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Agricultural Economics 28 (2003) 165-171

AGRICULTURAL ECONOMICS

www.elsevier.com/locate/agecon

Book reviews

Agricultural Technologies and Tropical Deforestation

Arild Angelsen, David Kaimowitz (Eds.), CAB International, Wallingford, UK, 2001, 384 pp., US\$ 60, ISBN 0851994512

For a few years now, Arild Angelsen, of the Agricultural University of Norway and the Center for International Forestry Research (CIFOR), and David Kaimowitz, CIFOR's Director since 2001, have been synthesizing and interpreting the literature addressing the causes of tropical deforestation. Among their publications is a comprehensive survey of empirical economic research (Kaimowitz and Angelsen, 1998). More recently, they have produced this edited volume, which contains a number of papers originally presented at a March 1999 workshop sponsored by CIFOR and held in Turrialba, Costa Rica.

The book's focus is the land-use change that results as crops and livestock are produced in new ways. As stated in the introductory chapter, it is widely believed that improving agricultural technology eases pressure on tree-covered hinterlands. However, various circumstances under which technological improvement has the opposite effect are highlighted in the second chapter, which contains the volume's conceptual framework.

These circumstances are not just a matter of theoretical conjecture, as is made clear in several of the book's case studies. For example, the current spread of mechanized soybean production—a profitable technology that is not labour intensive—in the Brazilian Amazon is coming at the expense of natural habitats. Likewise, significant forest loss in western Ecuador after the Second World War coincided with rapid immigration and the introduction of a new export crop—bananas.

This is not to say that complementarities between technological improvement in agriculture on the one hand, and the conservation of natural habitats, on the other hand, are neglected in this volume. As documented in various case studies, pressure on forests has been alleviated when and where agricultural progress puts downward pressure on commodity prices (as it usually does), new technologies enhance labour demand, or both. For example, the Green Revolution in Asia, which caused rice yields to go up and prices of the grain to go down, led to less farming in the region's forested uplands.

The case studies, of which there are 18, comprise this volume's primary strength. Each contains empirical analysis of high quality and adheres to the book's core themes. This, of course, reflects well on the editors. They also are to be congratulated for assembling contributions from every part of the tropics, and indeed beyond; one of the best chapters has to do with the spread of forests in some parts of the southern US and deforestation in other parts in recent years.

Given the attention that the editors and case-study authors pay to land-use change resulting from agriculture's technological improvement in specific settings, this volume is not intended to be a comprehensive treatise on tropical deforestation and its causes. Among the issues that are beyond its scope are the non-internalised environmental damages associated with the clearing of tree-covered land.

Furthermore, the obvious reluctance of those who have edited or contributed to this volume to settle the issue of whether better technology for crop and livestock production accelerates or arrests farmers' encroachment on natural habitats contrasts with other recently published surveys of the literature. In the introduction to a special issue of *Land Economics* on tropical deforestation, Barbier (2001) notes that the balance of empirical research leads one to conclude that, as a rule, agricultural development helps to save forests.

The seeming inconsistency here has a lot to do with the case studies' concentration on impulses for forest loss (or its opposite) in specific geographic settings. This focus, which can give short shrift to the eventual impacts of agricultural innovation on commodity prices, is certainly appropriate and useful for individuals and organisations concerned about the fate of particular patches of tree-covered land. However, those desiring a complete understanding of the technology-and-deforestation debate will want to complement their reading of this worthy volume with a review of other literature on the subject.

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PII: S0169-5150(02)00046-4

Agricultural Policies in Europe and the USA: Farmers Between Subsidies and the Market

Antonio Piccinini, Margaret Loseby (Authors), Palgrave Publishing, New York, 2001, 268 pp., US\$ 75, ISBN 0-333-77576-7

Although its economic predominance relative to other sectors has waned, agriculture continues to play a fundamental role in high income countries. With diverse objectives and in different ways, governments are influencing the structure and development of agricultural production, agricultural trade relations and agricultural price and income formation. Typically, agricultural policies are aimed at domestic objectives, though they usually involve repercussions for other countries. Therefore, international co-ordination of agricultural policies is valued highly, but only achieved with great difficulty. As a matter of fact, the formulation and successive reforms of the Common Agricul-

tural Policy (CAP) of the European Union (EU) offer an interesting example of international co-ordination. The Treaty of Rome, by which six countries set up the European Economic Community (EEC), and which entered into force in 1958, formed the starting point. Like for other sectors of the economy, the direction for agriculture was clear: free trade within the Common Market. However, in order to achieve this result, it was necessary for the Community to take over the national agricultural market and price policies of the Member States and put these on a supranational footing. In the policymaking process not only the trade concerns of the Member States were addressed, but later on also their socio-structural and environmental concerns. From the outset, the budgetary aspects formed important conditions, or rather boundaries, for the operation of the common policies. In the beginning of the CAP the concerns of other countries were not in the forefront, but in the meantime these also have become of critical importance. The Uruguay Round negotiations on agricultural trade liberalisation (1986–1994), which were clearly dominated by the USA, pressed the EU to start a fundamental reform. Presently, the final agreement of these negotiations has been implemented and successive WTO negotiations on agriculture have started in Geneva. Against this background, 'a clear and reasoned account of the salient features of current rural policies', which Piccinini and Loseby aim to offer in their book, is indeed a valuable source of information both to the interested layman as well as to those who are professionally involved.

The book opens with an introduction by Franz Fischler, European Commissioner for Agriculture and Rural Development, and concludes with a short supportive view by the authors on the future of agricultural policies. The core of the book is divided in two parts. The first part covers nine chapters dealing with general topics, such as the main trends of the CAP, the institutions of the EU, the role of the currencies, the Community budget, the external relations of the community, regional and socio-structural policies and finally environmental policies. These chapters take into account the Berlin decisions of 1999 on the Agenda 2000 proposals of the European Commission. A separate chapter in this part is devoted to the agricultural policy of the USA. This is focused on the Federal Agriculture Improvement and Reform Act of 1996, which is known as the Fair Act or as Freedom

to Farm. The failure of this act is explained in a few sentences, including the fact that beginning in 1998 large additional funds have had to be allocated to the farming sector to compensate for the effects of depressed markets and natural disasters. The second part of the book provides (in five chapters) the highlights of the common market regulations. These regulations concern cereals, oilseeds and protein crops, milk and dairy products, various meat products, fruit and vegetables, wine, olive oil, tobacco and sugar. The explanation of the main features of these regulations is systematically presented in the context of the position of the EU agricultural sector in international markets. The book is completed with selected references and with a combined index of persons and subjects.

The book has benefited from the didactical experience of its authors. They have managed to present the changing CAP in an accessible and non-technical way, which is only possible by leaving out many details. The publisher should be complimented for offering the text in a handy small-sized hardcover edition of some 250 pages, making it a pleasure to read the book. A text of this limited length on such a complicated field as agricultural policies obviously has some limitations. The book is an introduction, not a fundamental analysis. For further study, I would advise the reader to consult the more comprehensive volume edited by Ritson and Harvey (1997), The Common Agricultural Policy. For technical details on the operation of the market organisations, Agra-Europe's CAP Monitor is an indispensable source.

One of the problems for any book or article on changing policies is the danger of being outdated at the time of publication. As noted, this book was finalised after the Berlin decisions of 1999. However, the introduction by Commissioner Fischler is clearly from before that date. More problematic, I find that in many cases the descriptions of international markets in the second part of the book refer to situations in and before the 1995–1996 season. To bridge the gap with the present, it would have been helpful to provide the reader with a listing of relevant websites, such as those of the European Commission (http://europa.eu.int), US Department of Agriculture (http://www.usda.gov) and the World Trade Organisation (www.wto.org).

My sharpest criticism of the book does not relate to its contents but to its title, which falsely suggests a

balanced comparative treatment of agricultural policies in Europe and the USA. As described earlier, the book focuses on a selection of the agricultural policies in Europe, namely those of the EU. The structural, environmental and health-related policies of the Member States are only briefly mentioned, if at all, while the attention to US agricultural policies is mainly restricted to federal crop programmes. And although the subtitle suggests that the farmers are the focus of attention, the core of the book does not go into the fundamental changes which are taking place in their position vis-à-vis the concentrated agro-food industries and retailers.

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PII: S0169-5150(02)00047-6

Central and Eastern European Agriculture in an Expanding European Union

S. Tangermann, M. Banse (Eds.), CABI Publishing, CAB International, Wallingford, Oxon OX10 8DE, UK, 2000, 210 pp., US\$ 85.00, ISBN: 0-85199-425-3

The agricultural transition process in central and eastern European countries (CEECs) has received heightened attention in light of the envisaged accession of these countries to the European Union (EU). The eight articles in this book present the results of an EU research project aimed at identifying major issues for policy action based on quantitative analysis.

Chapter 1 by Davidova and Buckwell analyzes the performance of agriculture in CEECs during the transition process and the justification for grouping the Czech Republic, Estonia, Hungary, Poland, and Slovenia for the first wave of accession negotiations.

An interpretation of economic and political indicators published by the European Commission and international organizations serves to underpin the EU's rationale for discriminating between first and second wave countries. Insufficient reforms are seen as reasons why Bulgaria, Romania, and Lithuania lag behind in overall economic progress. This lack of sufficient reform would also explain the divergence between their deteriorating agricultural terms of trade and increasing ratios of gross agricultural to industrial output. Some convergence of CEECs' agricultural policies towards the Common Agricultural Policy (CAP) is noted.

In Chapter 2, Henrichsmeyer et al. present a Policy Information System for Agricultural Sectors in Transition Countries (PIT), providing insight into productivity and profitability developments during the 1990s. One of the characteristics of PIT is the consistent integration of statistical and other information into an activity-based accounting system. The aim is to provide a sound basis for quantitative analysis and comparability of data across CEECs and with the current EU. The detailed ex-post diagnosis and evaluation of the past performance of agriculture in the CEECs indicates that PIT is a rich source of information. However, an examination of the sensitivity of the diagnosis to its assumptions is missing. The authors also present a static analysis of the impacts of EU integration on agricultural gross value added in the CEECs. Their proposed simulation model, however, is only briefly discussed in the chapter.

In Chapter 3, Hughes evaluates the role of farm structure on sector productivity and the consequences of productivity patterns for future developments. Total factor productivity (TFP) indices by farm size and legal form are compiled. Factor analyses examine whether differences in TFP within a country can be attributed to (dis-)economies of scale and organizational type. The results are interpreted against the institutional and political background in the pre-transition era and after 1990. For example, whereas for the Czech Republic strong evidence for economies of scale in crop production can explain the higher TFP of production co-operatives compared with individual private farms, the opposite is found for Hungary.

In Chapter 4, Gorton et al. trace policy transfers and distortions along food supply chains. The OECD's Producer and Consumer Subsidy Equivalents are ex-

tended to calculate effective support for the various stages of the chain. The results indicate, for example, that in 1996, Polish policies helped processors and retailers at the expense of consumers, whereas Romanian farmers and consumers were supported through government controlled margins at the processing and retail levels. The authors question the hypothesis that excessive concentration at the processing and retail stages is a major problem. This work contributes to a better understanding of the nature of support, and calls attention to critical points in future food chain competitiveness under the pressure arising from EU integration.

In Chapter 5, Münch explores—for the five CEECs forming the first group in EU accession negotiations the effects of EU membership and CAP implementation on agricultural protection levels, product balances, and budgetary expenditures for market guarantees. The results of a partial multi-market model suggest that technical progress and the macro-economic effects of EU membership lead to higher net exports of almost all important agricultural commodities. For pork, however, the region would become a net importer. Implementing the CAP would shape these results depending on price ratios, direct payments, set-asides, and quota regimes. Considering the many uncertainties regarding market developments and conditions for CAP implementation, we recommend that the reader assess the estimated budgetary expenditures with caution.

Chapter 6 by Banse considers the macro-economic consequences of EU membership for the Czech Republic, Hungary, Poland, and Slovenia. Using Computable General Equilibrium Models, Banse disentangles the superimposed effects of integration, adoption of the CAP with Agenda 2000 price policy, and in addition, granting direct payments to farmers. Efficiency gains and transfers from EU structural funds would raise investments, GDP, and welfare, whereas the adoption of CAP prices would produce only minor impacts on GDP. More marked is the estimated redistribution of welfare between rural and urban households. The results also show that direct payments to farmers would be attractive for CEECs from a macro-economic perspective because they would increase net transfers from the EU. The author concludes that prior to enlargement, the EU's price support and protection should be reduced.

Hartell and Swinnen summarize in Chapter 7, the development of agricultural support in the CEECs since the beginning of the transition, and explain the changes and variations of protection levels and the choice of policy instruments resulting from political economic factors. Detailed and useful overviews of policy instrument developments between 1990 and 1998 are compiled. In the analytical part, the authors argue "that political economy determinants of agricultural protection that are important in other countries are also significant in the CEECs" (p. 178). Preparation for EU accession is regarded as an increasingly important factor for instrument choice. With regard to the observed "stopgap" and "ad hoc" policy phase, we wonder why the authors do not address the role of western policy-making support for CEECs.

In the concluding Chapter 8, Tangermann and Swinnen concentrate on issues "particularly relevant in the context of preparing for and implementing the accession of the CEECs to the EU" (p. 185). Understanding imperfections in factor markets would be an important matter for further research. They also propose investigating linkages with up- and downstream sectors, including the effects of managerial competence on economic success. Both aspects are seen as being crucial for future supply potential, international competitiveness, and supply elasticities in the agro-food sector.

The book is highly informative on facts and policy issues and stimulating with respect to quantitative analysis. It is a must for those interested in price and trade policies in the CEECs during transition and in view of EU accession. It is also recommended to those interested in how quantitative modeling approaches can be applied in a transition context. The book has not been written for 'modelers', however, as it stresses applications rather than the details of the models.

Because the book focuses on the analysis of price and trade policies, the discussion of institutional aspects is rather limited. Policy makers are given solid information on the implications of price and trade distortions, which should help them in shaping proper policy strategies during the ongoing transition and accession process. What such a policy strategy should actually look like is a question that goes beyond the scope of this excellent book.

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PII: S0169-5150(02)00051-8

Beef in China: Agribusiness Opportunities and Challenges

John W. Longworth, Colin G. Brown, and Scott A. Waldron (Eds.), University of Queensland Press, St. Lucia, Australia, 2001, 412 pp., price: US\$ 39.95, ISBN: 0-70223-231-9

Beef in China is the first of three books by Longworth, Brown and Waldron that document findings from nearly 4 years of investigation of China's beef industry. The Longworth et al. study provides the most current and complete description of this rapidly developing sector of China's agricultural economy. The authors state that "[t]his book is about identifying agribusiness opportunities in the Chinese beef industry." Nevertheless, the comprehensive presentation of the historical context of the industry's development, the demand and supply characteristics of the market, and the policy environment shaping the beef sector makes this book an interesting read for anyone with a desire to understand the complexities of China's agricultural and food markets.

In the second chapter of the book, the authors briefly recount the emergence of beef production as a major industry in China over the last two decades. They argue that a combination of general market-oriented and specific beef-sector policies was the primary force driving the industry's growth in the 1980s and early 1990s. Beef industry development programs, initiated at various levels of government, targeted investments in breeding stock, feedlots, slaughterhouses, and processing facilities to achieve a wide range of rural development objectives. As a result, production shifted away from the traditional beef regions of the pastoral northwest to the agricultural regions in central and northeast China. The authors contend that the policy-driven nature of these programs prompted many investments to be made without

adequate assessment of the market realities and long-term viability of the projects. The "supply-push" nature of the growth in China's beef sector generated an excess supply of low-quality beef and excess capacity in the slaughter and processing sector, resulting in low cattle prices and a rationalisation of capacity in the mid to late 1990s. The authors suggest that savvy foreign investors can capitalise on the ill-planned development of the sector by identifying opportunities to satisfy market segments that have not yet been adequately reached. Throughout the text, potential investment opportunities and pitfalls for foreign firms are highlighted toward the end of each chapter.

The bulk of the book is devoted to a detailed presentation of China's beef supply chain, covering all of the important links from breeder to consumer. Each of the ten chapters describing the supply chain is largely self-contained. The authors provide historical and policy information, as well as specific market detail, leaving the reader with more than a superficial understanding of each market segment. However, anecdotal information and side discussions are wisely placed in text boxes to avoid interrupting the flow of the main text. The supply discussion is well balanced, placing emphasis on household production and traditional marketing channels, as well as on integrated feedlot and food company chains. At first glance, readers looking for agribusiness opportunities may not readily see the value of discussing at great length household production and low-value marketing channels. Yet, working through the entire supply-side exposition yields several useful insights into the incentives that shape production and marketing decisions and the conditions for profitability for all major participants in the market.

Chapters 13 and 14 focus on the characteristics of Chinese demand for beef. The analysis presented in these chapters is based on survey data collected in 1997–1998 in 11 cities in central China. Chapter 13 summarises Chinese consumers' attitudes toward beef, their preferred product characteristics and methods of preparing beef, and their purchasing behaviour. Chapter 14 examines the determinants of beef demand in the larger context of the demand for all meats and seafood. The authors consider the impacts of prices, income, seasonality, and ethnicity, but they do not undertake a formal econometric analysis. One of the novel features of the demand discussion is the attention paid to demand for beef offal and to the opportu-

nities for foreign firms to increase their returns from products that typically have little or no value in western markets. Longworth et al. round out their sketch of China's beef industry with a discussion of the unique role of the Hong Kong market and issues affecting beef and live cattle trade.

Beef in China is not a primer for foreign firms desiring to invest in China's beef industry, rather it is a descriptive economic study written in language that is readily accessible to non-economists. The book is a snapshot of a rapidly evolving industry; therefore, it has its greatest value to the agribusiness audience in the near term. Reading Beef in China will sharpen the potential investor's vision for identifying lucrative opportunities in China's beef market, but it should also underscore the need for a thorough consideration of the potential market demand and the challenges posed by domestic competition and government involvement before seizing an investment opportunity.

Academic readers and policy makers may find *Beef in China* an interesting case study in economic transition and development. Parallels can be readily observed in other agricultural markets in China or in other developing economies. However, the agribusiness orientation of the exposition forces the reader to recognize those links without much assistance from the authors. Likewise, the lack of econometric analysis might leave economists wondering about the robustness of some inferences drawn from the data presented. Despite these shortcomings, *Beef in China* is a valuable addition to our understanding of China's agricultural markets and well worth reading.

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PII: S0169-5150(02)00044-0

International Trade in Agricultural Products

Michael R. Reed, Prentice-Hall, Upper Saddle River, NJ, 2001, 235 pp., US\$ 91.00, ISBN: 0-130842-09-5

Flexibility is the hallmark of Michael R. Reed's textbook in international agricultural trade. His book

is designed to provide a "... complete treatment of the major issues in international agricultural trade" for advanced undergraduate and graduate students. Reed provides a survey of the essential topics in international trade: gains from trade, importer and exporter trade policies, exchange rates and multilateral trade negotiations. Additional topics include preferential trade agreements, technical barriers, environmental issues, and agribusiness marketing in the global marketplace.

An instructor can design his/her course with either a pure policy approach, based on the first ten chapters, or limit the policy approach to the first five chapters and then concentrate on the firm level international marketing topics in the last four chapters. The framework for agricultural policy analysis starts with the gains from trade in a general equilibrium framework and then moves into a partial equilibrium framework to analyze the impacts of trade policies on patterns of trade and welfare producers' and consumers' welfare.

While the impact of tariffs, quotas, variable levies and other import protection measures are discussed in Chapter 3, the text could be strengthened with more specific examples. Export subsidies, export taxes, embargoes and marketing boards are discussed in Chapter 4. Technical and non-tariff barriers to trade are discussed in Chapter 5. The primary topics found in Chapters 6 and 7 include multilateral trade negotiations, GATT and the World Trade Organization, preferential trade agreements, NAFTA and the European Union (EU).

Macroeconomics and environmental trade issues are covered in Chapters 8 and 9. Reed's discussion of currency appreciation and depreciation could benefit from a more thorough partial equilibrium analysis of their impacts on producers and consumers using a specific commodity example. A real plus, however, is Reed's use of "discussion boxes" in each chapter in which the reader can find a quick summary of special topics

such as the Asian financial crisis and its impact US agriculture.

Reed's discussion of European Agriculture (Chapter 10), provides a strong foundation for understanding recent trade disputes between the EU and the US. A comparison of the costs of the Common Agricultural Policy and US farm programs would have enhanced this chapter. Reed's summary conclusion that "Agriculture is less important in the European Union than in the United States" overlooks the multifaceted role that farming plays in European society, from protecting the environment and the rural countryside to tourism. Moreover, European policies reflect agriculture's important role in society.

The last four chapters of the book cover agribusiness and the food industry in the global market. Reed's emphasis on competitiveness in the international market and the analytical tools for market analysis are especially useful for agribusiness majors. This section is an important component for building student understanding of international trade in agricultural and food products.

The book achieves its objective of providing a very good overview of international trade programs and policies for undergraduates. Graduate students could complement the text with a reading of the excellent references to each chapter. If there is one element missing, it is a chapter on US trade institutions for formulating and administrating trade policy. Such a chapter would complement the discussion of protectionism in food and agricultural products.

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