Useful plants in Sudan <Part 2>

Sorghum

Sorghum (*Sorghum bicolo*r) is a field crop representative of Sudan, and along with pearl millet, has long been cultivated as a food staple. Looking at the African continent, after the Age of Exploration in the 16th century, the cultivation of latecomer grains such as maize originating from the New World and wheat originating from the Mediterranean Sea in the north expanded, and sorghum and pearl millet which had been mainstream were gradually displaced with new crops.. In Sudan as well, bread made from imported wheat has become popular in recent years, but traditional staple foods made of sorghum and millet are still influential even today and a certain scale of production is maintained. Especially in non-irrigated areas where rain-fed agriculture is said to account for more than 85% of the country's land area, it definitely supports the livelihood of residents as the main crop.

In the past, AAINews has published articles on sorghum under the titles of "Sorghum and Rainfed Agriculture," " Pastoral Sorghum Cultivation by Water Harvesting Agriculture," "Grain Eating Culture of Sorghum and Wheat", and "What Causes Damage to Sorghum Fields." We tried to touch on historical and cultural aspects of the crop. This time, at the beginning of this new series, which introduces "Sudan's Useful Plants", I wanted to focus on the future possibilities and challenges related tothis crop.

As mentioned, sorghum is widely cultivated in rain-fed or non-irrigated areas, so it can come across as being non-systematically cultivated but that is howparticularly by farmers along the Nile River. For these farmers it is an important task to secure livestock feed and to combine this with crop production in winter (October to April) for raising livestock such as sheep, goats, and cattle. For the sorghum in the irrigated area, an early-maturing cultivar called Abu-sabain (Abu means 'further' and sabain means '70 days' in Arabic) is selected, and all parts, such as ears, stems and leaves are used as fodder. In addition, crop production is usually concentrated in the winter season, and summer (May to September), when the weather is extremely hot, is called the "dead season" for crops, and cultivation tends to be avoided. Sorghum for feed has a track record of being cultivated as a valuable summer crop that can be planted stably with a high yield.

In recent years, in addition to sorghum for feed, attempts have been made actively to introduce highly marketable cash crops such as sesame, peanuts, sunflowers, soybeans, and rice for summer cultivation in irrigated areas. In addition to these, the author considers that edible sorghum also has a potential as a new cash crop. Until recently, sorghum for food was considered to have a low advantage compared to other cash crops, and there was also a fixed idea that sorghum was suited traditional extensive cultivation in non-irrigated areas. However, considering the deteriorating economic situation owing to the currency depreciation in Sudan and the food situation due to future climate change, sorghum should be re-evaluated as a main summer food crop. On the other hand, wheat is highly dependent on imports, the supply is unstable, and the land suitable for winter cultivation is limited.

Summer cultivation of early mature sorghum cultivar 'Abu-sabaiin'

In addition, the planted area in the irrigated areas in the summer is overwhelmingly smaller than in the winter, and there are many vacant lands to plant edible sorghum. To this end, comprehensive efforts such as the introduction of modern flour milling technology, high added value, and improvement of the distribution network are required for the advanced use of edible sorghum. Food Research Corporation (FRC) in Sudan has also started research on bread making using mixed wheat flour, and it is attracting attention locally as a substitute for imports of wheat. As such, we believe that the potential for positive utilization of edible sorghum as a crop adapted to the hot summers of Sudan could be furth er explored.

Trade of fodder sorghum