Book Review

Schwartz, H.F., Steadman, J.R., Hall, R., Forster, R.L. 2005. Compendium of Bean Diseases. 2nd Edition. APS Press – The American Phytopathological Society, St. Paul, USA. 109 pp. ISBN 0-89054-327-5.

This book will be of great interest to bean growers, plant protection specialists, diagnostic clinicians and all others interested in recognition or management of bean plants diseases.

Common bean (*Phaseolus vulgaris*) is the third most important food legume crop in the world and only soybean (*Glycine max*) and peanut (*Arachis hypaea*) have higher production rate. The genus *Phaseolus* contains over 51 species among which the most important are: common bean (*P. vulgaris*), runner bean (*P. coccinneus*), lima bean (*P. lunatus*) and tepary bean (*P. acutifolius*).

This compendium describes 72 diseases, 32 of which are caused by fungi, 5 by bacteria, 6 by nematodes, 26 by viruses, 4 by phytoplasmas, and numerous noninfectious diseases caused by abiotic factors. The scope of the book is well explained in the "Introduction" (p. 1–9) and in two parts of this compendium.

Part I "Infectious diseases" (p. 10–86) provides information on various pathogens and diseases according to: (1) symptoms, (2) casual organism, (3) disease cycle and epidemiology, (4) management, and (5) selected references.

In chapter "Fungal diseases of subterranean parts" (p. 10–22) seven following pathogens are characterized: *Thelaviopsis basicola, Fusarium solani*, *F. oxysporum, Phymatotrichum omnivorum, Pythium* spp., *Rhicoctonia solani*, and *Sclerotium rolfsii*.

In chapter "Fungal diseases of aerial parts" (p. 22–46), the following pathogens are characterized: *Alternaria* spp., *Phaoisariopsis griseola, Glomerella lindemuthiana=Colletorichum lindemurgianum, Phoma eigua, Ascochyta* spp., *Macrophomina phaseolina, Cercospora cruenta, Chaetoseptoria wellmanii, Diaporthe phaseolorum, Phytopthora nicotianae* var. *parasitica*, *Entyloma* spp., *Mycovellosiellla phaseolina, Trichotecium roseum, Erysiphe polygoni, Uromyces appendiculatus, Elsinoe phaseoli, Phakospora pachrhizi, P. meibomiae, Rhizoctonia solani, Pseudocercoporella albida, Sclerotinia sclerotiorum, Nematospora coryli,*

Into chapter "Diseases caused by bacteria" (p. 46–52) the following four species are included: *Pseudomonas syringae* pv. *syringe*, *P. syringae* pv. *phaseolicola*, *Xanthomonas campestris* pv. *phaseoli*, *Curtobacterium flaccumfaciens* pv. *flaccumfaciens*.

Into chapter "Diseases caused by nematodes" (p. 52–57) eleven following species are included: *Meloidogyne incognita*, *M. javanica*, *M. arenaria, Pratylenchus penetrans, P. brachyarum*, *P. neglectus, P. projectus, Rotylenchulus reniformis, Heterodera glycines, Belonalaimus longicaudatus, Aphelenchoides ritzemabosi* and others.

In chapter "Diseases caused by viruses" (p. 58–84) 23 diseases are described: alfalfa mosaic, angular mosaic, bean calico mosaic, bean common mosaic, bean common mosaic-black rot, bean dwarf mosaic, bean golden mosaic, bean golden yellow, mosaic, bean mild mosaic, bean necrosis mosaic, bean pod mottle, bean rugose mosaic, bean severe mosaic, bean southern mosaic, bean summer death, bean yellow dwarf, bean yellow mosaic, curly top, peanut mottle, peanut stunt, red node, soybean mosaic and stipple streak.

In chapter "Diseases caused by phytoplasmas" (s. 84–86) four diseases are described: long stem, machismo, phyllody and witches'-broom.

Part II. "Noninfectious diseases" (p. 87–98) characterizes the following environmental and genetic disorder: air pollutions, bald heads, genetic abnormalities, moisture stresses, pesticide injury and temperature stresses. Of special interest is chapter "Mineral deficiencies and toxicities" (p. 93–96) describing agronomic and pathologic effects of phosphorous, iron, magnesium and potassium deficiencies.

Of special value to readers will be "Glossary" (99–104)providing definitions and explanations of many words and terms used in agronomy, plant pathology and plant protection.

An extensive "Index" (p. 105–109) greatly facilitates finding information on each disease or pathogen in this very informative and excellently written and illustrated compendium.

Jerzy J. Lipa
Institute of Plant Protection
Miczurina 20, 60-318 Poznań, Poland