
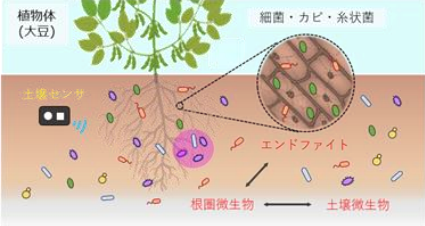
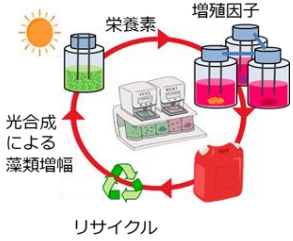


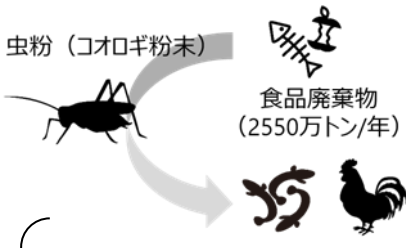


List of the project managers (PMs) and overview of the projects for Moonshot Goal 5

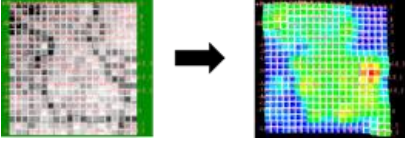
(1) Food production systems that achieve expansion of food supply and conservation of the global environment

PM	Overview of the project
<p>OHSAWA Ryo (Professor, University of Tsukuba)</p>	<p>(1) Achieving zero food risk by improving crop resilience using cyber-physical systems</p>  <p>~ Development of new varieties using new crop design technology~</p> <p>Developing a cyber-physical system (CPS) to design crops in cyber space and to develop crop varieties with high resilience to stressful environments</p>
<p>TAKEYAMA Haruko (Professor, Waseda University)</p>	<p>(2) Building a platform for sustainable farming by environmental control based on the microbe atlas of the soil</p>  <p>~ Elucidation and demonstration of microbial functions in soil~</p> <p>Development of a model to diagnose soil health by analyzing the interaction among the microbes in the soil, crop growth information and environmental factors</p>
<p>[FS-like project] SHIMIZU Tatsuya (Professor, Tokyo Women's Medical University)</p>	<p>(3) Bio-economical food production system based on circular cell culture using algae, plant and animal cells</p>  <p>~Food production through cell culture, etc.~</p> <p>Development of food production technology by circular cell culture and three-dimensional tissue fabrication using algae, plant and animal cells</p>

<p>[FS-like project] MATSUURA Kenji (Professor, Graduate School of Kyoto University)</p>	<p>(4) Termites' destructive wood-decomposition ability to convert unused wood into feed and food ~Feeding of termites with unused wood, etc.~</p> <p>Development of methods for mass proliferation of termites using leftover woods and for their conversion to livestock feed</p>
<p>[FS-like project] HINOMOTO Norihide (Professor, Graduate School of Agriculture, Kyoto University)</p>	<p>(5) Realization of zero pest damage agriculture by making full use of advanced physical methods and unused biological functions ~Pest control that does not rely on chemical pesticides~</p> <p>Development of pest control technology using advanced physical (Blue semiconductor laser light) and biological methods (symbiotic microorganism)</p>
<p>[FS-like project] KOBAYASHI Yasuo (Professor, Graduate School of Hokkaido University)</p>	<p>(6) Realization of a new livestock production system for 80 % reduction of methane emission by complete control of the cattle rumen microbiome ~ Reducing methane emission and improving animal productivity~</p> <p>Development of a production system capable of reducing methane emission and improving animal productivity through complete control of the microbiome in the cattle rums</p>

(2) Food consumption system aiming at zero food loss and waste

PM	Overview of the Project Summary
<p>YURA Kei (Professor, Ochanomizu University)</p>	<p>(7) Development of a circulatory food production system supported by crickets to solve global food problems and to prepare for human expanding to space</p> <p>虫粉 (コオロギ粉末) 食品廃棄物 (2550万トン/年)</p> <p>～ Conversion of insects into food and feed using food residues～</p>  <p>Development of a new food production system by breeding new breeds of crickets, and using wasted food to produce crickets as food and feed</p>
<p>NAKAJIMA Mitsutoshi (Specially Appointed Professor, University of Tsukuba)</p>	<p>(8) Development of innovative food solutions that simultaneously reduce food loss and improve QoL</p> <p>～ Manufacture food cartridges with a long shelf life for 3D printers from food residues～</p>  <p>Powder and paste made from food residues can be preserved in food cartridges with a long shelf life</p>
<p>[FS-like project] KANEMOTO Keiichiro (Associate Professor, Research Institute for Humanity and Nature)</p>	<p>(9) Development of a method for identifying food loss and waste on a global scale</p> <p>～ Understanding the global situation of food loss and waste～</p>  <p>Development of an application software for farmers and consumers to reduce food loss and waste by uncovering food loss across the global food chain</p>

<p>[FS-like project] TAKAHASHI Shin- Ichiro (Professor, Graduate School of Agricultural and Life Science, The University of Tokyo)</p>	<p>(10) Creation of next-generation food supply industrial chains based on natural capitalism society</p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <p>~Development of the Food of the Future through AI Nutrition~</p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p>(Development of futuristic foods by evaluating the effects of food nutrients on human/animals as scientific evidence)</p> </div>
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Note: In the outline of the project, the main points of the project are shown in “~”, and the details of the project are shown in parentheses.