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“Towards shifting paradigms in agriculture
for a healthy and sustainable future”

Transforming Food Agriculture to Feed the People and Save the Planet

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Abstract

The theme of Tropentag 2021 is ‘Towards shifting paradigms in agriculture for a healthy and sustainable future’. I have taken the liberty of interpreting agriculture as ‘food agriculture’ and I will confine my remarks on ‘the future’ to developing countries where both opportunities and challenges for agricultural transformation are significant.

Demand for food is driven by three main drivers – human population size, income and demographics. Robust modelling of population growth, incomes and demographics show that demand for food will likely plateau in the 2050s, but by then between 60–70 % more food will be needed than is currently produced. However, food supply is less predictable, as it is influenced by many more variables such as crop, livestock and fish productivity, increasing resource constraints (land and water in particular), climate change and variability, and global as well as local economic and political conditions. Our quest must be about both food and nutritional security – along with addressing the current and future food demand sustainably – environmentally, socially and economically.

To respond to this challenge in developing countries three paradigm shifts are proposed: (a) Agriculture must become a growth pole with equity, including for women and youth; (b) Research and innovation must respond to the needs of the agricultural population who are mostly small and medium scale farmers and entrepreneurs; (c) shorten and professionalise agriculture supply chains to reflect a focus on local and regional markets instead of export orientation.

Should these paradigm shifts take place, the food agriculture sector would respond to meeting future food and nutritional needs sustainably, contribute to gainful and equitable employment, as well as to growth and development in developing countries.

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