

## A Memoir of Kassala, Sudan <Part 2>

### Sorghum and rain-fed agriculture

On my way from the capital Khartoum to Kassala, as the Nile recedes, sorghum fields start to dominate the landscape. In the rainy season, dark green plants shoot up to 2m. During the dry season they wither, and, after harvest, the land is used for cattle grazing and grass collecting. Sorghum is not familiar to many people in Japan. However globally, is it the 5th most commonly traded cereal after wheat, rice, maize and barley.



Harvesting sorghum



Varieties of sorghum

In Sudan, there are some wheat schemes with river irrigation originating from the cultural complexes of Mediterranean cultivation. However there is hardly any maize cultivation which originates from the cultural complexes of New World's cultivation. What is predominant in the vast landscape is sorghum cultivation which came from the Ethiopian highlands in old times. Most of the farms are dependent on rain for water. Sometimes small fields of millet are seen at the edge of the sorghum fields. In Sudan, sorghum is used for traditional food such as *kisra* (fermented bread) and *aseeda* (paste product) and drinks such as *helamor* which is drunk during Ramadan. While grains are the main food in Sudan, stalks and leaves are important livestock fodder and are exported to neighboring countries.

Raw material for fermented drink *helamor*

Sorghum juice

In Sudan, sorghum is still the most important crop, however its characteristics are that the crop is cultivated under a highly unstable rain-fed environment. Rain-fed agriculture is often like gambling, and is often jokingly referred to as *Insha Allah* (as God wills it) agriculture. Cultivation success is outside human control and things do not often go at one's will. Also in Kassala, most sorghum cultivation is rain-fed, and agricultural areas are divided into mechanized rain-fed farming areas and traditional rain-fed farming areas. In the mechanized rain-fed farming areas, the average precipitation is between 400-500mm. Plowing and seeding machine have been used for a long time introduced in the period when the British were



Extension workers and



Growing sorghum

indirectly administering the area, and large scale farming is common for cultivating sorghum and sesame. In contrast, in the traditional rain-fed farming areas, the average precipitation is much less 200-300mm. In these areas, most work including plowing, seed sowing and weeding, is done manually by pastoralists using simple hand tools. Reasons why mechanization did not happen in these areas include low level of average rainfall and harsher climate and environmental conditions.



Drought damaged sorghum



Flour mill



Grains of variety Acramoi

Farmers in arid areas must have been devising various ways to overcome obstacles they face in undertaking rain-fed cultivation. These could include selection of adaptable varieties and planting at appropriate timing, predicting rains. In the next part of this series, we would like to dig a little deeper into these plans and improvement measures.



Use of stalks and leaves for fodder



Rain-fed field