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Nota di contenuto	Flowering Plant Embryology: With Emphasis on Economic Species; Contents; Preface; Introduction; Background: General works on embryology; Background: Embryology and systematics; What is a flower?; The floral appendages; The sexual life cycle; Literature cited; 2 Stamen and Androecium; Stamen variation in representative families; Stamen anatomy; Growth of the stamen: The anther; Growth of the stamen: Filament elongation; Anther dehiscence; Evolution of the stamen; Literature cited; 3 Pollen Development: Theme and Variations; Introduction to pollen; Summary of pollen development Pollen development in sorghumPollen development in sweet pepper; Pollen development in walnut; Pollen development in the mustard family; Pollen development in sunflower; Literature cited; 4 Pollen Development: Details of Stages; Anther differentiation before meiosis; Pollen sac before meiosis; Meiosis; Cytokinesis; Duration of meiosis; Tapetal behavior; Tapetal function; Post-meiosis: The pollen wall; Post-meiosis: Internal microspore/pollen events; Duration of pollen development; Gene expression during pollen development; Numbers of

pollen produced; Literature cited; 5 Carpel and Gynoecium
Carpel evolution and developmentCarpel variations: General considerations; Carpel variations: Apocarpy; Carpel variations: Syncarpy; Carpel variations: Relations to other flower parts; Carpel structure: Stigma; Carpel structure: Style and transmitting tissue; Literature cited; 6 Ovule and Embryo Sac; Ovule form and development; Ovule failure and ovule abortion; Megasporogenesis; Embryo sac (megagametophyte) development; Cells in the normal (Polygonum) type of embryo sac; Literature cited; 7 Pollination and Pollen-Stigma Interaction; Pollen desiccation and rehydration (harmomegathy)
Life span of pollenPollen food reserves; Factors in pollination success or failure; Pollen-stigma interaction: Incongruity; Pollen-stigma interaction: Incompatibility; Pollen-stigma interaction: Self-incompatibility; The mentor pollen technique; Callose and incompatibility; Late-acting (ovarian) selfincompatibility; Molecular basis for pollenstigma interactions; Compatible interaction; Literature cited; 8 Pollen Germination, Pollen Tube Growth, and Double Fertilization; Germination and early tube growth; Cells and nuclei within the pollen tube; Dimorphic sperm cells and the male germ unit
Guiding and nurturing the pollen tubeCallose plugs; Swelling and branching of pollen tubes; Pollen tube competition carpel ""filters""; Rate and duration of pollen tube growth; Pollen tube growth in ovary and ovule; Pollen tube discharge and double fertilization; Polyspermy; Literature cited; 9 Endosperm; Generalizations and historical interpretations; Cytology of endosperm; Introduction to endosperm types; Multicellular endosperm; Coenocytic/multicellular endosperm; Helobial endosperm; Coenocytic endosperm; Endosperm haustoria; Perisperm; Movement of carbohydrates into endosperm
Storage products in endosperm

Sommario/riassunto

Drawing from a lifetime of teaching botany, Dr. Nels Lersten presents the study of the structures and processes involved in the reproduction of plants in his text Flowering Plant Embryology. This richly illustrated reference text, with more than 350 figures and illustrations, presents general angiosperm embryology as it applies to economically important plants. The unique focus on economically important species increases the relevance of this book to today's students and researchers in the plant sciences. Lersten emphasizes the plant species that affect human livelihood, includ