

Farming systems in a rational world.

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Abstract

What would major crop production systems look like by mid-century if the world's population is stable, the Millennium Development Goals are achieved, the Kyoto Protocol or a similar instrument is in full force, perverse agricultural trade subsidies have been eliminated, and the world has otherwise come to its senses in terms of healthy diets, peace, democracy and good governance? In other words, what would the major crop production systems be in a rational world? What would happen if all that the international community were fighting for is really attained? What would the tradeoffs be? Would there be major synergies? Who would be the winners and the losers? In such a scenario, the world's population is stable at 9 billion people. The Millennium Development Goals have been achieved, meaning that the proportion of people suffering from hunger, absolute poverty, HIV-AIDS, malaria, tuberculosis, and lack of access to water, sanitation and essential medicines have been reduced in half, discrimination against women and girls has been eliminated, primary education is available to all, child and maternal mortality have been reduced by two thirds, the rural and urban environments are protected and enhanced, all through the work of an effective global partnership between rich and poor countries. By 2050 hunger, absolute poverty, HIV-AIDS, malaria, tuberculosis, lack of access to water, sanitation, child and maternal mortality have been reduced to insignificant levels. Greenhouse gas emissions are now at the level of 1990. Terrestrial and aquatic biodiversity are effectively protected; new genetic resources are being utilized, biotechnology and nanotechnology are mature industries and a much more powerful internet is accessible to all. I obviously do not know the answers, but the paper will set up a framework to address the question.