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Sugar Cane Production and Problems in China

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China is one of the most ancient countries in sugar cane cultivation in the world. As early as about 400 B. C, Chinese began to cultivate and process sugar cane for drinking and cooking. Now, sugar cane is one of the most important economic crops in China. It is broadly cultivated

in the southern parts. The main sugar cane production provinces include Guangdong, Guangxi, Taiwan, Fujian, Yunnan and Sichun. The sugar cane cultivation area in these provinces accounts for 90% of the country's total, producing 95% of the country's total cane sugar. Other sugar cane production provinces include Jiangxi, Hunan, Zhejiang, Gueizhou, etc. In 1990/91 refining season, China's sugar cane harvesting area was about 870,000 hectares, produced about 4.99 million tones of sugar. In 91/92 season, China's total sugar products (beet and cane sugar) was 7.91 million tones in which about 5.0 million tones were cane sugar, this made China the world's third largest sugar producer.

About 15 years ago, China began to adopt the Family-Response System in agriculture. According to the system, every family could get one piece of land which is mostly within one hectare. Because the land piece is very small and labor cost in China is very cheap, up to now, most of the works in sugar cane cultivation are carried out by manpower. For example, land preparation, planting, pesticide-spraying, fertilization, harvesting, etc., are mainly carried out in traditional ways. In recent years, Chinese scientists and officials encourage farmers to use some new techniques, such as using hormone to control harmful insects, using raw earth to promote sucrose content, using weeds-control-film to control weeds and conserve water and heat in soil, extending rational fertilization to reduce fertilizer used in cultivation, etc. These kinds of efforts have achieved significant results.

In sugar manufacturing, besides producing sugar, China has made rapid progress in the profitable use of waste products created by the sugar industry. Now China is able to produce more than 60 by-products, such as alcohol, active dry yeast, medium density fiberboard, citric acid, and lysine. Recently, some factories began to deep process some kinds of by-products, for example, molasses can now be used to yield four generations of by-products, liquor can be derived from molasses, ice acid from liquor, ethyl acetate and other products can be obtained from the acetic acid and adenosine triphosphate can be derived from the third generation of molasses by-products.

China has a population of 1.1 billion. Sugar consumption per capita is only a little more than 6kg, far below the world average of 20.6kg. This fact is a great challenge for Chinese sugar industry. Now, China's sugar industry is facing some serious problems. How to solve these problems will directly affect the future of China's sugar industry. These problems include;

- (1) Rain fed area in sugar cane cultivation is too big. Now two third of sugar cane is cultivated in rain fed area and because of shortage of water, cane yield is very low and unstable.
- (2) Sugar cane is being fiercely competed by other economic crops such as vegetables and fruits in sugar cane cultivation areas. In some places, sugar cane has already been squeezed out by other crops.
- (3) New varieties are not sufficient to replace some already degraded varieties.
- (4) Sugar content in cane is too low. This fact mainly results from two aspects, one is that factories are adopting the Weight-system in buying farmers' sugar cane, this makes farmers only care about sugar cane's fresh weight, not care about its quality, another reason is that good new varieties are not enough.

(5) Equipment and machines sugar cane factories are too old, they are anxiously to be renewed and modernized.