



Speaker Summary Note

Session: Social Levers

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Title: Agricultural Growth, Nutrition, and Health of Rural Residence in China¹

Since reform and opening in 1978, the steady growth of agricultural production laid the foundation for sustainable rural economic and social development as well as the food security. Meanwhile, the rural medical and health system, rural living conditions and nutrition have been improved significantly. Along with the enhancement of food access availability, structure of food consumption becomes more diversified, with increasing proportion of energy and protein from animal products. In current rural China, life expectancy, infant mortality and maternal mortality rates have approached the average level of high-income countries.

First, why focus on the nutrition and health of rural residents?

The key factor affecting nutrition and health status is that of household revenue undoubtedly. In China, although rural income per capita made great enhancement, rapid economic growth has not reduced the income gap between urban and rural areas yet, on the contrary, urban-rural income ratio increased from 1.86:1 in 1985 to 2.79:1 in 2000, and up to 3.33:1 in 2009 (National Statistics Bureau, 2010). Meanwhile, despite the rural poverty has been declined enormously, it is very clear that poverty reduction as well as nutrition and health improvement in rural China is still the top priority for China's government.

Second, how is the nutrition and health of rural residents?

Nutrition

During the last decade, the nutrition of rural residents in China has been significantly improved as the following aspects.

1. *The ratio of expenditure on food is declining.* Income of rural residents has been greatly improved alongside the reform and opening, the proportion on the food consumption also showed a decreasing trend. Rural Engel coefficient decreased from 67.7% in 1978, to 60% or less in the early 1980s (59.1% in 1981), and then to below 50% in the new century (49.1% in 2000), to 41.0% in 2009.
2. *The structure of food consumption is optimizing.* When entering into the late 1990s, the structure of food consumption changed with staple food intake declining from 62% in 1990 to 56% in 2009, and meat intake increasing from 3% in 1990 to 6% in 2009.

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3. *The structure of nutrient intake is improving.* There is evidence showing that since 1990 the per capita daily calorie intake of rural residents was decreasing (from 2841.6 kcal in 1990 to 2510.2 kcal in 2004), per capita daily protein intake is relatively stable (keeping 85-90 grams), per capita daily fat intake showing a growth trend (41.9 grams in 1990 to in 50.6 g 2003) (Qin Fu, 2006). Based on FAO data, LU Kaiyu (2006) proved that the nutrition structure of Chinese residents since the reform has achieved huge changes. The first is protein and fat contributed by grain decreased rapidly, and second, protein and fat contributed by animal products including meat and fish tended to improve, third is the proportion of fat from vegetable inclined to drop.

Health

Health of rural residents in China continues to improve, embodied in a comprehensive reflection of three important health indicators: First, average life expectancy from 68.2-year-old in 1978 increased to 73-year-old in 2005; second, the infant mortality rate decreased from 34.7 ‰ in 1981 to 15.3‰ in 2007, down by 56%; and third, maternal mortality rate, from 88.9/0.1million in 1990 dropped to 36.6/0.1 million in 2007, a decrease of 60%. Although China is still a middle-income developing country, these health indicators has reached the forefront among developing countries and approached the average level of high-income countries.

While the data also showed that ratio of children under-weight below 5-year-old decreased from 19.1% in 1990 to 11.2% in 2000, and further to 6.9% in 2005. Percentage of population undernourished has declined from 15.0% in 1991 to 12.0% in 1996 and further to 10.0% in 2005 (United Nations, 2011).

Third, what factors affect the nutrition and health of rural residents?

- *China's grain production maintain at a high growth.* Improving grain productivity and guaranteeing the food security have always been a top priority for government attention. To this end, government developed and implemented the household contract responsibility system, market-oriented reform, agricultural tax policy, agricultural subsidies, agricultural R&D policies, to stimulate grain production, and therefore achieved expected results. China's grain production increased from 305 million tons in 1978, rapidly to 407 million tons in 1984, reaching a record of 512 million tons in 1998, and setting a new record of 546 million tons in 2010.
- *Farmers' income maintain at a certain growth.* Since the beginning of reform and opening up, with new institutional arrangements, farmers' enthusiasm to improve production was greatly stimulated. Farmers got the land use rights and controlled the surplus product, the level of agricultural output and the income of farmers increased significantly. Policies of reform and opening also encouraged the non-farm employment opportunities as well, which increased rural household income of farmers and lead poor out of poverty (Xinhua, 2004). During the period of 1978 and 2007, net income per capita of rural residents increased by 31 times, with the average annual real growth of 7.1% (Xinhua, 2008).
- *Food imports increased the possibility of allocating more sources to production of grain, which attribute to market opening and international trade.*
- *Targeting policies aimed at improving people's livelihood.* Before entering into the 20th century, the focus of agricultural policy was to stimulate food production, to improve the domestic food distribution, and after entering into the 20th century, government put more emphasis on dietary nutrition, food safety and living conditions. In order to ensure food safety, to protect public health and safety, the Chinese government implemented the "Food Safety Law" (People's Republic of Presidential Decree No. 9) in June 2009; and in July 2009, the State Council further to issue the "Regulations of Food Safety Law," to specify regulations during process of food production and operations. In order to promote better nutrition and to improve the nutrition and health of Chinese residents, the Ministry of Health in September 2010 developed and implemented the "Management of Nutrition Improvement" (HDC, 2010).

Fourth, problems and challenges

- Irrational dietary pattern. In 2002, for urban residents, per capita daily oil consumption was 44 grams, increasing from 37 grams in 1992; energy from fat energy was over 35%, exceeding 30% the recommended by the WHO. Energy from cereals of urban residents is only 47%, significantly lower than the range of 55% to 65% (Ministry of Health, 2004).
- Micronutrient deficiencies are a common issue. Micronutrient deficiencies are a common problem in China. From the 2002 national nutrition survey data, ratio of children aged 3 to 12 with vitamin A deficiency was 9.3%, in which 3.0% in urban and 11.2% in rural areas, the ratio of marginal vitamin A deficiency was 45.1%, in which 29.0% in urban and 49.6% in rural areas. Calcium intake in both urban and rural areas was only 391 mg, equivalent to 41% of recommended intake. The micronutrient deficiencies become more and more serious in some remote poor mountain areas.
- Coexistence of over-nutrition and malnutrition. Various surveys showed that, malnutrition still exists, while over-nutrition appeared along with economic development. Over-nutrition occurs mainly in urban residents, especially in the developed cities such as Beijing and Shanghai. Affluenza incidence is also rising.
- Food quality and safety issues highlight. China's government has recognized that the adequacy of food output does not mean that nutrition and health in good mood. For example, in recent years, the development of food policy is more about food safety, production standards on pesticide use, standard dairy development, which showing that a reasonable diet and food safety are placed in a very important position for government's concern. Nutrition and health is not simply issues related to food, but also to income, education, health, social security network. Addressing nutrition and health problems, we must rely on collaboration and coordination between multi-sectors and multi-fields, in order to improve agricultural productivity as well as improvement of production structure.