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Nota di contenuto	Preface -- Chapter 1. Chemical feature -- Chapter 2. The biological role of ascorbate in plants -- Chapter 3. Ascorbate biosynthesis in plants -- Chapter 4. The oxidization and metabolism of ascorbate -- Chapter 5. Recycling of ascorbate -- Chapter 6. Transport of ascorbate -- Chapter 7. Key enzymes involved in ascorbate biosynthesis and metabolism -- Chapter 8. Regulation of ascorbate biosynthesis. - Chapter 9. Ascorbate in tomato, a model fruit. - Chapter 10. Metabolic modification of ascorbate in plants -- Chapter 11. Regulating ascorbate biosynthesis and metabolism for abiotic stress tolerance in plants -- References -- Index.
Sommario/riassunto	Ascorbate acid (AsA) is an important antioxidant in plants, playing important roles in various physiological processes. Humans have lost the ability to synthesize AsA because of the lack of L-gulonolactone oxidase (GLO).

lactone oxidoreductase, and thus have to absorb ascorbate from diet including fresh fruits and vegetables, as they are the major sources of ascorbate. Several pathways for AsA biosynthesis and metabolism have been identified in plants since 1998. More attention has been paid to improving ascorbate content in plants especially in fruits and vegetables. Significant progresses have been made on key enzymes and genes involved in the AsA biosynthesis and metabolism. Recently, more interests have arised in the regulation of AsA biosynthesis, as it is constantly regulated by the plant development and the environmental factors, e.g. light. Ascorbic acid is also frequently reported to affect plant growth and development e.g. flowering time and fruit ripening. The scope of the book is to cover the biological role, biosynthesis and metabolism, regulation, and metabolic modification of ascorbate in plants.

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