



IAPPS NEWSLETTER

Number VIII August, 2010

TWO EXOTIC INVASIVE WEEDS ON THE MARCH IN AFRICA



A typical stand of Chromolaena odorata

The Siam weed, *Chromolaena odorata* and the parthenium weed, *Parthenium hysterophorus*, both belong to the family Asteraceae are of neotropical origin. *Chromolaena odorata* was introduced as an ornamental plant to Kolkotta (Calcutta) Botanical Gardens from the Caribbean Islands in the 1840s. It escaped cultivation and became established throughout the humid tropical regions of Asia. In 1937, it was accidentally introduced to Nigeria through the imported seeds of the forest tree, *Gmelina arboria* from Sri Lanka. From Nigeria, it has spread throughout humid tropical West and Central Africa and recently to East Africa. Another biotype of *C. odorata* was introduced in to South Africa (Durban area) in the 1940s which is spreading northwards.



Parthenium hysterophorus (photo left) was accidentally introduced into India in 1955 and has since spread to Pakistan, Nepal, Bangladesh and Sri Lanka in that region. It was also introduced in to Australia in 1955 and has spread to Papua New Guinea, New Caledonia, Vanuatu and Taiwan. In the late 1970s, this weed established in Ethiopia and has spread to neighboring countries in East Africa. Another infestation from South Africa has moved northwards resulting in establishment of the weed in Madagascar, Southern and Central Africa and posing a threat of spread to West Africa.

Biological control programs for *C. odorata* supported by various national, regional and international agencies have resulted in establishment of the natural enemies, *Pareuchaetes pseudoinsulata* (Lepidoptera: Arctiidae), *Cecidochares connexa* (Diptera: Tephritidae) and *Acalitus adoratus* (Acarina: Eriophyidae) in Asia; *P. pseudoinsulata* in West Africa; and *Pareuchates insulata* (Lepidoptera: Actiidae) and *Calycomyza eupatorivora* (Diptera: Agromyzidae) in South Africa.

Biological control of *P. hysterophorus* was mostly carried out by Australia resulting in release of over a dozen natural enemies. India has released one natural enemy, *Zygogramma bicolorata* (Coleoptera: Curculionidae) which has fortuitously established in Pakistan and Nepal.

Currently an IPM CRSP USAID supported biological control program in East Africa and a national program in South Africa are screening natural enemies *Z. bicolorata* and *Listronotus setosipennis* (Coleoptera: Curculionidae) in the quarantine laboratories for eventual field release.

Recognizing the serious threat posed by this weed to the agricultural and forest areas and to the environment, Global Working Groups for each of these weeds have been established under the auspices of the International Organization for Biological Control (IOBC). A joint international workshop on biological control of *P. hysterophorus* and *C. odorata* has been planned to take place in Nairobi, Kenya during November 1-5, 2010. (see below workshop announcements)

Prof R. Muniappan

IAPPS Coordinator

Region XI: North America

Email: rmuni@vt.edu

SECOND ANNOUNCEMENT: COMBINED WORKSHOPS ON INVASIVE WEEDS

The '8th IOBC International Workshop on Biological Control and Management of *Chromolaena odorata* and Other Eupatorieae' will be held jointly with the "1st IOBC International Workshop on Biological Control and Management of *Parthenium hysterophorus*" at the ICRAF (World Agroforestry Centre) auditorium, Nairobi, Kenya, 1 to 5 November 2010.

These workshops are organized under the auspices of the IOBC, and the 8th workshop on *C. odorata* will be hosted by CABI. The workshop was initiated in 1988 to facilitate the management and biological control of *C. odorata* in

resource-poor tropical and subtropical countries. Kenya has been selected as the host country for this 8th workshop, the third held in Africa, because *C. odorata* has recently been recorded there and in other countries in East Africa for the first time. The entire region has been shown to be highly climatically suitable for the weed. Because tourism is one of the main foreign currency earners in Kenya, and the biggest employer is the agricultural sector, the threat of *C. odorata* is very real.

The intended purpose of the upcoming workshop on parthenium is to bring together international researchers working on this invasive weed, to disseminate information about its biology, occurrence and management, to increase collaboration amongst researchers regionally and globally, to optimise resources for the control of this weed, and for technology transfer (supply of biocontrol agents to other countries). Additionally, it is hoped that this workshop will raise awareness of parthenium weed for countries that are at risk, or that are in the early stages, of invasion by this weed.

For more details check this web link:

<http://www.arc.agric.za/home.asp?pid=5229>


or contact :

Dr. Costas Zachariades,

Agricultural Research Council - Plant Protection Research Institute, South Africa

E-mail: ZachariadesC@arc.agric.za

VEGETABLE IPM GUIDE FOR EXTENSION WORKERS

 This new guide has been produced by the International Institute of Tropical Agriculture (IITA) and Institut National des Recherches Agricoles du Bénin (INRAB), Cotonou, Benin, with support from the CGIAR Systemwide Program on Integrated Pest Management (SP-IPM), to improve the quality and usefulness of pest management research. All too often, extension workers do not know the cause of common pest problems in the crops they work with. Pest problems usually arise when the biological, ecological and sociological processes which underpin agriculture are disrupted. This guide helps to fill that information gap by focusing on accurate identification and better understanding of biodiversity in the development and application of IPM options against vegetable pests. Farmers make crop production management decisions based on issues such as yield, palatability and market potential, and often omit crop protection as a consideration. Planting dates are chosen mainly on the basis of a socio-economic calendar of activities. Agronomic techniques are largely dictated by labour and economic realities at the time. Some of these decisions may affect the type of IPM options which are used in current or subsequent crops. This guide aims to equip extension workers with the knowledge and skills required for them to assist farmers to maximise the production and protection of their vegetable crops and to use available IPM options effectively.

The guide has four main sections:

Agroecosystems as functional units: Increased knowledge of the components of vegetable agroecosystems and of the interactions between, and within, these components help extension workers to treat the agroecosystem (farm) as a single functional unit. Extension workers armed with a holistic view can offer better advice on the choice and application of IPM options.

Field monitoring: All the pests listed in this guide are unlikely to occur in the same field and at the same time. Vegetable pest problems are however very dynamic. Frequent farm visits are therefore essential to note and respond rapidly to these kinds of changes in a timely manner *Pest lists:* The field diagnostic methods and specimen collection techniques presented in this guide aim to increase the capacity of extension workers to correctly identify and assess the economic importance of pests.

IPM promotion: Harmful effects of inappropriate chemical control methods underline the need to search for and promote biologically-based IPM options in vegetable production. In their work to introduce farming communities to ecologically sound solutions to pest problems, extension workers need a full understanding of the types, nature and mode of operation of available IPM options.

For more information:

Dr. Braima James

IITA

E-mail: b.james@cgiar.org

The IAPPS Newsletter is published by the International Association for the Plant Protection Sciences and distributed in *Crop Protection* to members and other subscribers. *Crop Protection*, published by Elsevier, is the Official Journal of IAPPS.

IAPPS Mission: to provide a global forum for the purpose of identifying, evaluating, integrating, and promoting plant

protection concepts, technologies, and policies that are economically, environmentally, and socially acceptable.

It seeks to provide a global umbrella for the plant protection sciences to facilitate and promote the application of the Integrated Pest Management (IPM) approach to a the world's crop and forest ecosystems.

Membership Information: IAPPS has four classes of membership (individual, affiliate, associate, and corporate) which are described [here](#).

The *IAPPS Newsletter* welcomes news, letters, and other items of interest from individuals and organizations. Address correspondence and information to:

Dr. Manuele Tamo, Editor

IAPPS Newsletter

Biological Control Center for Africa, IITA-Benin

08 B.P. 0932 Tri Postal, Cotonou, Republic of Benin

E-mail: m.tamo@cgiar.org