

Sunshade Curtains Made of Vines



A prize-winning green curtain at a nursery school

Activities to popularize “green curtains,” a measure to help mitigate global warming, have taken root in Shibata City, Niigata Prefecture.

SATO KUMIKO

IN Shibata City, located in northern Niigata Prefecture facing the Sea of Japan, buildings including public facilities such as the city hall and nursery schools, as well as offices and private residences, are covered in a screen of

plants in summer. This is a type of surface greening called a “green curtain,” whereby creeping plants, mainly annual bitter melons and morning glory, are trained over a net or trellis to form a screen. In addition to blocking the hot rays of the sun, these green curtains lower the surrounding temperature as a side effect of the leaves’ transpiration, and in recent years, they have been attracting attention as a measure against global warming. Moreover, when they are decorated with these green curtains, the buildings look more beautiful and create a feeling of coolness. For these reasons, the Green Curtain Project in Shibata, a project involving citizens to popularize the green curtain concept, was started in 2009.

The climate of Shibata City features a harsh winter, but there is high humidity throughout the year and summer is both hot and humid. Sato Kyoko, director of the non-profit You & Me no Kai and promoter of this project, says, “There is no air conditioning in our office, and it is really hot in summer. We experimented with a green curtain and found a 5°C difference between the room with the green curtain and the rooms without. I thought there was value in spreading this.”

You & Me no Kai takes on environmental



A prize-winning green curtain at a residential property



- 1 Green curtains at an elementary school in Shibata City
- 2 A bitter melon planting event at a nursery school in Shibata City
- 3 A green curtain arch at a nursery school
- 4 A sweet made using bitter melon

problems from the viewpoint of citizens, and thanks to their track record, once they advocated for the popularization of green curtains, cooperating companies appeared one after the next and it developed into a project that included the city's environment and health division.

Because they didn't want to breathe in chemical sprays when drawing in air through the green curtains from outside, Sato and others chose the bitter melon plant as the main plant for the curtains as it does not attract many insects. This plant originates in tropical areas in Asia and there were concerns that it wouldn't grow well in the climate of Niigata Prefecture, but after researching growing methods with the help of Niigata Prefectural Shibata Agricultural High School, You & Me no Kai was able to establish a stable method for raising seedlings that was suitable for the climate of Shibata City. Three years ago, students at the school began participating in the raising of seedlings, and they delivered about 1,700 plants to more than 250 facilities and households in the city this year.

Since the second year of the project, they have held a cooking contest in the city to help popularize the project and, since the sixth year, a photo contest. The bitter melon has a unique bitterness that is not to everyone's taste, but the fruit is

full of vitamins, minerals and other nutrients, and being able to harvest this fruit is another attractive feature of the green curtains. Sato says, "For the cooking contest, participants proposed ideas that surprised everyone, such as recipes that make it easy for children to eat the bitter melon, and ways to process it into desserts, such as candied bitter melon and pancakes."

In addition, to encourage young children to think about environmental problems through the cultivation of green curtains, a picture card show was created in which high school and university students in the city tell stories to children using the cards with songs and dances. This series of activities has been highly praised, and the project in Shibata City was awarded the Minister of the Environment's Award for Global Warming Prevention Activities in 2018.

Currently, in addition to growing green curtains, local residents are having fun with creative ideas such as making green arches and tunnels. As a result, air conditioning use is declining at homes with green curtains. Shibata City enters the twelfth summer of its Green Curtain Project this year. **17**