



Vegetables sold in a market with the Visualization Label. Photo: MAFF



Presentation of the Visualization Label by Minister of Agriculture, Forestry and Fisheries Sakamoto at a press conference. Photo: MAFF



The new Visualization Label formally launched in March 2024



For rice, contribution to biodiversity conservation can also be evaluated and indicated on the label in accordance with the guidelines (the bottom half of the label).

# Visualization and Labeling of Environmental Impact Reduction Efforts on Agricultural Products — Contributing to Reduction of Greenhouse Gas Emissions and Biodiversity Conservation

In order to build sustainable food systems, the Ministry of Agriculture, Forestry and Fisheries (MAFF) has initiated an initiative to visualize farmers' efforts to reduce the environmental impact in their farming practices, with the aims of raising public awareness of the issues and reducing such burden food systems as a whole pose on the environment. Through the initiative, farmer's efforts to reduce greenhouse gas (GHG) emissions to address global warming, as well as their efforts for biodiversity conservation, can be visually indicated on the agricultural product by the designated label. The label indicates the degree of farmer's contribution by the number of stars (1 to 3 stars) and communicates farmer's efforts to consumers. These labels help consumers choose agricultural products. This article presents an overview of this labeling scheme.

## Background to the initiative

In May 2021, MAFF launched the MIDORI Strategy, a strategy for Sustainable Food Systems as a new policy direction to enhance both productivity potential improvement and sustainability in the food, agriculture, forestry, and fisheries industries through innovation. In 2022, the MIDORI Act came into effect, positioning the visualization of environmental burden reduction efforts as a policy for the Government to take measures. It is expected that all stakeholders involved in the food systems (from procurement to production, processing, distribution, and consumption) will have a sense of ownership on addressing environment-related matters, such as contribution to GHG emissions reduction and consideration of biodiversity conservation, and take practical actions to reduce impact on the environment.

## “Visualization Labeling” — the scheme and the progress to date

MAFF commenced the labeling scheme with the above-mentioned background. The label is designed to clearly indicate the degree of farmer's efforts to reduce environmental burden with the number of stars on the label, by comparing them to average farming practices in the region. A designated calculation tool is available for farmers or relevant stakeholders to calculate GHG emissions/Carbon sequestration using their farming data, such as chemical fertilizer and pesticide use, fossil fuel consumption, biochar application, and for rice paddy field water management. Following a first pilot project in fiscal year 2022, targeting three products (rice, tomatoes, and cucumbers), the scope of the second pilot project was extended to include



Photo: PIXTA

An example of farming practices for biodiversity conservation is winter flooding in paddy fields. For rice, the degree of farmers' contribution to biodiversity conservation is evaluated based on whether biodiversity conservation farming practices in paddy fields (such as the reduction of chemical pesticides and fertilizers, winter flooding, and creation of biotopes) are implemented.

### Visualization of Environmental Burden Reduction Efforts

The reduction of environmental burden by farmers' efforts is evaluated and communicated to distributors, retailers, and consumers through labeling.

★★★

★★★★★

GHG Emissions Reduction	Biodiversity Conservation								
<ul style="list-style-type: none"> <li>Reduction of chemical pesticides &amp; fertilizer use</li> <li>Application of manure and biochar</li> <li>Extension of mid-season drainage (for rice) &gt; <small>This effort can lead to a 35% reduction in methane emissions!</small></li> </ul>	<table border="1"> <thead> <tr> <th>Farming practices (examples)</th> <th>Score (pts)</th> </tr> </thead> <tbody> <tr> <td>Chemical pesticides &amp; fertilizer reduction</td> <td>1~2</td> </tr> <tr> <td>Winter flooding in paddy fields</td> <td>1</td> </tr> <tr> <td>Herbicide-free field margin vegetation management</td> <td>1</td> </tr> </tbody> </table>	Farming practices (examples)	Score (pts)	Chemical pesticides & fertilizer reduction	1~2	Winter flooding in paddy fields	1	Herbicide-free field margin vegetation management	1
Farming practices (examples)	Score (pts)								
Chemical pesticides & fertilizer reduction	1~2								
Winter flooding in paddy fields	1								
Herbicide-free field margin vegetation management	1								

This labelling expresses "avoided emission rates" compared to average cultivation in the region

- ★★★★: avoided emission rate ≥20%
- ★★★: avoided emission rate ≥10%
- ★★: avoided emission rate ≥5%

※for rice, vegetables, fruits, tea (23 crops)  
※Considering adding livestock products

This labelling expresses the total score of farming practices

- ★★★★: 3 points or more
- ★★★: 2 points
- ★★: 1 point

※for rice

This labelling scheme seeks to promote **consumers' understanding, behavioral changes, and farmers' actions for the environmental impact reduction!**

Poster explaining the Visualization Labels

23 products (rice, vegetables, fruits, and potatoes, etc.) in fiscal year 2023. In March 2024, a full-scale implementation was launched, introducing a new label design along with guidelines for its use. Additionally, biodiversity conservation efforts were added as an evaluation target for rice.

Since 2022, in cooperation with various stakeholders, including retails, restaurants, and other businesses across the country, the pilot project was implemented in more

### GHG emission reduction

$$100\% - \frac{\text{GHG emissions from individual farming practices}}{\text{GHG emissions from average farming practices in the region}} = \text{Avoided emission rate(\%)}$$

- ★★★★: Avoided emission rate ≥20%
- ★★★: Avoided emission rate ≥10%
- ★★: Avoided emission rate ≥5%

Calculation method for avoided GHG emission rates

than 700 places. Consumer surveys conducted during the pilot project in fiscal year 2022 and 2023 revealed that 95% of respondents had a favorable impression of such stores that sell agricultural products with the Visualization Label. This result indicates consumers' significant interest in environmental friendliness.

The Government of Japan has set goals of reducing GHG emissions by 46% by fiscal year 2030 and achieving carbon neutrality by 2050. MAFF will continue to support environmentally friendly producers and businesses by assisting in calculating GHG emissions and providing marketing materials related to the scheme.

Be sure to check for the Label on agricultural products in stores, and take steps toward sustainable consumption by making selective purchases.

### Reference URL

[https://www.maff.go.jp/j/kanbo/kankyo/seisaku/being\\_sustainable/mieruka/mieruka.html](https://www.maff.go.jp/j/kanbo/kankyo/seisaku/being_sustainable/mieruka/mieruka.html)