

Onion drying project in arid regions - Joint work between AAI and the drying machine maker Taikisangyo Co., Ltd- <Part 3>

Reaction from the project site

It was at the beginning of March 2016 when we received the news from Sudan, informing us that the shipment from Japan, Kobe Port had crossed the Indian Ocean, and had arrived at Port Sudan in the Red Sea.

Of course, that was the electric dryer made in Japan. This machinery was introduced experimentally to set up a small-scale dry onion plant operated by farmers and rural women groups using Japanese electric dryers, in order to replace the former factory for large-scale dry onion processing in Kassala, Sudan, which is currently out of service. The first issue of this series described the background behind the planning of this project conceived by volunteers including NOTA (National Organization for Technology Assimilation), and the second issue presented collaborative work with them and the progress of the project after introduction of the machinery for the production of dry onions. This issue illustrates the reactions of the farmers group, that is the final beneficiary of the introduced machinery, including their frank opinions and future issues based on them.

It took more days than expected to complete unfamiliar customs clearance, and after further 12-hour drive by road, the machinery was finally brought to Kassala, which everyone waited for patiently. The arrival of the drying equipment was a joyful moment after the long waiting. Excited eyes with expectations of the fellow farmers group were concentrated on the contents of a wooden box that had just arrived. The direct reaction that everyone showed when looking at the contents of the box was "compact". The appearance of the machinery was unexpectedly small, and it was too much different from the feeling that everyone envisioned, although the concept of a small-scale dry onion plant itself was received favorably. Since then, this preconception has always been around us through this project. However, when the electric dryers introduced actually began to operate, products of dry onion were produced, and the achievement became visible, this preconception gradually melted.

The real intention of the small-scale plant concept was using multiple numbers of electric dryers to flexibly accept fluctuating amounts of fresh onions to dry, according to farmers' demands. There were necessary steps in order to achieve farmers' understanding of this concept. First of all, demonstration activity showed profitability per electric dryer, and then proved effectiveness of adjusting processing amounts by using multiple

driers. We feel that their reactions have gradually changed, after the farmers group clearly realized the profitability obtained per electric dryer, and the whole concept was circulated among them. Under this feasibility study, seminars on small-scale dry onion processing were carried out three times in Kassala and Khartoum, which was useful to enhance farmers' awareness of the project and to share realistic images for the plant operation gradually. We were happy unexpectedly that international organizations, NGOs and private companies in addition to the farmers group showed interest in the concept and ideas of this project. It seemed that maturity and stable quality of the product shown as samples were also one of the attractive factors.

This project was adopted as a JICA dissemination and verification project in June 2017, and verification and demonstration in the field will be continued as a successor project. From now on, as a small-scale dry onion plant project, we are planning to introduce and operate more efficient electric dryers. More data accumulation, analysis and verification with higher precision will be required to stably produce high quality products.

Our future dream is to realize overseas export of processed agricultural products from Sudan using electric dryers imported from Japan. It will be necessary to show specific possibilities of product development to overseas markets. In addition, there are many other issues to be solved, such as various restrictions on commercial transactions between Japan and Sudan regarding introduction of equipment. The way to go is still far, but we will step forward to realize the dream by overcoming various challenges one by one.



Seminar held in Kassala



Exhibition of packaged dry onions



Final Seminar for the Federal Government