

BOOK REVIEW

Rimmer S.R., Shattuck V. I., Buchwaldt L. (Eds.). 2007. Compendium of Brassica Diseases. APS Press – The American Phytopathological Society, St. Paul, Minnesota, U.S.A. 117 pp. ISBN 978-0-89054-344-3.

The APS Press published a highly successive, authoritative and practical reference guide for persons engaged in diagnosing and managing plant diseases problems. This compendium refers to the family *Brassicaceae* (= *Cruciferae*) which is composed of about 350 genera and 3500 species from which *Brassica oleracea*, *B. napus*, *B. rapa*, and *B. juncea*, are cultivated all over the world for either vegetable, animal fodder or oilseed purposes. In addition diseases of *Raphanus sativus* and *A Armoracia rusticana* are also included. It is worthy to mention that world production of cabbage, cauliflower, and oilseed rape has increased over the last years because of oilseed demand and increasing evidence of its anti-carcinogenic properties.

As indicated in the "Preface" (p. III) the purpose of this compendium is to provide a thorough, authoritative and practical reference guide on diagnosing and managing disease problems in brassica crops in all parts of the world. In order to make this compendium useful for growers, research scientists, and plant breeders in all countries where brassicas are grown, the editors invited 43 experts to participate in writing of this compendium.

Part I. "Introduction" (p. 1–14) contains two sections referring to taxonomy and production of brassicas. In section "Taxonomy and genetic relationships of *Brassica* species" (p. 2–6) in descriptive, graphic and tabulated way species relationships and characteristics down to the level of subspecies and varieties with common names are given within: *B. oleracea*, *B. rapa*, *B. nigra*, *B. napus*, *B. carinata*, *B. juncea*, *Crambe abyssinica*, *Eruca vesicatoria* subsp. *sativa*, and *Raphanus sativus*. (B). In section "Production management" (p. 7–14) very useful technical information on fertilization, direct seeding, transplanting, harvest, irrigation, pest management and harvesting is provided for the main species and subspecies of (1) vegetable crops (cabbage, cauliflower, broccoli, Brussels sprouts, kohlrabi, greens), (2) Asian vegetable brassica crops (Asian mustard green, Chinese broccoli, Chinese cabbage, root crops, horseradish, radish, turnip and rutabaga), (3) Oilseed crops – oilseed rape (canola, rape-seed) and culinary and condiment mustards.

Part II. "Infectious Diseases" (p. 15–81) contains the detailed characteristics of the following microbial agents infecting brassica crops: (1) Diseases Caused by Fungi and Oomycetes (p. 15–58): *Alternaria brassicae*, *A. brassicicola* and *A. japonica*; *Colletotrichum higginsianum*, *Phoma lingam*, *Leptosphaeria maculans*, *Aphanomyces raphani*, *Botrytis cinerea*, *Plasmodiophora brassicae*, *Hyaloperenospora parasitica*, *Pyrenopeziza brassicae*, *Phytophthora* spp., *Pythium* spp., *Erysiphe cruciferarum*, *Rhizoctonia solani*, *Mycosphaerella brassicicola*, *Sclerotinia sclerotiorum*, *Verticillium dahliae*, *V. longisporum*, *Mycosphaerella capsellae*, *Albugo candida*, *Fusarium oxysporum* f.s. *conglutinans*. (2) Diseases Caused by Bacteria (p. 58–62): Bacterial leaf spot (*Pseudomonas syringae* pv. *maculicola*), bacterial soft rot (*Erwinia carotovora* var. *carotovora* and *Pseudomonas marginalis* pv. *marginalis*), *Xanthomonas campestris* pv. *campestris*); (3) Diseases Caused by Mollicutes (p. 62–65): Aster yellows (*Phytoplasma* sp.), *Spiroplasma citri*). (4) Diseases caused by viruses (p. 66–75): Beet western yellows virus) (Turnip yellows luteovirus); Cauliflower mosaic, Cucumber mosaic, Radish mosaic, Ribgrass mosaic, Turnip crinkle, Turnip posaic, Turnip yellow mosaic. (5) Diseases Caused by Nematodes: (p. 75–81): cyst nematodes – *Heterodera schachtii*, *H. cruciferae*; root-knot nematodes – *Meloidogyne hapla*, *M. incognita*, *M. arenaria*, *M. javanica*.

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In Part III. Noninfectious Diseases (p. 82–103) the following recognized disorders were characterized: (1) Air Pollution (p. 82); (2) Disorders Related to Environmental Effects (p. 83–91) – black speck of cauliflower; bolting or buttoning of cauliflower, broccoli, and cabbage; cold injury, drought injury, growth scars and tissue splitting, hail injury, heat tolerance in broccoli and cauliflower, hollow stem, intumescence, mechanical injury, edema, petiole freckle (gomasho) of Chinese cabbage, riciness of cauliflower, root cavities of daikon (Lo Bok), salt injury, soil compaction problems, soil moisture injury, strangles (windwhip), winter decline syndrome, yellow eye (starring, cat eye); (3) Genetic abnormalities (p. 91–93), (4) Herbicide injury (p. 93–97) – herbicide injury due to improper timing or rate, herbicide injury due to unintentional exposure, herbicide injury due to carryover; (5) Nutritional deficiencies (p. 98–103) – lack of calcium, chlorine, iron, magnesium, nitrogen, phosphorous, potassium, sulfur, zinc. (6) Postharvest disorder of vegetable brassicas (p. 103–104) – chlorophyll loss, discoloration in cabbage, leaf abscission, off-flavors and off-odors in broccoli and cauliflower.

A “Glossary” (p. 105–110) and “Index” (p. 111–117) greatly facilitate the use of this very useful book which I strongly recommend to all agricultural libraries and to a broad community of plant protection specialists involved in research, extension service and teaching activities.

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