Fumigants & Pheromones

Issue 38

Spring 1995

A Newsletter for the Insect Control & Pest Management Industry

Wooden Pallets

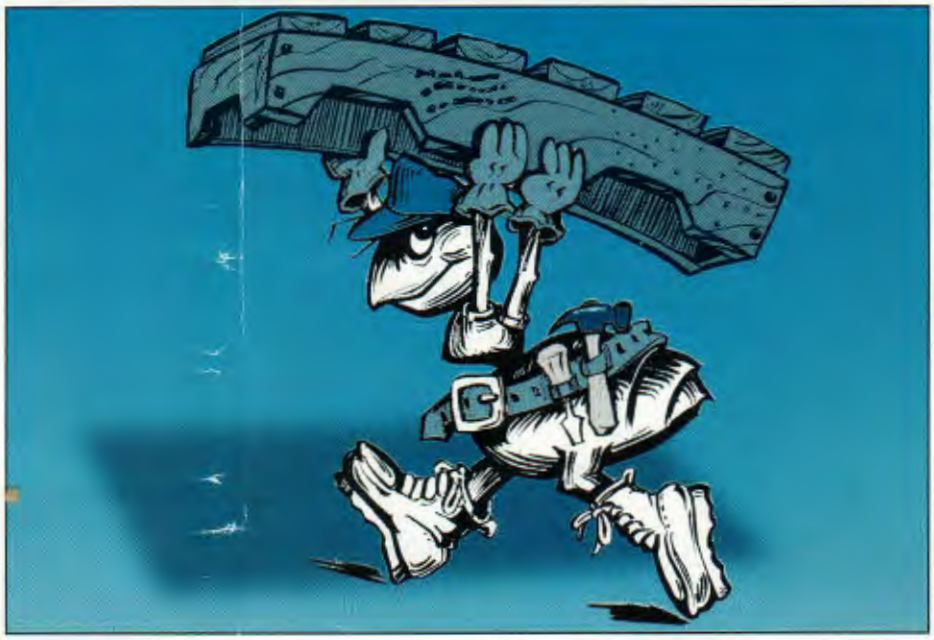
by Roger D. Cole

Your company has just spent a considerable amount of time and money producing a quality product for your best customer from Japan. The product was placed on a $10 wooden pallet that was constructed with cheap wood products. In this pallet was a hidden infestation of carpenter ants that laid dormant all winter long. The warm temperatures in the manufacturing plant have awakened them and encouraged them to leave the pallet. Many reproductive adult ants fly away to other areas of the plant but one big black carpenter ant crawls into the shrink wrapping that is protecting the pallet of the ready-to-ship product. The ant becomes stuck in the plastic wrapping and dies. The pallet makes its journey to Japan only to arrive at the Quality Control stop (gatekeeper) at the Japanese plant before entering the plant. The QA manager carefully inspects the pallet and *EUREKA* he finds the dead carpenter ant. A bright orange sticker is placed on the pallet that means REJECT. Faxes are sent and phone calls are exchanged. The final bill for this defect in quality is $300,000 after the whole load is returned and has to be reworked. This really happened and continues to happen more and more.

Wooden pallets present a unique problem. This problem is presented through the nesting sites and feeding sites of many species of wood destroying insects.

Here are four possible solutions:

1. *Plastic Pallets*
2. *Corrugated Pallets*
3. *Borate Treatment*
4. *Heat Treatments*
5. *Fumigation*



Plastic Pallets

One popular trend today in the food and drug industry is the use of plastic pallets. Curt Hale, BCE of General Mills in Cedar Rapids, IA stated: "Plastic pallets have an advantage in the food industry. There is no wood contamination from the splinters and no wood destroying organisms or stored product insect problems." One disadvantage of plastic pallets is that they have to be cleaned or disinfected occasionally and they may cost as much as $80 each, compared to $10 for a new wooden pallet. At $80 each, lost pallets and return pallet programs may be too expensive.

Corrugated Pallets

These pallets are made of 100% recyclable corrugated sheets. The pallets can be ordered to meet a specific size and weight requirement. The weight load of this pallet can be up to 2800 lbs. Humidity and water contact will reduce the life of these pallets. They should not be stored outdoors.

This option could completely eliminate all wooden pallets and wood destroying insects coming into your facility. Care should be taken to rotate the pal-

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ARTICLES IN THIS ISSUE

Wendell E. Burkholder Award Recipients

Paul Cogan of Central Science Laboratory, Slough, UK - Wendell E. Burkholder, Ph.D. USDA, ARS, University of Wisconsin, Madison, WI - Professor Dott. Paquale Trematerra, Universitá degli Studies del Molise, Campobasso, Italy get together to discuss recent advancements in stored-product insect research at the Entomological Society of America meeting in Dallas. The Wendell E. Burkholder award is given each year by Insects Limited, Inc. of Indianapolis.

Wooden Pallets

(continued from page 1)

lets to protect them from moisture. A tiny insect called Booklice or Psocids can thrive on old moist starchy paper.

Borate Treatments

The use of *boric acid* as a wood preservative has become very popular. The compound that is used in formulation is called Disodium octaborate tetrahydrate. The formulation is of low mammalian toxicity. "The borates won't leech from the wood. There shouldn't be a problem with food products." said Stoy Hedges, BCE, of Terminex International in Memphis, TN.

The treatment is applied by spraying on the borate solution or dipping the pallets into a previously mixed solution of the borate product. The boric acid then diffuses into the wood. The wood inhabiting insects ingest the toxic compound by feeding on the treated wood (ie. powderpost beetles, termites, carpenter ants, wood borers), or by walking across the treated surface. As the insects groom, they ingest a lethal dose. The boric acid disrupts the natural intestinal flora of the insect and causes a cessation in feeding which leads to starvation.

There are two products on the market currently for treating pallets. The products are called by the trade names of TIM-BOR and BORA-CARE. Both of the products contain the Disodium octaborate tetrahydrate.

Heat Treatment

Super heating the environment near a pest insect can be a very effective control tool. Insects are cold blooded organisms that must maintain an internal temperature from 75-90° (F) for optimal growth conditions. By changing the environment in which these pest insects live, they will either leave or die. This is pest management. By increasing the temperature of the wood pallet to 120-140° (F) the internal bio-functions of the pest insects break down and thus result in death.

Application of this method to practical on-site treatments would require special equipment and more labor. It could be very effective.

Fumigation

The most common technique used for treating pallets is to fumigate with methyl bromide in sheds or truck trailers. Both of these are often not tight enough to offer effective fumigations. Failures often occur during the cold temperature months when the internal insects are dormant. Care should be taken during the winter months to obtain a "reefer" trailer and warm the pallets and insects above 60° (F). The special "reefer" trailer is very tightly sealed. The de-gassing process is much simpler and shorter with the built-in circulation system.

When methyl bromide is no longer available, metal phosphides can be effectively used to treat pallets. Magnesium phosphide is much less temperature dependent and slightly faster. Phosphine gas can be slower acting with exposure times of 3-5 days normally.

Vikane™ (Sulfuryl floride) is an option for fumigating wooden pallets. Vikane is very good at killing wood destroying insects. Most fumigators have not completed the mandatory Dow Elanco Stewardship Program that sets minimum standards for using Vikane. Fumigators in California, Florida, and Arizona where most of the termite fumigations occur with Vikane would have ready access to this fumigant and training.

Conclusions

In the food and pharmaceutical industries, one black carpenter ant in finished product often means an expensive customer complaint. The question that should be asked is why do we risk our reputation on a cheaply built wooden pallet that wasn't properly fumigated, treated, or inspected before our products are placed on them?

Pheromone Tip

Use pheromones as a mobile inspection tool. Industry consultant Austin Frishman, Ph.D., places an Indianmeal moth lure on his hard hat when he does an inspection. David Mueller of Insects Limited, Inc. places a Warehouse beetle lure and Indianmeal moth lure on his clipboard. Then, when he moves through the facility, the moths and beetles come to him!

Try this at your local grocery or health food store, or pet store. You will be amazed at how fast they work.

◆ New Patent Issued ◆

Low Concentration Phosphine Fumigation Method

Patent Number: 5,403,597

Date of Patent: April 4, 1995

SCIENCE U•P•D•A•T•E

From Global Environmental Change Report 24 February, 1995

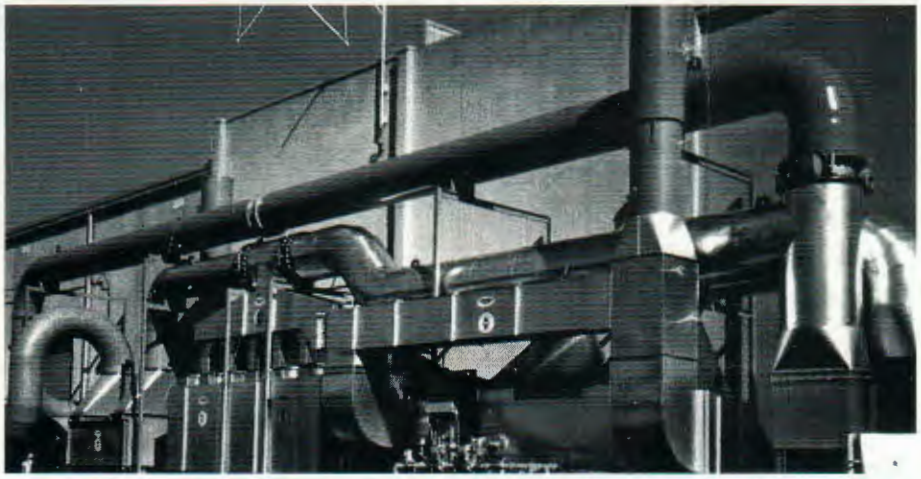
Methyl Bromide Alternatives

Recovery and Recycling Also an Option

Despite the lack of an internationally mandated phaseout of methyl bromide, a number of countries have already legislated phaseouts of their own. The U.S., which is the world's largest producer and consumer of methyl bromide, capped production at 1991 levels beginning in 1994, and will prohibit all production and imports after January 1, 2001, although remaining stocks can still be used. The European Union (a.k.a. EC), another significant user of methyl bromide, will reduce production and consumption of methyl bromide by 25% from 1991 levels by 1998, as will Canada.

Given the UN-negotiated cap on production and the phaseout plans of a number of countries, at least one company has seen a need for recovery and recycling capabilities and has jumped in to fill the gap. Halozone Technologies of Mississauga, Ontario, is marketing its Bromosorb system for the recovery and recycling of methyl bromide used for commodity fumigation. As air containing methyl bromide is vented from the fumigation chamber, a zeolite material selectively absorbs some 95% of the methyl bromide. The zeolite is heated to release the methyl bromide, which can be reused.

Halozone installed a test unit in Wenatchee, Washington, in June 1994, and another unit last month in a 72,000-cubic-foot fumigation chamber at the Port of San Diego, California. On March 28, this unit began running for the first time. It has the potential of pulling business from other neighboring ports including Los Angeles. Although the unit is expensive, Vladen Veljovic of Halozone notes that it would represent only about 5%-6% of the total cost of a US $20-million fumigation facility. Halozone has a third system for commodity fumigation enroute to Chile that will be installed by the end of the month, and is exploring other applications, including timber fumigation, in Canada.



Methyl bromide recovery system at the port of San Diego where 95% of methyl bromide is captured and stored in zeolite in 15 minutes.

Halozone is developing this technology for several other applications including soil and greenhouses. Veljovic said, "We realize the ideal is not to use methyl bromide, period." Velojovic said, but noted that in the meantime, their technology has the capability to reduce methyl bromide emissions and make up for potential shortages once caps and phaseouts take effect.

Oceans May be Net Sink for Methyl Bromide

Long thought to be a net source of methyl bromide to the atmosphere, a new study indicates that the oceans may actually be a net sink instead, according to a report in the 17 February issue of Science (vol. 267, pp. 1002-1005), by Jorgen Lobert and colleagues from the National Oceanic and Atmospheric Administration in Boulder, Colorado.

The researchers found that areas of open oceans in both the Northern and Southern Hemisphere had a lower partial pressure of methyl bromide than the air did, indicating that the ocean was absorbing methyl bromide from the atmosphere. In coastal and upwelling areas the reverse was true. One researcher predicted that the ocean is a net sink for 6,000-18,900 metric tons of methyl bromide each year. This is a big change in the estimated budget from what was previously thought.

James Butler, of the NOAA stated: "About one third of the methyl bromide produced by the oceans is emitted to the atmosphere, but a larger quantity is absorbed and destroyed, according to new research, making the oceans a net sink rather than a source". Butler went on to say that further studies completed since the publication supported the results.

Source: Global Environmental Changes Report, in part. For more information about this resourceful newsletter, Contact 1-800-964-5118 in North America, E-Mail: gecr@igc.apc.org.

We Study Insects To Feed A Hungry World

Food shortages exist in many parts of the world. About 40 percent of the world's food production is lost to insect pests every year. Sound entomological research and commercial industry programs are essential in solving these important problems.

Although reducing vast insect-caused losses will not automatical-

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We Study

(continued from page 3)

ly solve world hunger problems, entomology is and will continue to be a key element in the solution.

Meet Tim

Tim Hodgson *(Hot-son)* is truly Tim-the-Tool-man.

Tim is often the person behind the pleasing and helpful voice that you hear when you place an order with FSS or Il. But in addition to this primary responsibility, Tim is in charge of shipping, purchasing, inventory, international export documentation / shipping, fork truck repair, and he even built a new office addition this winter (2 new offices, records room, and locker room).

Tim has six years of experience with FSS/IL, is a certified fumigator, and helps during the busy warm months to do some fumigations.

Tim is married to Mandy and has two beautiful young girls: Jessica and Chelsea, two painted horses, one mule and several barn animals. Tim enjoys auto racing and has pitted for race crews on several occasions. He has done some racing himself. But now-a-days, horses are his true hobby.

If you ever need to place an order or check on the status of an order, ask for Tim...he can just about do it all.

What is IPM?

By Tom Phillips, Ph.D.

Integrated pest management (IPM) is a decision making process whereby a system manager must utilize information on pest biology, commodity or resource biology, pest control alternatives, and pest population trends in a cost benefit analysis to maintain pest populations below an economic threshold. The economic threshold is some point of insect density beyond which control must be applied to prevent losses, but below which control is not cost effective.

IPM integrates a variety of methods to keep pest populations below the economic threshold while reducing the overall costs and the overuse of chemical pesticides. Thorough knowledge of insect ecology is required for proper IPM. The development of a sampling scheme to monitor insect population levels and predict population trends is critical in the decision-making process. IPM does not call for the elimination of chemical pesticides, but for their judicious use when needed.

Tom Phillips, Ph.D

Rudy Plarre, Ph.D

Editors note: Tom is no longer at Madison, WI. He is now with the USDA in Hawaii studying quarantine pests on fruit. The stored product protection community will miss him and his excellent science. Dr. Rüdiger Plarre (Rudy) has joined Dr. Wendell Burkholder and his staff at Madison. Rudy is from Berlin and worked on stored-product insects at the German government stored-product laboratory. He studied at Vanderbilt University for two years and is the son of a geneticist. His speciality is the granary weevil *(Sitophilus granarius)*. Welcome Rudy!

GRAIN INDUSTRY '95

by John B. Mueller

According to the latest report from the USDA Grain Stocks, corn storage in all positions are 40% over last year's figures (5.59 billion bushel). In Illinois, 50% of the total 970 million bushel is stored on the farm. With all these factors in mind, increased storage, a warm 1994 fall/winter, early spring, and large volumes of commodities stored on the farm may add up to serious insect problems for grain and grain processors.

Warm weather has arrived, grain and grain processing facilities from all over the midwestern United States have

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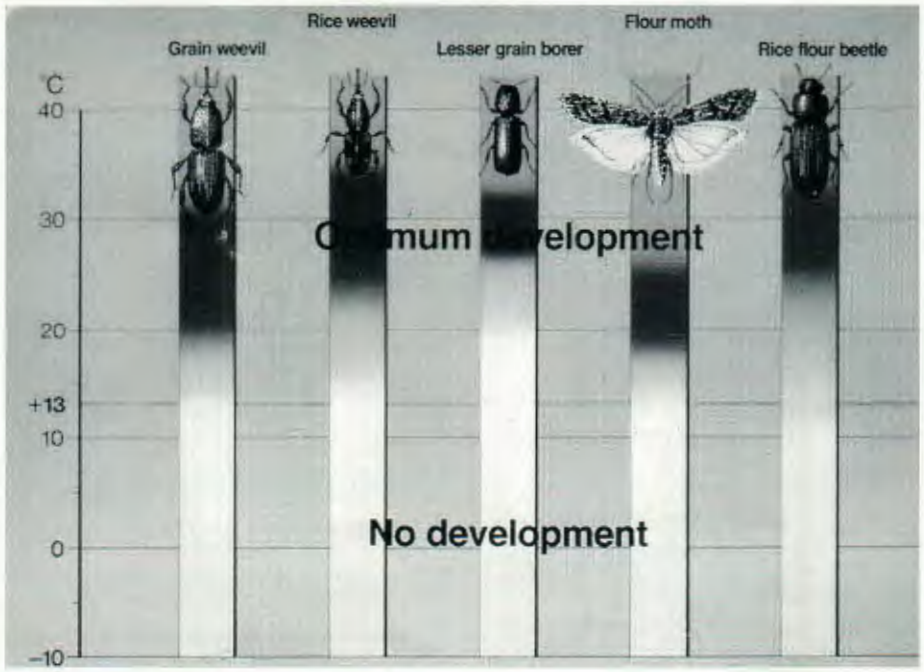

Comfort zone for stored product pests. Information courtesy of Zacher, Lange and Geisthardt.

Your Pesticide Log

Record of Use

This form is not copyrighted and is for you to photocopy.

Fumigation Service & Supply, Inc.
1-800-992-1991

All commercial applicators or their employees shall keep and maintain, for a period of (2) years or longer, records of all applications of pesticides classified for restricted use*. Such records shall be maintained separately from the customary sales invoices and should provide the following information listed on this form. This form is intended to assist you with those record keeping responsibilities. Some states require additional information than is included on this log. Please check with your local lead agencies for any additional requirements.

Certified Applicator's Name(s) _____

_____

Certification Number(s) _____

_____

Category (s) _____

Expiration Date(s) _____

Site of Application Address(es) _____

_____

_____

_____

Date	Brand Name	EPA Reg. Number	Name of Manufacturer	Commodity Treated/ Target Pest	Amount Used	Amount or Area Treated	Dosage Rate

* Restricted use pesticides are for retail sale and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification. Direct supervision in the case of fumigation means that the certified applicator has to be on the site and in direct contact with the fumigation.

COPY & SAVE

Classification	Use During Plant Operations	(1)Application	(2)Available as Space Treatment	Diluent	Residual Properties	(3) Oral rat LD_{50}	(4)Signal Word	Food Additive Tolerance
BOTANICAL								
Pyrethrins	Some labels	C/C, Spot, General	Yes	Water/Oil	No	1,350 mg/kg	Caution	Yes
Microencapsulated pyrethrins	No	C/C, Spot, General	Yes	Water	Some	34,000 mg/kg	Caution	Yes
SYNTHETIC PYRETHROIDS								
Cyfluthrin	Some labels	C/C, Spot, General	No	Water	Yes	590	Caution	Yes
Resmethrin	No	C/C, spot	Yes	Oil	Some	1,500 mg/kg	Caution	Yes
CARBAMATES								
Baygon (Propoxur)	No	C/C, Spot	No	Water/Oil	Yes	83 mg/mg	Warning	No
Ficam (Bendiacarb)	No	C/C, Spot	No	Water	Yes	40-156 mg/kg	Warning	No
GROWTH REGULATORS								
Methoprene	No	C/C, Spot, General	Yes	Water/Oil	Yes	34,500 mg/kg	Caution	No
Hydroprene (Gentrol)	No	C/C, Spot	No	Water/Oil	Yes	>5,100 mg/kg	Warning	No
CHLORINATED HYDROCARBONS								
Methoxychlor	No	C/C	No	Water	Yes	5,000 mg/kg	Caution	No
ORGANO-PHOSPHATES								
Dursban (Chlorpyrifos)	No	C/C	No	Water	Yes	145 mg/kg	Warning	No
Diazinon	No	C/C, Spot	No	Water/Oil	Yes	76 mg/kg	Warning	No
Microencapsulated Diazinon	No	C/C, Spot	No	Water	Yes	21,000 mg/kg	Caution	No
INORGANICS								
Silica Gel	Yes	C/C	No	N.A.	Yes	50-500 mg/kg	Warning	No
Boric Acid	Yes	C/C	No	N.A.	Yes	500-5000 mg/kg	Caution	No

(Note: Always follow the label that you have in hand. Labels can change from time-to-time.
The following information must not be substituted for directions on a current approved EPA label)

(1) **C/C** - application of small amounts of insecticide into cracks and crevices in which insects hide or may enter a structure.
Spot - application to limited areas on which insects are likely to occur, but which will not be in contact with food or food contact surfaces. The surface area must not exceed 2 square feet.
General - the application to broad expanses of surface such as walls, floors, and overheads.

(2) Space treatment is the dispersal of insecticides into the air by foggers, misters, or aerosol devices for control of flying or exposed crawling insects.

(3) LD_{50} on technical grade material - published in "NIOSH #1978 Registry of Toxic Effects of Chemical Substances." Working material values may vary.

(4) Signal words may reflect the LD_{50} or special physical hazards which may be encountered during the handling of material.

EPA Category-Meaning	Signal Word	Oral LD_{50} Range
I - Highly toxic	Danger/Poison	0-50
II - Moderately toxic	Warning	50-500
III - Slightly toxic	Caution	500-5000
IV - Relatively non-toxic	Caution	>5000

Information taken from *Insecticide Recommendations for Food Processing Plants, Heaps and Harein*; Minnesota Extension Service

INSECTICIDES FOR FOOD HANDLING AREAS

1. ***FOOD HANDLING ESTABLISHMENT*** -"is an area or place other than a private residence in which food is held, processed, prepared and/or saved."
2. ***NON-FOOD AREAS***-of food handling establishments- "including garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling)."
3. ***FOOD AREAS***-of food handling establishments- " include areas for receiving, serving, storage (dry, cold,frozen, raw), packaging (canning, bottling, wrapping, boxing), preparing (cleaning, slicing, cooking, grinding), edible waste storage, enclosed processing system (mills, dairies, edible oils, syrups)."
4. ***NON-RESIDUAL INSECTICIDES***- "are those products applied to obtain insecticide effects only during the time of treatment and are applied either as space or contact treatments."
5. ***SPACE TREATMENT***- "is the dispersal of insecticides into the air by foggers, misters, aerosol devices of vapor dispensers for control of flying insects and exposed crawling insects."
6. ***CONTACT TREATMENT***- "is the application of a wet spray for immediate insecticide effects."
7. ***RESIDUAL INSECTICIDES***- are those products- "applied to obtain insecticide effects lasting several hours or longer and are applied as general, spot, or crack and crevice treatments."
8. ***GENERAL TREATMENT***- "is application to broad expanses of surfaces such as walls, floors, and ceilings or as an outside treatment."
9. ***SPOT TREATMENT***- "is application to limited areas on which insects are likely to occur, but which will not be in contact with food or utensils and will not ordinarily be contacted by workers. These areas may occur on floors, walls, and bases or undersides of equipment. For this purpose, a 'spot' will not exceed 2 square feet".
10. ***CRACK AND CREVICE TREATMENT***- "is the application of small amounts of insecticides into cracks and crevices in which insects hide or through which they may enter the building. Such openings commonly occur at expansion joints, between different elements of construction, and between equipment and floors. These openings may leak to voids such as hollow walls, equipment legs and bases, conduits, motor housings, junction or switch boxes."

Terms were taken from the *Federal Register*, Vol. 38, No. 154, August 10, 1973.

Grain Industry '95

(continued from page 4)

been seeing Indianmeal moth activity since March. Indianmeal moth are generally the indicator for the rest of the year. Since the female Indianmeal moth can lay over 400 eggs in its short lifetime, an extra generation in August can mean big trouble.

Where to Start

Elevator managers will frequently call in the spring to ask: "What can I be doing to prepare for the summer onslaught of insects?" Most managers by now understand that effective temperature control will buy some time before temperatures reach levels that propagate pests. Insects' optimum growth zones are between 75-90°(F).

Temperatures of 55°(F) and below either stop or drastically reduce reproduction and minimize insect activity as well as, reducing insect damage kernels (IDK). As temperatures rise above 55°(F) insect activity begins to increase. At these temperatures close observation for Indianmeal moth activity in the head spaces of storages is necessary. If activity is noticed, a host of control measures are available. Most people are still unclear of what control measures are available as a top dressing or surface treatment:

The lesson we learned from 1994 was that we had 5 slow months of insect activity (Jan.-May).

Then much of the country experienced 15+ days of 90°(F) weather in the month of June. This accelerated all insect activity. The problems started compounding to make 1994 one of most "buggy" summers since the '80's.

The summer of 1995 is starting to look like another tough year for "bugs". Planning ahead and leveling storages, raking off old webbing, and controlling temperatures are the best ways to start.

Products Currently Available:

- **Actellic**®; Only labeled for Corn and Grain Sorghum
- **B.T.** *(Bacillus thuringensis)*; Stored Grains
- **Reldan**®; Only labeled for Wheat, Oats, Rice, Milo, Barley
- **Insecto**®; Stored Grains
- **1% Pyrethrin ULD**; Stored Grains

Upcoming Products:

(not yet available)

- **Sorcide**®; (Primiphos - methyl + Cyfluthrin) by Gustafson labeled for commercial market
- **Stealth**®; (Deltamethrin + Primiphos - methyl) by Gustafson for on farm use.
- **Dryacide**®; Diatomaceous earth product from Australia

Note: for further information on these products call us at 1-800-992-1991.

Grain Monitoring

New PC Grain Trap An invention of CSL-Slough, UK

The New PC Grain Trap consists of a clear plastic cone. It can be pushed easily into the grain for monitoring insect and mite populations. Special holes in the lid are tapered from the inside out to allow grain pests in but not out. A Teflon rim gives further insurance against the pests escaping.

Early detection of grain pests can allow the grain managers to predict outbreaks of destructive populations of insects before they become an economic problem.

Devices like the new PC Grain Trap are helping the modern grain handlers to be more pro-active in their pest management programs rather than reactive.

NEW PHEROMONE

Insects Limited, Inc. has been granted the license from the Ministry of Agriculture, Fisheries and Food, Central Science Laboratory in Slough, England to synthesize, manufacture and distribute the new pheromone for the Saw-toothed grain beetle *(Oryzaephilus surinamensis)*. The saw-toothed grain beetle is a major pest of stored-products worldwide. It is especially found in grocery stores, home pantries, pasta factories, and many places where cereal-based food is stored.

The new pheromone has shown good results in field and laboratory testing. Paul Cogan of CSL showed at the Fumigants & Pheromones Technical Conference that the 3-lactone pheromone was 11 times more attracted to this pheromone than to a control. This is especially good for a non-flying beetle. More details can be obtained about this new pheromone trapping system from Insects Limited, Inc.

PARASITIS '95

Sunny Barcelona, Spain was the site of PARASITIS '95, an *International Fair of Pest Control Technology in Urban and Industrial Environmental*. This was the equivalent of the N.P.C.A.'s national convention and exhibition for Spain. Spain has over 40 million people and its share of pests *(plagas)* in this warm Mediterranean climate. During the four day *(February 21-24)* fair, over 3000 professionals in urban and industrial pest control passed through the gates and smiles of the organizers.

Jaume Banchs, director of PARASITIS stated: "The purpose of the fair was to provide the necessary means to offer an exchange of information and technologies related to questions of domestic and urban pest control." His counter-part Joan Carles Parrarés added: "PARASITIS '95 is a great opportunity for unifying and consolidating ideas, for bringing technologies up-to-date and for making known new techniques and services."

A few innovations could be found among the 40 exhibitions, however, the Mediterranean region is strong on rodenticide and insecticide technology. True pest management is just starting to become recognized in this region. Ants, Yellow jackets, cockroaches, flies and mice top their list of most wanted dead. Stored product protection is often separate from their normal pest control duties.

(continued on page 8)

Parasitis '95

(continued from page 7)

Insects Limited, Inc. of Indianapolis exhibited pheromones, alternatives to methyl bromide, pest monitoring software, and announced the next Fumigants & Pheromones Technical Conference in Bologna, Italy February 14-15, 1996.

INTERNATIONAL CONFERENCES

PEST-EX '95

British Pest Control Association

London • 18-21 • June 1995

New

Insects Limited Product Guide Available:

Please send me the new IL Product Guide ❑.

I am interested in receiving a program for Italy ❑ Tulsa ❑.
Please send a program and registration information when it becomes available.

Name _____

Co. _____

Address _____

City _____ St _____

Country _____

Zip _____ Phone _____

Is your mailing label correct?
YES ❑ NO ❑
Fax: (1) 317-846-9799
or send: P.O. Box 40641,
Indianapolis, IN 46280-1451 USA

Conferences and Workshops

Fumigants & Pheromones International Conference
14-15 February, 1996
Bologna, Italy

Hands-on Fumigation Workshop
October 11-12, 1995
Tulsa, Oklahoma
Organized by Fumigation Service & Supply, Inc. and Insects Limited, Inc. To receive a program, send the bingo card on this page.

QUOTABLE QUOTES

"With NAFTA and GATT Trade Agreements, the only way countries can restrict trade anymore is by pesticide residues and pests." Geritt Cuperus, Ph.D., Oklahoma State University, 3/95.

"Man's judgment is bounded only by the horizons on his experience." John V. Osmun, Ph.D., Professor Emeritus Purdue University.

"The customer pays you for protecting his property, not for how many gallons of pesticide you used, or what the body count was, or even for how many hours it took for the protection of his property." Jeff ?????, Ph.D., FMC, Northwest Pest Control Conference, Hood River, OR, 3/95

"Most of the scientists and producers now believe that the science (on methyl bromide) is solid." Bill Thomas, EPA, Stratospheric Protection Div., Fumigants & Pheromones Technical Conference, Indianapolis, 12/94.

"Practice random acts of kindness and senseless acts of beauty," seen on a bumpersticker.

Small boy asks father: "What killed that small squirrel in the middle of the road?" Father says: "A car, son." Mom says: "No it wasn't a car, honey, it was indecision."

NEWSLETTER

Fumigants & Pheromones is published by Fumigation Service & Supply, Inc. and Insects Limited, Inc.for the professional applicator. 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., P.O. Box 40641, Indianapolis, IN 46280.

Insects Limited
INCORPORATED

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Indianapolis, IN 46280-1451
317-846-5444
FAX 317-846-9799

U.S. Postage
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Carmel, IN
Bulk Permit #14

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ALBERT F. MUELLER
1508 S. RED BANK RD.
EVANSVILLE IN 47712-

Attention Mailroom Personnel (or Addressee) - Please Reroute if Necessary