

博士課程学生・修了生プロフィール（鳥取大学大学院連合農研究科）掲載一覧

Profile of doctoral students and graduates (UGSAS, Tottori University)

No.	専門分野 Specialized field	氏名 Full name	配属大学 Assigned university
1	Applied Bioresource Chemistry	Ajinkya Deepak Anjekar	Shimane University
2	UAV remote sensing, Artificial intelligence, Biomass modelling	Benedict Nzioki	Tottori University
3	Agricultural Water Management	DAYYABU Muhammad Zaharaddeen	Tottori University
4	Plant molecular biology; Plant pathology; Bioinformatics	FIROSE HOSSAIN MD	Shimane University
5	Application of Raman spectroscopy on medical and biological field	Hossain Mohammad Imrul	Shimane University
6	Fungal cytology	Ivan Permana Putra	Tottori University
7	Agricultural Production Science	JAEHWAN LEE	Tottori University
8	森林・流域環境科学	李 婉	島根大学
9	Food microbiology	Abdul Zahir Matin	Shimane University
10	Global Dryland Science	Mohamed Farig Saad Ragab	Tottori University
11	Application of Raman Spectroscopy on Biomedical Science and Singular-cell levels	MUHAMMAD SARWAR HOSSAIN	Shimane University
12	Irrigation and drainage/ Water harvesting system and irrigation	NANA Jean Bosco	Tottori University
13	Soil microbiology and Plant-microbe interaction	Nicho NURDEBYANDARU	Tottori University
14	Soil and Ecological Engineering/Recycling of Agricultural Wastes	John Seye OLANREWAJU	Shimane University
15	Regional resources development / Entrepreneurship development studies	Rahman Md Shajidur	Shimane University
16	Study of redox regulation in Euglena gracilis/ Dry land Agriculture	Raihan Md Topu	Shimane University
17	Autotoxicity in plants under recycled hydroponics	RAZZAK Md Abdur	Shimane University
18	Fungal Taxonomy and Fungal-Bacteria Interaction	HERMAWAN Rudy	Tottori University
19	Managerial economic/ Evaluation impact of water and soil management	SAWADOGO Didier	Tottori University
20	Global Dryland Science (Hydrology)	Tadesual Asamin SETARGIE	Tottori University
21	Bioproduction and Bioenvironmental Sciences/ Entomology	Tareq A. S. Abubaker	Tottori University
22	Fungus and Mushroom Sciences	Toga Pangihotan NAPITUPULU	Tottori University
23	Agricultural economics / Studies on farmland conservation policy	GAO Xiaoxi	Shimane University
24	農業市場学、食料経済学、流通学	橋本 芙奈	山口大学
25	植物病理学	坂根 光星	山口大学

26	水産環境科学	松田 烈至	島根大学
27	菌類分類学・菌類生態学	菅原 遼	鳥取大学
28	施設環境材料学	大山 幸輝	鳥取大学
29	生態学・野生動物保護管理学	大森 鑑能	山口大学

No.1

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	Ajinkya Deepak Anjkar
Specialized field	Applied Bioresource Chemistry	
Research Theme	Application of Machine Learning methods to Raman hyperspectral data for robust classification and early diagnosis of diseases	
Obtained (planned) degree	Doctor of Philosophy (Bioresource and Life Sciences)	
Acquired degree (planned) date	April 2024 (scheduled)	
Message		
<p>Chronic disease incidences and mortality are on a rise across the world in recent years. Early diagnosis and classification of such diseases can not only help to find a cure but also plays an important role to find a suitable drug delivery system. Raman spectroscopy can be used as a diagnostic tool which can provide the information at molecular level. It's application in diagnosis of diseases is already proven and very well established. However, to study the Raman spectra, various Machine Learning methods are used but existing methods are not efficient and requires professional expertise but prone to human made errors. To overcome these difficulties, we can make use of recent advances in Artificial Intelligence field such as neural networks or Deep Learning which is also a sub-class of Machine Learning field. The automation of the classification process can make the diagnosis process user-friendly and may also solve the problem related to regions where healthcare infrastructure remains a serious concern. Since the topic is relevant to the social cause, I would like to find a suitable research environment in future to continue the work based on my research theme. I see myself as an academician and would also like to distribute the knowledge to each human-being interested.</p> <p>Laboratory homepage: URL https://fvraman.wixsite.com/raman</p>		

No.2

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Benedict Nzioki
Specialized field	UAV remote sensing, Artificial intelligence, Biomass modelling	
Research Theme	Tree species detection and classification using UAV data and Artificial Intelligence techniques. Modelling aboveground biomass from remote sensing data	
Obtained (planned) degree	Doctor of Philosophy (Science)	
Acquired degree (planned) date	Scheduled: September 2023	
Message		
<p>Forests are important forest carbon sinks, storing the highest amount of terrestrial carbon, measured through above ground biomass. Monitoring of forest condition is the only way of monitoring and accounting for this biomass storage. Traditional methods of monitoring involve field visits and felling of trees, followed by intensive laboratory work. These are time consuming and destructive to the forests, especially when trees are cut. In addition, traditional methods are not applicable to restricted/inaccessible areas. Their scope thus remains shallow, owing to these limitations.</p> <p>Recently, the world has seen increased availability/accessibility of drones for remote monitoring, advances in Artificial Intelligence (AI), hence machine vision, and increased computation power. Researchers have previously used drone images and AI methods to detect and identify trees with accuracies exceeding 95%. This is a promising method to solve aforementioned limitations of traditional methods. In my research, I use deep learning to detect and classify trees, then later estimate above ground biomass in a small mixed forest. In future, I plan to apply the same methods in tropical/Dryland areas, especially in finding suitable, invasive or other unique featured trees within the given ecosystem. My career goal is to research with international research organizations or regional/international multidisciplinary and collaboration research projects.</p>		

No.3

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	DAYYABU Muhammad Zaharaddeen
Specialized field	Agricultural Water Management	
Research Theme	Assessment of Water Management System in Large Scale Irrigation Schemes	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Obtained in September 2024 (scheduled)	
Message		
<p>The success of an irrigation scheme and its water delivery system can be measured by how well it meets the objectives of delivering an adequate and dependable supply of water in an equitable, efficient manner to the users.</p> <p>The developed irrigation schemes in Nigeria have not been brought into production fully and they have been implemented with inappropriate infrastructure and management process. By 2004, only about 20 percent of the area planned for public irrigation sector had been developed and only 32 percent of the developed area was being irrigated. The poor utilization of the developed irrigation area in the public irrigation sector in Nigeria can be attributed to a number of factors, among which is insufficient attention to management systems of the schemes. Presently, the Federal Government of Nigeria is trying to create significant improvements through Transforming Irrigation Management in Nigeria (TRIMING) Project.</p> <p>In view of the above, am interested in investigating how to solve the challenges mention above to achieved greater agricultural production through irrigation farming. During my Master course I studied about the water management system in Japan, which is recognized among the best in the world. This gave me the opportunity to understand some lapses with that of Nigeria, and learned the way to mitigate some of the challenges in my Country.</p> <p>In the future, I would like to get a job or a position where I can carry out research and educational practices in a wide range of fields, related to the construction of water infrastructures and utilization of water for Agricultural production. As a Senior Water Engineer and researcher, I look into the ways that will help in serving the humanity by using and utilizing the water reliably.</p>		

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	FIROSE HOSSAIN MD
Specialized field	Plant molecular biology; Plant pathology; Bioinformatics	
Research Theme	<ol style="list-style-type: none"> 1. Expression analysis of plant intracellular ras group related leucine rich repeat proteins in <i>Arabidopsis thaliana</i> 2. Targeted inhibition of cell division by expressing dominant <i>bgl23</i> mutant using cell/ tissue specific promoters in <i>Arabidopsis thaliana</i> 3. Expression analysis of leucine rich receptor like kinases (LRR-RLKs) under different abiotic stresses in <i>Arabidopsis thaliana</i> 	
Obtained (planned) degree	Doctor of Philosophy, Ph.D. (Agriculture)	
Acquired degree (planned) date	Expected to obtain Ph.D. in September, 2022	
Message		
<p>The plant is very special to mankind. It provides everything from food to medicine. Therefore, research focusing on plants is always fascinating around the world. I'm interested in broadening my knowledge to better understand the function of some key genes in plants, especially leucine-rich repeat genes. Based on my major in biotechnology and plant biology, I have been working to reveal tissue-specific expression analysis of leucine-rich repeat proteins in <i>Arabidopsis thaliana</i> under normal and abiotic conditions. I have also identified a potential dominant mutation in <i>A. thaliana</i> that generates an abnormal guard cell phenotype. Using this mutant, I am trying to alter the structure of major organs other than guard cells in <i>A. thaliana</i>. Besides this, I have a keen interest in plant-microbe interactions, especially the development of natural control systems to manage some bacterial and fungal diseases of plants. As a young scientist, I want to devote myself to scientific research for the welfare of mankind.</p> <p>Qualification: Skilled in Molecular cloning, Bioinformatics, Plasmid isolation, DNA and RNA isolation, RT and qRT-PCR, Confocal microscopy, Agrobacterium mediated genetic transformation.</p> <p>Laboratory homepage: http://shimane-u.org/nakagawa/gbv.htm</p> <p>Main Published paper:</p> <ol style="list-style-type: none"> 1. Hossain MF, Billah M, Parvez MS, Zaoti ZF, Hasan SMZ, Hasan MF, Dutta AK, Khalekuzzaman M, Islam MA & Sikadar B. Molecular identification and biological control of <i>Ralstonia solanacearum</i> from wilt of papaya by natural compounds and <i>Bacillus subtilis</i>: An integrated experimental and computational study. Saudi journal of biological sciences. December 2021; 28(12): 6972-6986. 2. Ali MR, Hasan MA, Rahman MS, Billah M, Karmakar S, Shimu AS, Hossain MF, Maruf MMH, Rahman MS, Saju MSR, Hasan MRH, Acharjee UK & Hasan MF. Clinical manifestations and socio-demographic status of COVID-19 patients during the second-wave of pandemic: A Bangladeshi experience. Journal of infections and public health. October 2021; 14(10): 1367-1374. 3. Chowdhury MR, Ahamed MS, Mas-ud MA, Islam H, Fatamatuzzohora M, Hossain MF, Billah M, Hossain MH & Matin MN. Stomatal development and genetic expression in <i>Arabidopsis thaliana</i> L. Heliyon. August 2021; 7(8). 4. Khatun D, Hossain MY, Hossain MF, Mawa Z, Rahman MA, Hasan MR, Islam MA, Rahman MA, Hassan HU & Sikha SN. Population parameters of a freshwater clupeid, <i>Corica soborna</i> (Hamilton, 1822) from the ganges river, northwestern Bangladesh. Pakistan journal of zoology. June 2021. 5. Chowdhury MR, Masud-ud MA, Ali MR, Fatamatuzzohora M, Shimu AS, Haq MA, Islam MA, Hossain MF, Hosenuzzaman M, Islam MM, Hasan MF & Matin MN. Harmful effects of covid-19 on major human body organs: A review. Journal of pure and applied microbiology. May 2021; 15(2)500-511. 6. Hasan SZ, Hossain MF, Zaoti ZF, Faruk M, Islam MA, Khalekuzzaman M, Sikdar B. PCR amplification of DNA sequence related to the <i>hrpD</i> gene of <i>Xanthomonas cucurbitae</i> in leaf spot 		

disease of pumpkin and their antagonism by soil bacteria. Archives of phytopathology and plant protection. April 2018; 51:(5-6), 252-266.

7. Habiba, **Hossain MF**, Uddin JBF, Lisa AK, Islam MA and Sikdar B. Identification and molecular characterization of *Candidatus liberibacter asiaticus* (Citrus huanglongbing disease pathogenic Agent) and its control by plant extracts in Bangladesh. European journal of medicinal plant. April 2018; 23(2): 1-13.
8. Hasan SZ, **Hossain MF**, Zaoti ZF, Jahan MS Faruk M, Islam MA, Sikdar B. Identification and characterization of causal agent of cercospora leaf spot disease of okra. March 2018; 10(3): 1015-1019.
9. Zaoti ZF, Hasan SZ, **Hossain MF**, Faruk M, Islam MA, Khalekuzzaman M, Sikdar B. Biochemical and molecular characterization of bacterial wilt disease of banana and evaluation of their antibiotic sensitivity. Microbiology research journal international. February 2018; 22(6): 1-10.
10. **Hossain MF**, Hasan SZ, Zaoti ZF, Habiba , Hasan MF, Islam MA, Sikdar B. Biological control of bacterial leaf spot disease of papaya (*Carica papaya*) through antagonistic approaches using medicinal plants extracts and soil bacteria. International journal of pure and applied bioscience. January 2018; 6(1): 1-11.
11. Sarkar D, **Hossain MF**, Hasan SZ, Zaoti ZF, Ali MR, Faruk M, Islam MA, Sikdar B. PCR amplification and sequencing of *Xanthomonas axonopodis* Pv Citri in citrus canker and its antagonistic control measures. Journal of international academic research for multidisciplinary. January 2018; 5(12):1-16
12. **Hossain MF**, Hasan SZ, Zaoti ZF, Faruk M, Hasan UK, Islam MA, Khalekuzzaman M, Sikdar B. Isolation and characterization of *Pseudomonas syringae* pv. lachrymans from angular leaf spot disease of cucumber (*Cucumis sativus* L.) and evaluation of its antibiotic sensitivity. Journal of pharmacognosy and phytochemistry. October 2017; 6(6):233-238.
13. Ali MR, Hasan MF, Lia RS, Akter A, Sumi MS, **Hossain MF**, Hasan SZ, Islam MD, Khalekuzzaman M, Sikdar B. Isolation and characterization of a canker disease causing pathogen from *Citrus aurantifolia* and evaluation of its biological control measure. Journal of Entomology and Zoology Studies. October 2017; 5(6): 1526-1532.
14. Afrin D, **Hossain MF**, Hasan SM, Khalekuzzaman M, Sikdar B. Characterization of citrus bacterial spot bacteria through biochemical approaches and its control measures. Journal of sylhet agricultural university. December 2016; 3(2):315-323

No.5

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	Hossain Mohammad Imrul
Specialized field	Application of Raman spectroscopy on medical and biological field	
Research Theme	Imaging cell wall dynamics during fission yeast sporulation process	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Life Sciences)	
Acquired degree (planned) date	September 2022	
Message		
<p>Raman spectroscopy is a spectral based molecular vibrational spectroscopy that can detect the molecular fingerprint. Imaging distribution and detection of molecular structure in the living condition, Raman spectroscopy is a prominent tools couples with different analytical methods such as multivariate and univariate analysis. Fission yeast is a model organism that uses various purpose of biological and medical applications.</p> <p>In my research I am employing a fundamental method based on Raman spectroscopy to determine fission yeast cell wall components during sporulation processes. Yeast cell wall consist of different kind of polysaccharide mainly α.and β contain. Cell walls are considered the primarily drug target side to discovery anti-fungal drugs. In the traditional way including fractions methods can not separate cell all and spore wall, therefore</p> <p>we employed Raman spectroscopy and couple with multivariate analysis to determine cell all dynamics during sporulation process.</p> <p>I would like to get a job or position where I will be able to implement my research knowledge and education practices.</p> <p>Laboratory homepage: URL https://www.researchgate.net/profile/Tatsuyuki-Yamamoto</p>		

No.6

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Ivan Permana Putra
Specialized field	Fungal cytology	
Research Theme	Host impact to the cytological characters of ectomycorrhizal fungi structures	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Obtained in September 2022 (scheduled)	
Message		
Most reports dealing with mycorrhiza has been focused on plant structures adjustment. The fungal structure's responses due to the symbiosis is remain obscure. We intend to reveal that mystery in order to deepen the current understanding regarding fungi-plant interaction.		

No.7

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	JAEHWAN LEE
Specialized field	The Course of Bioproduction and Bioenvironmental Sciences Division of Agricultural Production Science	
Research Theme	Development of "Fruit Tree Cultivation Support System" applying AI	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Obtained in September 2022 (scheduled)	
Message		
<p>My research involves the development of a next-generation orchard management system using IOT. The know-how of fruit tree horticulture is based on accumulated rules of thumb obtained from decades of work experience, and as the shortage of successors is becoming more serious, there is an urgent need to support the bearers of fruit trees by building a pear production system that utilizes information infrastructure. Most of the previous research has focused on monitoring plant growth using data measured by 3D laser scanners and drones. My research is unique in that it uses measured data to develop an algorithm that understands the cultivation techniques of skilled farmers, visualizes the data in a way that allows for management continuity, and builds a model that can be implemented in society. My goal is to become an expert in "smart agriculture," working toward the development of sustainable agriculture that can be used worldwide to make farmers happy and to provide people with delicious agricultural products by engaging in agricultural research in Japan.</p> <p>Laboratory homepage: http://muses.muses.tottori-u.ac.jp/faculty/morimoto/ Jaehwan LEE., Tsuyoshi YOSHIDA., Kazuyoshi NONAMI., Ichizen MATSUMU-RA., Akira YANO., Eiji MORIMOTO., 2021, Development of pear cultivation management technology using information and communications technology for the next generation of farmers (Part1) — “Development of a tree extraction method applying 3D laser scanning —,” Journal of the Japanese Society of Agricultural Machinery and Food Engineers, 83(4), 274-281. URL: https://ci.nii.ac.jp/naid/40022650988/</p> <p>私の研究は IOT を活用した次世代型果樹園管理システムの開発を進めています。果樹園芸のノウハウは数十年に渡る作業経験から得た経験則が蓄積されたもので、後継者不足が深刻になることから情報インフラを活用した梨生産体制の構築による担い手支援が急務であります。これまでの先行研究等は 3D レーザスキャナとドローンなどから計測したデータから植物の生育をモニターリング目的とする研究がほとんどでしたが、私の研究の特色は計測したデータから熟練者の栽培技術を理解するアルゴリズムを開発し、経営継承が可能なデータを可視化し、かつ社会実装まで視野に入れたモデルを構築している点が独創的なポイントと考えています。これから日本で農業の研究に携わることで、農家が幸せになるため、人々に美味しい農産物を提供するため、世界的に活躍できる持続的な農業の発展に向けて働く「スマート農業」の専門家となることが私の目標です。</p> <p>研究室のホームページ : http://muses.muses.tottori-u.ac.jp/faculty/morimoto/ LEE JAEHWAN, 吉田剛, 野波和好, 松村一善, 谷野章, & 森本英嗣. (2021). ICT を活用したナシ栽培管理における継承技術の開発 (第 1 報) 3 次元レーザー スキャナを適用した樹木抽出手法の開発. 農業食料工学会誌= Journal of the Japanese Society of Agricultural Machinery and Food Engineers, 83(4), 274-281. URL: https://ci.nii.ac.jp/naid/40022650988/</p>		

連合農学研究科	配属大学	氏名
鳥取大学	島根大学	李 婉
専門分野	森林・流域環境科学	
研究テーマ	<ul style="list-style-type: none"> ・ 森林意識の国際比較、森林環境教育のあり方に関する研究 ・ 森林の総合的利用に関する研究 	
取得（予定）学位	博士（農学）	
取得（予定）年月	2023年3月（予定）	
メッセージ		
<p>私、中国寧夏回族自治区出身です。寧夏大学農学院を卒業した後、環境教育を勉強するため、2013年10月に島根大学に留学しました。島根大学では教育学研究科の修士課程で環境教育の国際比較について研究し、2016年3月に修了しました。その後、島根大学国際交流センターで特任助教として約3年間勤めてきました。契約満了後、森林環境教育に絞って深く研究したい考え、再び大学院生として博士課程に入学しました。研究テーマは、森林環境教育の中国と日本及び世界との比較研究です。森林環境教育は地域や時代状況に応じて子どもたちや人々に、正しい森林の取り扱い方や在るべき姿を伝えることがその目的です。森林は木材、環境および保健などの機能を持ち、我々の生活や社会経済のために各機能が発揮されることが重要です。森林生態系サービスやその利用・保護には地域ごとに段階性があり、各段階に適した教育が行われ、発展していくという仮説を立てて森林の総合的利用の研究に進めています。</p> <p>取得資格：キャンペーンインストラクター</p> <p>研究室：2018.10-2021.3 森林資源管理研究室 2021.4-現在至る 農業経済学研究室</p> <p>URL：http://www.ipc.shimane-u.ac.jp/ruralecon/</p> <p>主な公表論文：</p> <p>1. 李婉・伊藤勝久「日中のアンケート調査からみた森林意識と森林体験の関係」 掲載予定号：104巻2号</p> <p>2. 李婉・井上憲一・高橋絵里奈・伊藤勝久 「森林に関わる知識・態度・行動の関係性—日中の事例分析—」（審査中）</p> <p>URL: https://www.jstage.jst.go.jp/browse/jjfs/103/0/_contents/-char/ja</p>		

No.9

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	Abdul Zahir Matin
Specialized field	Food microbiology	
Research Theme	Improvement of the biological activity of the food component using lactic acid bacteria	
Obtained (planned) degree Acquired degree (planned) date	Ph.D. Degree. 31.3.2024	
Message		
<p>I am a member of the food technology department of HERAT University. Food related research are new in Afghanistan. Bioactive food ingredients are non-essential substances found in foods that can modulate one or more metabolic processes, resulting in enhanced health. The number of microbial species which may exert probiotic properties is impressive. As far as nutrition is concerned only the strains classified as lactic acid bacteria are of significance. I hope by the end of this research I will find some novel bioactive compound by using lactic acid bacteria.</p>		

No.10

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Mohamed Farig Saad Ragab
Specialized field	Global Dryland Science	
Research Theme	<ul style="list-style-type: none"> • Assessment of drought impact on crop and water • Assessment of water delivery performance and governing of water user associations 	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Obtained in March 2022 (Scheduled)	
Message		
<p>Global agriculture will face multiple challenges over the coming decades to satisfy the world's food security. The global challenge of agriculture is that water scarcity affects every continent and was listed as the largest risk in terms of potential impact over the coming decades. In this context, I am interested in assessing 'Agricultural water management. My studies involve how to mitigate the impacts of water scarcity on farmers' livelihoods in terms of both farm and institutional levels. During my doctoral course, I modified water delivery performance indicators of adequacy, efficiency, equity, and dependability in an irrigated area of the Northern Nile Delta of Egypt, where severe water shortage occurs. The most notable point of this study is the originality in developing new methods to assess equitable water distribution and its impact on farmers livelihoods. In the future, I would like to continue evaluating/using the new approach of assessing water delivery performance in Egypt to maintain paddy rice cultivation, particularly, on the Northern Nile delta of Egypt, where I work and paddy rice is the major summer crop despite the hyper water crisis in this area.</p> <p>Research Gate URL:</p> <p>https://www.researchgate.net/profile/Mohamed-Farig</p>		

No.11

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	MUHAMMAD SARWAR HOSSAIN
Specialized field	Application of Raman Spectroscopy on Biomedical Science and Singular-cell levels	
Research Theme	Space- and time-resolved study on the effect of the antifungal drug at the single-cell level by Raman <i>microspectroscopy</i>	
Obtained (planned) degree Acquired degree (planned) date	Doctor of Philosophy Ph.D. (Bioresource and Life Sciences) Obtained in March 2022 (scheduled)	
Message		
<p>Cellular pharmacokinetics and pharmacodynamics are emerging field in pharmacology research and has recently attracted much attention owing to their potential in evaluating drug efficacy. By studying the dynamic profiles of drug uptake, distribution, metabolism, and efflux into the extracellular environment, we can derive detailed information about PK/PD and construct models that can help in drug discovery and development. Such an approach integrates cellular physiology and pharmacology, which needs an effective way to study single cells without involving fractionation methods. Hence, we plan to utilize confocal Raman microscopy to visualize the dynamics of drug-induced metabolic changes, at the single-cell level. To demonstrate the application of Raman spectroscopy to study single-cell pharmacology.</p> <p>By this technique, I also apply it in living single-cell levels and various fields like environmental chemistry and this technique is being popular day by day as an alternative technique.</p> <p>Gender: Male</p> <p>Age: 36</p> <p>Nationality: Bangladesh</p>		

No.12

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	NANA Jean Bosco
Specialized field	Irrigation and drainage/ Water harvesting system and irrigation	
Research Theme	<ul style="list-style-type: none"> • Water Harvesting with Plastic Sheet and Tank, • Determination of root growth for garlic under salinity stress 	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Scheduled to obtain in September 2024 (scheduled)	
Message		
<p>Water scarcity is the largest limitation of agricultural development in a semi-arid zone. Water harvesting would be one of viable practices the severe restriction of funds to develop conventional water resources. I am widely interested in developing economical water harvesting system in automatic irrigation. I have majored in pure physic since I was in undergraduate student</p> <p>During my master's I have been studying water engineering sciences. In addition, five years ago as a research engineer corporate in the Ministry of Research Scientific and High School, I implemented Water harvesting irrigation using a reservoir and co-working with smallholders on rice and cowpea cultivation under soil fertility management through participative research.</p> <p>My research Doctoral course focuses, in developing economical design of a water harvesting system using a tank and plastic sheet. To determine the optimal economical design of this water harvesting design, a field experiment is being carried out on a sandy soil in the Arid Land Research Center, Tottori University, Japan, in order to find the optimal tank capacity under garlic growth which gives the highest net income. A numerical model in predicting water content and yield was conducted to compare the accuracy of the water harvesting system that give the highest net income, considering tank capacity storage and tank price. In addition, I'm interested in how to secure crop production under salinity stress.</p> <p>In future, I would like to work with international researchers, irrigation equipment's company for co-creation and educational related in irrigation and drainage.</p> <p>Qualification: Water harvesting system, Irrigation</p> <p>Laboratory Irrigation and Drainage Subdivision: https://www.alrc.tottori-u.ac.jp/english/division/agri-produc.html</p>		

No.13

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Nicho NURDEBYANDARU
Specialized field	Soil microbiology and Plant-microbe interaction	
Research Theme	<ul style="list-style-type: none"> • Understanding the function of hyphal associated bacteria <i>in vivo</i> • Study on ectomycorrhiza application to promote pine plant as a symbiont for producing fruiting body 	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	September 2024 (scheduled)	
Message		
<p>Agriculture is important because food is a primary human need. Population increase must be balanced with agricultural production. Various are taken to increase production, one of which is by optimizing existing resources or looking for other food sources. However, the problem of increasing production is also inseparable from major problems such as pests and diseases and even environmental conditions like global warming. This issue has made me interested in studying agriculture from various aspects. Since my undergraduate, I studied in the microbiology field. My undergraduate thesis about the potential of the bacterial enzyme as biocontrol of plant pest and my graduate thesis on the taxonomy of endophytic fungi and interaction of dark septate endophytic fungi (DSE) in increasing plant vigor under temperature stress.</p> <p>I have worked as quality control at a multinational company, university lecturer, and government-organization analyst. Now, I am working as a researcher and disseminating technology related to agricultural land resources and biofertilizer production at the R&D Agency at the Ministry of Agriculture. Soil is a very complex ecosystem with hidden resources where microbes and plants interact. Therefore, I am interested in continuing my study to see the interaction of bacteria, ectomycorrhizal fungi, and their symbiont plants. Research related to ectomycorrhizal fungi is still rarely done, especially in my country where pine forests are very wide and are commonly used for resin production, ecology, and tourism. The use of pine forests as a source of production for food diversity will be interesting and provide added value for agriculture. Therefore, during my doctoral education, I will study the interactions of bacteria associated with mycorrhizae and the effect and compatibility of these microbes on plants. I hope there are new insights and knowledge that can be applied to the development of fertilizer products and increasing mushrooms or other agricultural commodities production.</p> <p>Qualification: organizational business process drafter, microbiology researcher, technology dissemination officer</p>		

No.14

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	John Seye OLANREWAJU
Specialized field	Soil and Ecological Engineering/Recycling of Agricultural Wastes	
Research Theme	<ul style="list-style-type: none"> • Optimization of Designed Biochar Properties for Agricultural Uses • Studies of Silica Release from Designed Biochar from Agricultural Residues • Recycling of Agricultural Wastes and Residues • Circular Economy in Agricultural production • Paddy Soil Improvement in Developing countries 	
Obtained (planned) degree	Doctor of Philosophy Ph.D (Agriculture) – In View	
Acquired degree (planned) date	March 2024 (Scheduled)	
Message		
<p>Agricultural wastes and residues have been considered as a sustainable environmental resource if well managed, but the management methods are a challenge in different parts of the world. I am broadly interested in the management of these sustainable environmental resources to create a sustainable environment and economy for agricultural production in developing countries.</p> <p>I have been involved in Research related to agricultural mechanization, ecological engineering, recycling of agricultural wastes for agricultural soil improvement. I have also been involved in the extension and dissemination of Japanese agricultural technology known as Sawah Eco-technology. My doctoral research work focuses on developing a method of optimizing the available nutrients derivable from pyrolyzed agricultural residues and its application to agricultural soils for higher and sustainable yield in developing countries. I would like to get a job or position where I can contribute in carrying out research and contribute to the “designing of a sustainable agricultural system that integrate human society with its natural environment for the benefit of both”.</p> <p>Qualification: B.Sc. (Chemical Engineering), M. Sc. (Environmental Sc.), Research Engineer</p> <p>Laboratory: http://www.ipc.shimane-u.ac.jp/ecotech-soil/index.html</p> <p>Publications:</p> <ol style="list-style-type: none"> 1. Nwajiaku I.M., Olanrewaju J. S., Sato K., Tokunari T., Kitano S. and Masunaga T. Change in nutrient composition of biochar from rice husk and sugarcane bagasse at varying pyrolytic temperatures. <i>International Journal of Recycling of Organic Waste in Agriculture</i>, 7(4), 269-276, 2018 (Aug. 2018 online, Dec. 2018 printed), doi: 10.1007/s40093-018-0213-y 2. Olanrewaju J.S. (2011). “Development of Basic Skills for Sawah Eco-technology for Rice Production” JCBP, International Cooperation Centre for Agricultural Education (ICCAE), Nagoya University, Japan., Pgs 243-250 3. Olanrewaju, J.S. Dada-Joel O.T, Onyemize, U.C., Fagbenja, M.A Ademiluyi Y.S. and T. Wakatsuki. (2011): Challenges and Prospects of Youth Involvement in Sawah Rice Farming in Nigeria. Paper published in the proceedings of the 1st International Workshop on Sawah Eco-technology and Rice Farming (SERIF) in Sub-Saharan Africa’, 22-24 November, 2011, Kumasi, GHANA. Pgs 195-200 		

No.15

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	Rahman Md Shajidur
Specialized field	Regional resources development / Entrepreneurship development studies	
Research Theme	Entrepreneurship development based on local resources	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Obtained in March 2024 (scheduled)	
Message		
<p>Socio-economic condition of local people largely depends on local resources development. Without development of regional or local resources, it is extremely challenging to change the local people fate. I am extensively interested in how to improve local people life through their own regional resources. In my master's thesis, I worked on how to revive local resources through entrepreneurship development among young generations specially in developing countries. During my doctoral course, I have been working to find out a concrete framework through my field survey and data analysis how to improve the local people and unemployed young people life throughout the globe. In future, I would like to get a job or a position, where I can imply my research knowledge. As a researcher, I always think how I can contribute to our society and change the young people thought across the country and around the globe through my work. My dream is to work with passion and try to contribute to build a hunger, poverty, and unemployment free world.</p> <p>Qualification: Data analyst, Business model developer.</p> <p>Laboratory: Laboratory of regional agricultural and rural development.</p>		

No.16

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	Raihan Md Topu
Specialized field	Study of redox regulation in <i>Euglena gracilis</i> / Dry land Agriculture	
Research Theme	Biochemical analysis and characterization of redox metabolites in <i>Euglena gracilis</i>	
Obtained (planned) degree	Doctor of Philosophy Ph.D.	
Acquired degree (planned) date	Obtained in October 2024 (scheduled)	
Message		
<p><i>Euglena gracilis</i>, one of the mysterious photosynthetic protist, is found ubiquitously in fresh or brackish water as well as moist soils. These unique features made it one of the most studied model organisms for investigation of cell biology and biochemistry. Various ROS by-products are produced during various metabolic processes of <i>E. gracilis</i> which causes oxidative stresses in <i>E. gracilis</i>. Hence, <i>E. gracilis</i> might be a good model organism for biochemical studies of redox metabolites and would be potential candidate for reducing oxidative stresses in plants. I completed my graduation in Genetic Engineering and Biotechnology. My MS thesis was about characterization of endophytic microorganisms from medicinal plants and their application in reduction of biotic and abiotic stresses in plant.</p> <p>Qualification: B. Sc. in Genetic Engineering and Biotechnology MS in Genetic Engineering and Biotechnology</p> <p>Laboratory homepage: http://shimane-univ-biochemistry.jp/?page_id=1070 Google Scholar Profile: https://scholar.google.com/citations?user=V3LDi1EAAAAJ&hl=en</p> <p><u>Main Published Papers:</u></p> <p>Topu Raihan, Mukhlesur Rahman Shepon, Prattay Dey, Nandan Chowdhury, Md. Hazrat Ali, Sabrina Suhani, Md. Toasin Hossain Aunkor, Abul Kalam Azad (2021) Extracellular metabolites of endophytic fungi from <i>Azadirachta indica</i> inhibit multidrug-resistant bacteria and phytopathogens. Future Microbiology</p> <p>Topu Raihan, Muhammad Fazle Rabbee, Puja Roy, Swapnila Choudhury, Kwang-Hyun Baek, Abul Kalam Azad (2021) Microbial Metabolites: The Emerging Hotspot of Antiviral Compounds as Potential Candidates to Avert Viral Pandemic Alike SARS CoV-2. Frontiers in Molecular Biosciences.</p>		

No.17

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	RAZZAK Md Abdur
Specialized field	Autotoxicity in plants under recycled hydroponics	
Research Theme	Application of electro-degradation for recovering autotoxicity in lettuce considering electrical conductivity (EC) control and light emitting diodes	
Obtained (planned) degree	Doctor of Philosophy Ph.D.	
Acquired degree (planned) date	Obtained in March 2023 (scheduled)	
Message		
<p>Hydroponics is a suitable method of growing crops under controlled environmental conditions. But by continuous use of nutrient solution (NS), crop growth and yield may hamper for releasing some chemicals into the rhizosphere of plants by roots or leaves which is known as autotoxicity. To avoid yield reduction, every time farmers need to apply new NS and drain out the previously used NS which may cause of environmental pollution. I am fascinated to know the reasons for such yield reduction and recovering method for growing crops in hydroponic systems. During my doctoral course, I would like to find the suitable strategy for using electro-degradation for recovering the retarded growth of plants under electrical conductivity control systems. I also find the optimal intensity of LEDs for growing lettuce under autotoxicity. As I am university faculty member in my country, I will continue my research activities to identify autotoxic chemicals release by different plants grown hydroponically and possible ways to detoxify those substances.</p> <p>Gender: Male Age: 34 Nationality: Bangladesh Position in home country: Assistant Professor, Faculty of Agriculture, Bangladesh Agricultural University</p> <p>Main Published article: Md Abdur Razzak, Md Raihan Talukder, M. Asaduzzaman, Hideyuki Tanaka and Toshiki Asao (2021): Appropriate strategies of electrodegradation for the alleviation of growth retardation during autotoxicity of lettuce in recycled hydroponics, New Zealand Journal of Crop and Horticultural Science, https://doi.org/10.1080/01140671.2021.1944884.</p>		

No.18

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	HERMAWAN Rudy
Specialized field	Fungal Taxonomy and Fungal-Bacteria Interaction	
Research Theme	<ul style="list-style-type: none"> • Isolation and Identification of Exo- and Endo-Hyphal Bacteria from Some Ectomycorrhizal Fungal Isolates • The Role of Hyphal Bacteria for Ectomycorrhizal Fungal Mycelial Growth: Consortium Phenomenon 	
Obtained (planned) degree	Doctor of Philosophy Ph.D (Agriculture)	
Acquired degree (planned) date	Obtained in September 2023 (scheduled)	
Message		
<p>Bacteria are cosmopolitan microbes. They can live everywhere and anywhere as long as the environment is capable for them to live. Moreover, they can live in the organisms and microorganisms, such as mushroom/fungi. In my study, I learn about the bacteria in/on fungal mycelial isolates. The bacteria can be divided into two types as Exo- and Endo-Hyphal Bacteria. During my research in Tottori, I found many bacteria isolated from ectomycorrhizal fungal isolates. They had the uniqueness each other. I called these bacteria as culturable hyphal bacteria. I am sure that many bacteria livings in/on the fungal isolates, but mostly maybe they are unculturable bacteria.</p> <p>Previously, my bachelor's degree field was about isolation ectomycorrhizal fungi on serpentine (harsh/toxic) soil. And I did the postulate Koch to confirm the isolate can penetrate as ectomycorrhizal fungi to the plant. Then, my master's degree field was about the taxonomy using ecological, morphological, molecular, and biological species concepts for fungal subject as in Zygomycota. From my previous fields, I used and compiled the skills for my Doctoral degree field here. I found my passion in mycology field.</p> <p>Being the doctoral student in Tottori University makes my passion and interest of mycology to become more confident. During my doctoral research that I found the bacteria, now I am thinking about the role of the bacteria for the fungal host and non-fungal host too. The result will explain us about the relationship between the bacteria and the fungi as consortium phenomenon. As a researcher here, I investigate the interaction of the microorganisms.</p> <p>Qualification: Taxonomy microorganisms (Bacteria and Fungi), Microorganism's Interaction</p>		

No.19

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	SAWADOGO Didier
Specialized field	Managerial economic/ Evaluation impact of water and soil management	
Research Theme	Evaluation the effect of soil and water conservation practices and optimizing fertilizers on smallholders' farmers for cereals production.	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agricultural economic)	
Acquired degree (planned) date	Obtained in March 2024 (scheduled)	
Message		
<p>Agriculture plays a crucial role in achieving the development goals of promoting growth and reducing poverty in Africa. As a graduate engineer in rural development with a passion for agricultural research, I have been able to develop a rich skills and professional experience. As a junior researcher, I am currently working on Soil Fertility Management (SFM), Food Security and Agricultural Resilience. My professional skills mainly cover: Market analysis and economics; analysis of the agricultural and agri-food sectors; global value chain approaches; econometric analysis and socio-economic modelling; analysis and processing of qualitative and quantitative survey data. My research Doctoral aims to propose options for integrated management of innovative technologies that are cost-effective and efficient for smallholder farmers in northern Burkina Faso. After graduation, I plan to become a specialist in the economic analysis of organo-mineral fertilization technologies. First, I intend to contribute to the economic evaluation of technologies to guide policy decisions and the choice of cost-effective technologies to be disseminated for the well-being of small producers. Then, I intend to be a leading consultant in the economic evaluation of fertilization projects to support partners and investors in making economic and financial choices for fertilizer extension specific to cereal and cash crops. Lastly, I intend to contribute to orienting smallholders' farmers on profitable organo-mineral fertilization technologies that are accessible to their income. This specialization will enable me to initiate bilateral collaborations for development projects and the establishment of a repertoire of expertise for the benefit of Burkina Faso and Japan.</p>		

No.20

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Tadesual Asamin SETARGIE
Specialized field	Global Dryland Science (Hydrology)	
Research Theme	<ul style="list-style-type: none"> - Evaluate gully erosion using alternative techniques and datasets - Model key controlling factors of gully erosion and their interaction 	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	To be obtained in September 2023 (scheduled)	
Message		
<p>Soil erosion not only reduces agricultural productivity by causing land degradation and loss of soil fertility but also remains one of the most challenging global issues by resulting in onsite and offsite environmental problems. Although Ethiopia is the ‘<i>water tower of Africa</i>’, it is also the top hotspot area for soil erosion by water globally. As a person living in the highly erosion susceptible region of the Ethiopian highlands, I was concerned about how to use the water resources for developmental activities while reducing soil loss. For this reason, I have decided to study my B.Sc. in ‘<i>Water Resources and Environmental Engineering</i>’ and M.Sc. in ‘<i>Engineering Hydrology</i>’. I did my B.Sc. project on the application of remote sensing tools for water resource monitoring. My master’s thesis assessed the contribution of shallow groundwater for dry season irrigation. In my doctoral study, I have repeatedly modified my research title because of travel restrictions due to the ongoing global pandemic. As a result, I started to think of alternative techniques that can be used to model gully erosion. Currently, I am working on modeling key controlling factors of gully erosion and their interaction in the Upper Basin Nile (UBN) basin of Ethiopia using alternative techniques and available remote sensing datasets. The alternative techniques include topographic thresholds, machine, and deep learning-based models, whereas, the remote sensing datasets comprise satellite imageries, DEM, and SAR products from different sources with varying resolutions. In my future career, I want to study the hydrology of the UBN basin and other river basins to contribute to the reduction of soil (sediment) loss and support integrated river basin management in Ethiopia and Nile basin at large.</p> <p>Qualifications: Lecturer, Water Resources Engineer and Hydrologist</p> <p>Main published papers: Setargie et al., 2021. Journal of Hydrology: Regional Studies, 37, p.100901. URL: https://doi.org/10.1016/j.ejrh.2021.100901</p>		

No.21

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Tareq A. S. Abubaker
Specialized field	Bioproduction and Bioenvironmental Sciences/ Entomology	
Research Theme	Identification of female sex pheromone of a serious pest of cultivated Eustoma, <i>Stenoptilia zophodactyla</i> (Lepidoptera: Pterophoridae)	
Obtained (planned) degree Acquired degree (planned) date	Doctor of Philosophy Ph.D. (Agriculture) Obtained in September 2024 (scheduled)	
Message		
<p>The insect pests are damaging around 18–20% of the annual crop production around the world, estimated at a value of more than US\$470 billion. Traditionally, the majority of farmers follow chemical control practices, but in recent years, resistance to the pesticides has increased and the toxicity of the pesticides has become a serious problem for beneficial insects, biodiversity and human health. There is now greater interest in using biocontrol methods that use natural insect pheromones. During my doctoral course, I will identify the female sex pheromone of many species, and develop practical methods of monitoring and mating disruption using the female sex pheromone. Unfortunately, there is no such specialization in Palestine, despite the intensive research to collect a huge amount of information about this specialty. Now I have the opportunity to study this specialization and disseminate this information to the concerned authorities responsible for the agricultural sector in Palestine in order to help farmers, raise awareness, reduce use of chemical pesticides and dissemination of the concept of biological control by using pheromone traps. In the future, I would like to get a job or a position where I can carry out research and educational practices in a wide range of fields related to the Entomology and Integrated Pest Management (IPM). As a researcher, I look into the ways that will help in serving the human mankind by reducing use of pesticide, improving food quality and enhancing biodiversity.</p>		

No.22

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Tottori University	Toga Pangihotan NAPITUPULU
Specialized field	Fungus and Mushroom Sciences	
Research Theme	Evaluation of Ecological role of Bacteria Isolated from Fruiting Body of <i>Rhizopogon roseolus</i>	
Obtained (planned) degree	Doctor of Philosophy Ph.D (Agriculture)	
Acquired degree (planned) date	Obtained in September 2022 (scheduled)	
Message		
<p>Bacterial-fungal interaction (BFI) is ubiquitous in nature and plays a crucial role in various environmental niches, contributing to the biochemical and physical processes in nature, including in the mycorrhizal relationship, a form of mutualistic symbiosis between plant and fungus. Fruiting body or sporocarp is the most visible part of the ectomycorrhizal mushroom (ECM) on which spore producing structures are formed. It harbors unique bacteria that might be have roles in symbiotic relation between plant and ectomycorrhizal fungus or in sporocarp functions, yet relatively unexplored compared with bacteria in mycorrhizosphere soil. I am broadly interested in understanding the ecological role of these bacteria regarding ectomycorrhizal symbiotic system. In my doctoral research, I investigated the bacteria, belonged to <i>Burkholderiaceae</i> family, that have been isolated from the fruiting body of <i>Rhizopogon roseolus</i> (a delicacy edible ECM, called “shouro”/シヨウロ in Japanese) in a <i>Pinus thunbergii</i> (Japanese black pine) forest. I focused mainly on the mycelial growth-promoting as well as mycorrhization helping ability of the bacteria toward mycorrhizal symbiotic <i>R. roseolus</i> – <i>P. thunbergii</i>. Furthermore, I also investigated the specificity interaction of these bacteria toward mycelial growth of other various ECMs. Currently, I am also affiliated in the Research Organization for Life Sciences, National Research and Innovation Agency (BRIN), Indonesia, as a microbiology researcher. In the future, I would like to focus on BFI research of not only in mushroom science application but also in broader bioprospecting purposes and applications in ecological field researches.</p> <p>Qualification: bacterial-fungal interaction, mycelial growth-promoting bacteria</p>		

No.23

Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Name of United Graduate School of Agricultural Sciences	Assigned university	Name
Tottori University	Shimane University	GAO Xiaoxi
Specialized field	Agricultural economics / Studies on farmland conservation policy	
Research Theme	<ul style="list-style-type: none"> • Qualitative understanding of rural resident's conservation of farmland • Analysis of the influence of intermediate management organization on farmland liquidation 	
Obtained (planned) degree	Doctor of Philosophy Ph.D. (Agriculture)	
Acquired degree (planned) date	Obtained in September 2023 (scheduled)	
Message		
<p>The depopulation, aging, and shortage of successors for agricultural cultivators in Japan are becoming more serious. The trend of declining farmland in recent decades has not stopped. The land carries the basic needs of the rural resident, community, and the country. My study aims to analyze the relationship between improved farmland utilization and related factors to prevent the increase of abandoned farmland. Efficient use of land can ensure the safety of food supply and secure the rural area's sustainable development.</p> <p>I am in the second year of my doctoral course. During the study, we examined the qualitative characteristics of the substantial community-based master plan, using a text-mining analysis based on free descriptions of master plans in the Sanin region in the Chugoku area in Japan. It is important to know residents' thoughts and strategies in the rural community based on the free descriptions so that policy responses can be implemented based on the residents' awareness. In addition, the transfer of farmland (borrowing and lending) impacts the utilization of farmland. In the following study, we will research the relationship between the process of farmland transfer and regional agriculture, the factors that influence regional farmland accumulation will be identified.</p> <p>I would like to have work in a university or research institute in the future. I hope to find a way to enhance the farmers' sense of collective activity, and develop the endogenous power of the village, thereby the farmers and the rural areas can develop sustainably.</p> <p>Laboratory homepage: http://www.ipc.shimane-u.ac.jp/ruralecon/pg121.html</p>		

連合農学研究科	配属大学	氏名
鳥取大学	山口大学	橋本 芙奈
専門分野	農業市場学、食料経済学、流通学	
研究テーマ	<ul style="list-style-type: none"> ・鶏卵における流通経路やマーケティング戦略の解明 ・循環型経済（サーキュラーエコノミー）の構築に係るモデル化 	
取得（予定）学位	博士（農学）	
取得（予定）年月	2023年3月 取得（予定）	
メッセージ		
<p>私は、山口市主導の「山口市子実トウモロコシ生産普及事業」に学部4年生から2年間携わり、その事業内容を農業系月刊雑誌で計8回にわたり報告しました¹⁾。この経験を活かし、修士課程では、資源循環型畜産に焦点をあて、養鶏業者と国産子実トウモロコシ生産者の取引における関係性を明らかにしました²⁾。資源循環型畜産を学ぶなかで、採卵養鶏企業には多様な形態があり、鶏卵の流通構造が複雑で不明確な点を確認しました。そこで、博士課程では、中小採卵養鶏企業のチャネル選択傾向の類型化³⁾やマーケティング戦略の解明に係る定性的研究に取り組んでいます。これらの研究は、アニマルウェルフェアや循環型経済にも深く関わることから、今後は、SDGsや地域活性化の観点からもアプローチしていきたいです。</p> <p>主な研究業績</p> <p>1) 橋本芙奈・種市豊，子実トウモロコシ地産地消への挑戦（第1回～第8回），農業経営者，通巻第270～277号，2018年9月～2019年4月。</p> <p>2) 橋本芙奈・種市豊，養鶏業における国産子実トウモロコシの利活用と持続性に関する研究 — 「地域利用型」と「遠隔地利用型」に焦点をあてて—，東Asia企業経営研究，第11号，pp.77-91，2019。</p> <p>3) 橋本芙奈・種市豊，中小採卵養鶏企業のチャネル選択に関する一考察 —中国地方の3県に焦点をあてて—，企業経営研究，第24号，pp.27-41，2021。</p>		

連合農学研究科	配属大学	氏名
鳥取大学	山口大学	坂根 光星
専門分野	植物病理学	
研究テーマ	<i>Fusarium oxysporum</i> f. sp. <i>cepae</i> の病原性関連因子の同定	
取得（予定）学位	博士（農学）	
取得（予定）年月	2024年10月 取得（予定）	
メッセージ		
<p>私は学部学生から修士学生修了に至るまで植物病理学研究室に所属し、植物病原菌が植物に対して病害を引き起こす因子に関する研究を行っていました。修了後は企業に就職致しましたが、就職先において様々な国籍、業種の人々とコミュニケーションをとって行く中で、専攻していた「植物病理学」が今後さらに重要になってくると考え博士課程への進学を決意しました。博士課程では修士課程時の研究内容である「植物病原菌の病原性関連因子の同定」に引き続き取り組んでおります。将来的には植物病理学を通して社会に役立つ新たなモノを創出し、還元することが出来る研究者となることを目指して日々の研究に取り組んでおります。</p> <p>研究室のホームページ：http://www.agr.yamaguchi-u.ac.jp/member/shinsan/index.html</p> <p>取得資格：TOEIC 810</p> <p>Plant pathogens can infect commercial crop products and cause severe disease, leading to loss of crop production. Therefore, developing the effective management of plant pathogens is important. I have been studying plant pathology in bachelor and master periods. During my Doctoral course, I especially focus on the <i>Fusarium oxysporum</i> f. sp. <i>cepae</i>, cause severe disease on onion/welsh onion all over the world, including Japan. In my future, I would like to be researcher, are able to release the valuable insight into society and contribute to upcoming food problem.</p> <p>Laboratory homepage: http://www.agr.yamaguchi-u.ac.jp/member/shinsan/index.html</p> <p>Qualification : TOEIC 810</p>		

連合農学研究科	配属大学	氏名
鳥取大学	島根大学	松田 烈至
専門分野	水産環境科学	
研究テーマ	<ul style="list-style-type: none"> ・汽水湖における生態リスク評価 ・汽水湖における湖沼環境と底生生物の関係 	
取得（予定）学位	博士（農学）	
取得（予定）年月	2024年3月 取得（予定）	
メッセージ		
<p>私は、淡水と海水の混合する場所に成立する汽水域に興味を持ち、学部から現在まで研究を行っています。学部から博士前期課程は北海道網走市周辺の汽水湖、博士後期課程からは島根県宍道湖や神西湖を対象として野外調査を行っています。また、これらの野外調査と汽水域の水産有用種であるヤマトシジミの耐性実験の結果から汽水域における生態リスク評価や湖沼環境と底生生物の関係について研究を実施しています。将来的には、自然と人間活動が調和した環境の形成を手助けする研究者になりたいと考えています。</p> <p>主な発表論文</p> <ol style="list-style-type: none"> 1. 松田烈至・園田 武・東 義洋, フルボ酸鉄シリカ資材による寒冷地ヤマトシジミ漁場の底質改良実験, 水環境学会誌, 43(5): 153-163, 2020 https://www.jstage.jst.go.jp/article/jswe/43/5/43_153/article-char/ja/ 2. 松田烈至・園田 武, 河口閉塞処理施設が施工された北海道オホーツク海沿岸海跡湖シブノツナイ湖の湖沼環境と底生生物群集の現状, 土木学会論文集 B2 (海岸工学), 77(1): 28-39, 2021 https://www.jstage.jst.go.jp/article/kaigan/77/1/77_28/article-char/ja/ 3. 松田烈至・園田 武, 汽水性二枚貝ヤマトシジミの亜硝酸及び硝酸耐性, 東京農大農学集報, 66(3): 51-57, 2021 https://nodai.repo.nii.ac.jp/?action=pages_view_main&active_action=repository_view_main_item_detail&item_id=899&item_no=1&page_id=28&block_id=60 		

連合農学研究科	配属大学	氏名
鳥取大学	鳥取大学	菅原 遼
専門分野	菌類分類学・菌類生態学	
研究テーマ	<ul style="list-style-type: none"> ・ 外生菌根菌の生活史と種多様性の解明 ・ カノシタ科（担子菌門アンズタケ目）の純粋培養と分類学的研究 	
取得（予定）学位	博士（農学）	
取得（予定）年月	2023年3月 取得（予定）	
メッセージ		
<p>私は、学部学生の頃から森林生態において重要な樹木との共生者である、外生菌根菌の純粋培養に取り組んできました。修士研究からは単孢子分離法によって培養に成功した菌株をベースに、アンズタケ目に所属する外生菌根菌、カノシタ属（<i>Hydnum</i> L.）菌の生活環の解明と分類学的研究を行ってきました。博士課程では、カノシタ属菌の単核菌糸がどのような生活史をもつのか、国内のカノシタ属系統間においてどの程度の生殖的隔離が生じているのかを追求し、カノシタ属菌をモデルとした外生菌根菌の生活史と種多様性の解明に取り組んでいます。</p> <p>また、同じくカノシタ科の背着生きのこ種 <i>Sistotrema</i> Fr.属菌についても分類学的観点から種多様性の解明に取り組んでいます。菌根性の <i>Sistotrema</i> 属菌は既知種が10種にも満たない一方で、林内の菌根をシーケンス解析すると高頻度で検出される、いわゆる「Uncultured fungus」が多い分類群です。このような実体不明な「菌種」の子実体を野外調査によって収集・培養・記載することで、森林生態の理解や未知の遺伝資源菌株の確立を目指しています。</p>		
<p>主な公表論文：</p> <p>Sugawara R, Yamada A, Kawai M, Sotome K, Maekawa N, Nakagiri A, Endo N. (2019). Establishment of monokaryotic and dikaryotic isolates of Hedgehog mushrooms (<i>Hydnum repandum</i> and related species) from basidiospores. <i>Mycoscience</i>, 60(3), 201–209.</p> <p>Sugawara R, Sotome K, Maekawa N, Nakagiri A, Endo N. (2021). Mycorrhizal synthesis, morpho-anatomical characterization of mycorrhizae, and evaluation of mycorrhiza-forming ability of <i>Hydnum albidum</i>-like species using monokaryotic and dikaryotic cultures. <i>Mycorrhiza</i>, 31(3), 349–359.</p> <p>Sugawara R, Maekawa N, Sotome K, Nakagiri A, Endo N. (2022) Systematic revision of <i>Hydnum</i> species in Japan. <i>Mycologia</i> (in Press).</p>		

連合農学研究科	配属大学	氏名
鳥取大学	鳥取大学	大山 幸輝
専門分野	施設環境材料学	
研究テーマ	内面載荷法による農業用パイプラインの耐力評価に関する研究	
取得（予定）学位	博士（農学）	
取得（予定）年月	2022年3月 取得（予定）	
メッセージ		
<p>私は、学部学生の時（当時：生物資源環境学科環境共生科学コース）に農業土木の基礎を勉強し、その過程で農業水利施設のストックマネジメントに興味を持ち、研究室に所属してからは、老朽化した農業用パイプラインの新たな耐力評価手法である内面載荷法の実用化に向けて研究してきました。修士課程では、内面載荷法を適用した遠心力鉄筋コンクリート管（RC管）の管体挙動を再現することを目的に、3次元有限要素法を用いてRC管のモデル化を行いました。博士課程では、内面載荷法を埋設管に適用した際の管体と周辺地盤の力学的挙動を明らかにするため、現場実験と模型実験を実施しました。今後は、博士課程までに学んできたことを生かしつつ、コンクリート2次製品（パイプ、パイル、セグメントなど）のメーカーに就職しますので、これからの社会インフラの持続的利用を見据えた維持管理手法や新しいセメント系材料の研究・開発に携わることができるような仕事につきたいと考えております。</p> <p>研究室のホームページ：https://sites.google.com/site/kibantottori/</p> <p>主な公表論文：</p> <p>[1] 大山幸輝，兵頭正浩，緒方英彦，石井将幸，吉原 修：管内面に局所荷重を作用した際のRC管の地盤内挙動評価，農業農村工学会論文集，No. 312, pp. I_53-I_61, 2021. URL：https://www.jstage.jst.go.jp/article/jsidre/89/1/89_I_53/_article/-char/ja/</p>		

連合農学研究科	配属大学	氏名
鳥取大学	山口大学	大森 鑑能
専門分野	生態学・野生動物保護管理学	
研究テーマ	<ul style="list-style-type: none"> ・イノシシと堅果類の豊凶との関係 ・衛星画像を用いた堅果類の豊凶調査手法の確立 ・中大型哺乳類のタンニン結合性唾液タンパク質に関する研究 	
取得（予定）学位	博士（農学）	
取得（予定）年月	2022年3月取得（予定）	
メッセージ		
<p>イノシシ (<i>Sus scrofa</i>) は全国で毎年約 50 億円もの農作物被害を発生させています。古くから身近な哺乳類であるにも関わらず、いまだによくわかっていない生態も多いです。イノシシはブナ科堅果類、いわゆるどんぐりを好んで採食しますが、堅果類は年によって結実量に年変動（豊凶）を示す種が多く、イノシシはその繁殖や農作物被害など様々な面で堅果類の豊凶の影響を受けることが明らかになってきました。人とイノシシ間の軋轢の解決に向けて、被害に苦しむ方々のお役に立てるよう日々研究を行っております。</p> <p>取得資格：狩猟免許（わな）、鳥獣管理士（準1級） 研究室の HP：http://web.cc.yamaguchi-u.ac.jp/~hosoi/index.htm 主な公表論文： 大森鑑能・細井栄嗣. 2021. 本州西部における中大型哺乳類3種の堅果類選択性とタンニン収斂性の関係. 哺乳類科学. 61: 239-247. 大森鑑能・阿部奈月・細井栄嗣. 2022. ツキノワグマ (<i>Ursus thibetanus</i>) はタンニン結合性唾液タンパク質の分泌能を有するか. 哺乳類科学. 62: 11-20.</p> <p>In press: Omori, A and Hosoi, E. 2022. Contribution of acorn masting to food composition and body condition of and crop damage by wild boars (<i>Sus scrofa</i>) inhabiting evergreen forests in Japan. Mammal Study. 47. 大森鑑能・細井栄嗣. 2022. 西日本の照葉樹林におけるイノシシ (<i>Sus scrofa</i>) のタンニン結合性唾液タンパク質産生量の季節変化. 哺乳類科学.</p>		