

MAJOR WORLD SOYBEAN
DISEASES,
WEEDS AND
INSECT PESTS

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Food and Agriculture Organization of the United Nations

Insert to *Guidelines for Integrated Control of Soybean Pests*

The first step in the development of an integrated pest control (IPC) program is to obtain the correct identification of the major pests involved. This book (an insert in Guidelines for Integrated Control of Soybean Pests) presents color illustrations of a sample of some of the most important soybean pests of the world.

The correct identification of a weed, insect or disease provides the first key to the literature on those pests and thus to the information on their biology and control. Control recommendations in IPC must be target-specific, if they are to be economically and ecologically sound. Therefore, use these illustrations often but with caution. Most weeds and diseases represented here have widespread distribution throughout the world. However, you should pay particular attention to the information on geographical ranges of the insect pests. Some species superficially may resemble those illustrated but, in fact, be quite different. Apparently similar insect species may have very different behavioral and ecological characteristics that influence their pest status and determine the best control approach. In case of doubt, collect specimens with care and submit them to a specialist for a positive identification. Use more detailed manuals for confirmation of your own identifications.

The following are some useful illustrated manuals recommended to supplement the information provided here:

Compendium of Soybean Diseases, J.B. Sinclair. American Phytopathological Society, St. Paul, Minnesota, USA. 104 p. (1982).

Soybean Insects: Identification and Management in Illinois, M. Kogan and D.C. Kuhlman. Bulletin 773, University of Illinois, College of Agriculture, Urbana, Illinois, USA. 58 p. (1982).

Soja: Como Reconhecer e Combater suas Pragas [How to Identify and Control its (Insects) Pests], D.L. Gazzoni, Centro Nacional de Pesquisa da Soja, Londrina, Parana, Brasil. 18 p. (1979).

Insects of Grain Legumes in Northern Australia: A Survey of Potential Pests and their Enemies, M. Shepard, R.J. Lawn and M.A. Schneider. University of Queensland Press, St. Lucia, Australia. 89 p.(1983).

Selected Weeds of the United States, U.S. Department of Agriculture, Agricultural Research Service, Washington, D.C., USA. 463 p. (1970).

Weed Control Manual, Annual issues published by Ag-Consultant and Fieldman, Willoughby, Ohio, USA.

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Designed by Marisa Rubenking Meador.

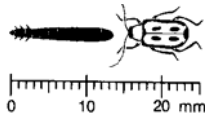
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INSECTS

I. Coleoptera *beetles, chafers, grub*



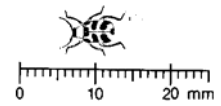
1. *Cerotoma trifurcata*
bean leaf beetle (adult)
North America



2. *Cerotoma trifurcata*
bean leaf beetle (larva)



3. *Ceratoma arcuata*
bean leaf beetle
(adult)
Brazil



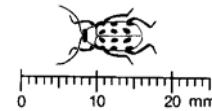
4. *Aulacophora* sp.
(adult)
Korea



5. *Colaspis brunnea*
grape colaspis (adult)
North America



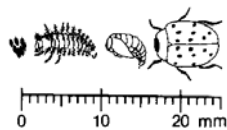
6. *Diabrotica undecimpunctata*
southern corn rootworm (adult)
North America



7. *Epilachna varivestis*
Mexican bean beetle
(eggs)
North America



8. *Epilachna varivestis*
Mexican bean beetle (larva)



9. *Epilachna varivestis*
Mexican bean beetle (pupa)



10. *Epilachna varivestis*
Mexican bean beetle (adult)



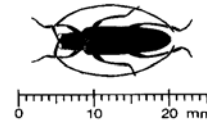
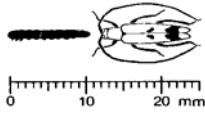
11. *Zygrita diva*
stem borer (adult)
Australia



12. *Zygrita diva*
stem borer (larva)



13. *Dectes texanus*
weed borer (adult)
North America



14. *Grammopsoides rufipes*
stem borer (adult)
Peru



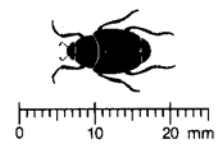
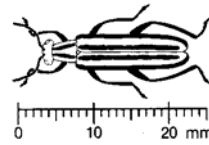
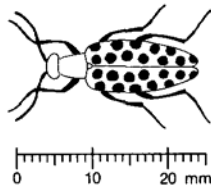
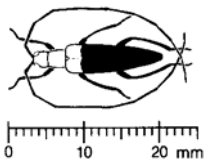
15. *Epicauta atomaria*
blister beetle (adult)
Brazil



16. *Epicauta vittata*
striped blister beetle (adult)
North America



17. *Popillia japonica*
Japanese beetle (adult)
North America and Asia



18. *Anomala rufocuprea* (adults)
Japan



19. Scarabaeidae larva
white grub
North America



20. Elateridae larvae
wireworms
North America

