

Utilization and Conservation of Reed

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Shiga Prefecture, located in the central part of Honshu Island, comprises of an area of 4,016 sq. km. Lake Biwa, Japan's largest freshwater body, lies in the middle of Shiga surrounded by mountains.

There are records that people lived around Dai-naka-no-ko lagoon since Jyomon- and Yayoi-era (6,000 - 2,000 years ago). Since then, reeds have been used as housing materials. The Kansai district, in which Shiga Prefecture is situated, had been a center of Japanese culture and has a large population. The ancient capitals of Nara, Otsu and Kyoto are all located in the region. The hot and humid summer of the region brought up the custom of using reed as materials of household articles. By virtue of its ventilation function (reeds are bound by threads to create some gaps allowing wind to come into), reed has been used as materials of sliding door for summer season, shading screen outside and interior shading blind, etc. to enjoy cool summer (in winter sliding doors are replaced with ones made of wood or paper) (Fig. 1).

The ancient aristocrats loved the natural beautiful color and texture of reeds which grew up in the clean water. As civilization advanced the quality of reed products became sophisticated as interior ornaments. Lake Biwa was an ideal place for high quality reeds. Reed grows almost every watershore in Japan, but the quality differs place by place. The quality appears to be determined by interactions of climate, soil condition, the water quality and the other environmental factors.

My vocational experience with reeds is such that I can tell where each specific reed was grown. For example, I can tell whether a reed was grown at Tohoku, or Lake Biwa, or other Kansai area, or Okayama.

The natural color of reed product is highly appreciated. No artificial colors are used. Once it is colored naturally, it will not fade out for twenty-thirty years. This particular characteristic is limited to reeds grown in the Ohmi (old name of Shiga) district around Lake Biwa. Reeds are very resistant to plant diseases and poor environments. Due to unprecedented environmental deterioration, however, reeds no longer grow in some areas of Lake Biwa.

The best cutting season is winter, and reeds are mown from December through April. We have to complete cutting by the time new reed shoots emerge in April. By mechanizing the harvesting work by use of combine machine for rice production in paddy fields, we can

increase the efficiency by ten times. In snowy areas, reed have to be mowed before the onset of snow season, though the color is still muddy and green. In Ohmi, reeds are mowed at the most appropriate season. Reeds are processed and the products are sent all over Japan.

Around Lake Biwa, there are a lot of large and small lagoons. Residents call the former "Outer Lake" and the latter "Inner Lake." Major lagoons such as Dai-naka-no-ko, Benten-ko, and Iba-naiko were already drained, and Nishino-ko is the only major lagoon remaining in the eastern shore of Lake Biwa. In the past, such lagoons were haven for pheasant, reed warbler, little grebe and other migratory birds as well as many fishes such as carp, crucian carp and goby. These inner lakes have been intensively used by resident people for fishery, freshwater-pearl culture and reed industry.

After World War II, large lagoons in this district, e.g. Sho-naka-no-ko, Dai-naka-no-ko and others were reclaimed by drainage and changed into paddy fields for increasing rice production according to the policy of the national government. With the loss of lagoons, many reed beds have isappeared. Nishi-no-ko (west lake), which is the only remaining large lagoon and where I live, was also included in the program. Thanks to the desperate opposing of the residents, the lagoon so far eluded reclamation. The reason why natural conditions of in and around Nishi-no-ko lagoon have been protected is because the place has been managed intensively for reed industry.

A very difficult question to answer is which is economically more productive to engage in reed industry or rice paddy agriculture. Some reed beds produce high-quality reeds to be used for interior decoration, while other beds may produce only poorer reeds. In the past, however, it happened that some reed beds brought more income than the rice paddy field of the same size.

Because of the decrease in the neighboring lagoons, more and more waste water and agrochemicals water flew into Nishi-no-ko, and the water quality of the lagoon increasingly deteriorated. In the 1970's, PCB contamination occurred in Lake Biwa. The offensive odor from large rotting fish more than 4kg in weight such as carp, crucian carp and catfish was an unforgettable scene.

About the same time, however, quality of reed also

began to deteriorate. The stem was bent, the color turned brownish, and the market value was lost at all. As shown in Fig. 2, the brighter and glossy one is the healthy one and the darker one is the poor reed which grows in the deteriorated lake.

Apparently this was brought by deteriorated lagoon water quality, and such situation continued for 10-15 years. No special management measures were taken for the conservation of reeds, and the situation was even worse in 1980's. Accompanied by the wider water level fluctuation, water level happened to be too low when reeds require water, and too high when dried beds are necessary (time of reed burning). It is my guess that roots of reeds were damaged by that. Reed beds were overgrown with land weeds such as tall goldenrod, vines. Presently, income from reed mowing cannot

cover even personnel cost, and the quality of reeds in Aomori, Kyusyu and other areas is much better than the reed in Lake Biwa. Reed quality deterioration is clearly shown when we see the Yodo river system (Lake Biwa is an upper stream part of the system), i.e. reed color is more blackish in the downstream.

I have been in the business of reed trading and reed goods manufacturing, and my family have been concerned in this industry for three generations (more than 100 years) and my son is also going to take over my business. I like to go into reed beds and talk with them. I can hear the cry of the reed, the reed is weeping at present. The reed is now dying and the reed spoke to me saying "help me." I tried to tell the reed "Wait for a while. I will do my best so that I can help you survive."



Fig. 2. Left: high quality reed grown in the clean water.
Right: low quality reed grown in the deteriorated water.



Fig. 1. Sliding doors and an interior shading blind made of reed in a Japanese style house.