515 Japan  
Tel: +81-83-933-5800 Fax: +81-83-933-5820 (81 is the international code for Japan)

## List of Major Supervisors and their Research Interests

The United Graduate School of Agricultural Sciences offers doctoral programs in the following three major courses : Bioproduction and Bioenvironmental Sciences ; Bioresource and Life Sciences and Global Dryland Science. Each course contains one to four Divisions ; and each Division offers basic and applied research programs. Faculty members (Professors and Associate Professors who serve as Major Supervisors) and their active research programs are listed below.

### 1. THE COURSE OF BIOPRODUCTION AND BIOENVIRONMENTAL SCIENCES

#### (a) Division of Agricultural Production Science

ARAKI Hideki (Y)	Agronomy	Function of plant production under environmental stresses and its agronomical application
KOBAYASHI Nobuo (S)	Horticultural Breeding	Evaluation of plant genetic resources and applications for breeding
TAKAHASHI Tadashi (Y)	Crop Science	Establishment of low-cost and low-input crop cultivation systems
TAKEMURA Yoshihiro (T)	Horticultural Science	Studies on the crop ecophysiology in horticultural crops
TANAKA Hiroyuki (T)	Plant Genetics	Genetic and breeding studies on improving quality of wheat flour
TSURUNAGA Yoko (S)	Food Processing	Studies on manufacturing method and functionality in food processing
NAKATSUKA Akira (S)	Molecular Breeding of Horticultural Crop	Molecular breeding for agriculturally useful traits in horticulture crops
NONAMI Kazuyoshi (T)	Agricultural Production Engineering	Mechanization of agricultural work
MATSUMOTO Shingo (S)	Biochemistry of Soil and Plant Nutrition	Studies on the mechanism of plant nutrient acquisition in relation to soil fertility
MATSUMOTO Toshikazu (S)	Fruit Science	Studies on fruit growing and processed food
YANO Akira (S)	Bioenvironmental Electrical Engineering	Application of electrical engineering to bioenvironmental technologies

#### (b) Division of Managerial Economics

TANEICHI Yutaka (Y)	Agricultural Marketing	Study on distribution of agricultural products and agricultural materials
TSUTSUI Kazunobu (T)	Rural Geography	Studies on regional economy and community development in Rural areas
MATSUDA Toshinobu (T)	Economics of Consumer Behavior	Empirical analysis of consumer behavior, especially food demand
MATSUMURA Ichizen (T)	Farm Management	Studies on the relationship between farm management and rural society
WAN Li (T)	Marketing Information Analytics	Agricultural products distribution channels and econometric analysis of market information
YASUNAGA Nobuyoshi(S)	Regional Economics	Sustainability of farmlands, communities, and economies in less favored areas
YASUNOBU Kumi (T)	International Agricultural Development Studies	Agricultural and rural development in Southeast Asia

### (c) Division of Forest and Watershed Environmental Sciences

ISHII Masayuki (S)	Regional Infrastructure Engineering	Development of designing method for renovation of irrigation facilities
KUBO Masako(S)	Plant Ecology	Plant ecology, vegetation and conservation
NAGAMATSU Dai (T)	Plant Ecology	Population dynamics of forest and grassland, vegetation science and biodiversity conservation.
FUJIMOTO Takaaki (T)	Wood Physics	Analysis of wood property variation, and development of measurement techniques
YOSHIMURA Tetsuhiko (S)	Forest Utilization	Social and technological issues in forest utilization and wood harvesting

### (d) Division of Environmental Bioscience

ARANISHI Futoshi(S)	Conservation ecology	Conservation genetics and evolutionary ecology of hydrobiosphere
UENO Makoto (S)	Plant Pathology	Studies on the expression of resistance in plant-microbe interaction
KAMINAKA Hironori (T)	Plant-Microbe Interactions	Molecular mechanisms of immune response and mycorrhizal symbiosis in plants
KARASAWA Shigenori (T)	Biodiversity	Genetic diversity and species diversity of invertebrates
KIHARA Junichi (S)	Plant Pathology	Photoresponses of the phytopathogenic fungi
KODAMA Motoichiro (T)	Plant Pathology	Molecular mechanisms in plant-microbe interactions and plant disease resistance
TAKEMATSU Yoko (Y)	Ecological Entomology	Biodiversity and ecology of termites
MIYANAGA Ryoichi (S)	Insect Ecology	Biology and management of wild bees
YAMAGUCHI Keiko (S)	Aquatic Ecology	Studies on ecology of benthic animals and aquatic environments

## 2. THE COURSE OF BIORESOURCE AND LIFE SCIENCES

### (a) Division of Fungus and Mushroom Sciences

AIMI Tadanori (T)	Biochemical Technology of Microorganisms	Biochemistry, molecular biology and biotechnology of microbial production
SHIMOMURA Norihiro (T)	Mushroom Breeding and Cultivation	Studies on breeding and cultivation of mushroom resources
SOTOME Kozue (T)	Mushroom Phylogeny and Taxonomy	Phylogenetic taxonomy of mushrooms, and ecological researches of wood-decaying basidiomycetes.

### (b) Division of Bioscience and Biotechnology

ARIMA Jiro (T)	Bio-Functional Chemistry	Functional analysis of enzymes and microorganisms, and their application to industry
ISHIKAWA Takahiro (S)	Plant Molecular Physiology	Biosynthesis pathway of antioxidants and metabolism of reactive oxygen species in photosynthetic organisms
IWASAKI Takashi (T)	Bioregulatory Chemistry	Development and screening of bioactive substances regulating biological function

SHIOTSUKI Takahiro (S)	Insect Chemical Biology and Agrobio-Regulators	Chemical biology and molecular mechanisms in regulation of insect development and their applications
MATSUO Yasuhiro (S)	Microbial Genetics	Cell signaling and cell cycle control in fission yeast
MANO Jun'ichi (Y)	Mechanisms of Environmental Stress-tolerance in Plants	Elucidation and application of plant tolerance mechanisms against abiotic environmental stresses
MARUTA Takanori (S)	Plant Physiology	Redox metabolism network and stress response in plants

### (c) Division of Applied Bioresource Chemistry

AZAKAMI Hiroyuki (Y)	Molecular Microbiology	Molecular mechanisms of bacterial colonization to host surface
ISHIHARA Atsushi (T)	Natural Product Chemistry	Function, Biological activity, and Biosynthesis of metabolites produced by plants and microorganisms
ICHIYANAGI Tsuyoshi (T)	Organic Chemistry	The molecular design and functional analysis of bioactive compounds
KAWANO Tsuyoshi (T)	Bioorganic Chemistry	Regulation of diapause, metabolism and longevity corresponding to the growth environment
SHIMIZU Hidehisa (S)	Nutritional Pathophysiology	Study on the relationship between food-derived bacterial metabolites or cyanobacteria-derived toxins, and pathogenesis of diseases
TAMURA Jun-ichi (T)	Organic Chemistry	Chemical synthesis of bioactive glycans and isolation/characterization of natural glycans
MUROTA Kaeko (S)	Bioavailability and Food Function	Bioavailability and physiological function of lipophilic food factors
YABUTA Yukinori (T)	Nutritional Science	Studies on the function of antioxidant vitamins and oxidative stress response
YAMAMOTO Tatsuyuki (S)	Bio-molecular Spectroscopy	Spectroscopic studies on life science and medical applications

## 3. THE COURSE OF GLOBAL DRYLAND SCIENCE

### (a) Division of Global Dryland Science

AKASHI Kinya (T)	Molecular and Cellular Biology	Molecular responses of drought-tolerant plants and their application to molecular breeding
AYEHU Nigussie Haregeweyn (T)	Land Management	Watershed processes monitoring, modeling and management
AN Ping (T)	Plant Eco-Physiology	Physiological responses and relative mechanisms of plants and plant ecophysiology in dry lands.
ICHINOHE Toshiyoshi (S)	Livestock Feeding	Evaluation of ruminants production system
INOSAKO Koji (T)	Soil and Water Management	Conservation, restoration and sustainable use of soil and water environment
IBARAKI Yasuomi (Y)	Bio-environmental Control Engineering	Environmental control in plant production
ENDO Tsuneyoshi (T)	Soil Chemistry	Influence of soil properties and irrigation water quality on soil salinization/sodicitation in irrigated farmlands of arid regions
OGATA Hidehiko (T)	Irrigation and Drainage Facilities Engineering	Evaluation of construction materials and structural performance of irrigation and drainage structures
KISHII Masahiro (T)*	Plant Genetic Resource Development	Research and utilization of plant genetic resources with high environmental tolerance for breeding



KINUGASA Toshihiko (T)	Dryland Restoration and Conservation Ecology	Ecology and ecophysiology of plants in arid and semi-arid grasslands
KIMURA Reiji (T)	Boundary Layer Meteorology	Heat and water balance in arid lands
KUROSAKI Yasunori (T)	Dryland Climatology	Climate change and variability, wind erosion, dust emission in drylands, and impacts of aeolian dust on climate
SHIMIZU Katsuyuki (T)	Water Use and Management	Monitoring and assessment of irrigation water management
SUZUKI Kenji (Y)	Meteorology	Observational study on precipitation mechanisms and development of instruments for hydrometeor measurements
TAGAWA Kotaro (T)	Renewable Energy Engineering	Technological development and optimal design of renewable energy systems and components
TANIGUCHI Takeshi (T)	Microbial Ecology	Soil and root microbial ecology and the application
TSUNEKAWA Atsushi (T)	Conservation Informatics	Monitoring and modeling of plant production and ecosystem change in drylands
TSUBO Mitsuru (T)	Climate Risk Management	Dryland agrometeorology and climate-smart agriculture
TODERICH Kristina Nikolaevna (T)	Dryland Salinity and Landscape Restoration	Salinization in drylands and restoration of affected landscape using halophytes and non-conventional crops
NISHIHARA Eiji (T)	Crop Production in Drylands	Construction of crop production system in areas including drylands
HYODO Masahiro (T)	Facilities and Environmental Materials	Rehabilitation management of agricultural irrigation facilities and development of environmental materials
FUJIMAKI Haruyuki (T)	Soil Conservation	Development of methods for preventing salt accumulation and erosion and remediation of degraded soils
MASUNAGA Tsugiyuki (S)	Pedosphere Ecological Engineering	Control and use of soil functions of environmental protection-restoration and plant production
YAMADA Satoshi (T)	Plant Nutrition	Mechanisms of Response to Stresses of Plants in Arid Regions
YAMAMOTO Sadahiro (T)	Environmental Soil Science	Conservation of soil environment and sustainable use of farmland in arid regions

Abbreviations; T : Tottori University, S : Shimane University, Y : Yamaguchi University.

\* ; Cooperation with Japan International Research Center for Agricultural Sciences