



Who Will Feed the Giant? – Chinese Pollution and Grain Crisis

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Dear Editor-in-Chief

According to Reuters news, Chinese buy rice imported from Japan at the price of 1500 RMB (1\$=6.33 RMB) for 5 kg (It is more than 10 times the price for the Chinese local rice). It reflects a worrying presence of heavy metals and other toxins in China (1). Rice is a major staple food of the Chinese. There is an old Chinese saying “Min Yi Shi Wei Tian” which means hunger breeds discontentment, food security is the priority in China. The news reported that China imports food (rice) from the other countries like Thailand, or Japan. Nowadays, China might have enough food but not enough food safety. Actually, the rice production in China as of 2014 is the highest in history and enough to supply the country. Hence, there might be a food safety crisis in the coming future. After experiencing a famine in the 1960's, China needs to fight on the food issue once again. Several reasons have contributed to the potential food safety in China. Starting with the urbanization of China, farmers go to the city for a new life, while millions of villages disappear. At same time, agricultural land has been used for estate or factory development resulting in pollution of the land and water. In 2013, the Minister of Land and Natural Resource said that plants would not grow on about 50 million mu (3.33 million hectares) of land due to the existence of heavy pollution. The increasing negative effects on food safety from water and soil pollution potentially contribute to

'cancer villages' (2, 3). For example, food chain contamination by cadmium (Cd) is a serious health concern resulting in chronic abnormalities (4). Fortunately, the Chinese government got serious about its pollutant-laden soil, which could threaten the food supply chain (5). Although the Chinese Government has shown determination to reform laws, to establish monitoring systems, and to strengthen food safety regulation, the results remain unclear (2). This might be due to Chinese food safety policies not being integrated with soil and water pollution management policies (6). Several measures can be taken to avoid the potential food crisis. First, strictly staying with the arable red line is the key. Second, importing food from other countries e.g. Thailand, Brazil, and USA is also a solution. Third, using high technology in agriculture to increase production with limited resources is necessary or inevitable for the country or individual. Genetic modification methods could be a good choice, although there is a continuing debate on the safety. The Chinese believe that “un-nature” food could cause unhealthy outcome. Fourth, broadening the staple food list is another solution for grain self-sufficiency. Potato has been proposed as staple food that can be added to the list (rice, wheat, and corn are the traditionally Chinese staple). Compared to the traditional Chinese staple, potato needs less water.

However, without solving the soil and water pollution problem, food crisis cannot be resolved.

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