

Useful plants in Sudan <Part 6>

Mesquite

The useful plant we look at this time is mesquite (*Prosopis juliflora*). We wrote about mesquite in the mini series "Various Arid Land Plants" in AAINews No. 73, and discussed its advantages and disadvantages. However in Sudan today, few people consider mesquite to be a "useful plant." Mesquite, native to South America, was originally introduced to Sudan in the 1970s, about half a century ago, as a useful plant for fixing sand dunes. With its vigorous reproductive power and rapid growth, it was expected to be a final resort in combating desertification. In that sense, mesquite was seen as a useful plant when it was introduced, but its reputation in Sudan has rapidly declined since then. Its strong reproductive ability has become a disadvantage, and it has become increasingly difficult to prevent its invasion and spread into fields and near roads, beyond the scope of human control. It has clearly become a target for "elimination" as a harmful weed, and in the mid-1990s, the Sudanese government implemented a large-scale weed control campaign in areas devoted to national irrigation schemes. Efforts have also been made to establish control techniques, but in order to remove mesquite completely, sufficient measures must be taken to prevent germination and regrowth. It requires uprooting with heavy machinery and spraying of chemicals, but there are still difficulties in terms of cost.

Generally, mesquite is disliked, but since 2011, we have been focusing on its usefulness and pursuing advanced use by farmers and rural women in Sudan, so we would like to briefly introduce some recent activities. Firstly, charcoal production is a method that has already spread widely at the farm level. The traditional style of charcoal burning is to pile up pruned mesquite trees, cover them with soil, and smoke them. There is a demand for charcoal for barbecues in neighboring Gulf Arab countries, and there are cases of exporting it. Another direct use is as firewood. The use of firewood as a cooking fuel has been steadily decreasing due to the



Mesquite charcoal burning

progress of gasification and electrification, but its use is being reconsidered due to the recent deterioration of the Sudanese economy. Furthermore, mesquite is a leguminous plant, and because of its high protein content, there is great potential for its development as compost or livestock feed, and efforts are being made to promote its use on a trial basis. Other activities that have been carried out so far include the use of mesquite as building material (wood) and as food by powdering the bean pods. In this way, it is possible to further promote the use of mesquite in agricultural production. However, it is important to take care to prevent livestock from grazing on it or the seeds from being dispersed by water currents, and to ensure a sufficient crushing process for use.

So how about going back to the starting point of mesquite's introduction, which was to combat desertification?

Unfortunately, there is no effective way to control mesquite as a useful tree,

and currently no systematic planting is being carried out in Sudan. However, a hint seems to be found in the orderly, upright/straight mesquite forest that we once encountered on the east bank of the Atbara River in Kassala State. The forest was grown by a German NGO, and the key to the technique is the combined use of "pruning" and "thinning." The optimum timing of operation and soil moisture may be involved, but the first mentioned techniques are thought to be the key to management. In this article, I have written about the use of mesquite, a "useful plant" that is not often discussed. In the future, we would like to continue practicing activities that aim for further low-cost and advanced utilization of mesquite at the farm level.



Seed dispersion by livestock feeding



Tree planting activities by NGO