

Porous Alpha, an innovative soil improvement agent based on foamed glass, realized a 22% yield increase with water saving by 50% for green beans in Morocco
— As a next step, Porous Alpha to be installed to producers' farms —

Tottori Resource Recycling, Inc. (Headquarter: Tottori, Japan, CEO : Yoshiaki Takeuchi) realized a 22% yield increase with 50% water saving for green beans in Morocco in the project "the Verification Survey with the Private Sector for Disseminating Japanese Technologies for Water-Saving Agriculture in Arid Area" through its innovative soil improvement agent "Porous Alpha".

Efficient water resource management is the key for Morocco. Agriculture is an important sector for Morocco which mainly exports agricultural product to Europe. For example, the export volume of tomato in 2014 was 420,000 tons, 6th largest all over the world (Source: UN COMTRADE). Meanwhile, the region of Souss-Massa, the project site and one of the main agricultural areas including tomato, has less rain fall than water demand. Therefore the depth of ground water has been continuously decreasing, which makes water saving technology the key for the sustainable agriculture.

The objective of our project is to reduce water consumption by utilizing our foamed glass product "Porous Alpha" as soil improvement agent. "Porous Alpha" is a cellular foamed glass which includes numerous pores. The soil mixed with Porous Alpha has higher water retention capacity and aeration capacity, which realizes water saving, yield increase and improves resilience to climate change which causes severe short rain. We have proved the effect in the University of Tottori, a partner for collaborative research, and in Kenya, Mauritania and Senegal.



In the experimentation starting last September, it's now confirmed that, with Porous Alpha, the yield of green beans was improved by 22% with water saving by 50%. This result was evaluated and confirmed with project counterpart of Ministry of Agriculture and Fisheries, Morocco and ORMVA-Souss Massa (Office Régional Mise en Valeur Agricole, Souss Massa). In addition, a better result in tomato

production is confirmed whose harvest will end in next few months. (Photo: Production of green beans. Left: With Porous Alpha, Right: Without Porous Alpha)

Based on this result, it was agreed to introduce Porous Alpha to the local producers' farms with Ministry of Agriculture and Fisheries, Morocco and ORMVA-Souss Massa. According to this agreement, Tottori Resource Recycling will select farmers to participate in this project, train the farmers to install Porous Alpha, conduct experimentation in producers' farms and prepare for the manufacturing and marketing of Porous Alpha in Morocco.

Interest in environment and climate change in Morocco is now rising partially thanks to the COP 22 that Morocco hosts in Marrakesh in November. Tottori Resource Recycling continues the contribution to agricultural development and environmental issues through our technology.

Contact : Tottori Resource Recycling, Inc. Ms. Kamii
TEL +81-858-49-6230 FAX +81-858-49-6288 e-mail: kamii@t-rrl.jp

Tottori Resource Recycling, Inc. : A solution company for soil improvement, air treatment, water treatment, adsorption of phosphorus and fluorine through cellular foamed glass "Porous Alpha" <http://www.t-rrl.jp/>