The Transition of Grassland Area in Japan

It is unusual to see vast grasslands in Japan today, except for special regions like Aso in Kyushu; the lower plains consist mainly of farmland, housing lots and urban areas, and most hilly and mountainous areas are forested. Statistics show that the area of grassland is about 1 percent of the total land area in recent years.

However, the area of grassland in Japan was once much larger. Much of the landscape has changed into forests such as plantations of Japanese cedar (Cryptomeria japonica D. Don) and hinoki cypress (Chamaecyparis obtusa Endl.) or natural woodlands after succession of plant communities. This paper examines changes in the area of grassland in Japan based mainly on statistics from the early Meiji era onward.

The results show that there was a time when statistics of the area of grassland were overestimated, as in the early Meiji era (1880’s), while at other times they have been underestimated, as in the period between around 1900 and 1940. When the actual area is estimated while correcting for these statistical problems, it is thought that nearly five million hectares of grassland existed in Japan at the beginning of the 20th century, and that the area has since decreased greatly.

On the other hand, in the Edo period, which preceded the Meiji era, agriculture required more extensive grassland areas, as grass was used in large quantities for fertilizer, domestic animals’ fodder, and so on. Such uses required at least five times and perhaps as much as ten times the area of cultivated land. Agriculture at that time was not maintained in places where there was insufficient grassland, unless alternative materials were available for fertilizer, such as human excrement or dried sardines.

The area of grassland in the Edo period is not easy to estimate correctly. However, it seems that it was common to see vast areas of grassland in many regions where more than half of the hills and mountains were covered with grasses or very low vegetation. Vegetation of small pine trees and bald hills and mountains were often seen around Kyoto, along the Setouchi coast, and in other parts of the region at that time. Such vegetation and denudation seem to have been the results of the overuse of vegetation, including grasses, for many years.