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**BOOK REVIEW**

# **Handbook on the Human Impact of Agriculture,** **edited by Harvey S. James, Jr. Edward Elgar** **Publishing Limited, Cheltenham, UK, 2021, pp. 430,** **ISBN: 978 183910 173 1 (cased), 978 183910 174 8** **(eBook).**

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*The Handbook on the Human Impact of Agriculture* is an edited book by Professor Harvey S. James, Jr., which draws on 37 expert contributors writing on the different impacts of various agricultural development issues from the perspectives of agricultural and resource economics, agroecology, anthropology, environmental science, geography, sociology and other applied social sciences. Thus, the thinking and coverage are quite broad.

In short, modern agricultural technologies, such as intensive cropping and large-scale livestock husbandry practices, introduction of chemical fertilizers, pesticides and herbicides, have brought about mixed impacts across the world. Obvious positive impacts are greater food supply for a growing population, increased employment and farm income benefits that are critical to regional economies. However, it is critically important to also pay attention to the negative consequences derived from the agricultural development activities. In this book, the authors have differentiated the negative impacts of agriculture on human society into two different levels: (1) the impacts on those closest to the agriculture sector (e.g. farmers) and (2) broader impacts on non-farmers, communities and society. This differentiation has well captured the impacts, and how these are presented and discussed throughout the book makes them easy to follow. In particular, for me, it was the presentation of impacts on the broader society that added great value, as most of the time, much attention has been paid to farmers and/or those closest to the production level, leaving possible broader social or economic impacts much less attended.

For example, agricultural chemical use is pointed to by the authors as an indirect cause of various health problems in the broader society including obesity, diabetes and cancer. To reduce those negative health impacts, the authors suggest transitioning to a post-agrochemical agri-food system to achieve equitable and sustainable futures. However, the authors come short on specific recommendations that could deliver such a transition to the sustainable future, and reduce harmful health impacts as a result of lower agrochemical use. Admittedly, there is no easy answer to this broad question which demands further investigation, but it was a little disappointing nonetheless not to see some coverage of those issues given the opportunity.

Perhaps, this is because most of the authors, while drawing on their experiences of working in developing countries, are based at universities and other research institutes in developed countries. Those closer to the issues may have added useful perspectives.

The book does, however, define ‘agriculture’ broadly to include social, economic and governance systems stretching beyond crop and livestock production, which I enjoyed. This means that a wide range of agricultural activities such as input supply, agricultural innovation, post-harvest activities, such as processing, and delivery of finished products was touched upon as they should be. The book has also covered end consumers, allowing readers to explore possible human impacts on different actors in the agri-food system. This appealed to me given the traditional and considerable amount of attention and analysis typically focussed on production (i.e. smallholder farmers), with less focus on the (just as important) stages of processing and consumption.

As mentioned earlier, the perspectives presented in this book were drawn from, mostly, developed countries. Therefore, information regarding the impacts of agricultural development activities from the other parts of the world was somewhat limited. Some chapters did briefly describe cases of adoption of ‘modern’ agricultural management practices including the use of digital technologies, and how a more cautious attitude towards pesticide use might benefit the livelihoods of smallholder farmers in India. However, it would also have been interesting to see detailed case studies on the similarities and differences in impacts on livelihoods and other criteria, including broader society impacts using comparative studies between developed and developing countries.

For example, the contributors could have explored personal experiences and attitudes of different actors, for example smallholder farmers, which are crucial. Furthermore, do smallholder farmers have the means to participate in the modern agricultural food production system (e.g. fair-trade production system)? Understanding that not all farmers have the same opportunities to participate in modern agricultural production systems is important to help the most disadvantaged farmers to improve their livelihoods. Finally, in case of the pesticide use behaviour, social, cultural and economic disadvantages have been identified as reasons for poor practices; however, it would be more interesting if farmers’ knowledge were touched upon (Jallow *et al.* 2017; Bagheri *et al.* 2019; Aniah *et al.* 2020), which could be used to reduce agricultural impacts on a large scale. But, as stated, most of the lessons presented in this book are drawn from developed countries where farm consolidation, contract farming, digitalization and other transformative changes have been existent for a relatively long time. Thus, the perspectives may be less useful to agricultural impacts in the least-developed and developing countries where contract farming, farm consolidation and agricultural technology adoption are still lagging behind. On that front, the specific countries where lessons are drawn in this book become somewhat less relevant.

Overall, I enjoyed reading this book as it got me thinking—which is not always the case. In particular, I valued the inclusion of diverse perspectives illustrated with evidence. Some of the agricultural development activities presented in this book are currently taking place in my country, Laos, where contract farming, adoption of farm mechanization in maize production system and pesticides use feature prominently in the discourse around agriculture. So, this book provided some interesting perspectives on the impact of agricultural development activities already occurring in developed countries and highlighted the complexity of other impacts that may happen in developing countries like my own. Therefore, researchers and policymakers in both developed and developing countries would find this book a worthwhile reference.

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