The Effect on Soil Erosion Control by Seabuckthorn in China

Li Min[1] and ***Lu Jian***[2]

[1]Management Bureau of the Up-Middle Reaches of Yellow River, YRCC. MWR, Xi'an, 710043
E-mail: limind@pub.xaonline.com
[2]China Administrative Centre for Seabuckthron Development

The loess Plateau in China is such a region with the widest loess distribution and the thickest loess depth in the world. It is also one of the most serious soil erosion regions. Here sediment discharging into the Yellow River is 1.6 billion tons per year.

Therefore harnessing soil erosion in loess plateau is the exigent wish of Chinese government and local people.

Seabuckthorn is a kind of native shrub specie in the Loess Plateau in China. Using its special eco-economic features of seabuckthorn to recovery vegetation, improve environment and control soil erosion is an important strategic measures on Loess Plateau treatment and sediment reduction in Yellow River.

Since the 1980s, seabuckthorn resource has been developed in a large scale under the state departments' support and local people's effort. Soil erosion has been controlled by seabuckthorn and sediment discharging into Yellow River is reduced efficiently.

According to preliminary statistics, there was over 510 thousand ha seabuckthorn resource area in Loess Plateau in 1985. From 1986, yearly seabuckthorn-planting area was 33 thousand ha—67 thousand ha. The total increased area from 1986 to 2000 was about 80 thousand ha. And accumulated area was about 1,267 thousand ha by taking 85% of total in China.

1 The main achievement

1.1 A breakthrough is made in harnessing soft rock region by seabuckthorn

Seabuckthorn-planted area was more than 33 thousand ha in bare soft rock region after several years' continuous treatment.

1.2 Seabuckthorn demonstration area construction implemented smoothly

The first phase of such areas cover 31 counties of Qinghai province, Gansu province, Ningxia Hui Autonomous region, Shaanxi province, Shanxi province and Inner Mongolia Autonomous Region. The total seabuckthorn-planted area was more than 60 thousand ha from 1994 to 1998.

1.3 Research and experiment of seabuckthorn has gained many results

The biological and ecological characteristics of seabuckthorn were made clear, and a new classification system was established. The breeding network of seabuckthorn in Yellow River basin was set up where there were 5 fine-specie base nurseries and the first generation of 13 fine species were reproduced.

The Bureau of Upper and Middle Reaches of Yellow River completed the research on seabuckthorn inheritance improvement system. The effort has gained national science and technology progress award.

The Bureau of Upper and Middle Reaches of Yellow River has completed the second-generation fine species of seabuckthorn.

The research on flexible dam of seabuckthorn exploited the function in sediment retention, flood discharging and vegetation recovery in soft rock region.

1.4 Local economy was promoted by seabuckthorn construction

Seabuckthorn plantation has solved the problems in fodder and fertilizer supply in poverty region. A lot of farmers increased income through seabuckthorn plantation and animal husbandry.

New growth point is added in local economic development by exploitation and utilization of seabuckthorn.

2 The main experiences

(1) More attention paid by leaders at all levels is the core for seabuckthorn plantation.

(2) Promoting construction of seabuckthorn by aiming at soil erosion control.

(3) Planting and exploitation of seabuckthorn at the same time so as to arouse farmer's enthusiasm by economic benefit.

(4) Increasing input of science and technology, enhancing the contents of science and technology.

3 The proposals

(1) To do seabuckthorn special planning well.

(2) Further to establish the status of seabuckthorn in Yellow River harnessing, local environment treatment and agriculture development.

(3) To strengthen scientific research and extension of seabuckthorn, as well as technical training.

(4) To Intensify management, making good technical service.

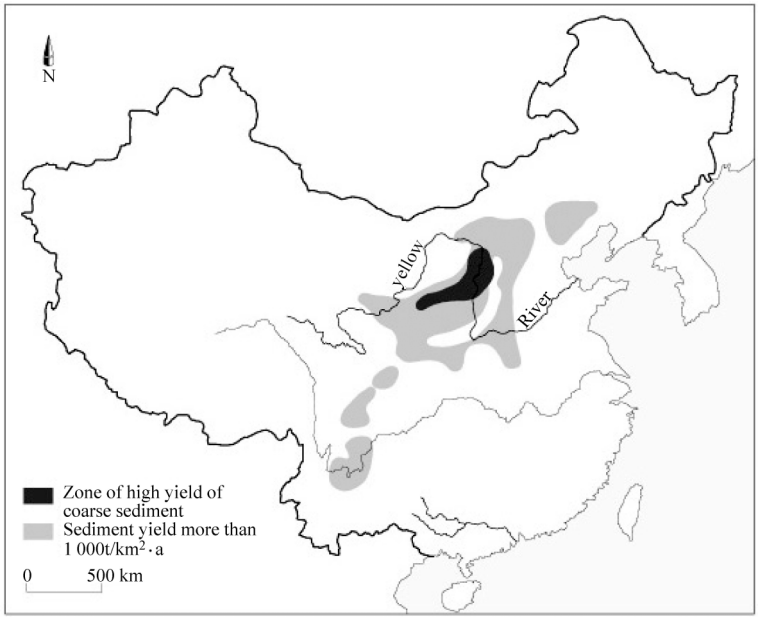

Fig. 1