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Sommario/riassunto	<p>A plant growing under field conditions is not a simple individual; it is a community. We now know that there is a community of microbes associated with all parts of the plant, and that the root associated community is particularly large. This microbial community, the phytomicrobiome, is complex, regulated and the result of almost half a billion years of evolution. Circumstances that benefit the plant generally benefit the phytomicrobiome, and vice versa. Members of the holobiont modulate each other's activities, in part, through molecular signals, acting as the hormones of the holobiont. The plant plus the phytomicrobiome constitute the holobiont, the resulting entity that is that community. The phytomicrobiome is complex, well developed and well-orchestrated, and there is considerable potential in managing this system. The use of "biologicals" will develop during the 21st century and play as large a role as agro-chemistry did in the 20th century. Biologicals can be deployed to enhance plant pathogen resistance, improve plant access to nutrients and improve stress tolerance. They can be used to enhance crop productivity, to meet the expanding demands for plant material as food, fibre and fuel. They can assist crop plants in dealing with the more frequent and more extreme episodes of stress that will occur as climate change conditions continue to develop. The path is clear and we have started down it; there is a considerable distance remaining.</p>