Graduate School of Agriculture

Tottori University

1. Graduate school code	6
2. Maximum number of participants	5 participants every year
3. Fields of Study	【Engineering】 ☐Manufacturing Engineering ☐Civil Engineering ☐Electrical and Electronics Engineering ☐Mechanical Engineering ☐Chemical Engineering ☐Environmental Engineering ☐Geology and Mining Engineering ☐Other Engineering Fields 【Agriculture (including Fishery, Dairy and Livestock) 】 ☑Irrigation, Water and Soil Management ☑Crop Science ☑Biochemistry ☑Microbiology ☑Food Science ☐Livestock Science / Veterinary and Animal Medicine ☐Marine Fisheries Science ☑Forest Resources ☑Horticulture ☑Agricultural Engineering ☑Other Agricultural Fields ☐ICT ☐Science ☐Marine Science ☐Commerce ☐Economics / Business Administration ☐Medical Science ☐ Social Welfare ☐Tourism ☐Political Science / Public Administration ☐Others( )
4. Program and Degree	Special Program for Foreign Students in Arid Land Agricultural Sciences **/** Master of Agriculture
5. Standard time table (Years needed for graduation)	☐ 1 year as a Master's Student ☐ 2 years as a Master's Student ☐ Starting as a Research Student up to 6 months, then 2 years as a Master's Student after passing the entrance exam ☑ 2 years as a Master's Student OR Starting as a Research Student up to 6 months, then 2 years as a Master's Student after passing the exam. (Depend on the capacity of the applicants)
6. Language of program	(1) Lecture: All lectures in English (2) Text: In general, English texts are used, but Japanese texts will be occasionally used while oral instructions are being given in English. (3) Laboratory work: In conducting research, the supervisor generally instructs in English, including safety instructions. (4) Seminar: There are many occasions where international students can interact in English at seminars. Seminars, where Japanese students are

	the majority, are given basically in Japanese supplemented by English explanations. (5) Thesis Guidance by academic supervisor is regularly conducted in English.
7. Desirable English level and Necessary Academic background	(1) Copy(s) of the record of English proficiency test (TOEFL, TOEIC, IELTS, etc.) is/are required. (2) At least 16 years of academic background or equivalent (Thesis of Bachelor of Science, etc. is required. i) A copy of his/her thesis of Bachelor of Science if he/she has completed college. ii) A progress report of research if he/she is still in college. iii) An equivalent material to the graduation thesis if a graduation thesis is not available.)
8. Prior Inquiry From Applicants (Before Submission of Application Documents)	Must E-mail Address for inquiries: To: ag-kyoumu@adm.tottori-u.ac.jp The title of E-mail has to be “Program of ABE initiative inquiry”.
9. Website	(1) Graduate School of Agriculture http://muses.muses.tottori-u.ac.jp/english/index.html (2) Tottori University http://www.tottori-u.ac.jp/english (3) The Arid Land Research Center http://www.alrc.tottori-u.ac.jp/english/e_index.html (4) Special website for prospective students interested in the “ABE Initiative” http://www.ciatu.tottori-u.ac.jp/africa/

10.Professors and Associate Professors

The names, fields of research, and email addresses of prospective supervisors (Professors and Associate Professors) for the Special Program (Arid Land Agricultural Sciences) and its assistant professors are as follows:

Field Production Science:

- Akihiro ITAI (Horticultural Biotechnology): itai@muses.tottori-u.ac.jp
- Takeshi YAMAGUCHI (Crop Husbandry): yamaguch@muses.tottori-u.ac.jp
- M. Azuma (Insect Biochemistry and Biotechnology): azuma@muses.tottori-u.ac.jp
- Fumio TAMURA (Horticultural Production Science): tamura@muses.tottori-u.ac.jp
- Hideshi NAKA (Applied Entomology): chun@muses.tottori-u.ac.jp
- Makoto NOHMI (Food and Agricultural Economics): nohmi@muses.tottori-u.ac.jp
- Hideo FURUTSUKA (Accounting and Management System): furutuka@muses.tottori-u.ac.jp
- Toshinobu MATSUDA (Economics and Consumer Behavior): matsudat@muses.tottori-u.ac.jp
- Ichizen MATSUMURA (Farm Business Management): michizen@muses.tottori-u.ac.jp
- Li WANG (Marketing Information Analytics): wanli@muses.tottori-u.ac.jp
- Hidehiko OGATA (Water Use and Management): ogata@muses.tottori-u.ac.jp

- Katsuyuki SHIMIZU (Hydrospheric Environment Assessment): shimizu@muses.tottori-u.ac.jp
- Koji INOSAKO (Agroecological Management): inosako@muses.tottori-u.ac.jp
- Ryota NAGASAWA (Landscape Ecology): nagasawa@muses.tottori-u.ac.jp
- Yoshiyuki HIOKI (Ecological Engineering): hioki@muses.tottori-u.ac.jp

Life and Bioresource Science:
- Kinya AKASHI (Molecular Cell Biology): akashi.kinya@muses.tottori-u.ac.jp
- Hiroyuki TANAKA (Plant Genetics): htanaka@muses.tottori-u.ac.jp
- Hironori KAMINAKA (Plant Molecular Biology): kaminaka@muses.tottori-u.ac.jp
- Mariko OKA (Environmental Plant Physiology): m.oka@muses.tottori-u.ac.jp
- Tadanori AIMI (Microbial Resource Science): taimi@muses.tottori-u.ac.jp
- Norihiro SHIMOMURA (Fungal Breeding and Cultivation): nshimo@muses.tottori-u.ac.jp
- Fumio WATANABE (Food Science): watanabe@muses.tottori-u.ac.jp
- Yukinori YABUTA (Nutritional Science): yabuta@muses.tottori-u.ac.jp
- Jiro ARIMA (Bio-functional Chemistry): arima@muses.tottori-u.ac.jp
- Tsuyoshi KAWANO (Bio-Organic Chemistry): kawano@muses.tottori-u.ac.jp
- Tsuyoshi ICHIYANAGI (Organic Chemistry): yanagi@muses.tottori-u.ac.jp
- Yoshiaki YAMANO (Animal Biochemistry): yyamano@muses.tottori-u.ac.jp

Global Arid Land Science:
- *Atsushi TSUNEKAWA (Conservation Informatics): tsunekawa@alrc.tottori-u.ac.jp
- *Hisashi TSUJIMOTO (Molecular Breeding): tsujim@alrc.tottori-u.ac.jp
- *Pin AN (Plant Ecophysiology): an.ping@alrc.tottori-u.ac.jp
- Sadahiro YAMAMOTO (Environmental Soil Science): yamasada@muses.tottori-u.ac.jp
- Eiji NISHIHARA (Arid Land Crop Production): nishihar@muses.tottori-u.ac.jp
- Satoshi YAMADA (Plant Nutrition): syamada@muses.tottori-u.ac.jp
- Tsuneyoshi ENDO (Arid Land Environment and Resources): endo@muses.tottori-u.ac.jp
- *Reiji KIMURA (Arid Land Applied Meteorology): rkimura@alrc.tottori-u.ac.jp
- *Hiroshi YASUDA (Hydrology in Arid Environment): hyasd@alrc.tottori-u.ac.jp
- *Haruyuki FUJIMAKI (Soil Conservation in Drylands): fujimaki@alrc.tottori-u.ac.jp
- *Norikazu YAMANAKA (Revegetation in Arid Areas): yamanaka@alrc.tottori-u.ac.jp
- Kumi YASUNOBU (Agricultural Development Studies): yasunobu@muses.tottori-u.ac.jp
- Toshihiko KINUGASA (Arid Land Restoration and Conservation Ecology): kinugasa@muses.tottori-u.ac.jp
- *Takeshi TANIGUCHI (Microbial Ecology): takeshi@alrc.tottori-u.ac.jp

(* *Researchers of the Arid Land Research Center of Tottori University*)

11. Features of Graduate School

The Special Program (SP) is a two-year master's course program and belongs to the Graduate School of Agriculture, Tottori University. It is conducted also to serve as the pre-doctoral course of the United Graduate School of Agricultural Sciences of Tottori University (UGSAS) that focuses on the doctoral course.

The Tottori University is internationally known for the Global Arid Land Science, and many SP faculty members are engaged in the international human resource development program of the government of Japan conducted in collaboration with JICA. We have received a total of 235 participants from more than fifty countries in the last twenty-four years in the technical training course on appropriate water and land management for sustainable dry land agriculture (see photo on the left). Since the SP is being managed by the same

researchers engaged in the international training programs, classes and practices of the SP are conducted in highly interactive manners.

As an important player coping with the problems of the world's dry lands, researchers belonging to our Graduate School regularly attend international conferences, including COP-11 of the United Nations Convention to Combat Desertification (UNCDD) in Namibia September 2013 (photo on the left). Sometimes we also organize side-events taking advantage of such publicized events, and Japanese and international students are encouraged alike to take part in the exhibition and presentation on such occasions.

The Tottori University is the most reputed and the largest university in Tottori Prefecture. It has faculties of engineering, medicine, and regional sciences, in addition to the agricultural faculty to which the Graduate School of Agriculture belongs. The Faculty of Agriculture can date back to 1920 when its predecessor research and education institution, the Tottori Agricultural Collage, was established. In talking about the Collage's contribution to Japan's agricultural development, we can't fail to mention the research works conducted by them in coping with difficult conditions of the area, including sandy soils, low soil water retention, high evapo-transpiration during hot summer, salty winds from the sea, moving sand dunes onto the farms, etc. After overcoming many challenges, the Faculty embarked on the journey of international cooperation to work on dry land issues. Presently the Faculty educates more than 1,000 undergraduate students, some 140 master course students, and about 120 doctoral students.

Many graduates of the Faculty and the Graduate School of Agriculture are already assuming good research positions at the universities in Africa, Japan and elsewhere, including Khartoum University (Sudan), Mekele University (Ethiopia) and Arid Land Research Center (ALRC) of Tottori University. While not in the list of the faculty members of the Special Program, Prof. Eltayeb Habora of ALRC (specializing in genetic improvement of arid land crops) is an important supporter of the SP and international students receive lots of useful advices from him on their studies and life in Tottori (right).

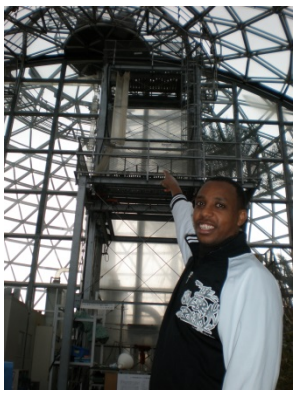
12. Features and Curriculum of Program

The SP is a two-year master's course designed for international students specializing in the Arid Land Agricultural Sciences, and it is managed by the Graduate School of Agriculture, Tottori University. It is conducted also to serve as the pre-doctoral course of the United Graduate School of Agricultural Sciences of Tottori University (UGSAS) that focuses on the doctoral course.

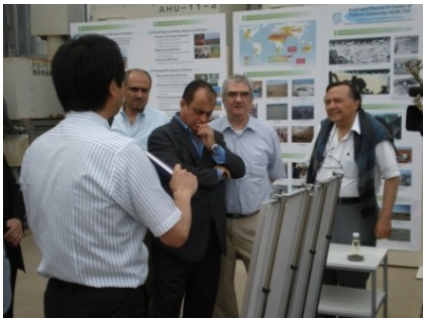
The Program is designed to offer academically advanced education in bio-resources, environmental foundation and management for agriculture in the arid land areas of the world. The students are expected to learn basic and applied sciences related to these areas so that they will be able to identify appropriate measures in dealing with desertification and food supply issues.

A master course student has to earn more than 30 hour credits and write Master's thesis to obtain his/her degree in Master of Science. The classes and the advice in the SP are given in English by the faculty members belonging to three categories of the Graduate School: (a) Field Production Science, (b) Life and Bio-resource Science, and (c) Global Arid Land Science.

The faculty members who are currently conducting research in collaboration with African partners include: Prof. Tsujimoto (Morocco,Sudan), Prof. Nishihara (Tanzania and Uganda), Prof. Inosako (Egypt), Prof. Akashi (Botswana), Prof. Tsunekawa (Ethiopia), Prof. Yasuda (Sudan), Prof. S. Yamamoto (Uganda), Prof. Fujimaki (Egypt), and Prof. Yamanaka (Tunisia). The photo on the right shows Dr. Meshesha from Ethiopia, who earned his PhD from our Graduate School, conducting rainfall soil erosion simulation studies using advanced facilities at the Arid Land Research Center.



13. Internship program



Internship Program will be arranged with agricultural development consultant firms, agricultural cooperative associations, local government offices, agricultural research stations, producers, etc., according to the student's interest area and availability of the specific partner.

As the Tottori University is internationally recognized as a scientific base on dry land agriculture and desertification issues, we regularly receive visitors from both within Japan and around the world. In 2012, a team of 9 Ambassadors of Arab countries based in Tokyo visited the Arid Land Research Center (ALRC) and highly appreciated the rich experience of its research on issues and challenges facing dry land countries such as soil and land degradation, water-saving irrigation, and sustainable land and water management (photo above).

On another occasion, a senior scientist of the Chinese Academy of Science came to the Tottori University as a visiting Professor, and we arranged field visits for him to get first hand experiences in the local agriculture practiced in Tottori Prefecture, including an observation tour to the automated water-melon selection and marketing center (photo on the right).

The Internship Programs of our SP, therefore, will be built on the faculty members' rich experiences of meeting different requirements of diversified range of international visitors and the connections they have with many local institutions, both governmental and private.

14. Academic schedule

(1) Entrance Ceremony: October
(2) Semesters: First Semester: October – March
Second Semester: April – September
(3) Long-term vacations:
Summer Vacation: August – September
Spring Vacation: March
(4) Major Events:
University Festival (Fuumon-sai): October