Proceedings of the 4th International Working Conference on Stored-Product Protection
(Table of Contents)

Full Citation:

Foreword v-iv

SYMPOSIUM 1. BIOLOGICAL AND PHYSIOLOGICAL MEANS FOR PREVENTING INSECT AND MITE INFESTATIONS 1
Potential uses of host plant resistance – Dobie, P. 2-13
Bacillus thuringiensis: A critical review – McGAughey, W.H. 14-23
Insect growth regulators – Bengston, M. 35-46
Environmental manipulation as a physiological control measure – Longstaff, B.C. 47-61

SYMPOSIUM 2. MICROFLORA AND MYCOTOXINS 62
The influence of water and temperature on moulding and mycotoxin production – Lacey, J.; Magan, N.; Cuero, R.; Smith, J.E. 63-76
Oxygen consumption by a wet grain ecosystem in hermetic silos at various water activities – Diawara, B.; Cahagnier, B.; Richard-Molard, D. 77-84
Susceptibility of cereal microflora to oxygen deficiency and carbon dioxide concentration. – Richard-Molard, D.; Diawara, B.; Cahagnier, B. 85-92
Factors related to aflatoxin biosynthesis – Fanelli, C.; Fabbri, A.A.; Panflli, G.; Passi, S. 93-110
Effect of antioxidants and free radical scavengers on aflatoxin production in vivo – Passi, S. 111-126
De Luca, C.; Picardo, M.; Finotti, E.; Fabbri, A.A.; Panfllli, G.; Fanelli, C. 127

SYMPOSIUM 3. PHYSICAL AND ENVIRONMENTAL CONTROL 127
Towards rational controlled atmosphere dosage schedules: A review of current knowledge – Annis, P.C. 128-148
Some biological and physical constraints to the use of heat and cold for disinfesting and preserving stored products – Evans, D.E. 149-164
Impact, physical removal and exclusion for insect control in stored products – Banks, H.J. 165-184
Stored-product irradiation studies in Brazil (Abstract) – Wiendl, F.M. 185
Effect of irradiation and exposure to nitrogen on mortality of adults of Tribolium confusum J.Du V. – Buscarlet, L.A.; Aminian, B.; Bali, C. 186-193
Low oxygen content to control stored product insects – Reichmuth, C. 194-207
Practical approach to purging grain with low oxygen atmosphere for disinfection of large wheat bins against the granary weevil, Sitophilus granarius – Fleurat-Lessard, F.; Le Torc'h, J.M.

SYMPOSIUM 4. ENGINEERING ASPECTS IN STORED PRODUCT PROTECTION 218

Cold preservation of grain – Brunner, H. 219-229
The response of non-ventilated grain to environmental temperature – Thorpe, G.R.; Nguyen, T.V. 230-242
Wall pressures in grain storages – Moysey, E.B. 243-253
Design formulae for aeration ducts – Hunter, A.J. 254-260
Disinfestation of grain with heated air – Sutherland, J.W.; Evans, D.E.; Fane, A.G.; Thorpe, G.R. 261-274
The influence of elevator construction practices on insect control – Van Loon, J.B. 275-279

SYMPOSIUM 5. PESTICIDES AND FUMIGANTS FOR PREVENTION OF STORAGE LOSSES 280

The role of residual pesticides in stored-product insect control – Champ, B.R.; Ryland, G.J. 281-287
Integration of new pest control technologies into the post harvest grains sector of developing countries – Picar, G.D. 288-301
Resistance to anticoagulant rodenticides: The problem and its management – Smith, R.H.; Greaves, J.H. 302-315
The response of insects to fumigant concentration gradients – Bell, C.H. 316-326
Investigations on adverse properties of the fumigants methyl bromide and phosphine. 1. Residues of methyl bromide in fumigated commodities – Bond, E.J. 327-334
Strategies for effective use of phosphine as a grain fumigant and the implications of resistance – Winks, R.G. 335-344
Sensitization of insects to fumigation techniques, including reduced pressure – Navarro, S.; Donahaye, E. 345-351

SYMPOSIUM 6. GRAIN STORAGE IN TROPICAL AND SUBTROPICAL CLIMATES 352

Food storage problems in areas of surplus and deficit cereal production (Abstract) – Calverley, D.J.B. 353
The role of grain stocks in national food security in tropical developing countries (Abstract) – Gray, J.G. 354
The influence of storage on quality criteria of tropical grains – Faure, J. 355-384

SYMPOSIUM 7. THE FUTURE OF STORED PRODUCT PROTECTION 385

A global view of arthropod pest status in relation to changing storage and marketing practice – Conway, J.A. 386-394
The importance of specific mould identification in relation to mycotoxins – Kozakiewicz-Lawrence, Z. 395-406
Maintaining insecticide susceptibility in stored grain pests – Prickett, A.J. 407-417
New insect pheromone, erectin-like substances – Yamamoto, I. 418-424
SUBMITTED PAPER SESSION A: BIOLOGY OF STORAGE INSECTS, MITES, RODENTS AND MICROFLORA

Oviposition, competition and population dynamics in storage insects – Smith, R.H. 426-433
Changes in species composition of an insect population on stored corn (Abstract) – Arbogast, R.T. 434-434
The growth of laboratory populations of Sitophilus, Rhyzopertha, and Sitotroga on sorghum seeds under ambient and humidity-controlled conditions in northern Nigeria – Ayertey, J.N.; Ibitoye, J.O. 435-446
Effects of harvesting and drying on maize weevil population in field-infested corn – Keever, D.W.; Wiseman, B.R.; Widstrom, N.W. 447-453
Occurrence and toxicological activity of molds on cereals stored in airtight containers – Schulz, F.A.; Ceynowa, J. 454-462
Unplanned factors affecting population size in laboratory populations of the almond moth Ephesia cautella (Walker) – Kamin-Belsky, Nurit; Wool, D.; Brower, J.H. 463-469
Genetic modification of malathion resistance in almond moth populations by immigration of susceptible males (Abstract) – Brower, J.H.; Wool, D.; Kamin-Belsky, Nurit. 470-470
Life history of Callosobruchus chinensis (L.) (Coleoptera: Bruchidae) – Yoshida, T.; Igarashi, H.; Shinoda, K. 471-477
Biological notes on Aglossa caprealis (Hubner) (Lepidoptera: Pyralidae) – Trematerra, P. 478-484
Attraction of selected organic compounds to Carpoglyphus lactis (Abstract) – Boczek, J.; Davis, R. 485-485
Insecticide resistance in some Australian populations of Oryzaephilus surinamensis, the sawtoothed grain beetle – Wallbank, B.E.; Rose, H.A. 486-491
Resistance of freeze-dried products to some infesting insects – Domenichini, G.; Bertonazzi, M. C. 492-496
Strategy for bio-integrated control of Prostephanus truncatus (Horn) (Col., Bostrichidae) – Schulz, F.A.; Laborius, G.A. 497-503
Host-plant resistance to stored-product insects in varieties and hybrids of rice (Abstract) – Cogburn, R.R.; Bollich, C.N. 504-504
Pheromones for monitoring and control of Indian-meal moth and Mediterranean flour moth infestations in flour mills and seed storage buildings (Abstract) – Fleurat-Lessard, F.; Mathon, B.; Siegfried, M.P. 505-505
Ecological status of host range and polymorphism in Bruchidae – Pajni, H.R. 506-516

SUBMITTED PAPER SESSION B: SUPPRESSION AND CONTROL OF STORAGE PESTS AND MICROFOLORA

Static fumigation with phosphine in large elevators – Celaro, J.E.; Finamor, R. L.; Brandao, C.; Ghidini, R. 519-527
'Actellic' advantages for grain storage – Deighton, J. M. 528-539
Effect of grain moisture on the biological activity of protectants on maize – Samson, P.R.; Parker, R.J. 540-546
A review of tricalcium phosphate as an insect population suppressant: Research to application – Davis, R.; Boczek, J. 555-558
Reducing susceptibility of horticultural commodities to chilling injury during cold treatment – Hatton, T.T.

Control of Tribolium castaneum and Cryptolestes ferrugineus with the insect growth regulator fenoxycarb on wheat or structural surfaces – White, N.D.G.

An automated system for monitoring fumigant concentrations in grain storage – Williams, P.; Wegecsanyi, M.; Gross, S.A.

Effectiveness of new chitin synthesis inhibitors against some stored product pests – Nawrot, J.; Czaplicki, E.; Sobotka, W.

Secondary plant metabolites with antifeeding activity and their effects on some stored product insects – Nawrot, J.; Harmatha, J.; Bloszyk, E.

A process for treating bulk commodities with phosphine – Friemel, W.

Control of some Lepidoptera phycitidae infesting stored-products with synthetic sex pheromone in Italy – Suss, L.; Trematerra, P.

POSTER SESSION

Toxicological and biochemical aspects of novel acylureas on resistant and susceptible strains of Tribolium castaneum – Ishaaya, I.; Yablonski, S.; Ascher, K.R.S.

Experience with a new stored grain pest in Togo and Benin: The larger grain borer, Prostephanus truncatus (Coleoptera: Bostrichidae) – Krall, S.

Determination of phosphine concentrations with an electrochemical cell – Ducomand, P.; Bourges, C.

Use of carbon dioxide for control of Mus musculus in storage (Abstract) – Hamel, D.

Effectiveness of organophosphorus insecticides against stored product insects in wheat (Abstract) – Hamel, D.

Detection of internally feeding stored product insects in grain by sound detectors (Abstract) – Vick, K.W.; Webb, J.C.

The effect of low doses of methoprene on Ephestia cautella development (Abstract) – Pisarev, V.

Rodent control in stored products (Abstract) – Buckle, A.P.; Rampaud, M.

Survey of mold flora and deoxinivalenol contamination in corn imported to Israel (Abstract) – Muszkat, L.; Paster, N.; Barkai-Golan, R.

Aflatoxin formation in acid-treated grains traced by analysis of Aflatoxin M1 in milk – Pettersson, H.

Development of a rapid method to determine insect infestation in grain bins with electroacoustic devices – Fleurat-Lessard, F.; Andrieu, A.J.

CLOSING SESSION

REPORTS BY SYMPOSIA CONVENERS

SYMPOSIUM I: Biological and physiological means for preventing insect and mite infestations – Evans, D.E.

SYMPOSIUM 2: Microflora and mycotoxins – Fanelli, C.

SYMPOSIUM 3: Physical and environmental control – Banks, H.J.

SYMPOSIUM 5: Pesticides and fumigants for prevention of storage losses – Zettler, J.L.; Bell, C.H.

SYMPOSIUM 6: Grain storage in tropical and subtropical climates – Calverley, D.J.B.

SYMPOSIUM 7: The future of stored product protection – Griffiths, D.A.

REPORTS BY ROUNDTABLE DISCUSSION MODERATORS
ROUNDTABLE I: Advances in the use of IGR's and pheromones – Burkholder, W. 654
ROUNDTABLE II: Advances in biological control – Arbogast, R. 655
ROUNDTABLE III: Advances in the host plant resistance method. – Rodriguez, J.G. 655-657
ROUNDTABLE IV: Advances in early detection identification and prevention of mycotoxins – Cole, J.R. 657-658
ROUNDTABLE V: Advances in the use of modified atmospheres for stored product protection 658-660 – Bell, C.H.
ROUNDTABLE VI: Aeration and Cooling for Improving Grain Storability – Sartori, M. R. 660-661
ROUNDTABLE VII: Prospects for the use of ionizing and microwave radiation for insect control. – Wiendl, F. 661-662
ROUNDTABLE VIII: Advances in the fluidized bed heating of grain – Evans, D. 662
ROUNDTABLE IX: Promising Novel compounds of low mammalian toxicity for use in stored product protection – Perry, A. 662-664
ROUNDTABLE X: Improved methods for preventing storage losses in tropical climate subsistence farms – Laborius, G.A. 665-666

Author Index 667-668

Back to IWCSPP Proceedings Index