THE FUTURE OF STORED PRODUCT PROTECTION: IMPACTS OF GLOBAL ISSUES

Oral Paper
Linking farmers to markets in developing countries: Impacts of globalisation, governance and development policies on innovation and implementation of postharvest technology – Haines, C.P.

Poster Papers
Improvement of the grain elevator receiving operation by means of object-oriented simulation – Berruto, R.; Maier, D. E.
The current situation and development priorities for grain postharvest technology in China – Cheng-chuanxiu; Li-fujun; Tan-Bengang.
University of Manitoba Centre for Grain Storage Research and Development – Jayas, D.S.; White, N.D.G.
Paddy and rice storage in China – Qiu Weifen; Jin Zuxun

BIOLOGY, DETECTION AND BIOLOGICAL CONTROL

Keynote Papers
Taxonomic imperatives in stored product acarology – Halliday, R.B.
Do resistant seeds offer a worthwhile avenue for progress in stored product protection? – Credland, P.F.; Appleby, J.H.

Oral Papers
Psocoptera (psocids) as pests of bulk grain storage in Australia: A cautionary tale to industry and researchers – Rees, D.
Effect of suboptimal temperatures and sublethal carbon dioxide levels on Cryptolestes ferrugineus, alone and in combination with Tribolium castaneum – Hulasare, R.B.; White, N.D.G.; Jayas, D.S.
Use of pheromone-baited trap catches as indicators of occurrence of potential hosts of Prostephanus truncatus (Horn) (Coleoptera: Bostrichidae) in a forest in southern Benin – Nansen, C.; Meikle, W.G.
The effect of temperature management on Sitophilus zeamais, Tribolium castaneum and Plodia interpunctella in stored maize: Summer 2001 pilot bin trials – Maier, D.E.; Ileleji, K. E.; Woloshuk, C.P.; Szabela, D.A.

Host-finding ability of Lariophagus distinguendus (Hymenoptera: Pteromalidae), a potential natural enemy for the biological control of stored product pest beetles – Steidle, J.L.M.; Prozell, S.; Schöller, M.

Entomopathogenic fungi for the control of invertebrate pests in storage structures – Cox, P.; Wakefield, M.; Price, N.; Wildy, K; Moore, D.; Aquino de Muro, M.; Bell, B.

Distinguishing injury from damage and post-storage damage projection – Stejskal, V.; Lukas, J.

Areawide integrated pest management program for commercial grain stores – Flinn, P.; Hagstrum, D.; Reed, C.; Phillips, T.

**Keynote Paper**

Where does pest detection research go next? – Chambers, J.

**Oral Papers**

Warning farmers when the risk of infestation by Prostephanus truncatus is high – Hodges, R.J.; Birkinshaw, L.A.; Addo, S.

Development and validation of sequential sampling plans for Sitophilus species associated with pet specialty stores – Toews, M.; Subramanyam, B.; Roesli, R.

Critical issues in the development and interpretation of pest monitoring programs for food processing facilities – Campbell, J.F.; Prabhakaran, S.; Schneider, B.; Arborgast, R.T.

Molecular diagnostic tools for detecting arthropod contamination in stored products – Phillips, T.W.; Baige; Zhao

Entomological applications of near-infrared spectroscopy – Throne, J.E.; Dowell, F.E.; Perez-Mendoza, J.; Baker, J.E.

Comparison of ELISA and fragment count methods for detection of insects in wheat flour – Atui, M.B.; Lazzari, S.M.N.; Lazzari, F.A.; Flinn, P.W.

Use of electronic nose technology for the early detection of spoilage moulds in cereal products – Magan, N.; Keshri, G.; Needham, R.; Sneath, R.

Commercialisation of a species-identifying automated stored-product insect monitoring system – Shuman, D.; Epsky, N.D.; Crompton, D.R.

**Poster Papers**

Insect population dynamics and grain damage in small-farm stores in Zimbabwe, with particular reference to Sitotroga cerealella (Olivier) (Lepidoptera: Gelechiidae) – Mvumi, B.M.; Golob, P.; Stathers, T.E.; Giga, D.P.

Biology of Apanteles carpatus (Hymenoptera: Braconidae), a parasitoid of tineid moths (Lepidoptera: Tineidae) – Pfarrer, R.; Balmuweit, O.

The effect of fluctuating temperature and humidity, and aeration, on population growth of Acarus siro (L.) near the surface of a grain bulk – Dunn, J.A.

Development of a rapid immunoassay for the detection of storage mite pests in cereals – Dunn, J.A.; Danks, C.; Thind, B.B.; Banks, J.N.; Chambers, J.

Space requirements of Cheyletus eruditus (Schrank) and Cheyletus malaccensis Oudemans (Acarina: Cheyletidae) – Z’darkova, E.; Horak, P.

Physical and ecological changes in insect-and fungus-induced hotspots – Cook, D.A.; Armitage, D.M.

The I-SPy Insect Indicator™: Development of an insect monitoring trap for use on flat surfaces in the cereal and food trades, and potential applications – Collins, L.E.; Chambers, J.; Cogan, P.
Kinetics of diatomaceous earth (Fossil-Shield®) uptake by Callosobruchus maculatus (F.) (Coleoptera: Bruchidae) – Rohitha Prasantha, B.D.; Reichmuth, Ch.; Strumpf, Th. 200-207

Effect of diatomaceous earths on the reproductive performance of Callosobruchus maculatus (F.) (Coleoptera: Bruchidae) – Rohitha Prasantha, B.D.; Reichmuth, Ch.; Büttner, C. 208-216

Distribution of Ephestia elutella in a tobacco-processing factory in Portugal – Pereira, A.P.; David, A.; Mexia, A. 217-221

The use of pheromone traps for mass trapping of Lasioderma serricorne in a cigarette factory in Portugal – Carvalho, M.O.; Mexia, A. 222-229

The granary weevil Sitophilus granarius is suppressed by the parasitoid Lariophagus distinguedens Förster (Hymenoptera: Pteromalidae) – Reppchen, A.; Schöller, M.; Prozell, S.; Adler, C.; Reichmuth, C.; Steidle, J. 230-232

Screening of North American species of Trichogramma Westwood (Hymenoptera: Trichogrammatidae) for control of the Indian meal moth, Plodia interpunctella (Hübner) (Lepidoptera: Pyralidae) – Schöller, M.; Fields, P.G. 233-237

Comparing insect captures in the "StorMax Insector" and other probe traps – Bonjour, E.L.; Phillips, T.W. 238-240

Preliminary molecular investigations of three Liposcelis species associated with grain storage systems in Australia – Mikac, K.M. 241-243

The use of light traps for attracting stored-product insects in a rice mill and paddy seed stores – Nualvatna, K.; Makathan, N.; Chavapradit, C.; Kitkuandee, K.; Uraichuan, J. 244-247

Learning from museums-IPM in practice – Pinniger, D.; Child, B. 248-251

Evaluation of a multi-attractant lure on the capture of several stored-product beetle species – Athanassiou, C.G.; Kavallieratos, N.G.; Eliopoulos, P.A.; Palyvos, N.E.; Casagrande, E.; Buchelos, C. Th.; 252-257

Dominance and frequency of predatory mites in stored products in Greece – Eliopoulos, P.A.; Athanassiou, C.G.; Palyvos, N.E.; Statas, G.J.; Buchelos, C. Th. 258-262

Degradation of insect myosin affects reliability of ELISA test for internal insect infestation of wheat – Atui, M.B.; Flinn, P.W.; Lazzari, F.A.; Lazzari, S.M.N. 263-266

Efficacy and persistence of Indian meal moth granulovirus applied to nuts – Vail, P.V.; Tebbets, J.S.; Hoffmann, D.F. 267-270

Optimal clutch size and oviposition strategy for the maize weevil, Sitophilus zeamais – Danho, M.; Haubruge, E. 271-275

Phenology and spatial analysis of some Coleoptera infesting a feed mill – Trematerra, P.; Sciarretta, A. 276-280

Traditional cereal storage and insect pests in some villages of southern Chad – Trematerra, P.; Gentile, T.; Djikoloum 281-287

Insect pests in hulled wheat warehouses of central-southern Italy and field occurrence of Sitotroga cerealella (Olivier) – Trematerra, P.; Gentile, P. 288-292

Interstrain variation in larval respiration rate in Callosobruchus maculatus – Guedes, R.N.C.; Guedes, N.M.P.; Smith, R.H. 293-296

Prey preference of the predatory mite Blattisocius tarsalis (Acari: Ascidae) – Riudavets, J.; Quero, R. 297-299

Oviposition response of the Indian meal moth, Plodia interpunctella (Hübner) (Lepidoptera: Pyralidae) to food oil constituents – Nansen, C.; Phillips, T.W.; Dillwith, J.W. 300-305

Attracticide for control of Indian meal moth, Plodia interpunctella (Lepidoptera: Pyralidae) – Nansen, C.; Phillips, T.W. 306-310

An assessment of pheromone traps to monitor flour beetles (Tribolium confusum) at a flour mill – Wilkin, R.; Cross, D.; Mumby, R. 311-314
The effectiveness of different methods of detecting and enumerating insects in stored grain – Couldridge, C.; Wilkin, D.; Knight, R.

Investigations on the biological control of Tineola bisselliella (Lepidoptera: Tineidae) with Trichogramma species (Hymenoptera: Trichogrammatidae) – Zimmermann, O.; Schöller, M.; Prozell, S.

Five years of biological control of stored-product moths in Germany – Prozell, S.; Schöller, M.

Response of the parasitoids of stored-product moths, Habrobracon hebetor, Trichogramma evanescenta and Venturia canescens (Hymenoptera: Braconidae, Trichogrammatidae, Ichneumonidae), towards three types of funnel traps – Schöller, M.; Prozell, S.

Role of insects in the propagation of mycotoxigenic fungi in stores in Bénin – Hell, K.; Lamboni, Y.; Cardwell, K.

Biocharacteristics of Prostephanus truncatus attracted to flight traps baited with aggregation pheromone – Addo, S.; Birkinshaw, L.A.; Hodges, R.J.

Method for rearing Oryzaephilus surinamensis (L.) (Coleoptera: Silvanidae), a pest of stored wheat, in the laboratory – Beckel, H.; Lorini, I.; Lazzari, S.M.N.

Responses of house mice (Mus musculus musculus L.) to different bait stations: The role of size, shape, material and odour – Volfov, R.; Stejskal, V.

External egg morphology of stored-product and dust mites (Acari) – Kucerova, Z.; Stejskal, V.

Insect monitoring in a paddy rice storage facility – Paula, M.C.Z.; Lazzari, S.M.N.; Lazzari, F.A.

Near-infrared transmittance spectroscopy for detection of insects and mites in grain – Stengaard Hansen, L.; Aberg, L.; Kristensen, M.; Sandgren, M.

Development and validation of a simple heat-accumulation model for predicting mortality of first instars of Tribolium castaneum (Herbst) exposed to elevated temperatures – Subramanyam, B.; Flinn, P. W.; Mahroof, R.

The potential of stored-product beetle aggregation pheromones as cross-species attractants: An electroantennogram and behavioural investigation – Wakefield, M.E.; Clarke, P.G.

Comparing insect infestation patterns in stored corn for three temperature management methods: Summer 2001 pilot bin trials – Ileleji, K.E.; Maier, D.E.; Woloshuk, C.P.; Szabela, D.A.

The ability of buried PC™ traps to detect stored-product mites in wheat – Clarke, P.G.

Using new tools to track the larger grain borer, Prostephanus truncatus (Horn) (Coleoptera: Bostrichidae) – Tigar, B.; Waldron, S.

Multiplication of stored-product mites on Canadian wheat and oilseed cultivars – White, N.D.G.; Demianyk, C.J.; Jayas, D.S.

Bruchidae (Coleoptera) in stored Leguminosae: A survey conducted in Portugal – Mateus, C.; de Carvalho, L. E.; Mexia, A.

Impact of IPM practices on insect populations in retail pet stores – Roesli, R.; Subramanyam, B.; Campbell, J.; Kemp, K.

**FOOD SAFETY**

**Keynote Paper**

Food for thought about mycotoxins, organic and genetically modified foods – Marasas, W.F.O.; Vismer, H.F.

**Oral Papers**

How to decide whether the presence of storage mites in food and feedstuffs actually matters – Chambers, J.
Legislative and regulatory actions affecting insect pest management for postharvest systems in the United States – Arthur, F.H.; Rogers, T. 435-438

The effects of high-temperature drying on fragrant rice – Lily Yaw Geok Moi; Srzednicki, G.; Craske, J. 439-447

A review of proposed maximum tolerated levels for fumonisins in maize and maize products – Viljoen, J.H.; Marasas, W.F.O. 448-455

Estimation of safe storage periods for malting barley using a model of heat production based on respiration experiments – Jacobsen, E.E.; Fleurat-Lessard, F. 456-463

An alternative approach to assessing pest problems in stored grain – Wilkin, R. 464-467

Development of management options for the control of aflatoxin in maize in West Africa – Hell, K.; Fandohan, P.; Cardwell, K.F. 468-474

**Poster Papers**


Impact of essential oils on growth and ochratoxin A production by Penicillium verrucosum and Aspergillus ochraceus on a wheat-based substrate – Cains, V.; Magan, N. 479-485

Multitarget environmental approach for control of growth and toxin production by Fusarium culmorum using essential oils and antioxidants – Hope, R.; Jestoi, M.; Magan, N. 486-492

Sorption of carbonyl sulfide by stored products – Weller, G.L. 493-497

The effect of storage conditions on the quality of Australian canola (rapeseed), Brassica napus L. – Reuss, R.; Cassells, J. 498-503

Comparison of methods for determining grain moisture content – Du, Haibo; Wei, Zuguo; Zu, Guidong. 504-505

Application of HACCP in grain storage – Du, Haibo; Shen, Juan 506-510

Fusarium mycotoxins in isogenic and Bt maize varieties grown in different geographic areas in France – Pinson, L.; Plancke, M.P.; Richard-Forget, F.; Fleurat-Lessard, F. 511-516

A study on the persistence of trifluralin, chlorpyrifos, decamethrin, cypermethrin and dichlorvos in rice and beans after cooking in a commercial microwave oven – Castro, M.F.P.M.; Oliveira, J.J.V.; Rodrigues, J.; Scartuchio Dias Loredo, I. 517-521

Phosphine: An alternative for controlling fungal growth and to avoid mycotoxin production in high-moisture stored grains – Fernanda Penteado Moretzsohn de Castro, M.; Mills, K.A. 522-525

Is Kashin-Beck disease related to the presence of fungi on grains? – Chasseur, C.; Begaux, F.; Suëtens, C.; Mathieu, F.; Nolard, N.; Malaisse, F.; Wang, Z. 526-528

Ochratoxin A in wine: Importance of preharvest factors in the spread of ochratoxin-producing fungi and on toxin accumulation in grapes – Battilani, P.; Pietri, A.; Giorni, P.; Kozakiewicz, Z.; Logrieco, A. 529-532

Interaction of ethyl formate (EtF) with stored products – Reuss, R.; Annis, P. 533-538

Stack-curing and storage of peanuts for prevention of postharvest aflatoxin contamination – Dorner, J.W. 539-545


**CHEMICAL AND PHYSICAL CONTROL** 551

**Keynote Paper**

Philosophy guiding current and future fumigant research – YongLin, Ren 553-555

**Oral Papers**

Alternative fumigants for the control of stored-product insects – Shaaya, E.; Kostyukovsky, M.; Demchenko, N. 556-560
The technical foundation for precision stored-product-pest fumigation with Profume™ gas fumigant – Schneider, B.; Vogelewede, C.; Houtman, B.

Slow generation of phosphine using QuickPHlo-C™ technology – Waterford, C.J.; Asher, P.P.

Two decades of monitoring and managing phosphine resistance in Australia – Collins, P.J.; Emery, R.N.; Wallbank, B.E.

Ecologically friendly methods used in Cyprus for grain storage and protection (a combination of hermetic storage, aeration and fumigation using phosphine from cylinders and in sleeves) – Varanava, A.


Biological activity of Novaluron, a new chitin-synthesis inhibitor, on the major stored-product insect pests – Kostyukovsky, M.; Trostanetsky, A.; Carmi, Y.; Frandji, H.; Schneider, R.

Effect of NeemAzal® and other neem products on mortality, fecundity and frass activity of the larger grain borer Prostephanus truncatus (Horn) (Coleoptera: Bostrichidae) infesting maize – Ogemah, V.; Reichmuth, C.; Büttner, C.

Securidaca longepedunculata (Fres.) as a control for stored product insect pests – Jayasekara, T.K.; Belmain, S.R.; Stevenson, P.C.; Hall, D.R.

Study on the insecticidal effects of custard apple (Annona reticulata L.) and mindi (Melia azedarach L.) leaves against Sitophilus zeamais Motschulsky (Coleoptera: Curculionidae) – Haryadi, Y.; Yuniarti, S.

Efficacy of pea protein and combinations of pea protein and wasps against stored-grain insects in large-scale tests – Xingwei, Hou; Fields, P.G.; Flinn, P.W.; Perez-Mendoza, J.; Baker, J.

Physiological aspects of diatomaceous-earth-treated cowpea weevil Callosobruchus maculatus (F.) (Coleoptera: Bruchidae) – Rohitha Prasanthan, B.D.; Reichmuth, Ch.; Hetz, S.K.; Adler, C.

The effect of relative humidity on the efficacy of the diatomaceous earth Protect-It™ against Liposcelis entomophila (Enderlein) (Psocoptera: Liposcelididae) – Cao, Yang; Xia, Lili; Zhang, Huaijun.

Efficacy of heat treatments against the tobacco beetle Lasioderma serricorne F. (Col., Anobiidae) and the lesser grain borer Rhyzopertha dominica F. (Col., Bostrichidae) – Adler, C.

Heat disinfestation of wheat in a continuous-flow spouted bed – Qaisrani, R.; Beckett, S.


Optimisation of inert dusts used as grain protectants and residual surface treatments – Arthur, F.H.

The survival of developmental Sitophilus granarius (L.) subjected to constant and fluctuating temperatures between 0 and 10°C – Fleming, D.A.; Armitage, D.M.

Models linking insecticidal efficacy decline and residue concentration decrease with time, temperature and water activity in chlorpyrifos-methyl treated wheat – Fleurat-Lessard, F.; Wilbert, T.; Vidal, M.L.

**Poster Papers**

Treatment of an empty fumigation chamber using the Degesch phosphine generator – Mathews, M., Luzaich, G.
Volatile activity of plant essential oils against stored-product beetle pests – Pascual-Villalobos, M.J. 648-650

Cyanogen: A possible fumigant for flour/rice mills and space fumigation – Yong, Lin Ren; Trang, Le Vu 651-653

Effect of fumigation temperature on the efficacy of phosphine against strongly resistant psocids Liposcelis bostrychophila (Psocoptera: Liposcelididae) – Nayak, M.K.; Collins, P.J.; Pavic, H. 654-655

Phosphine tolerance in two bruchid beetles, Callosobruchus chinensis (L.) and C. maculatus (F.) (Coleoptera: Bruchidae) – Md. Mahbub Hasan, ; Reichmuth, C. 656-661

A survey of psocid species infesting stored grain in China and resistance to phosphine in field populations of Liposcelis entomophila (Enderlein) (Psocoptera: Liposcelididae) – Cao, Yang; Song, Yi; Sun, Guanying 662-667

Prospects for predicting insect mortality in relation to changing phosphine concentrations – Daglish, G.J.; Collins, P.J.; Pavic, H. 668-670

Laboratory bioassay and dose variation of diatomaceous earth surface treatments – Cook, D.A.; Armitage, D.M. 671-674

Diatomaceous earth structural treatment against Oryzaephilus surinamensis (L.) (Coleoptera: Silvanidae) under fluctuating UK conditions – Cook, D.A.; Collins, L.E.; Armitage, D.M. 675-679

The efficacy of flufenoxuron and azadirachtin against mixed mite and insect populations in small bins of wheat – Collins, D.A. 680-684

The efficacy of flufenoxuron, azadirachtin and a diatomaceous earth, when admixed with oilseed rape, against storage mite pests – Collins, D.A. 685-688

The importance of moisture changes at the grain surface – Armitage, D.M.; Cook, D.A. 689-695

Lowering the moisture content of stored grain can gain extra time for cooling to prevent infestation: Studies on the development, productivity and survival at two relative humidities of two insect species on whole wheat and an artificial diet – Fleming, D.A.; Armitage, D.M. 696-701

Phosphine resistance in Lasioderma serricorne (F.) (Coleoptera: Anobiidae) – Savvidou, N.; Mills, K.A.; Pennington, A. 702-712

The use of a propane burner to control an artificially induced "hotspot" – Conyers, S.T.; Llewellin, B.E.; Cook, D.A.; Bell, C.H. 713-716

The use of phosphine as an alternative to methyl bromide for the disinfection of palm dates – Mills, K.A.; Wontner-Smith, T.J.; Cardwell, S.C.; Bell, C.H. 717-724


The use of carbon dioxide as an alternative to methyl bromide for the disinfection of palm dates – Mills, K.A.; Wontner-Smith, T.J.; Cardwell, S.C.; Bell, C.H. 729-735

Disinfestation of rust-red flour beetle (Tribolium castaneum), saw-toothed grain beetle (Oryzaephilus surinamensis), yellow meal worm (Tenebrio molitor), Mediterranean flour moth (Ephestia kuehielli) and Indian meal moth (Plodia interpunctella) with sulfuryl fluoride in flour mills – Reichmuth, Ch.; Rassmann, W.; Binker, G.; Fröba, G.; Drinkall, M.J. 736-738

Emission, entry and deposition of pesticide spray on neighbouring non-target areas after fogging warehouses with Detmolin F® (dichlorvos) – Klementz, D.; Reichmuth, Ch.; Holdt, G. 739-748

Repellency and toxicity of essential oils from Ocimum gratissimum (Lamiaceae) and Laurus nobilis (Lauraceae) from Georgia against the rust-red flour beetle (Tribolium castaneum Herbst) (Coleoptera: Tenebrionidae) – Andronikashvili , M.; Reichmuth, C. 749-762

Effect of temperature and relative humidity on diatomaceous earth treated Callosobruchus maculatus (F.) and Acanthoscelides obtectus (Say) (Coleoptera: Bruchidae) – Rohitha 763-767
Prasantha, B.D.; Reichmuth, Ch.; Büttner, C.
Insecticidal activity of some aromatic plants from Croatia against lesser grain borer (Rhyzopertha dominica F.) on stored wheat – Kalinović, I.; Rozman, V.; Guberac, V.; Mrčić, S.
Laboratory selection for resistance to diatomaceous earth – Fields, P.G.
Standardised testing for diatomaceous earth – Fields, P.G.; Allen, S.; Korunic, Z.; McLaughlin, A.; Stathers, T.
Can reduced concentrations of chlorpyrifos-methyl be combined with other products to effectively control stored-grain pests? – Bonjour, E.L.; Phillips, T.W.; Pitts, J.T.; Terry, J.
Rapid generation of phosphine using QuickPhlo-R™ technology – Asher, P.P.; Waterford, C.J.
Carbonyl sulfide fumigation of hay – Weller, G.
Towards more effective heat disinfestation from a biological perspective – Beckett, S.J.
Heat disinfestaction of empty farm silos before inloading – Beckett, S.J.; Qaisrani, R.
Effect of organophosphates on Acarophenax lacunatus (Prostigmata: Acarophenacidae) parasitising Rhyzopertha dominica (Coleoptera: Bostrichidae) – Faroni, L.R.D.; Guedes, R.N.C.; Gonçalves, J.R.; Zanuncio, J.C.
Effect of the temperature during spraying on the biological efficiency of chemical protectants of stored grains – Faroni, L.R.D.; Guedes, R.N.C.; Queiróz, M.E.L.R.; Pimentel, M.A.G.
Microencapsulated formulations of chlorpyrifos as possible grain protectants – Trostanetsky, A.; Kostyukovsky, M.; Carmi, Y.; Frandji, H.; Schneider, R.
Enhanced effectiveness of vacuum or CO2 in combination with increased temperatures for control of storage insects – Navarro, S.; Finkelman, S.; Sabio, G.; Isikber, A.; Dias, R.; Rindner, M.; Azrieli, A.
Propylene oxide as a potential alternative to methyl bromide – Isikber, A.A.; Navarro, S.; Finkelman, S.; Azrieli, A.; Rindner, M.; Dias, R.,
The mortality of stored-product insects following exposure to gaseous ozone at high concentrations – Leesch, J.G.
The efficacy of carbon dioxide treatments (under pressure or by modified atmospheres) for pest control in stored products – Riudavets, J.; Gabbarraa, R.; Castañéa, C.; Alomar, O.; Pons, M.J.; Sánchez, J.
Interaction of starvation and insecticide toxicity in granary weevil Sitophilus granarius L. (Coleoptera: Curculionidae) populations of different susceptibility – Kljajic, P.; Milosevski, N.; Zivanovlc, M.; Almasi, R.; Perić, I.
Efficacy against resistant strains of insects of recirculated phosphine fumigation of paddy rice held under PVC sheeting – Yang, Longde; Yang, Zili; Jiang, Tianke; Qin, Zhanggui; Yang, Longde; Deng, Gang; Wu, Xiuqong; Yan Xiaoping.
Investigation of the use of ozone fumigation to control several species of stored grain insects – Qin, Zhanggui; Wu, Xia; Deng, Gang; Yan, Xiaoping; He, Xuechao; Xi, Deke; Liao, Xingwen.
Effects of ultrasound on Indian meal moth reproduction – Huang, F.; Subramanyam, B.
Control of mites in stored grain and oilseeds using phosphine – Watson, C.R.; Wilkin, D.R.; Clayton-Bailey, I.
Study on the effects of mixtures of acetone extracts of black pepper (Piper nigrum L.) and nutmeg (Myristica fragrans Houtt) seeds on the development of Sitophilus zeamais Motschulsky (Coleoptera: Curculionidae) – Haryadi, Y.; Rahayu, S.
Deltamethrin resistance in Rhyzopertha dominica (F.) (Coleoptera: Bostrichidae) in Brazil – Lorini, I. 870-874

Fungi control by phosphine fumigation in high-moisture maize – Castro, M.F.P.M.; Leitão, M.F.F.; Oliveira, J.J.; Mills, K.A. 875-883

Efficacy of sulfuryl fluoride on stored-product insects in a semolina mill trial in Italy – Drinkall, M.J.; Zaffagnini, V.; Süß, L.; Locatelli, D.P. 884-887

Evaluation on the efficacy of spinosad dust against major storage insect pests – Mutambuki, K.; Ngatia, C.M.; Mbugua, J.N.; Likhayo, P. 888-891

Low pressure for controlling postharvest insects – Hulasare, R.; Phillips, T.W.; Mbata, G.N.; Payton, M. 892-895

Use of diatomaceous earth for insect control in paddy rice stored in silos – Paula, M.C.Z.; Lazzari, F.A.; Lazzari, S.M.N. 896-899

Sulfuryl fluoride as a new fumigant for the disinfestation of flour mills in France – Ducom, P.; Dupuis, S.; Stefanini, V.; Guichard, A. A. 900-903

Response of pests of flour mills to high temperatures in the presence and absence of 10% carbon dioxide – Bell, C.H.; Savvidou, N.; Wontner-Smith, T.J.; Bartlett, D. 904-909

Some properties of sulphuryl fluoride in relation to its use as a fumigant in the cereals industry – Bell, C.H.; Wontner-Smith, T.J.; Savvidou, N. 910-915

Spinosad: An effective replacement for organophosphate grain protectants – Subramanyam, B.; Toews, M.; Liang, Fang 916-920


Combinations to enhance the efficacy of diatomaceous earths against the larger grain borer, Prostephanus truncatus (Horn) – Stathers, T.E. 925-929

PROCESSING AND APPLICATIONS 931

Keynote Paper
A two-dimensional model of grain storage with dynamic visualisation: Predictions for temperature, moisture content, germination and respiration-a case study for rapeseed – Xanthopoulos, G.; Woods, J.L. 933-938

Oral Papers
Modelling stored-product ecosystems using the post-harvest aeration and storage simulation tool (PHAST) with realistic boundary conditions – Maier, D.E.; Ileleji, K.E.; Montross, M.D. 939-945


Mathematical modelling the stored-grains ecosystem – Thorpe, G.; Li, Chen 962-969

Commercial development of STORECHECK, fully integrated PC-based aeration monitor, controller and decision support for UK grain stores – Cook, D.A.; Watts, P. 970-977

QualiGrain expert system for stored grain quality maintenance: planning optimal storage technical routes – Ndiaye, A.; Ndiaye, S.; Fleurat-Lessard, F. 978-988

Improving postharvest commodity quality management through training – Longstaff, B.C.; van Someren Graver, J.E.; Srzednicki, G.S. 989-995

Poster Papers
The performance of an isothermal desiccant bed system for cooling stored grains – Thorpe, G.R.; Chen, L. 996-1001
Recent research on storage structures and control of storage pests and moulds in China – Zuxun, Jin; Yang, Guofeng; Wang, Suya
Assessment of a relative-humidity sensor for the monitoring of moisture-content changes in stored malting barley through sorption equilibrium models – Ndiaye, A.; Berhaut, P.; Niquet, G.; Jacobsen, E.E.
A new approach, using a text processor, to a computer-based advisory system for malting barley – Wilkin, R.; Knight, J.; Woods, L.; Armitage, D.
Wet maize (Zea mays L.) drying under continuous nitrogen flow – de Toledo Valentiini, R.; Cia, P.; Muñoz, V.R.S.; Moretzsohn de Castro, M.F.P.P.; de A. Vitali, A.
Silobag: Evaluation of a new technique for temporary storage of wheat in the field – Bartosik, R.E.; Rodriguez, J.C.; Malinarich, H.E.; Maier, D.E.
Management of community grain stocks in dryland areas of Andhra Pradesh, India – Jayaraj, K.; Reddy, T.; Adolph, B.; Hodges, R.J.
Value of spatial analysis in pest management, from the perspective of a pest control operator – Weier, J.A.
Meaning and practical value of spatial analysis for protecting retail stores – Arbogast, R.T.; Kendra, P.E.; Chini, S.R.; McGovern, J.E.

WORKSHOP REPORTS
Resistance to control measures – Collins, P.J.; Mills, K.; Emery, R.N.
Museum pests – Plarre, R.
Intelligent automated grain management systems – Cook, D.; Maier, D.
Alternatives to methyl bromide – Bell, C.H.; Reichmuth, C.
Trapping and spatial analysis for evaluating pest management practices in retail stores – Arbogast, T.; Subramanyam, B.
Biological control – Schöeller, M.; Prozell, S.

Author Index
Conference Participants

Back to IWCSPP Proceedings Index