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Autore	Boincean Boris
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Nota di contenuto	Preface -- Introduction -- Overview -- On giant's shoulders -- 1 Shifting the paradigm of agricultural intensification -- 2 Agro-ecology: the Scientific Basis for Sustainable Intensification of Agriculture -- 3 Land Use, Soil Quality and Soil Organic Matter Management of Chernozem -- 4 Carbon Sequestration and Climate Change -- 5 Crop Rotation -- 6 Soil Tillage and Conservation Agriculture -- 7 Soil Fertility, Soil Fertilization and Nutrient Recycling -- 8 Potential of Chernozem to Reduce Global Warming and Increase Food Security -- 9 General Conclusions -- Index. .
Sommario/riassunto	This book deals with the sustainability of agriculture on the Black Earth by drawing on data from long-term field experiments. It emphasises the opportunities for greater food and water security at local and regional levels. The Black Earth, Chernozem in Russian, is the best arable soil in the world and the breadbasket of Europe and North America. It was the focus of scientific study at the very beginnings of soil science in the late 19th century—as a world in itself, created by the

roots of the steppe grasses building a water-stable granular structure that holds plentiful water, allows rapid infiltration of rain and snow melt, and free drainage of any surplus. Under the onslaught of industrial farming, Chernozem have undergone profound but largely unnoticed changes with far-reaching consequences—to the point that agriculture on Chernozem is no longer sustainable. The effects of agricultural practices on global warming, the diversion of rainfall away from replenishment of water resources to destructive runoff, and the pollution of streams and groundwater are all pressing issues. Sustainability absolutely requires that these consequences be arrested.
