

DIRECTIONS FOR APPLICATION
FOR
THE SPECIAL PROGRAM FOR DRYLAND AGRICULTURAL SCIENCES
WITH REFERENCE TO SDGs, 2022
(THREE-YEAR DOCTORAL COURSE)
The United Graduate School of Agricultural Sciences
Tottori University
Japan

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

The Special Program (SP) for Dryland Agricultural Sciences with Reference to SDGs in the UGAS is designed for those students who have finished the Special Program of the Master's courses (Pre-Doctoral Courses) at the constituent Universities; Tottori, Shimane and Yamaguchi. Because the SP at the UGAS is to be open as of October 2022, the UGAS invites application from prospective foreign students who wish to study Dryland Agricultural Sciences.

1. PURPOSE OF THE SPECIAL PROGRAM

This Special Program (SP) 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.

2. FIELDS OF STUDY AND NUMBER OF STUDENTS TO BE ADMITTED

- (1) Fields of Study: Applications for any field in dryland agricultural sciences and related fields are accepted, provided that each applicant finds a suitable academic major advisor in the annexed "List of Supervisors and Their Research Interests".
- (2) Number of Students to be admitted: A limited number of students funded privately or by the other sources (hereafter "Personal Funds").

3. QUALIFICATIONS

- (1) Nationality: Applicants with Personal Funds are welcome to apply for the SP regardless of their nationality or residential experiences in 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 or equivalent qualifications by the end of September, 2022. Admission may be canceled, if successful applicants do not hold a Master's or equivalent degree by the end of September, 2022.
- (4) Health: Applicants should be in good mental and physical health.
- (5) Language proficiency: A good working level in English is required.
- (6) Arrival in Japan: The admitted students must arrive in Japan between October 1 and 7, 2022.
- (7) Note: Military related personnel are not eligible to apply, if they are to remain on duty during the period of study.

4. APPLICATION PROCEDURE

Applicants should submit the following documents through the desired major advisor to the School by April 22, 2022. Applications directly mailed to the School will not be accepted.

Documents:

- (1) Application in prescribed form, APPLICATION FOR ADMISSION To THE SPECIAL PROGRAM FOR DRYLAND AGRICULTURAL SCIENCES WITH REFERENCE TO SDGs, 2022 (Form No. 5).
- (2) LETTER OF RECOMMENDATION in the prescribed form by those students who know the applicant's research/study capability, addressed to the Dean of the United Graduate School (Form No. 6).
- (3) LETTER OF APPLICATION (about 1,200 words). Use A4 paper and attach a cover sheet (Form No. 3).
- (4) One copy of the applicant's Master's degree certificate or a certificate issued by the applicant's graduate school indicating that the applicant will be receiving a Master's degree.
- (5) Transcript of academic record issued by university authorities and its English translation.
- (6) A summary of the Master's thesis in English (about 1,200 words), or a summary of the research program in English (about 1,200 words) in the case of applicants who anticipate a Master's degree. Use A4 paper and attach a cover sheet (Form No.4).
- (7) Certificate of citizenship issued by municipal authorities.
- (8) One copy of the record showing English ability such as TOEFL, TOEIC or IELTS objectively.
- (9) Photocopies of publications described in #10 in APPLICATION FOR ADMISSION.
- (10) Passport size Photograph (5 x 4cm), showing a picture taken from the front, from the chest up, bare-headed, and taken within 6 months of the application date, indicating name and nationality on the reverse side (should be attached to the designated place on the application form).
- (11) Entrance examination fee of 30,000 yen (to be paid in cash or a postal money order, but waived for current Master students at the constituent Universities).

Notes:

- ① These documents should either be typed or printed neatly in English. Application forms can be downloaded from the Website (<http://rendai.muses.tottori-u.ac.jp/english/recruit/index.html>).

- ②Applications will not be accepted unless all the documents mentioned above are fully and correctly completed and delivered in due time.
- ③The letters of recommendation should include the writer's assessment of the applicant's English proficiency as Excellent, Good or Fair.
- ④The above-mentioned information for documents (1), (2), and (3) should be submitted on the forms provided, and others on A4 size paper. Only originals, not photocopies, will be accepted.
- ⑤None of the documents submitted will be returned to the applicants.
- ⑥Each applicant should select a professor as a prospective major advisor from the annexed "List of Supervisors and Their Research Interests" and contact professor in advance in preparing the application documents. Application failing to nominate a professor as a major advisor will not be accepted.
- ⑦The application fee is nonrefundable once paid.

5. FEES ON ENTRANCE

- (1) Admission fee: 282,000 yen (proposed) (waived for students continuing from the Master's course at the constituent Universities).
- (2) Tuition: 267,900 yen (proposed) for the first semester (annually 535,800 yen). Tuition may be revised each school year.
- (3) ①Personal 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. For details, please refer to Health Science Center (TEL (0857)31-5065).
- ②Insurance 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
 For details, please refer to Student Exchange Section, International Affairs Division. (TEL (0857)31-5056).
- (4) Medical insurance of the National Health Insurance Program: 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.)

6 . SELECTION

- (1) Examination period
From May 25, 2022 to June 8, 2022
- (2) Candidates will be selected through a comprehensive evaluation of the oral examination, the documents submitted, and other elements.
- (3) During an interview for the oral exam, or via videoconference in case the applicant is a residence of foreign country, 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).
- (4) 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.
- (5) Notification will be sent by the beginning of July to applicants.

7 . EDUCATION

The successful applicants will be enrolled as full-time graduate students and expected to complete their thesis research for a doctoral degree within three years, under supervision and instruction mainly in English. Each student is supervised by the faculty members of the three constituent Universities; a professor as a major advisor and two professors as sub-advisors. Although each student studies at the constituent University where the student's major advisor resides, the applicant can use training and research facilities at the other two constituent Universities.

8 . ENROLLMENT DATE: October 2022

9 . RESERVATIONS

- (1) If false statements were made in the application documents, the applicant's admission shall be canceled even after having been accepted in 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 recommended that they study the Japanese language. Knowledge of the Japanese language is very helpful to new-comers to Japan.

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

The United Graduate School of Agricultural Sciences

Tottori University

4-101, Koyama-Minami, Tottori, 680-8553 Japan

Tel: 81-857-31-5446 (81 is the international code for Japan)

Fax: 81-857-31-5683 (81 is the international code for Japan)

E-mail: ag-rengaku@ml.adm.tottori-u.ac.jp

Addressess of Constituent Universities:

*Tottori University

Faculty of Agriculture, Tottori University

4-101, Koyama-Minami, Tottori, 680-8553 Japan

Tel: 81-857-31-5446 (81 is the international code for Japan)

Fax: 81-857-31-5683 (81 is the international code for Japan)

*Shimane University

Faculty of Life and Environmental Sciences, Shimane University

1060, Nishikawatsu, Matsue, 690-8504 Japan

Tel: 81-852-32-6493 (81 is the international code for Japan)

Fax: 81-852-32-6125 (81 is the international code for Japan)

*Yamaguchi University

Faculty of Agriculture, Yamaguchi University

1677-1, Yoshida, Yamaguchi, 753-0841 Japan

Tel: 81-83-933-5800 (81 is the international code for Japan)

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

ASAO Toshiki (S)	Vegetable and Ornamental Science	Production of vegetables and ornamentals
ARAKI Hideki (Y)	Agronomy	Function of plant production under environmental stresses and its agronomical application
OHTA Katsumi (S)	Horticultural Plant Science	Studies on growth control in horticultural plants
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
YAMAMOTO Haruhiko (Y)	Environmental Information Science	Growth diagnosis of plant canopies by optical measuring methods

(b) Division of Managerial Economics

INOUE Norikazu (S)	Farm Management	Farming practices and resource management on farm businesses
TANEICHI Yutaka (Y)	Agricultural Marketing	Study on distribution of agricultural products and agricultural materials
TSUTSUI Kazunobu (T)	Rural Geograph	Studies on regional economy and community development in Rural areas
NOHMI Makoto (T)	Rural Economics	Development and application of regional analysis methods
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
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
NAGAMATSU Dai (T)	Plant Ecology	Population dynamics of forest and grassland, vegetation science and biodiversity conservation.
HIOKI Yoshiyuki (T)	Conservation and Restoration Planning of Ecosystem	Ecological planning and engineering for conservation and restoration of biodiversity
FUJIMOTO Takaaki (T)	Wood Physics	Analysis of wood property variation, and development of measurement techniques

(d) Division of Environmental Bioscience

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
KAWAMUKAI Makoto (S)	Genetic Engineering	Signal transduction, cell cycle control and biosynthesis of coenzyme Q in yeasts
SHIOTSUKI Takahiro (S)	Insect Chemical Biology and Agrobio-Regulators	Chemical biology and molecular mechanisms in regulation of insect development and their applications
NAKAGAWA Tsuyoshi (S)	Plant Molecular Genetics	Molecular mechanisms of plant development and technology for analysis of plant genes
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
WATANABE Fumio (T)	Food Science	Chemistry and nutrition of vitamin B12 and related compounds in food

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/sodicization 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
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
TANIGUCHI Takeshi (T)	Microbial Ecology	Soil and root microbial ecology and the application
TSUJIMOTO Hisashi (T)	Molecular Breeding	Breeding of drought tolerant crop lines by gene and chromosome engineering
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.