

# **IPPS**

## **The International Parasitic Plant Society**

in collaboration with the  
**4th International Weed Science Congress (IWSC)**

### **PARASITIC WEEDS SYMPOSIUM**

Durban (South Africa), June 24-25, 2004

## **PROGRAM**

### **SCIENTIFIC ORGANIZING COMMITTEE**

|                                  |                                  |
|----------------------------------|----------------------------------|
| D.M. Joel (Israel) - chairman    | B. Roman (Spain)                 |
| H. Bouwmeester (the Netherlands) | M.P. Timko (USA)                 |
| P. Delavault (France)            | J.A.C Verkleij (the Netherlands) |
| G. Ejeta (USA)                   | J.H. Westwood (USA)              |
| F. Kanampiu (Kenya)              | K. Yoneyama (Japan)              |
| M. Press (UK)                    | W.J. Zhou (China)                |

# Program summary

## Thursday -- IWSC & IPPS Sessions on Parasitic Weeds

| Time          | Activity   |
|---------------|--|
| 8:00 - 9:00   | IWSC Plenary lecture   |
| 9:00 - 10:00  | IWSC session on Progress in parasitic weed research            |
| 10:00 - 10:30 | Morning Coffee   |
| 10:30 - 12:30 | IWSC session on Progress in parasitic weed research            |
| 12:30 - 14:00 | Lunch  |
| 14:00 - 15:30 | Posters  |
| 15:30 - 16:30 | Posters discussion   |
| 16:30 - 18:30 | Workshop: <i>Striga</i> management in various cropping systems |

## Friday -- IPPS SYMPOSIUM

|               |   |
|---------------|---|
| 8:00 - 10:00  | Genetic variation in parasitic weeds                                    |
| 10:00 - 10:30 | Morning Coffee  |
| 10:30 - 12:30 | Physiological and molecular aspects of parasitic plant development (I)  |
| 12:30 - 14:00 | Lunch   |
| 14:00 - 16:00 | Physiological and molecular aspects of parasitic plant development (II) |
| 16:30 - 16:30 | Afternoon Tea   |
| 16:30 - 18:30 | Parasitic weeds control   |
| 18:30 – 18:45 | Concluding remarks  |
| 20:00         | Symposium Dinner  |

See details below

## Detailed program –Thursday morning

### IWSC Plenary lecture

|             |         |  |
|-------------|---------|--|
| 8:00 – 9:00 | DM Joel | The parasitic weeds problem and its fate in the 21 <sup>st</sup> century |
|-------------|---------|--|

### IWSC session on Progress in parasitic weed research (Mt 15)

| Time           | Author           | Title  |
|----------------|------------------|--|
| 9:00 – 9:30    | J Ransom         | New methodologies for the management of parasitic weeds  |
| 9:30 - 10:00   | P Westerman      | Demography of parasitic weeds and its impact on management   |
| Morning Coffee |                  |  |
| 10:30 - 11:00  | G Ejeta          | Understanding key developmental processes in parasitic weeds   |
| 11:00 - 11:15  | J Westwood       | Manipulating host defences to enhance resistance to <i>Orobanche</i>   |
| 11:15 - 11:30  | B Rubin          | EPSP-synthase presence and activity in broomrape   |
| 11:30 – 11:45  | K Yoneyama       | Determination and quantification of strigolactones   |
| 11:45 – 12:00  | D Muller-Strover | Enhancing the efficacy of a fungal biocontrol agent against <i>Orobanche</i> through combination with a resistance-inducing chemical |
| 12:00 - 12:15  | B Abu-Irmaileh   | Manure fermentation reduces <i>Orobanche</i> infestation on tomato   |
| 12:15 - 12:30  | JH Grenz         | Evaluating strategies to control the parasitic weed <i>Orobanche crenata</i> – a simulation study using APSIM                        |

12:30 - 14:00      Lunch

## Detailed program –Thursday afternoon

IWSC – IPPS Poster Session

14:00 - 15:30 Posters

15:30 - 16:30 Posters discussion

IWSC – IPPS Workshop on *Striga* management in various cropping systems

|               |             |   |
|---------------|-------------|---|
| 16:30 - 16:45 | Emechebe    | Ways to manage <i>Striga</i> infestations without herbicides  |
| 16:45 - 17:00 | B Hausmann  | Arresting the scourge of <i>Striga</i> by combining marker-assisted backcrossing and farmer-participatory selection                                       |
| 17:00– 17:15  | J Rodenburg | Yielding ability, resistance and tolerance as independent selection criteria for breeding against <i>Striga</i>   |
| 17:15 – 17:30 | Gworgwor    | Systems approach for ecological management of <i>Striga</i> in cereal-based cropping systems in northern Nigeria  |
| 17:30 – 17:45 | C Reinhardt | Prospects and limitations for <i>Striga asiatica</i> control in sorghum/desmodium intercrop   |
| 17:45 – 18:00 | VW Lenzemo  | Field inoculation with arbuscular mycorrhizal fungi reduces <i>Striga</i> performance on cereal crops and has the potential to increase cereal production |
| 18:00 - 18:15 | H Traoré    | Pathogenicity of <i>Fusarium</i> spp. isolates and metabolites to <i>Striga Hermonthica</i> In Burkina Faso   |
| 18:15 - 18:30 | A Murdoch   | Linking laboratory and field studies of dormancy in <i>Striga hermonthica</i> : is delayed planting an option for integrated control?                     |

## Detailed program –Friday morning

Genetic variation in parasitic weeds. Chair: D. Rubiales and J Verkleij

| Time          | Author      | Title  |
|---------------|-------------|--|
| 8:00 - 8:20   | NA Gworgwor | Parasitic Weeds In North-Eastern Nigeria   |
| 8:20 - 8:40   | B Roman     | Biodiversity of <i>O. crenata</i> in the Mediterranean region (review)   |
| 8:40 - 9:00   | B Haussmann | Genetic variability of <i>Striga hermonthica</i> (review)  |
| 9:00 - 9:20   | M Timko     | Genetic variability and host specialization in <i>Striga gesnerioides</i>  |
| 9:20 - 9:40   | J Verkleij  | Analysis of genetic variability in the closely related species <i>Striga hermonthica</i> and <i>S. aspera</i> by RAPD and SCAR markers |
| 9:40 - 10:00  |             | Discussion   |
| 10:00 - 10:30 | Coffee      |  |

Physiological and molecular aspects of parasitic plant development (I) Chair: K.Yoneyama and J Westwood

|               |            |  |
|---------------|------------|--|
| 10:30 - 10:50 | SF Shamoun | Tissue culture of western hemlock dwarf mistletoe ( <i>Arceuthobium</i> )  |
| 10:50-11:10   | WJ Zhou    | Callus production of parasitic weed <i>Orobancha</i> and its novel aseptic infection on host roots                       |
| 11:10 - 11:30 | G Glatzel  | Active vs passive mineral nutrient uptake in mistletoes – a still unresolved question?                                   |
| 11:30 - 11:50 | D Cameron  | Using the broad-spectrum hemi-parasitic angiosperm to investigate compatible and incompatible interactions               |
| 11:50 – 12:10 | M Timko    | Mapping and cloning of race-specific resistance genes to <i>Striga gesnerioides</i> and <i>Alectra vogelii</i> in cowpea |
| 12:10 – 12:30 | R Dorka    | Endogenous rhythms of nutational movement in <i>Viscum album</i> l. correlates with high level of jasmonic acid          |
| 12:30 – 14:00 | Lunch      |  |

## Detailed program –Friday afternoon

Physiological and molecular aspects of parasitic plant development (II) . Chair: G. Ejeta and M. Timko

|               |             |   |
|---------------|-------------|---|
| 14:30 - 14:20 | Y Takeuchi  | Fluridone promotes conditioning and germination of parasitic weed seeds                           |
| 14:20 - 14:40 | G Gbehenou  | Seed germination of <i>Rhamphicarpa fistulosa</i>   |
| 14:40 – 15:00 | G Dinelli   | Germination ecology, emergence and early host parasitization of <i>Cuscuta campestris</i> Yuncker |
| 15:00 – 15:20 | H Eizenberg | Growing degree days - a predictive tool for <i>Orobanche</i> parasitism                           |
| 15:20 – 15:40 | M De Mol    | Water relations and development of the <i>Viscum album</i>  |
| 15:40 – 16:00 |             | Discussion  |
| 16:00 – 16:30 | Coffee      |   |

Parasitic weeds control. Chair: F. Kanampiu and J. Hershenhorn

|               |                  |  |
|---------------|------------------|--|
| 16:30 - 16:50 | F Kanampiu       | <i>Striga</i> weed control in maize using herbicide seed coating technology                            |
| 16:50 - 17:10 | J Hershenhorn    | <i>Orobanche aegyptiaca</i> control in tomato  |
| 17:10– 17:30  | H Buschman       | Induced resistance: an effective control method for parasitic weeds?                                   |
| 17:30 – 17:50 | Evidente         | Advances in biological and integrated control of <i>Orobanche ramosa</i>                               |
| 17:50 – 18:10 | H Norambuena     | Monitoring colonization of the introduced bio-agent <i>Phytomyza orobanchia</i> on broomrapes in Chile |
| 18:10 – 18:30 | N Zermane        | Rhizobacteria: further progress in the biocontrol of <i>Orobanche</i>                                  |
| 18:30 - 18:45 | DM Joel          | Concluding remarks   |
| 20:00         | Symposium Dinner |  |