Reflexive biotechnology development
Studying plant breeding technologies and genomics for agriculture in the developing world

Wietse Vroom
Agriculture plays a crucial role in the alleviation of extreme poverty and hunger. Development of new crop varieties that are more resistant to disease and pests, and that produce more in dry conditions or on poor soils, can contribute to agricultural development. However, while the technical potential to improve crop varieties is increasing rapidly, such technologies do not always successfully contribute to the economic development of resource poor farmers. New technologies may never reach farmers, may be prohibitively expensive, or may solve only a very limited part of the problem that farmers are facing in practice.

This book engages with the debate on how modern genetic technologies are used in plant breeding, and questions what it is that makes a new technology appropriate for pro-poor agricultural development. It does so by moving beyond a technical perspective on what constitutes ‘appropriate technology’ and by analyzing how different approaches to agro-technological development create different social roles for technology developers and farmers in innovation processes and production systems. Case studies of projects and international research centres in India, Peru and Mexico provide an insight in the different approaches to agro-technological development in which farmers are treated as ‘recipients of technology’, or are involved as ‘co-innovators’, and in which technology developers present themselves as ‘solution providers’ or as ‘service providers’. Insight in those different approaches contributes to a clearer debate on the potential role of biotechnology in agricultural development and the reduction of poverty.