

cause tensions. Finally, she would create a new federal agency to administer and monitor industry-sponsored clinical trials. The fact that there are stirrings in all of these directions suggests that she may well have identified the sensitive areas.

For the world outside the United States—particularly southeast Asia, where research is more related to health and wealth creation—there are lessons to be learned from this book. The financial imperatives need to be kept in check to avoid serious damage, not just to science but to people's lives. ■

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Politics and history through the mill

Maize and Grace: Africa's Encounter with a New World Crop 1500–2000

by James C. McCann

Harvard University Press: 2005. 320 pp.

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Robert Tripp

Political, social and economic change has often been associated with the introduction and adaptation of new crop species. *Maize and Grace* shows how a New World crop contributed to the emergence of modern-day Africa. Some parts of Africa now have higher maize consumption per capita than Mexico and Guatemala, where the crop originated. Indeed in many African countries, maize production and supply is an issue that attracts an exceptional level of political attention.

It is unlikely that 500 years of history in a continent of diverse cultures and environments could produce a single, consistent narrative of crop adaptation, so James McCann has wisely chosen instead to provide brief glimpses of several important episodes in Africa's engagement with maize. Historical data on the crop's arrival in West Africa and its subsequent use are unfortunately very scanty, and much of the discussion focuses on what linguistic evidence might tell us. More detail is available to discuss the expansion of maize growing (and the priorities of maize breeding) in eastern and southern Africa in the past two centuries. There are also chapters exploring the response of the scientific community to a brief outbreak of rust disease in West Africa in the 1950s, and about a hypothesis linking the recent expansion of maize growing in northwest Ethiopia to a malaria epidemic.

McCann is fairly even-handed in his analysis, avoiding the temptation to cast maize as either hero or villain in the evolution of

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Same again? A foreign crop has become Africa's staple.

African agricultural systems. The peasants in this tale are pragmatists, not traditionalists; they are engaged with states and markets, seeking secure livelihoods and ways of coping under different political regimes. The agronomic advantages of maize provided African farmers with a productive early-maturing crop, allowed them to harvest and consume the green ears, and freed them from the bird-scaring required with native cereals. Its economic advantages included wide market demand and suitability for industrial milling techniques.

Maize farming provided opportunities for, and was in turn moulded by, the development of native kingdoms, colonial administrations and independent states in Africa. Crops can, of course, make significant contributions to political regimes without being transferred to new environments: the Incas imposed maize agriculture in their dominion to demonstrate their political control and to feed their armies. And Africa's crops have had an impact in the New World: in the late twentieth century, traditional maize-growing areas in central Mexico were transformed into sorghum fields as the economics of crop production and government policies stimulated the search for alternative crops.

Rather than describing sweeping historical currents, the book offers the reader a series of vignettes that provide opportunities to appreciate the paradoxes of maize development policy and to contemplate some

enduring themes in agricultural history. Development specialists worry about whether Africa's farmers can adapt to increasingly rigid standards for export agriculture. But they may be unaware that the dominance of white maize in southern and eastern Africa owes much to the fact that colonial maize farmers in the early twentieth century planted it to take advantage of export opportunities to Britain, where white starch was in demand. Similarly, current debates about agricultural subsidies in rich countries can be seen in the light of carefully constructed colonial policies that favoured European farmers in Africa.

Investment in agricultural research led to the highly productive single-cross maize hybrid SR52, which helped to support the economy of the breakaway Rhodesian regime. But McCann misses the opportunity to explore how the succeeding Zimbabwe government's devotion to hybrid maize led it to prohibit the sale of open-pollinated varieties.

Although McCann focuses on Africa, he provides some fascinating comparisons and links with southern Europe. During the eighteenth and nineteenth centuries, while maize and cassava were contributing to the growth and political dominance of the kingdom of Asante in West Africa, maize was helping to transform the agriculture of the Venetian republic. And although, as he argues, maize cropping patterns in Ethiopia may be partly responsible for the contemporary spread of malaria, farmers in the Balkans adopted maize to keep them away from the malaria-ridden lowlands. We can mourn the loss of maize diversity in the field and on the table, reflected both in Africans' development of a preference for white maize and in Italians' abandonment of their polenta made from red flint varieties.

The book usefully juxtaposes maize's multiple trajectories in the hands of African farmers with the political and economic forces that increasingly mandate uniform cropping patterns, and with market requirements. These forces are not, of course, unique either to maize or to Africa. McCann fails to answer the question of whether maize can indeed be Africa's "saving grace", and the concluding chapter only touches on the larger questions now facing Africa's agriculture. But the book's nicely drawn examples provide opportunities for reflection as these issues are debated. ■

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