REPORT FORMAT

REPORT TYPE: Annual Progress Report: ☐

Final Report: ☒

Part 1 - Project Details

Project Title: Travel to attend XXI International Congress of Entomology Conference at Iguassu Falls in Brazil

Project Number: DAN 149C

Part 2 - Contact Details

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FINAL REPORT

Objective of the visit

1. To attend the 21st International Congress of Entomology Conference and present a paper on beneficial insects conservation and development of IPM in cotton in Australia.
2. To interact and have discussion with scientists working in the same area of research to gain further knowledge in the area of beneficial insect conservation and IPM.

Background of the visit

The cotton industry is a significant production of export income for Australia, but the industry currently relies heavily on synthetic insecticides to sustain production. Over-reliance on insecticides and associated resistance in *Helicoverpa* spp., disruption of beneficial insects and environmental consequences threatens the sustainability of the cotton industry. Currently there is a strong push by the industry to adopt integrated pest management (IPM) program to reduce synthetic insecticide use. The International Congress of Entomology Conference is a gathering of Entomologists around the world for symposia in all the research areas in entomology. It is held every four years and serve as a forum where entomologists interact with each other and have discussions in topics in all specialist areas in entomology. Renowned entomologists who are world leaders in their areas of specialisation are invited by the organisers of the congress to lecture on selected topics in entomology in plenary sessions. Plenary lectures are usually followed with detail discussions to enable participants to learn more about their area of research. It is therefore crucial, depending on availability of funding, that entomologist attend the congress to upgrade their research knowledge and interact with colleagues working the same area of research.

Activities

The XXI International Congress of Entomology conference was held at the Foz Do Iguassu in the Parana region in Brazil from the 20-26th August 2000. The conference attracted over 4000 entomologists all over the world thus providing the platform for entomologists to interact, learn and discuss their research areas with their fellow entomologists. The Congress was divided into 17 plenary lectures and 24 concurrent sessions.

Plenary Lectures

The plenary lectures were given by world renowned entomologists on selected topics in entomology. The lectures usually commences at 8 am and ends at 9.20 am in the auditorium of the conference venues. Informal discussions follow each plenary lecture to provide the opportunity for participants to ask questions and interact with other expertise in the area of research. Plenary lectures are usnally given before the concurrent sessions to enable all participants to attend the lectures. The plenary lectures given at the conference are shown in Table 1.

Concurrent Sessions

The concurrent sessions and symposia organised at the conference are given in Table 2. In all, there were 24 concurrent sessions and each session consisted of a series of symposia on specific area in entomology. The topics were addressed by different speakers and poster sessions. Each symposium has a morning (am) and afternoon (pm) sessions. The morning session starts at 9.30 am and ends at 12.15 am; and the afternoon session commences at 1.30 pm and ends at 4.30 pm. All participants have the choice as to which symposium he/she will like to attend. Participants usually attend symposim which is related to their subject area or area of their expertise.

I attended all the plenary lectures and symposia organised under the following sessions; Agricultural Entomology, Entomophagous insects and biological control, General and Applied insect Pathology, Integrated Pest Management, Pesticides, Resistance and Insect-Tolerant transgenic crops, Trends and Research Targets of applied pest control for sustainable crop and Special environment entomology. I interacted with so many scientists working in the area of pest management particularly IPM, beneficial insects conservation and utilization in crop systems. One of the expertise working in the area of beneficial insect conservation and IPM which I spent much time with to learn his strategies is Professor Allen Knutson, an extension entomologist with the Texas A&M University's Agricultural Extension Service in the USA.

Table 1. Plenary lectures by date given at the International Congress of Entomology Conference in Brazil, 20-26th August 2000.

Title of Lecture	Delivered by	Date
1. Entomologists and the conservation of biodiversity	Prof. John H. Lawton	20/8/00
2. The impact of W. Henning's Phylogenetic systematics on contemporary entomology.	Prof. Nils M. Andersen	21/8/00
3. Plant/insect interactions - a synthesis	Prof. Elizabeth Bernays	21/8/00
4. Chemical communications in scarab beetles	Prof. Prof. Walter Leal	21/8/00
5. 400 million years of terrestrial arthropods, and the mesozoic radiations of the insects	Prof. David Grimaldi	22/8/00
6. Transgenic plants: an environmentally friendly method of pest control?	Prof. Angharad Gatehouse	22/8/00
7. Sustainable development and integrated pest management	Prof. Marcos Kogan	23/8/00
8. A new look at insect breathing	Prof. Karel Slama	23/8/00
9. An updated review of evidence on sexual selection and the evolution of insect genitalia.	Prof. Prof. William Eberhard	23/8/00
10. The role of small scale farmers in strengthening the linkage between biodiversity and sustainable agriculture: one view on tropical rice and vegetable production in Asia.	Prof. William Settle	24/8/00
11. Thick parasite interactions at the host interface.	Prof. Patricia Nuttall	24/8/00
12. Reassessment of the role of the gut microflora in insects.	Dr R. J. Dillon	24/8/00
13. Insect parasitoid interaction.	Prof. Mike Hassell	25/8/00
14. Development of the insect nervous system.	Prof. Leslie Tolbert	25/8/00
15. Insects for experiments on basic biology	Dr Michael Locke	25/8/00
16. Whiteflies: a revisited frontier	Prof. Dan Gerling	26/8/00
17. Entomological challenges for the next century	Dr Manfred Kern	26/8/00

Table 2. Concurrent sessions and symposia organised at the International Congress of Entomology Conference in Brazil, 20-26th August 2000

Sessions	Symposia	Date
1. Acarology	1. Molecular, Physiological and Biochemical Processes in Acarines	21/8/00
	2. Dispersal in the Acari	22/8/00
2. Agricultural Entomology	1. Biology and Management of Scarab pests	21/8/00(am)
	2. Design and Calibration of Detection Trapping Systems for Pests of Quarantine significance	21/8/00(pm)
	3. International Initiative for the conservation and sustainable use of pollinators.	22/8/00(am)
	4. Challenges and opportunities for pest Management of Bemisia in the New Century	22/8/00 (pm)
	5. The potential effect of United States Pesticide Legislation, the Food Quality Protection Act on International Trade	23/8/00 (am)
	6. Recent Advances in Particle film Technology for controlling Arthropod Pests and Diseases in Crops.	23/8/00 (pm)
	7. New wine from Old skins: A Landscape view of Cultural Control	24/8/00 (am)
	8. Arthropod Management in Vineyards	24/8/00 (pm)
	9. Forecasting and managing migratory insect pests and natural	25/8/00
	10. The Spatial Dynamics of Insect pests	26/8/00 (am)
	11. Management of Diabroticine Pests in Agronomic Cropping systems: a global review of IPM strategies	26/8/00 (pm)

3. Biogeography and Biodiversity	1. Directions and Priorities for exploration and discovery of insect biodiversity in the 21st Century	21/8/00
	2. Ecology, Biodiversity and Biogeograpby of Amazonian insects	22/8/00
	3. Entomological Societies Preserving Biodiversity in Latin America	23/8/00 (am)
	4. Scientific Approaches to Bioindication using Invertebrates	23/8/00 (pm)
	5. Insects as indicators of Land Use Change	24/8/00 (am)
	6. Insect conservation in Agricultural and Urban Landscapes	24/8/00 (pm)
	7. How many insects?	25/8/00 (am)
	8. The convention on Biological diversity and other International Agreements: Roles for Entomology and Entomologists	25/8/00 (pm)
	9. Aspects of Biodiversity and Biogeographical Research in Africa.	26/8/00 (am)
	10. Biodiversity of Tropical Lepidoptera	26/8/00 (pm)
4. Chemical and Physiological Ecology	1. Mechanisms of insect odour Detection	21/8/00
	2. Semiochemistry of the Heteroptera	22/8/00 (am)
	3. Bioprospecting	22/8/00 (pm)
	4. Pheromone Biosynthesis and Regulation	23/8/00 (am)
	5. Regulation and Plasticity of Neural Responses and Behavioural outputs in the olfactory system	23/8/00 (pm)
	6. Chemical communication in pest control	24/8/00
	7. Chemical Ecology of Blood feeding insects	25/8/00
5. Computer Science Applied To Entomology	1. Technologies for movement and Migration Research	21/8/00
	2. Utilization of the Internet for Information Dissemination	22/8/00 (am)
	3. Teaching Entomology using Multimedia	22/8/00 (pm)
	4. Insect Pest Management and Global Communication	23/8/00
	5. Towards a Global Biological Information Infrastructure: Challenges, Opportunities, Synergies and the role of Entomology	24/8/00
	6. Insect Informatics	25/8/00
6. Ecology and Population Dynamics	1. Ecology and Management of Sawflies in Small Grain crops and Grasses	21/8/00 (am)
	2. Migration and Dispersal Across Landscapes of varying scales: Behaviours and Ecological consequences	22/8/00 (amn)
	3. Interspecific interactions at the higher trophic levels	22/8/00 (pm)
	4. Evolutionary biology of Galling insects	23/8/00
	5. Endophytic fungal interactions with insect herbivores, seed predators and natural enemies	24/8/00 (am)
	6. Multitrophic interactions	24/8/00 (pm)
	7. Top-Down and Bottom-Up Regulation of Insect populations	25/8/00 (am)
	8. Insect communities with complex Intertrophic Interactions	25/8/00 (pm)
	9. Migratory insect outbreaks, Pests without Passports	26/8/00
7. Pesticides, Resistance and Insect Tolerant Transgenic crops	1. New Insecticide Chemistry: Toxicology and mode of Action	21/8/00 (am)
	2. Mechanisms of insecticide resistance	21/8/00 (pm)
	3. Pesticides and Ectoxicology: New Insights and approaches from Ecology	22/8/00 (am)
	4. New Insect Control options using biotechnology	22/8/00 (pm)
	5. Environmental impact of genetically modified crops	23/8/00 (am)
	6. Practical Aspects of Managing Transgenic crops to combat Pest resistance	23/8/00(pm)

	7. Botannical insecticides: Current status and Prospects	24/8/00 (am)
	8. Genetics and Evolution of Insecticide resistance	24/8/00 (pm)
	9. New Insecticide products: Biology and Field Performance	25/8/00 (am)
	10. Combating Insecticide Resistance: Global Perspective	25/8/00 (pm)
	11. Resistance Management of Transgenic Maize: a model for other transgenic crops	26/8/00
8. Entomophagous insects and Biological control	1. Tritrophic interactions in pest management	21/8/00 (am)
	2. Rearing Entomophagous insects on artificial diets: Laboratory Production to Field Evaluation	21/8/00 (pm)
	3. Parasitoids of Citrus pests	22/8/00 (am)
	4. Technology for Automation of insect mass rearing for management and research.	22/8/00 (pm)
	5. International Exchange of Biological Control Agents	23/8/00 (am)
	6. Host location and recognition	23/8/00 (pm)
	7. Theoretical and practical advances in Augmentation biological control: A view	24/8/00
	8. Egg Parasitoids	26/8/00
9. Ethology	1. Insect mating system	21/8/00
	2. Behaviour of Neotropical Insects	22/8/00 (am)
	3. Evolution of signals and mating systems in Acoustically communicating insects	22/8/00 (pm)
	4. Evolution of signals and mating systems in Acoustically communicating insects	23/8/00
10. Forest Entomology	1. Forest management and insect diversity	21/8/00
	2. Integrated pest management in Tropical Forestry	22/8/00 (am)
	3. Invasive forest pests-Threats to biodiversity, Management and commerce.	22/8/00(pm)
	4. Biological and biorational control of Forest pests: A biotechnological perspective.	23/8/00
	5. Mechanisms of resistance in Trees to insects: Patterns Across Guilds	24/8/00 (am)
	6. Deployment of Resistance in Forest Management	24/8/00 (pm)
	7. Management of Forest defoliators in the 21st Century	25/8/00 (am)
	8. Structure, dynamics and Interactions Shaping Arboreal Arthropod communities and herbivore assemblages.	25/8/00 (pm)
	9. Management of reforestation insects: first step of sustainable forestry.	26/8/00 (am)
	10. Pest Management in Eucalypt plantations	26/8/00 (pm)
11. General and Applied Insect Pathology	1. Microbial pesticides: Dream or Reality	21/8/00 (am)
	2. The present and future of Entomopathogenic Nematodes as biopesticides.	21/8/00 (pm)
	3. Production and use of Baculoviruses and Fungal biopesticides: Recent developments and remaining challenges	22/8/00 (am)
	4. Microbial control of social insects	22/8/00 (pm)
	5. Use of pathogens in the management of soil dwelling pests	23/8/00 (am)
	6. Biopesticides: the practicalities of effectively delivering to their targets.	23/8/00 (pm)
	7. Microbial control of Lepidopteran Orchard Pests	24/8/00

12. Genetics and Evolutionary Biology	1. Theoretical and Evolutionary biology: Contributions from Entomology I	21/8/00 (am)
	2. Theoretical and Evolutionary biology: Contributions from Entomology II	21/8/00 (pm)
	3. Genetics and Evolution of Hymenoptera	22/8/00 (am)
	4. Gene Expression and the Evolution of insect Polyphenisms	22/8/00 (pm)
	5. Differentiation of populations and Speciation in the Tropical Region.	23/8/00 (am)
	6. Chromosome Inversion Polymorphisms and adaptations	23/8/00 (pm)
	7. Invasion genetics: Sorting Ancestral Polymorphism and the recovery of population and species level Relationships.	24/8/00 (am)
	8. Role and Evolution of insect Transposable Elements	24/8/00 (pm)
	9. Genetics of Species Complexes	25/8/00 (am)
	10. Non Drosophilid insect Transgenesis: the state of the Art and Future Possibilities.	25/8/00 (pm)
	11. The Genetics and Population Ecology in Successful Area-wide programs to control insects.	26/8/00
13. Insect Physiology Neurosciences nunity and Cell Biology	1. Insect Neurohormones and Neurohormone Receptors	21/8/00 (am)
	2. Insect G-Protein-Coupled Receptors and Signal Transduction	21/8/00 (pm)
	3. Synaptic and non-synaptic signalling in insects	22/8/00
	4. Insect Immunity	23/8/00 (am)
	5. Prophenoloxidases Cascade	23/8/00 (pm)
	6. Insect nutrition: Rearing for research, Production and Release	24/8/00 (am)
	7. Molecular and Physiological Interactions between Parasitoids and their hosts.	24/8/00 (pm)
	8. Homeosmotic Systems	25/8/00 (am)
	9. Cuticle formation and Sclerotization	25/8/00 (pm)
	10. Biological, Biochemical and Molecular properties of the insect petritrophic.	26/8/00
14. Integrated Pest Management	1. Areawide Approaches to Insect Population Regulation: the Management to Erradication continuum.	21/8/00 (am)
	2. Codling moth: Maanagement strategies for the 21st Century	21/8/00 (pm)
	2B. Codling moth Management tools: non-chemical control tactics; post harvest control.	21/8/00 (pm)
	3. Bemisia in the New World: Challenges and opportunities for the New Century	22/8/00 (am)
	4. IPM in Annual Cropping systems: Current Progress and Future Challenges.	22/8/00
	5. Perspectives in Ecotheory and IPM	23/8/00
	6. IPM programs in Grapes	24/8/00 (am)
	7. IPM in Citrus: An International Perspective	24/8/00 (pm)
	8. Advances in Integrated Pest Management in Rice	25/8/00
	Managing Heteropteran Pests in Tropical Agriculture	26/8/00
15. Medical and Veterinary	1. Odour-mediated behaviour of mosquitoes.	21/8/00 (am)
	2. Global Change, Arthropod pests and Vector-borne diseases in humans and animals.	21/8/00 (pm)
	3. Environmental change and vector-borne disease transmission	22/8/00 (am)
	4. Arthropod-parasite and arthropod-host interactions in the transmission of vector borne diseases.	22/8/00 (pm)
	5. Molecular genetics and biotechnology of procaryotic micro-organisms in arthropods.	23/8/00 (am)
	6. New concepts and tools applied to the land scape ecology of vector-borne disease: spatial and environmental analyses of vector biology.	23/8/00 (pm)
	7. Emerging health hazards from insects and mites in food.	24/8/00 (am)

	8. Molecular basis of vector-pathogen interactions	24/8/00 (pm)
	9. Public Health pesticides: Aglobal perspective and future course of Integrated Mosquito Management.	25/8/00
	10. Forensic Entomology in the 21st Century: Current trends in research and application.	26/8/00
16. Morphology and Ultrastructure	1. Ovary structure and Oogenesis	21/8/00
	2. Insect Neuroendocrine systems: Morphology and Function	22/8/00 (am)
	3. The Insect antenna: a Multimodal Sensory organ	22/8/00 (pm)
	4. Evolution of insect genitalia	23/8/00 (am)
	5. Insect Flight: New Perspective	23/8/00 (pm)
	6. Embryogenesis and Insect Body plan	24/8/00
	7. Feeding and Mouthparts	25/8/00 (am)
	8. Spiracular Mechanism: Ultrastructure Physiology	25/8/00 (pm)
	9. Sperm structure and Spermaiogenesis	26/8/00
17. Plant Disease Vectors	1. Insect vectors of Plant Pathogenic Bacteria in Xylem sap	21/8/00
	2. Molecular and Physiological Determinants of Pathogen transmission by vectors.	22/8/00
18. Development and Reproduction	1. Neuropeptides in insect development and reproduction	21/8/00
	2. Significance of Lepidopteran Genome projects for elucidating the control of insect development.	22/8/00 (am)
	3. Circadian clocks in insects: Molecular and Cellular perspectives	22/8/00 (pm)
	4. New complexities in the regulation of insect diapause and Cold Hardiness.	23/8/00 (am)
	5. Hormonal control of larval development and metamorphosis	23/8/00 (pm)
	6. Using insects to elucidate the mechanisms of evolutionary change.	24/8/00 (am)
	7. Molecular aspects of insect reproduction	24/8/00 (pm)
	8. Photoperiodic induction of diapause and seasonal morphs.	25/8/00
19. Social insects and sericiculture	1. Current and future trends of Termite management	21/8/00
	2. Social insects as pests in Urban and Natural Environments	22/8/00 (am)
	3. Wild Silkmoths and their utilization	22/8/00 (pm)
	4. Evolution of the Attine Ant-Fungus Symbiosis	23/8/00
	5. Honeybee Tolerance to Varroa jacobsoni	24/8/00
20. Special Environment ntomology	1. Biodiversity, Ecology and Systematics of Aquatic and semiaquatic bugs (Hemiptera: Nepomorpha and Gerromorpha)	23/8/00
	2. Host and and microhabitat use by arthropods in Tropical forest canopies	24/8/00
	3. Cave-dwelling insects as model systems for evolutionary and conservation biology.	25/8/00
21. Systematics and Phylogeny	1. Neotropical fulgoromorpha: terra incognita	21/8/00 (am)
	2. Curculionoidea: A case of megadiversity	21/8/00 (pm)
	3. Recent advances in systematics and Phylogeny of Heteroptera	22/8/00 (am)
	4. Congruence among data from different sources in systematic entomology	22/8/00 (pm)
	5. Taxonomy, Phylogeny Host-Parasite Relationship of Strepsitera	23/8/00
	6. Systematics and Phylogeny of Diptera	24/8/00 (am)
	7. Systematic studies in Scarabaeoidea (Coleoptera)	24/8/00 (pm)
	8. The Holometabola: Phylogeny and Evolution of the most successful terrestrial clade	25/8/00

	9. Phylogeny of Lepidoptera	26/8/00 (am)
	10. Phylogeny and evolution of Leiodidae (Coleoptera)	26/8/00 (pm)
22. Trends and Research targets of applied pest control for sustainable crop production	1. Mating disruption for sustainable production of fruit crops.	21/8/00
	2. Fruit flies of economic importance around the world: biology genetics, behaviour and control.	22/8/00 (am)
	3. Deployment of plant genes, transgenes and Genomic elements for 21st Century.	22/8/00 (pm)
	4. Biopesticides: their role in acceptance of integrated pest management tactics.	23/8/00 (am)
	5. Global change and sustainable IPM in crops: An activity of the International Geosphere-Biosphere program.	23/8/00 (pm)
	6. Insect Management with Physical methods	24/8/00 (am)
	7. The effect of plant derived food supplements on tri-trophic interactions	24/8/00 (pm)
	8. Risk assessment for the introductions of exotic natural enemies: Current procedures and research needs.	25/8/00 (am)
	9. Pest Quarantine issues and international trade	25/8/00 (pm)
23. Urban and Stored products Entomology	1. Biology, behaviour and physiology of insects associated with storage and urban buildings.	21/8/00 (am)
	2. Non-chemical prevention and control.	21/8/00 (pm)
	3. Biological control, Predators and Bioagents	22/8/00 (am)
	4. IGR's, Juvenoids, Hormone as insecticides	22/8/00 (pm)
	5. Early detection and traps.	22/8/00 (pm)
	6. Fumigation and Modified Atmospheres	23/8/00 (am)
	7. Modelling of Stored-Grain Ecosystems, Expert Systems	23/8/00 (pm)
	8. Integrated pest management	24/8/00 (am)
	9. Synthetic and Natural contact insecticides and repellents	24/8/00 (pm)
	10. Urban Entomology	25/8/00
24. Special issues	1. Utilization of insects for human life	25/8/00
	2. 5th International Symposium on the Chrysomelidae	25/8/00

Presentations

I presented two papers during the poster session at the conference (see attached certificates). The reason for poster presentation instead of oral was that I registered late for the conference and therefore my abstract was accepted late by the organisers because of the late registration. By the time my abstract was accepted all the speakers for my selected symposium has been chosen already. However, the poster session was attended by quite a lot of scientists and attracted a lot of attention.

Benefits

- The conference and subsequent interaction and discussion with colleagues in my area of research has enabled me to gain extra knowledge and enabled me to "step back" from the immediacy of my beneficial and IPM research and critically review its direction and refine my strategies. This will no doubt facilitate and expedite the progress of my research.
- My discussion with colleagues particularly Prof. Allen Knutson of Texas A&M in USA indicate that my research in beneficial insects and IPM is among the world leaders has boosted my research confidence.
- The Conference has further improved my research standing in the international research communities and enabled me to establish contacts with professionals in International Research Organizations working on beneficial insects and IPM programs worldwide.
- It has given the opportunity to have contact with world renowned scientists working in the my area of research.

Itinerary

18th August 2000	Brisbane - Sydney - Buenos Aires - Sao Paulo - Foz do Iguassu
20th August 2000	Conference Registration (Convention Centre, Iguassu)
21-26th August 2000	Conference Lectures, Symposium and Tour
27-29th August 2000	Foz do Iguassu - Sao Paulo - Buenos Aires - Sydney - Narrabri

Financial Statement from 18-29th August 2000 (Receipts attached)

Airfares: International and Domestic	A$ 2,501.40
Conference registration	A$ 690.85
Accommodation and Sustenance	A$1,934.57
Airport Tax (Return)	A$ 70.00
Vaccination	A$191.55
Visa	A$ 90.00
Airport Pharmacy	A$ 30.40
tal	A$ 5,508.77
Less Funds from CRDC	5,000.00
Loss or Debt	508.77

Acknowledgements

I would like to thank the Cotton Research and Development Corporation for funding this trip to attend the conference (CRDC project DAN 149C). I would have been unable to attend the conference without their funding and therefore gratefully appreciate their generousity.

XXI INTERNATIONAL CONGRESS OF ENTOMOLOGY

Foz do Iguassu - August 20th to 26th, 2000 - Brazil

Certificate

We hereby certify that **Mensah, R. K**

has participated in the XXI International Congress of Entomology - ICE, as Speaker.

HABITAT DIVERSITY: EFFECT ON POPULATION DENSITIES OF PREDATORY INSECTS OF HELICOVERPA SPP. IN COTTON IN AUSTRALIA (2755-392-Poster Session)

Foz do Iguassu-Paraná-Brazil, August 26, 2000.

Flávio Moscardi
President Entomological Society of Brazil
Chairman, Scientific Committee of the XXI ICE

Décio Luiz Gazzoni
President, XXI ICE

XXI INTERNATIONAL CONGRESS OF ENTOMOLOGY

Foz do Iguassu - August 20th to 26th, 2000 - Brazil

Certificate

We hereby certify that **Mensah, R. K**

has participated in the XXI International Congress of Entomology - ICE, as Speaker.

IPM PROGRAM IN COTTON IN AUSTRALIA BASED ON BENEFICIAL INSECTS, STRIP-CROPPING AND PROVISION OF SUPPLEMENTARY FOOD (3979-95-Poster Session)

Foz do Iguassu-Paraná-Brazil, August 26, 2000.

Flávio Moscardi
President Entomological Society of Brazil
Chairman, Scientific Committee of the XXI ICE

Décio Luiz Gazzoni
President, XXI ICE

XXI INTERNATIONAL CONGRESS OF ENTOMOLOGY

Foz do Iguassu - August 20th to 26th, 2000 - Brazil

Certificate

We hereby certify that **ROBERT KOFI MENSAH**

has participated in the XXI International Congress of Entomology - ICE, as Participant.

Foz do Iguassu-Paraná-Brazil, August 26, 2000.

Flávio Moscardi
President Entomological Society of Brazil
Choirman, Scientific Committee of the XXI ICE

Décio Luiz Gazzoni
President, XXI ICE