

Reducing the Environmental Burden in Agriculture

Environmental Considerations in the Agricultural Sector

Emissions from agriculture, forestry, and other land use account for about a quarter of global greenhouse gas emissions. Additionally, natural disasters such as typhoons, floods, and high temperatures are increasing year by year, causing serious damage to crops. The Norinchukin Bank is a financial institution grounded in the agriculture, fishery, and forestry industries. As such, we will take initiative in helping to resolve these issues.

Collaboration with the National Agriculture and Food Research Organization

The agriculture sector emits high levels of carbon across the world. Yet, decarbonization technologies and methods in agricultural production are limited. Mechanisms that properly reflect decarbonization efforts in agricultural GHG (greenhouse gas) calculations also have yet to be established. To address this, the Bank cooperated with the National Agriculture and Food Research Organization and launched a unique initiative (MABI Project*) to encourage and support agricultural producers in reducing GHG emissions. Through this collaboration, we will work to develop emission measurement standards that appropriately reflect decarbonization efforts, disseminate GHG reduction technologies, and support agricultural corporations to manage decarbonization and measure GHG. In this way, we will help solve environmental issues in the agricultural industry.

* Measurements of GHG in Agriculture and Better Implementation

GHG Measurement Support for Clients

Disclosing information on climate change is necessary to become a decarbonized society. Companies are required to take action to measure and reduce GHG emissions not only for themselves but for their entire supply chain.

The Bank will collaborate with companies that provide consulting services on matters such as measuring GHG

emissions and supporting responses to CDP. In doing so, we will provide solutions for clients to decarbonize their businesses and help solve environmental and social issues.

Topics

Financial and Non-financial Support for Agricultural Corporations to Reduce GHG Emissions

Suzunari Inc. ("the Company," below) has farmed with 90% less chemical fertilizers and 50% less pesticides compared to conventional farming method since its establishment in 2008. Large companies particularly have made considerable progress in GHG reduction efforts. The Bank also aims to further encourage efforts to reduce environmental burdens in the agricultural sector. To support the visualization of GHG emissions, the Bank introduced Asuene Inc., a company that provides GHG emission measurement and consulting services, to the Company.

We additionally set GHG emission reduction targets (Scope 1 and 2) and signed a Sustainability Linked Loan agreement with the Company in December 2022. This agreement sets these targets as Sustainable Performance Targets (STPs). The Bank will continue to introduce technologies that contribute to decarbonization to support environmentally friendly agriculture from both financial and non-financial perspectives.



Their farm

Tackling CO₂ Absorption Through Agriculture

Some aspects of agriculture, fishery, and forestry place a burden on the environment. However, the fact that they can contribute to the environment through CO₂ absorption functions is gaining attention. In agriculture, the ability of the soil to absorb CO₂ and the resulting environmental value can be sold as credits, thereby contributing to the environment and possibly increasing farmer income.

Topics

Reducing the Environmental Burden with High Performance Biochar

The Maebashi Branch of the Bank cooperated with Japan Agricultural Cooperatives (JA) to begin experimentally scattering biochar* in Gunma Prefecture as of June 2023. This biochar is made of carbonized rice husks, chicken manure, and other agricultural waste. This biochar is highly functional and was developed by a university-based startup company. Compared to standard biochar, it is expected to increase harvests while reducing the use of chemical fertilizer. Farmers can expect an increase in income if CO₂ reductions from biochar can be sold as Japanese government-certified J-credits. Based on the results of the trial, we will consider the full-scale introduction of the system within the prefecture.

* Biochar: Carbonized biomass (biogenic resources). Rice husks and other agricultural wastes emit CO₂ when they are incinerated to ash, rot, or decay through microbial or other activities. We can reduce CO₂ emissions by heating and carbonizing these materials, making them less likely to decompose. Biochar was originally used to improve soil through improving farmland drainage and other issues.