

BOOK REVIEWS

Beef in China: Agribusiness Opportunities and Challenges by John W. Longworth, Colin G. Brown, and Scott A. Waldron, St. Lucia, University of Queensland Press, 2001, xix + 412 pp.

This book is the outcome of surveys of the Chinese beef industry conducted over four years by the University of Queensland with the collaboration from the Chinese Ministry of Agriculture. It is based on the investigation of production and distribution in fourteen provinces and the beef consumption of households in twelve cities and Hong Kong. The industry participants interviewed in the process numbered well over four hundred. This is a commendable book compiled by integrating the findings of field surveys, data made available by the Chinese government, and the results of similar research that has been done overseas.

By the end of the 1990s, the Chinese beef industry had grown into the world's third largest in terms of quantity after the United States and Brazil. Until the end of the 1970s, cattle had been bred primarily for such purposes as farming and draught power. Until then the source of beef was limited to injured or aging cattle. Before China's economic reforms started, cattle were collectively owned by the people's communes, but after their dissolution, their ownership shifted to the hands of individual farmers. Breeding entities also shifted to millions of farm households. In this process, the beef industry developed in a new direction. Farm cattle were divided into those specialized for producing beef or milk, and the breeding process was changed from self-sufficiency to large-scale production. The book analyzes the process of this transition in three major areas: breeding and slaughtering, distribution and marketing, and consumption.

A. *Overcoming the Analytical Difficulties*

From his more than forty years of study of the Chinese economy, especially its agro-economy, the reviewer knows that each decade has its own difficulty in research. Specifically, the difficulty for the years after the 1980s is that, on one hand, there are millions of low-tech individual farmers spread around like a vast ocean, at the same time, however, there are large-scale enterprises that rank among the world's most advanced. If one's observation of Shanghai Pudong New Area is used to portray the overall state of the Chinese economy, it would be a totally imbalanced analysis failing to consider the self-sufficient and hand-to-mouth conditions of farmers in the remote villages and hills. A picture of the entire economy can only be drawn through a well-balanced view of China's economic imbalances and with insights into the country's development potentials.

Economic reform while stimulating the economy has made it tremendous difficult for the Chinese government to collect statistical data. The government has been reforming its statistics since the mid-1980s, but figures for rural areas are still in need of drastic improvement. Until the 1970s the country had an investment-oriented economy, but since the 1980s

this has been shifting slowly to a consumption-oriented economy. The preparation of economic statistics which include those on consumption are part of this change. Nevertheless, figures on beef consumption by type, for instance, are virtually unavailable. The key to a reliable study report is the ability to collect facts and figures on the individual farm households dispersed across the country and on beef consumption by item. The authors of this book must be commended for having overcome these difficulties by conducting field surveys and presenting the real picture of China's beef industry virtually in its entirety.

B. *The Authors' Basic Observations and Analysis*

Chapters 1 and 2 discuss the problems and basic observations of the research, and two points in Chapter 2 are of particular significance. The first concerns the parties who have been instrumental for the rapid growth of the beef industry and an analysis of the factors that have initiated this development. The authors ascribe this fast growth to local-level governments which have perceived the beef sector as a profit-making industry and have actively participated in it. China's administrative structure has six major levels running from central government downwards to provincial governments (provinces, municipalities, and autonomous regions), prefectural governments (prefectures and prefecture-level cities), county governments (counties, county-level cities, autonomous *zhou*, and autonomous *qi*), township governments, and rural administrative villages. There are some regions that have no prefectural governments.

Primarily responsible for industrial development has fallen to prefectural governments and lower-level offices. The main players in manufacturing and transportation are provincial and municipal governments, while those for primary industry are the prefectural governments and offices at lower levels of administration. Today, enterprises under private management or ownership are seen spreading across the breadth of the economy. However, as a whole, the economy retains the tinge of local bureaucracy, leading to keen competition among all the local levels of administration. Such basic observations are visible throughout the three major areas (breeding and slaughtering, distribution and marketing, and consumption) and provide the basis for discussions of China's broader economic structure.

The second significant point is the argument that relatively early government deregulation was an important element in the rapid growth of the beef industry which prompted the shift to a market economy. Deregulation began in the early 1980s in stockbreeding as well as in fisheries and in vegetable and fruit growing. Since then the development of these four areas of primary industry has been particularly rapid. Meanwhile deregulation of four major crops (grains, cotton, vegetable oil crops, sugar crops) and tobacco has been much slower, the reason being that the four major crops are the country's most important, and tobacco is an essential source of government tax revenues.

The authors succeed in vividly depicting how the state-controlled economy has given way to the market-oriented economy in the above-mentioned three major areas of the beef industry. The analyses, though initially intended for the beef industry, can provide a thesis that is applicable to other industries as well.

C. *Breeding Development, Cattle Production, and Distribution of Live Cattle*

Decisively important for modernizing the beef industry is to increase the ratio of beef and

dairy cattle from among the cattle used primarily for farming and draught power. This essential upgrading of cattle stock is reviewed in Chapter 3. To realize this objective, the Chinese Ministry of Agriculture undertook a nationwide mapping of cattle in 1980. This book explains how seed bulls were imported from the United States, and how the system for selective breeding was established by governments from the prefectural down to the township and village levels. In order to protect the purity of bred cattle, the introduction of cattle from outside provinces was restricted, and breeding was allowed only within ten kilometers of townships and villages. The book's description of the breeding system even gets down to such minutia as the estimation of the quantity of frozen semen needed for speedy cross-breeding.

Chapter 4 analyzes the structure of the cattle production sector. Figure 4.1 (pp. 74–75) and Table 4.1 (pp. 78–79) divide the sector into two categories (agricultural and pastoral areas) and group breeders into three types (unspecialized households, specialized households, commercial feedlots). The table lists area distribution, number of cattle, ownership, type/use of cattle, feed base, cattle supply, and cattle sales for each abattoir and slaughter in this production sector. The effort in making this detailed overview easy to understand is very impressive, and such overviews about each theme are presented in other chapters as well. For instance, cattle-marketing channels are shown in Figure 8.1 (p. 166), the cattle-slaughtering sector in Figure 9.1 (p. 185), and distribution channels for beef in Figure 12.1 (p. 243). Such efforts to help readers understand China's beef industry deserve the highest commendation.

Chapters 5–7 analyze the management of cattle production by unspecialized households, specialized households, and commercial feedlots, respectively. An analysis of returns per head of cattle shows minus figures for unspecialized households (p. 116), Rmb6,088 for specialized households (p. 132), and Rmb354 for feedlots (p. 148).

Modernization of the beef industry is being promoted by feedlots. Feedlots and farm households account for about 15 per cent and 85 per cent of the nation's total cattle, respectively (Table 4.1). The reviewer has a great interest in how household breeding has and is continuing to change. Currently returns for unspecialized households are minus. However, as they can rely on self-supplied feeds and get self-supplied fertilizers, and management labor is virtually zero, cattle as draught power bring a substantial benefit to farm households. In an income expenditure analysis, draught power is translated into returns, and from Japan's experience, the reviewer estimates that an unspecialized household's decision of whether to continue or discontinue cattle breeding depends on draught returns. In the 1950s Japan witnessed the rapid diffusion of tillers and small tractors with motors of a few horse power, and after about ten years unspecialized households ceased breeding cattle. In the United States, where farming style is quite different from Japan, it was in the 1920s that horses were replaced by tractors, and that pasture land for horses was converted into farmland.

This trend has begun to appear in China as well. From 1994 to 2000 the number of large-sized livestock decreased, falling from 10.04 million to 8.77 million for horses, from 10.92 million to 9.23 million for donkeys, and from 5.55 million to 4.53 million for mules. Only the number of cattle increased from 104.2 million in 1995 to 128.6 million in 2000. This increase is believed to be in beef and dairy cattle. Thus it seems to the reviewer that cattle

bred by farm households as draught power is in the process of being replaced by small tractors. There was also a rapid diffusion of small tractors during the 1990s, their number doubling from 6.79 million vehicles in 1990 to 12.64 million in 2000. The reviewer presumes that this surge has also reached unspecialized cattle breeding households, but the analyses of this trend in Chapters 5 and 6 is inadequate.

D. *Cattle Slaughtering and Beef Distribution and Marketing*

Chapter 9 deals with cattle slaughtering. The industry has a four-layer production structure, ranging from relatively large-scale slaughtering by local governments to mini-scale abattoirs at the township and village level. Table 9.1 presents a numerical summary of abattoirs by size, ownership, cattle supply, and products and markets. The book states that many of them are managed by local governments, and that a large number of them run by county government are in the red. These are apt examples of local government economic behavior that fails to meet the needs of the market.

Chapter 10 analyzes products from cattle slaughtering, ranging from edible byproducts such as offal to inedible ones such as hides, blood, and bones. The analysis of beef processing may be gainfully read together with the review of beef distribution and marketing in Chapter 12. Byproducts are not fully utilized in China, the book points out, because of the unstable supply from small and medium-scale slaughterhouses. Pharmaceutical enterprises tend to turn to large-scale pig slaughterhouses for byproducts. This fact points to a big problem that exists with the use of byproducts at small and medium-scale cattle slaughters and abattoirs (pp. 221–22).

Chapter 11 reviews the leather sector, focusing on cattle hides, but its discussion encompasses the entire leather sector. The analysis of the structure of leather enterprises reads especially well, and the book notes that this sector is rapidly catching up with imported goods in terms of quality (p. 236).

Five chapters, 12–16, are given over to analyzing beef distribution and markets (Chapter 15 covers the Hong Kong beef market and Chapter 16 for foreign trade). Domestic retail beef markets are also a multi-tiered structure: hotel restaurants for foreigners (which offer the best-quality beef), restaurants, supermarkets in big cities, *nongmao* markets (rural trade markets), traditional retail markets, morning markets, and peddlers on bicycles. Of these outlets, *nongmao* markets and morning markets handle the overwhelming quantity of beef. In the area of high-quality products, however, supermarkets are expanding their shares, and this expansion is expected to have a major impact on the entire market in the near future. In view of this trend, the book points out that areas with a concentration of beef production and processing began considering how to introduce a formal standardized grading system in the Ninth Five-Year Plan for 1996–2000 (pp. 258–59).

Chapter 13 contains a survey on consumer preferences for processed products, such as fresh meat, chilled meat, and frozen meat. The survey shows how the diffusion of modern cooking appliances such as microwave ovens has created differences in consumer demand for different types of processed products.

For some time the reviewer has anticipated that with the growth of consumer income, the consumption of animal protein would increase, especially of that of herbivorous animals such as beef and mutton, while fatty meat such as pork would decrease. Indeed, the amount

of meat purchased by households has increased, though very slowly. According to data on the quantity of meat purchases by urban residents in the *China Statistical Yearbook*, purchases of pork are declining and those of poultry are rising. Yet the increase in per capita and per year from 21.5 kilograms of meat in 1985 to 25 kilograms in 2000 pales beside the Western average of 40–60 kilograms, a level unattainable in China in the foreseeable future. Among the various meats, the growth rates of beef and mutton in China remain flat or nominal at best for whatever reasons.

The authors discuss the trend of beef consumption by taking up the case of the Hong Kong beef market separately in Chapter 15, probably to grasp the future trend of beef demand in the mainland cities. Hong Kong's per capita GDP surpassed that of Britain a few years ago, and its level of consumption is among the highest in the developed world. The chapter assumes that Shanghai will have such an urban type of beef consumption sooner or later, although no specific estimate of beef consumption is given.

For the whole of China, however, the consumption of beef and other meats is likely to remain at a low level, well below the Western level. Some discussion of this point in the course of analyzing beef consumption would have enriched the content of this well-documented book.

E. *Evaluation of the Book*

The reviewer mentioned the following issues in this review. The diffusion of small tractors and trucks seems to be having a great impact on the rise and fall of cattle breeding by farm households. Despite the rapid growth of income, beef consumption has not expanded accordingly, and the consumption of less fatty meat such as beef and mutton has been leveling off. It appears advisable not to consider the level of China's future beef consumption on the basis of European standards.

Another point the reviewer would like to stress is the environmental issue, which, though touched on in this book, receives little in-depth analysis. Environmental regulations are mentioned in Chapter 9 ("Cattle Slaughtering") referring to industry regulations and standards (pp. 192–95). Chapter 11 ("Leather Sector") has a section on "Environmental Issues" related to leather factories (11.4.1; p. 236) which notes that the State Council issued decrees in 1996 regarding pollution caused by the leather industry, and that the Environmental Protection Bureau is responsible for monitoring leather companies and ensuring compliance. On the other hand, it admits the difficulty of monitoring a great number of small leather companies.

Environmental issues in the beef industry are serious and should have been discussed in a separate chapter. Cattle excrement causes water pollution at the stage of breeding. In Taiwan hog raising is said to cause 40 per cent of the water pollution. As the mass raising of animals progresses, the cost of treating polluted water increases. Substantial pollution also arises at the slaughtering stage. The cost of treating this type of pollution must be tremendous. Within the light industrial sector, leather manufacturing, along with paper manufacturing, is the prime discharger of pollutants. What costs do modern leather makers bear in controlling this type of pollution? Is the information on the disposal of this pollution available? An effort to delve into these questions would have enhanced the value of this book.

Despite these questions and inadequacies, the book is a highly valuable publication for the following four reasons.

Firstly, through their in-depth analyses of the beef industry's multi-tiered structure, even of the lower levels that are indiscernible from the publicly available data and published information, the authors have succeeded in presenting a thorough and wide-ranging examination of the industry.

Secondly, the authors' analytical framework for examining the beef industry, as well as other industrial sectors and the Chinese economy as a whole, is consistent throughout the book.

Thirdly, the available materials and records have been perused and utilized with scholarly care and faithfulness. There are two approaches in China studies. One is to study of the country by first delving into one discipline and then proceeding to other areas. The other is to start by learning to read Chinese and then studying China as an area study. The former approach is apt to make mistakes in comprehending the flow and interplay of China's many phenomena, because its study is limited to a specific area. The latter cannot go sufficiently deep into a specific area. For instance, the chart in Figure 10.1 (p. 209) showing each of the usable components of a typical cow and their weights (kilograms) cannot be prepared without knowledge of animal husbandry. The authors have had many opportunities of professional access to Chinese literature, and are well versed in the progress of the country's economic policy and promulgated ordinances. The reviewer, as a follower of the latter approach, has found few errors in the use of materials and interpretation of historical facts.

Fourthly, the figures and tables in each chapter are well prepared and laid out which greatly help the reader grasp the theme of the chapter. The boxes inserted from time to time also help clarify the flow of the text. The way appendixes are presented indicates the author's consideration for the reader's convenience. While noting that the market's draught power for boosting China's beef industry is still feeble, the book has been compiled with due consideration for the readership market. All these points make this book one of the superb analytical works on a vital Chinese industry. (Reeitsu Kojima)

Rethinking the East Asian Miracle edited by Joseph E. Stiglitz and Shahid Yusuf, New York, Oxford University Press for the World Bank, 2001, x + 526 pp.

The best way to begin a review of this book, *Rethinking the East Asian Miracle*, is by comparing it with its predecessor, *The East Asian Miracle*, published in 1993, also by the World Bank. As is well known, *The East Asian Miracle* verified the effectiveness of industrial policy. The volume's conclusions were threefold. First, industrial policy was effective in countries with competent bureaucrats, such as Japan and the Republic of Korea, and contributed to their economic growth, but such policy is not always effective in developing countries which lack such bureaucrats. Second, the export-led growth measures adopted by East Asian countries can be applied effectively to developing countries in other regions.