

Shen J, 2002, *China's Grain Economy: The Challenge of Feeding More Than a Billion*.  
Wang L and Davis J (Aldershort: Ashgate, 2000), *China Information*, 16(2), 148-149.

---

*China's Grain Economy: The Challenge of Feeding More Than a Billion.*

**Liming WANG and John DAVIS**

Aldershort: Ashgate 2000. xvii+256 pp. ISBN 1 85521 957 3 (hc). Price: £45.

Who will feed China? This is an important question facing the world and China. The book, written by two agricultural economists in the Queen's University of Belfast, represents yet another effort in analyzing China's grain economy. The authors attempt to model the grain supply and demand in China in the period 1952-1995 and to project these up to the year 2010.

The book has five major chapters. Chapter two provides a detailed account of the government policy and agricultural development in China in 59 pages and will be useful to those who are unfamiliar with the agricultural policy in China. The authors make a serious attempt in chapter three to analyze the grain supply and demand schedules graphically under the unique conditions of production quota and grain rationing.

A microeconomic model of farm household is developed under utility maximization. The model assumes that a household engages only in the production of grain and cash crops. One interesting development of the model is the consideration of two cases of the grain production quota. If the quota is exogenous, then the state quota price will not have any direct effect on grain supply. If the quota is endogenous, a rise in the state quota price will induce a positive supply response. The implicit tax due to the quota becomes a proportional tax instead of a lump-sum tax. This provides one explanation to the rationale that the Chinese government has often raised the procurement price to stimulate grain production. One important factor, labour, is not considered in the model. A rural household makes a decision whether to use part of its labour to engage in non-agricultural activities, which has important impacts on their inputs in farming in reform period. The model of urban consumer demand is more straightforward and is highly simplified. The model considers how much an urban consumer will spend on

rationed food, food from free market and non-rationed substitute food under a given expenditure on food.

In chapter four and five, econometric models of grain supply and grain demand are estimated using the time-series data for China as a whole in various periods. The authors provide a detailed account of their selection of variables, data and underlying assumptions in their modeling. Considering dramatic institutional changes after 1978, readers may be concerned with many models covering the period crossing 1978. Two grain response models for pre and post reform periods are estimated and compared. Structural change is found in the acreage response function but not in yield response function. The explanation for the later is that a dummy variable has been used to capture institutional changes in the model.

Future grain supply and demand are projected in chapter six. To make use of grain responses models, total farmland, multiple cropping index and many exogenous variables such as grain price have to be projected first. The declining farmland has been considered as a key factor in the future grain production in the literature. But the farmland is treated in this book using a simple linear trend model. Technical progress is also a crucial factor driving future grain supply. But past trend is assumed to continue in the projection. Due to structural change in food grain demand, the grain demand model developed earlier is not used. Instead, income elasticity and income growth rate is used to project the food grain consumption per resident. The projection of feed grain is based on a time trend factor and the total consumption of pork and poultry meats that in turn is projected using an annual growth rate. Considering the key features and procedures in the projection of grain supply and demand identified above, the projected level of grain import is more or less reflects the past trend. Nevertheless, their projections are close to those by World Bank and the Chinese government.

The book makes a useful contribution to the development of a microeconomic framework of grain economy with production quota and grain rationing. The detailed empirical work is also interesting. Nevertheless, some key factors underlying China's grain supply and demand such as rural labour, farmland, technology and feed grain are not considered in detail. The important geographical dimension is also ignored. The

structural processes such urbanization and industrialization, the changing technology and living standard, and the geographical dimension need more attention in future studies.

The book is recommended to those who are interested in China's rural and agricultural policies, and theoretical and quantitative analysis of grain production, demand and trade in the country.

(Jianfa Shen, Geography and Resource Management, The Chinese University of Hong Kong, Hong Kong, China)