

Fumigants & Pheromones

Issue 61

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2001

Routing:

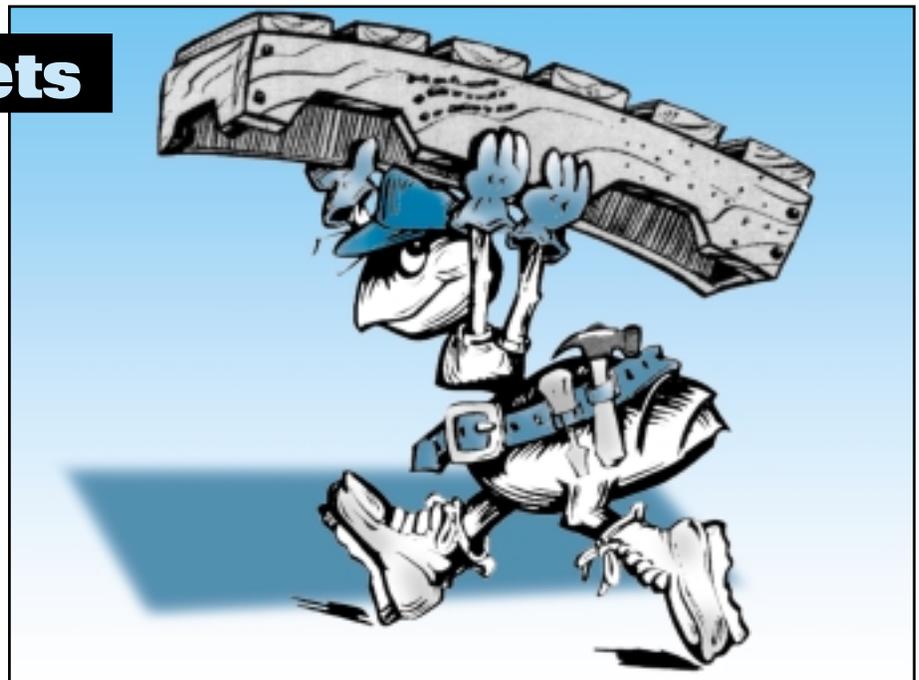
Celebrating Our 20th Anniversary ❄ 1981-2001

Wooden Pallets

After October 1, 2001, any non-manufactured wood packing material (NWPM) and coniferous wooden pallets entering Europe must be subject to certain treatment in order to prevent the introduction into the European Union (EU) of the pinewood nematode. The pinewood nematode is a microscopic eelworm, which has caused extensive mortality in pines in Japan and China. European concern over the possible introduction and establishment of the pinewood nematode has heightened over the past couple of years after an outbreak in Portugal and the interceptions at the port from United States, Canada, China, and Japan.

The United States Department of Agriculture (USDA) states that a significant portion of U.S. exports to the European Union (EU) are expected to be affected by the EU's regulation since most goods are transported using solid wood packing material. Of the 450 million new pallets produced annually in the United States, 30% are made of pine or coniferous wood. Many manufacturers and shippers around the world are scrambling to find a way to satisfy this new EU regulation. These international shipping requirements are only part of the problem. China, Brazil, and Australia have equally difficult requirements for wood treatment.

Non-manufactured wood packing material (NWPM) is defined by EU as "that which is comprised in whole or in part of non-manufactured wood of conifers from the U.S. or certain other countries in the form of



packing cases, boxes, crates, drums, and similar packing, pallets, box pallets and other load boards, and pallet collars, whether or not actually in use in the transport of objects of all kinds".

The USDA/APHIS defines NWPM as "wood packing other than that comprised wholly of wood-based products such as plywood, particle board, veneer, wood wool, etc. that has been created using glue, heat, or pressure or a combination." The EU regulation doesn't cover dunnage, lumber shipments, or wood items such as furniture, doors, and handicrafts.

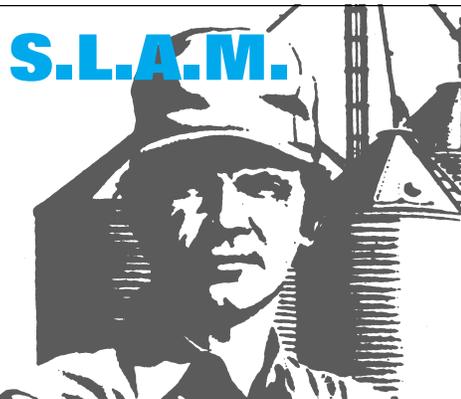
The EU emergency measures allow three treatment options for coniferous packing materials: (1) Heat Treatment, (2) Fumigation or (3) Chemical pressure impregnation. In all cases treated wood must bear a

mark indicating the organization that treated the wood packing material and the location of that organization. The APHIS (Animal and Plant Health Inspection Service) is recommending heat treatment because it is the only long-term measure currently listed.

(continued on page 2)

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An overall preventive post-harvest management system involving sanitation, loading, aeration and monitoring (S.L.A.M.) provides grain protection by the numbers. Purdue University and Oklahoma State University says: "Elevator operators and producers must adjust these grain storage management strategies depending on their location, facility, stored product, harvest time, and storage period."

1. Sanitation before loading grain into a storage structure requires cleaning silo aeration ducts, floors and unload auger trenches, where insects thrive on grain dust and fine material; cleaning out insect harboring locations, such as weeds, trash, and moldy grain in and around storages; spraying an approved post-harvest insecticide around the perimeter of the silo, 3-5 feet up the outside wall, and fumigating, dusting or spraying empty storages; sealing tank, silo and silo base openings including fans to provide barrier protection against insect entry at all locations below the roof eaves.
2. Loading storages properly involves cleaning, coring, and leveling. Cleaning (screening) removes grain dust and fines that insects and mold thrive on, and improves aeration. Coring grain silos means operating each storage unload conveyor to pull the peak down at least half way and remove the central core of fines, trash, and foreign material accumulated under the loading spout to make aeration more effective and to remove a major insect attractant. Leveling clean grain using a spreader or remov-

Wooden Pallets *(continued from page 1)*

Fumigation: Regarding fumigation, the EU emergency decision does not specify any particular fumigant or an officially approved mark, but it does require an officially recognized technical specification. The EPA is responsible for establishing technical specifications (labeling) for pesticides.

Because of these considerations, APHIS is advising exporters as follows:

- Fumigation may be used to meet EU treatment retirement for coniferous non-manufactured wood products (NMWP)
- Fumigation must be done by licensed applicators following the EPA-approved label specification of the fumigant used.
- Methyl bromide is the fumigant recommended by APHIS, but any fumigant labeled for wood fumigation, including phosphine and Vikane, may be used.
- The name of the fumigation company/applicator, the two-letter code for the state of origin, and the state pesticide applicator number should be shown on the coniferous NMWP.

For more information: Fumigation Service & Supply, Inc./ 1-317-896-9300
www.insectslimited.com or www.aphis.usda.gov/ppq/swp/

Opportunity: Companies all over the world are calling on fumigation companies to understand the details of this international shipping requirement. They are asking us to solve their problems during this time of change. The only recommended long term solution to this pest problem is heat treatment. It may not be practical to build a kiln, boilers, and enclosed space just to treat pallets, but the knowledge that we have accumulated from heat-treating food processing buildings could help us on the road to discovery. It will take some experimentation to come up with methods to treat wood to an internal temperature of 127.4 degrees F or 53 degrees C for 30 minutes. Imagine trying to accomplish this in the middle of the winter in Minneapolis.

Enforcement: The EU's measure is designed to be a paperless reporting system. No documentation will be required for subject SWPM other than the mark (which may be stamped, branded, labeled, etc.) exporters may want to include a statement about the composition of such SWPM on the bill of lading or invoice.

USDA/APHIS warns freight forwarders to advise exporters of the EU's new regulations and be aware that shipments may be held on arrival.

ing the peak by coring makes it easier to manage and assure more uniform airflow.

3. Aeration to maintain grain temperature as uniform as possible and as low as practical by managing aeration fans using automatic control. Grain temperatures should be kept below the optimum insect feeding and breeding range of 70-90° F (21-32° C).
4. Monitoring grain in storage using temperature cable sensor read-outs; scheduled grain and insect sampling; protectant top dressing

as needed; fumigation as needed based on economic threshold; and aeration or grain turning when hot spots are detected.

When coordinated, the S.L.A.M. management strategies will help to maintain grain quality, minimize marketable moisture weight loss, reduce operating costs, and preserve stored product quality. For more information on S.L.A.M. Post Harvest Strategy contact: Purdue University Grain Quality Team 1-765-494-4586 or Oklahoma State University Stored Product Group 1-405-744-9419.

New Profume*

Food tolerances near for proven structural fumigant

A successful structural fumigant is completing food residue trials and is on track for registration as a post-harvest fumigant that could help fill the void left by the methyl bromide phaseout.

Dow AgroSciences is pursuing full registration of sulfuryl fluoride, which would be marketed as a post-harvest fumigant under the name of ProFume* gas fumigant. The company has marketed sulfuryl fluoride for 40 years as Vikane* gas

warehouses and vehicles that transport dried fruits, tree nuts, or grain.

A great deal is known about the effectiveness of sulfuryl fluoride because it has been used to fumigate more than a million structures, including homes, museums, rare book collections, historic landmarks and medical and science laboratories with sensitive equipment. A U.S. Department of Agriculture publication on methyl bromide alternatives (Oct. 2000) stated: "Sulfuryl fluoride is considered by many to be the post harvest fumigant of the future... Though sulfuryl fluoride must undergo rigorous EPA registration procedures, its approval will provide an acceptable alternative to methyl bromide, thus filling a substantial need for post harvest fumigants."

Research shows that sulfuryl fluoride is effective against all life stages of post-harvest insects. Larvae, pupae and adult insects are highly susceptible, while eggs are more tolerant. Effective doses for all stages can be obtained by varying concentration and exposure time. Forty years of use have shown that sulfuryl fluoride has many advantages as a structural fumigant. It rapidly penetrates porous materials; it has low sorption on fumigated materials; it rapidly aerates; and it does not react with materials to form unpleasant odors. It is non-corrosive; therefore, it will not harm sensitive equipment or electronic devices.

ProFume, to be delivered in steel cylinders, can be applied in much the same way as methyl bromide. During the past six years, a number of research fumigations have been conducted in cooperation with fumigation companies like Fumigation Service & Supply, Inc. to further refine application techniques. Concurrent with its residue work, Dow AgroSciences is also developing a calculation tool to help applicators determine the exact application dose.

* Trademark of Dow AgroSciences LLC

Regulatory Timeline:

Dow AgroSciences is pursuing the following timeline for ProFume registration for post-harvest uses:

- 2001** Experimental Use Permit received for walnuts and raisins in California.
- 2002** U.S. Section 3 registration expected for dried fruit and tree nuts and cereal grains.
- 2003** U.S. product launch for dried fruit and tree nuts and cereal grains.
- 2004** Approval and European launch in cereal grains; U.S. launch in food processing.

All registrations, launches and development of application recommendations are expected before final phase-out of methyl bromide in the U.S.

fumigant for structural fumigations to combat termites and wood-boring beetles. An experimental use permit is now approved for use on walnuts and raisins in California. A federal Section 3 registration on dried fruits and tree nuts is expected by the end of 2002, and registration for use on cereal grains is also expected in 2002. When food tolerances are established and these registrations are granted, ProFume can be used in food mills, processing facilities,

Book Review:

Pest Management in Museums, Archives and Historic Houses

By David Pinniger

116 pgs, 38 black and white illustrations
Archetype Publications Ltd, London; 2001

This handbook is the newest work of David Pinniger. It incorporates much of the information of the three previous versions of Pest Management in Museums, with expanded and up-to-date information not previously covered.

It is a useful tool for the conservator of museums and historical houses as well as the pest control professional who is working with this sector. This is a well-organized book of seven chapters covering insect pests, detection and monitoring, prevention and control of insects, and a chapter by Adrian Meyer on rodent and bird control.

Emphasis is on the IPM approach, with clear strategies on prevention and detection/monitoring of pests. There is an excellent comparison and explanation of the advantages and disadvantages of various control methods and materials. The book finishes with guidelines on implementing an IPM approach to pest management in museums. The drawings are very good quality and are useful for identification purposes.

David Pinniger, entomologist, author, consultant, and lecturer can be considered the foremost authority of museum pest management. His background at the famous Slough Stored Product Insect Laboratory and more recently, in his private consultancy has offered him the varied experiences to solve pest problems throughout the world. David has the unique quality to being a scientist, a teacher, and a practitioner at the same time. Available from The Bookstore, www.insectslimited.com, 1-800-992-1991.

Cost: \$46.00

W O R K S H O P S



Certification Training & Examination Fumigation Category 7D

January 22, 2002

This workshop is designed to offer you the material needed to help pass a state certification examination. In the past, Purdue University's Pesticide Training Office has offered the training for this Fumigation category. This was normally held in March of each year but will not be offered this year. People looking for initial training in fumigation to help take the fumigation examination can now come to this fumigation training workshop. Anyone wanting to just take the fumigation test without training can still take the exam with the Indiana State Chemist office (765) 494-1492.

Topics include:

- Start with the Insects First
- Principles of Fumigation
- How to Read a Fumigant Label
- Grain Bin Fumigation
- Structure Fumigation
- Fumigation Air Monitoring
- Respiratory Equipment
- Sulfuryl Fluoride Fumigation
- Methyl Bromide Fumigation
- Phosphine Fumigation
- Calculating Volumes to be Fumigated

Workshop Fee: \$165, (after Dec. 15: \$185) includes lunch, three breaks, and a Fumigation Training Manual.

Instructors: David Mueller, John Mueller, Pat Kelley, Alain Van Ryckeghem, Nathan Stocker, Jeff Waggoner, Damon Shodrock.

Grain & Seed Fumigation Re-Certification Program

January 23, 2002

Each certified and licensed fumigator must receive continued education credits to maintain his license to apply restricted use pesticides. This workshop is intended to teach what's new and proper application. With new products like ECO₂FUME phosphine fumigant and new fumigant alternatives, now is the time to re-tool your knowledge and receive some continuing education in this area. Check your license and see when it expires. Don't wait too late to sign up for this program. There is limited seating available (40).

Topics include:

- Empty Bin Treatment
- Current Grain Research from USDA
- New Advances in Fumigation
- Insects that Attack Grain
- Seed Warehouse Pest Management
- Insect Trapping in Grain
- Fumigating Grain with the New ECO₂FUME Phosphine Fumigant
- Fumigant Recirculation Method

Workshop Fee: \$295, (after Dec. 15: \$325) includes lunch, three breaks, and a manual.

Instructors: David Mueller, John Mueller, Dr. Frank Arthur, Pat Kelley, Alain Van Ryckeghem, Brian Wendell, Jeff Waggoner.



Class of 2001

Pest Management for the Bird Food, Popcorn & Pet Food Industries

January 24, 2002

Protecting food from insect and pest attack can be more difficult when the raw agricultural ingredients become finished food in a few processing steps. Indianmeal moths prefer bird food, popcorn and pet food. This one insect pest is responsible for most of the consumer complaints that occur to this industry. This workshop will focus on the particular needs of these three industries. The discussion between the workshop participants can be a valuable part of any educational exchange. This workshop will facilitate this exchange and encourage problem solving by case studies and hands on training. Each person should leave this workshop with a blueprint for modern pest management in his or her individual facility.

Topics include:

- Start with the Insect First
- Insect Resistant Packaging
- Using Temperature to Control Insects
- Pheromone Trapping
- Spatial Mapping
- Fogging Programs
- Rodent Control and Bird Control Program
- Inspection
- Phosphine Fumigation

Workshop Fee: \$295, (after Dec. 15: \$325) includes lunch, three breaks, and a manual.

Instructors: David Mueller, John Mueller, Dr. Bobby Corrigan, Pat Kelley, Alain Van Ryckeghem, Nathan Stocker.

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Methyl Bromide Alternatives

February 20-21, 2002

Many people are now looking for alternatives to methyl bromide and other pesticide treatments. This workshop will discuss hands on experience and insight into alternatives from experts with many years of experience and from researchers looking for new techniques of managing stored food pests without methyl bromide.

Topics include:

- New Regulations in Stratospheric Ozone Protection/E.P.A.
- Fumigating flour mills in Denmark—We stopped using Methyl Bromide in 1997. How did we do it?
- Sanitation and Inspection
- Workshop: Treating Finished Food with Cold
- What's New in Pheromones
- New Profume; Sulfuryl fluoride fumigant test results on flour mills and empty food factories
- Stored Product Research from USDA, ARS, Manhattan, KS
- ECO₂FUME phosphine fumigant
- Corrosion Management
- Heat Treatment—"I heated up our 6 million cu.ft. food manufacturing plant for 20 years."
- Heat Treatment—Panel Discussion

Workshop Fee: \$495 (after Jan. 15: \$545) includes two lunches, 4 breaks, and a manual.

Instructors: David Mueller, Bill Thomas, Larry Dean, Henrik Lange, Jerry Heaps, Dr. Bobby Corrigan, Dr. Brian Schneider, John Mueller, Pat Kelley, Alain Van Ryckeghem, Bobby Gannon

For complete details contact Barb Bass at 1-800-992-1991, or email insectsltd@aol.com

Bookstore Specials:

	Was	Now
Stored Product Protection, <i>David Mueller</i>	\$64 ⁰⁰	\$48 ⁰⁰
Mallis Handbook of Pest Control, <i>Hedges, et.al.</i>	\$144 ⁰⁰	\$120 ⁰⁰
Engineering for Food Safety and Sanitation, <i>Tom Imholte</i>	\$99 ⁰⁰	\$89 ⁰⁰
Truman's Scientific Guide to Pest Control, <i>Bennett, et.al.</i>	\$91 ⁰⁰	\$82 ⁰⁰
NEW Pest Management in Museums, Archives, Historic Houses, <i>Pinniger</i>		\$46 ⁰⁰
NEW Rodent Control, <i>Corrigan</i>		\$79 ⁹⁵
Regulatory Compliance, <i>Pinto</i>	\$59 ⁰⁰	\$45 ⁰⁰
Alternatives to Pesticides in Stored Products, <i>Subramanyan</i>	\$110 ⁰⁰	\$99 ⁰⁰

Sale is effective until December 31, 2001. Shipping is not included in the price.

Book Review:**Corrigan's New Rodent Book**

Dr. Bobby Corrigan worked hard to share his practical and uncomplicated knowledge in this much anticipated book. He knows the field of rodent control like no one else and his love of teaching is evident on every page. Bobby is an educator who has found a way to save his experiences and encapsulate them in 350 pages of illustrated knowledge.

This book is the first comprehensive guide to rodent control to hit the market in more than a decade. After 28 years of involvement in the urban and industrial pest management industries, well-known industry consultant Bobby Corrigan now shares his extensive knowledge of commensal rodents in the hardcover book *Rodent Control: A Practical Guide for Pest Management Professionals*.

Written in easy-to-read language and filled with hundreds of photos and illustrations, *Rodent Control* provides a comprehensive look at over 350 pages of useful information.

This book is now available by contacting The Book Store at 1-800-992-1991 or insectsltd@aol.com. The price is \$79.95 plus shipping.



The Future of Methyl Bromide

by Dr. Tom Batchlor,
The European Union
Expert on Methyl
Bromide in Brussels
and the keynote
speaker at this year's
Fumigants & Pheromones
International
Conference and
Workshop,
Thessaloniki, Greece.



The ozone layer, essential for minimizing harmful UV radiation reaching the earth, is about 40% thinner over the Antarctic, 16% thinner in the Arctic and 4-6% thinner in the mid-latitudes due to ozone depleting substances (ODSs) released over the past three decades by man. The start of ozone layer recovery is not expected to be detectable until 2015 with full recovery expected after 2050, depending on further cooperation in minimizing the release of ODSs.

Methyl bromide (MB) is a severe ozone depleting substance that in the short-term is 10 times more depleting than the highly damaging CFCs whose production has been phased out in the past decade in developed countries. Government agreements under the Montreal Protocol will result in reductions of MB consumption for all uses of MB except that used for Quarantine and Pre-shipment (QPS), which is exempt from control i/e. freeze, step-down and phase out.

The use of MB for Quarantine and Pre-shipment is increasing in many countries due to trade that requires disinfestations typically with MB prior to export or on arrival. The EC limit on the amount of MB than can be placed on the market for QPS in 2001 is 607 ODP tonnes but in practice it will be much lower. Member States must also report on the quantities of MB used or QPS and for which uses.

These actions are expected to encourage research on the development of alternatives and to minimize future dependency on MB whose cost is likely to increase and whose availability in the future becomes increasingly uncertain.

Unfortunately, the international exemption for the use of MB for Quarantine and Pre-shipment renders research in this area a lower priority than research finding alternatives for MB uses that will be banned in 2005. As a result, the exemption for QPS is counterproductive to the development of alternatives for MB used for QPS, as the Protocol's Multilateral Fund will only fund alternatives for ozone depleting substances that are not exempt. As QPS alternatives would be very similar for both developing and developed countries, acceptance of an international control measure would benefit all countries that are using MB to overcome pest problems in trade.

Dr. Tom Batchlor can be reached at:
tom.batchlor@cec.eu.int

Did you know?

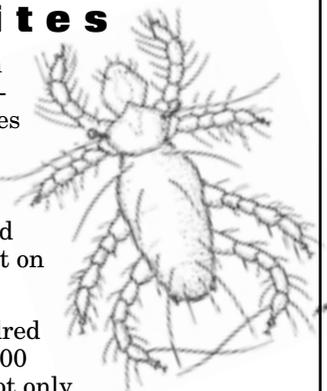
- Denmark banned all uses of Methyl bromide (MB) in 1997.
- The Netherlands has replaced uses of MB.
- Germany uses less than 100 tonnes of MB per year (about the same as one large tomato or strawberry field in California).
- Fumigation Service & Supply, Inc. has replaced 300,000 lb. of MB in flour mills and food processing facilities with alternatives.
- Estonia and Georgia have already phased out of methyl bromide in Eastern Europe.
- India, the second most populous country in the world, uses only about 250 tonnes of MB per year.
- The global phase out of the ozone depleting substance methyl bromide is well under way.
- The United States uses half of all the MB in the world.

Bad Bugs... Straw Itch Mites

Have you ever crawled out of a grain bin or from under straw and started itching? Upon examination of the irritated skin you found small red bites that hurt like hell for several days. This is not a chigger but an aggressive predator mite that is known to eat everything living in its way when its primary hosts disappear or are scarce. It would make the Terminator look tame if they ever meet on the same scale.

One year at the Indiana State Fair several hundred people were treated for bites; many had 100 to 200 bites on their bodies. The Straw itch mite will not only leave you itching but can cause a fever and cold sweat and make sleep impossible. Relief is obtained by bathing in warm soapy water and then applying talcum powder. Often farmers may become desensitized and show no symptoms.

Control of the Straw Itch Mite: Control and removal of the primary host (i.e. Straw joint worm, moths or beetles) is the primary form of control. Fumigation can help eliminate the host and kill most mites. Except for its effect upon contact with man, the straw itch mite would be considered beneficial since it attacks such grain and cereal insects as the Angoumois grain moth, rice and granary weevils, sawtoothed grain beetle, and other injurious insects. This can be found in households also. It is invisible to the human eye and the female can produce 200-300 offspring parthenogenetically. The optimum temperature for the development of the straw itch mite is 70-80° F (21 to 27° C).



The venom from this microscopic Pyemotes mite is 3000 times more powerful than rattlesnake venom, ounce for ounce.

Phosphine Burial

by Jan van S Graver and Chris P. Whittle,
CSIRO, Canberra, Australia

After a warehouse fumigation, fumigators are faced with a predicament: Where do you dispose of the spent dust or packets that still may contain small amounts of active phosphine gas? In the past, many fumigators buried the 'spent dust' near the fumigated site. This study takes a look at this method of disposal.



Phosphine remaining in formulations after 19 months burial.

Introduction

There have been occasions when there has been a requirement for safe disposal of large quantities of aluminum phosphide formulations. Safe disposal of aluminum phosphide may involve burial. In this investigation a range of aluminum phosphide preparations used for fumigation of stored products was buried, and production and decay of phosphine were observed over a period of 19 months.

The Formulation

The formulations were buried at two depths, 250 and 500 mm (7.5 and 15 inches).

Formulations	Manufacturer(s)	Condition
Blankets	Celphos Quickphos	Unspent and partially spent Rolled and unrolled Large and small
Pellets	Celphos	Unspent and partially spent Mixed origin (manufacturers)
Tablets	Phostoxin Quickphos	Unspent and partially spent

Methods

Phosphine produced by the buried formulations was monitored at irregular intervals. Measurements were made at 500 mm, and 250 mm below ground level, at ground level, and 1 and 2 meters above the ground. Surface measurements reduced to zero early in the burial period and were discontinued. The amount of phosphine produced declined in a predictable way and extrapolation of early data indicated that the buried formulations would be completely spent within 250 days. However, when sub-surface measurements of phosphine reached 10 ppm they remained at this level.

Results

After 19 months, samples of the buried materials were retrieved and stored in airtight containers. Some were analyzed for active material capable of generating phosphine. The analyses were carried out by headspace analysis of phosphine concentrations generated by reaction of samples with sulphuric acid in sealed reaction vessels.

George Okumura Dies

After a long bout with cancer, George T. Okumura, famous stored product entomologist from Sacramento, CA has died. As a respected entomologist specializing in the field of stored food pests, George provided his expertise to many major food and pest control companies. He trained thousands of food industry students at his Okumura Biological Institute courses throughout the world.

George T. Okumura was a graduate of the University of Minnesota and also Sacramento State College. He served overseas in World War II in the Counter-Intelligence Corps, Pacific Operations. He was with the California Department of Agriculture for over 20 years and was chief of the insect identification of stored food insects and moth larvae. George specialized in the notorious pest insects called *Trogoderma* (Warehouse and Khapra beetle). He is the author of several books and many referred journal research articles.

George was a believer in education. His short-courses taught us more about identifying insects than most university degree programs. George will be known as an entomologist, a caring father, and a self-made entrepreneur.

Those interested may contact his daughter directly: Christine Kojima (obibugman@aol.com)

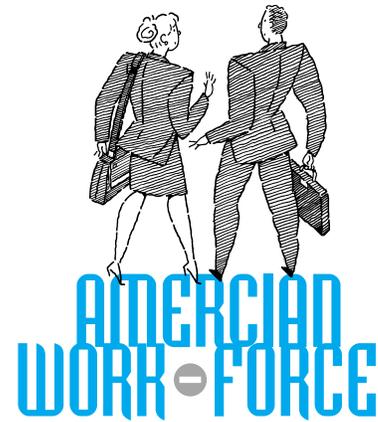
Fumigation Service
& Supply, Inc.
and Insects
Limited, Inc.
celebrating
20 years!



M E E T I N G C A L E N D A R :

- Oct. 1-3, 2001*** 2001: A Pest Odyssey, British Library Conference Centre, London, England, contact: Belinda Sanderson, Belinda.sanderson@bl.uk or fax: 44 20 7412 7796
- Oct. 28-31, 2001*** National Pest Management Association, Pest Management 2001, New Orleans, LA, contact: www.pestworld.org, 1 (703) 573 8330 or fax 1 (703) 573-4116
- Nov. 4-8, 2001*** Methyl Bromide Alternatives and Emission Reduction, San Diego, CA, Contact: Gary Oberdorf, Doubletree Hotel, www.mbao.org or fax 559-436-0697
- Dec. 2-3, 2001*** National Grain and Feed Association, Indianapolis, www.ngfa.org, 1-202 289 0873
- Jan. 7-11, 2002*** Purdue Pest Control Conference, W. Lafayette, IN, Susan Umberger, 1-800-359-2968,
- Jan. 22, 2002**** Certification Training & Indiana Fumigation Examination, Westfield, IN, David Mueller, www.insectslimited.com or fax 1-317 867-5757
- Jan. 23, 2002**** Grain & Seed Fumigation Re-Certification Program, Westfield, IN, David Mueller, www.insectslimited.com or fax 1 317 867-5757
- Jan. 24, 2002**** Pest Management for the Bird Food, Popcorn & Pet Food Industries, Westfield, IN, David Mueller, www.insectslimited.com or 1 317 867-5757
- Feb. 20-21, 2002**** Methyl Bromide Alternatives Workshop, Indianapolis, David Mueller, www.insectslimited.com or 1 317 867 5757
- July 7-10, 2002*** The 4th International Conference on Urban Pests, Charleston, SC, Contact: Richard Cooper, rcooper@cooperpest.com or fax: 609-799-3859
- July 22-26, 2002*** 8th International Working Conference on Stored Product Protection, University of York, Contact: Nick Price www.csl.gov.uk or fax 44 1904 462252
- Aug. 19-23, 2002*** 6th National Stored IPM Training Conference, Manhattan, KS, contact: Dr. Subi Bhadriraju, KSU, 1 (785) 532-4092, bhs@wheat.ksu.edu
- June 2003**** 6th Fumigants & Pheromones International Technical Conference and Workshop, Sharing Through Education, Copenhagen, Denmark, Contact: David Mueller, www.insectslimited.com, tel. 1-317 896-9300, fax 1-317-867 5757 or Henrik Lang'e, lange@tanaco.dk.

* we hope to see you there ** organized by Insects Limited, Inc.



58%: Adult women who work.

24%: Children with a working father and a stay-at-home mother.

3.5 years: Average time worker has been with current employer.

9.2: Jobs the average person holds from age 18 to 34.

7.5 million: People holding more than one job in July 2001.

13.5%: Workers belonging to a union.

9.5: Average paid holidays a year.

13.8: Average annual paid vacation days with five years on job.

21 million: People who did some work at home as part of their primary job.

\$14.27: Average hourly earnings for non-supervisory, non-farm workers.

THE NEWSLETTER

Fumigants & Pheromones is published by Fumigation Service & Supply, Inc. and Insects Limited, Inc. We hope that the information that you receive from this newsletter will help you in your business, and you, in turn, will support our business efforts. If you have an associate who would be interested in receiving this newsletter, please contact the address below. We would welcome any comments or suggestions for topics. Address correspondence to: David K. Mueller, Fumigation Service & Supply, Inc., 16950 Westfield Park Rd., Westfield, IN 46074 USA.



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