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DUST MITES*

Dust mites are a cosmopolitan group of arthropods that refer to a number of species which are normally found in the home. The most common species in both Australia and the UK is Dermatophagoides pteronyssinus from the family Pyroglyphidae. However, there are a range of other species that are loosely named ‘dust mites’, as well as a number of predatory mites that share the same dusty environment.

Dust mites live in the fine layer of minute dust particles that continually settles on household items. They are found almost worldwide but their numbers are considerably reduced at high altitudes and in dry climates.

In the mites favor homes with high humidity levels and constant warm temperatures and, under these conditions, mite populations can explode, although there are some seasonal fluctuations.

The mites are known to concentrate in high traffic areas in homes and on certain furniture items, especially beds, upholstered lounges, chairs and in carpets with long fibres. They are attracted to these areas for food and they feed on shed human skin scales and secretions, house dust, fungal spores, pollen grains, plant fibres and insect scales.

Dust mites dislike strong light and will take harborage in the seams, ledges, and framework of furniture when exposed. Due to their light weight, dust mites can become airborne during activities such as bed making, and in this way can be distributed throughout the room or house.

Identification is Difficult

Adult mites are described as white to a light tan in color; they are difficult to see with the naked eye, as they measure only 0.5mm in length, and the developmental stages are smaller.

The body of the mite is oval shaped and covered with fine striations. Identification of dust mites is performed with the use of light microscopy and taxonomic keys, after a complex process of separating the mites from the dust substrate. Very few laboratories have the taxonomic skills to confirm the identification of these mites.

There are five stages in the life cycle of a dust mite; from the egg, the larvae stage then two nymphal stages, and finally the adult.

The whole life cycle from egg to adult takes approximately one month to complete. Mature female mites can lay from one to two eggs per day. Adult mites can live up to two months but this is dependent on the levels of humidity and temperature of their surrounding environment.

Dust Mites and Asthma

House dust mites have been known to be associated with allergies since the 1960’s and have become a focus over recent years for their involvement with respiratory ailments, particularly as a trigger for asthma.

They do not bite, sting or transmit diseases, but harbor strong allergens in their bodies as well as in their secretions, excreta and shed skins.

Constant contact with these allergens can trigger respiratory and dermatological complaints, which may include allergic rhinitis, childhood eczema, various other allergies, as well as asthma.

Patients with a suspected dust mite allergy can be tested for such an allergic response via skin prick tests in a specialist allergy clinic.

It is estimated that around 70-80% of people in warmer climates have an allergy to dust mites.

Managing Allergies

Allergies from house dust mites can be managed by immunotherapy using mite extracts in conjunction with reducing the mite population in the home of the patient.

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The Indiana Pest Management Association, under the leadership of Judy Logsdon (Rid-A-Pest), gathered about 20 of its members to provide pest control services to benefit homeless veterans. On September 19th, the PMPs gathered at the Donald W. Morea Sr. Veterans House in Indianapolis, IN to provide bed bug and German cockroach management services. The house is a three-story, 40 unit building that provides housing and reintegration services to homeless veterans and administers programs and services to prevent at-risk veterans from becoming homeless.

PMPs brought their applications and personal protection equipment. Insecticides were provided by Univar, Bayer, Zoecon and Syngenta— including Temprid, Gentrol and Gentrol Point Source, Advion and Tri-Die—and used in combination with non-chemical control measures provided by Facility Manager Jason Bates. Teams were appointed for each floor, and the operation was conducted over a three-hour period.

**IPMA members who provided service were** Pat Becker, Joy Flynn and Ray Seigel (POW Pest); Bob Schafstall and Brandon Foster (Burt’s Pest Control); Texas Boles (Superior Pest Management); Brent Hiatt (POW Pest); Tim Kaforke (Univar); Sarah Florey (Arab Termite and Pest Control) and Judy Logsdon, Mike Bender, Eugene Hicks and Larry Logsdon (Rid-A-Pest) Troy Fry (Gold Seal Pest Control), Loren Cunnington and Mike Leahy (Zoecon Corp); and Ryan Klein (Bayer).
Sanitation is defined as the development and application of salubrious practices for the sake of cleanliness. Cleanliness via cleaning involves various methods including using the five senses. One overlooked, yet very effective method is resource cleaning or bioremediation. Bioremediation is environmental cleanup through biological agents or nonpathogenic, beneficial bacteria.

There are many environmental advantages with bioremediation practices.

**Advantages**

Bacteria double every 20 minutes; Bacteria give-off CO2 and water only; Bacteria are non-pathogenic; Bacteria thoroughly clean organic buildups; Bacteria reach micro-spaces; Bacterial bioremediation is a natural process; Bacterial bioremediation can remove offensive organic odors; Bioremediation is cost effective; Bioremediation has a low capital outlay. Bioremediation requires less energy by comparison to other technologies; Bioremediation requires far less manual inputs and supervision.

Sanitation efforts are challenging, perpetual, and change with the facility. Poor sanitation resulting from poor cleaning methods can threaten both inhabitants’ well-being and structural valuations.

An essential and routine cleaning method, bioremediation must be included in the Master Cleaning Schedule (MCS). Focal areas must include vault toilets, showers, ceramic tile floors, floor drains, drain-lines, overflow lines, septic systems, grease traps, elevator pits, lift stations and sumps, compactors, loading docks, dumpsters, trash receptacles, mops and mop-bucket waters, outside drains, trough drains, and other areas where organic build-up is present.

For example, by routinely and systematically opening and scrubbing all floor drains with a bristly brush followed by beneficial bacteria or a biologically enhanced cleaner, micro-space sanitation is assured.

An automated inline injection pump system can assure programmatic delivery of a biologically enhanced cleaner to numerous end points. Set the timer for the required dose (any amount of run time for any given period).

Chronic organic buildup is plausible in unknown or inaccessible floor drains, below vending machines, below slab floors, and numerous other micro-spaces that are not being effectively cleaned. Intimate knowledge of the current structural architecture is essential.

Rigorous and routine sanitation inspections must be conducted. Inspection results must be shared with the facility’s staff to determine actionable items. With sanitation concerns, there must be recurrent communication and consistent follow-up. A close working relationship must exist between the cleaning staff and other staffers.

When using a biologically enhanced cleaner, it must have certain characteristics to assure optimum substrate performance. It must be of a certain centipoise (the amount of force necessary to move a layer of liquid in relation to another liquid). Centipoise is considered the standard unit of measurement for fluids of all types. It is 1/100 of poise (unit of viscosity). The symbol for centipoise is cP or cps.

For example, a viscosity of 880 centipoise enables high sheer cling or sticking to vertical surfaces. High sheer cling allows beneficial bacteria to inoculate organic build-up within micro-spaces, immediately digesting inanimate organic debris. High sheer cling allows “stick-to-it-cleaning” (especially for drains, toilets, holding tanks, grease traps and septic systems).

Biological cleaning products are biodegradable and nontoxic compounds that contain no pathogens, are noncaustic, non-corrosive and salmonella-free. Biologically enhanced cleaners consume greases, fats, oils, proteins and carbohydrates. They can leave behind a fresh citrus scent.

Put billions of cleaning microbes to work in all those architectural micro-spaces that are rarely seen.

**How do you know? Micros make it so!**

*By Dr. Stuart Mitchell, Pest West Educational Brief*
JOHN WALTON ELECTED TO IPMA HALL OF FAME*

John Walton was born in 1929 at home and described as an instigator by his parents. One time he took all the door knobs off the entire home so that no one could get in or out setting a good example for his two younger siblings. He was raised by his parents that were married for 73 years. Attending the old Central High School in downtown Evansville his favorite subjects were math and gym since girls were not a subject. Throughout grade and high school his favorite activities were to take bike rides across town, swim, play softball and basketball. Latter as a teen he began to idolize Jack Nicklaus and soon after golf became his favorite sport, which he still enjoys today. His first job was working in a gas station servicing cars and pumping gas. After high school he joined the National Guard and attended Milligan College to study business. Milligan is a small Christian college which only had 800 students at the time. His big brother in college was Del Harris who later became a head coach for three different NBA teams. Once out of college he began working in a grocery store where he met Carl Fergus. This opened the door to the pest management industry. Carl Fergus at the time was the General Manager of Orkin and decided to hire him in 1961. After nearly two years with Orkin he left to take a manager’s position back into the grocery business. Just six months later he realized his love and passion for the pest management industry and decided to move to Indianapolis, IN for a job with ARAB Termite and Pest Control. In 1965 after working for ARAB of Indy for two years he decided to move back home and buy the ARAB dealership in Evansville, IN. During that time he also served as a Reserve Deputy for the Sherriff Department. This gentleman took 2 daughters and a son to raise as his own. His goal as a parent was to guide and provide for his family. Not only did he love his children he served as the president of the Biddy Basketball league through Lakeview Optimist Club for nearly 30 years. He served as President for ARAB Pest Management Services for 5 years, attends Indiana Pesticide Review Board Meetings as well as serving on the board of directors for the Indiana Pest Management Association since 1996. He has become guardian for our pest management industry.

I have the honor to present to you Mr. John Walton, Jr.

*Presented by Sid Shah

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DUST MITES* continued from page 3

It is virtually impossible to eliminate all dust mites from a household, but areas where mites tend to congregate can be targeted:

- Wall-to-wall carpet should be reduced and replaced, where possible, with smooth, hard surfaces that are easy to clean.
- Upholstered furniture should be avoided.
- Mattresses and pillows should be encased in especially manufactured encasements that aid in the exclusion of mites.
- Bedding and curtains should be selected on their ability to withstand frequent laundering.

In addition:

- Thorough vacuuming on a regular basis using a cleaner with a high efficiency particulate cleaner, including all mattresses, especially the seams and framework of the bed, will also help to reduce dust mite populations and a build-up of the allergens.
- Steam cleaning can readily kill the mites and therefore subsequently reduce the allergens.
- A reduction in humidity levels by increased ventilation throughout the house and the use of air conditioning, will assist in maintaining mites at a lower level.

**Chemical Means of Control**

There are various products registered for dust mite control including permethrin and eucalyptus oil, which are largely aimed at the DIY market.

However, these chemical methods will not provide long-term benefits in reducing mite populations, nor will they decrease the allergens.

This means that proper housekeeping with a high degree of hygiene by the homeowner should be the main means of managing dust mites. As such, it is usually unnecessary for pest managers to be involved in dust mite control.

*By Stephen Doggett and Marilyn Geary, from Professional Pest Manager*
IN MEMORIAL: AL SMITH

Alan Smith, 39-year veteran in the pest management industry, passed away peacefully in his home on December 13 after a brief battle with pancreatic cancer. Smith spent the past 14 years with Cooper Pest Solutions in Lawrenceville. While at Cooper, Smith headed the firm’s termite teams and was a regional manager.

Graduating from The Ohio State University in 1975 with an undergraduate degree in entomology, Smith worked with Robert and Judy Dold for 25 years as the general manager for their Cochnower Pest Control office in Lafayette, IN.

Smith is survived by his wife, Dee, his daughter, Johanna, his son, Cameron and daughter-in-law, Lauren.

If you wish to make a donation in his name, the family has two suggestions: Alan and Dee were history buffs and attended the Sig Synnestvedt Memorial Lecture series in Brockport, N.Y.

During his time in the Midwest, Smith was a dedicated member of the Indiana Pest Management Association, attending the annual meetings at Purdue University for more than 20 years and serving as president in 1984. Donation information for both organizations is listed below:

Sig Synnestvedt Memorial Lecture, The Fund for Brockport State University of New York, 350 Campus Drive, Brockport, NY 14420-2926

The Indiana Pest Management Association Memorial Scholarship, (Checks should be made out to the name above, with “Honoring Al Smith in the memo line) and mailed to: Dr. Gary Bennett, Purdue University, Department of Entomology, 901 West State Street, West Lafayette, IN 47907

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KNOWING YOUR BUGS BETTER*

Pest management professionals (PMPs) are likely to hear taxonomic terms when reading industry newsletters and magazines or attending seminars and conferences. Taxonomy is the naming and grouping, or classification, of organisms. It’s important for PMPs to understand the basic building blocks of taxonomy and how organisms are grouped together.

The organizational hierarchy in taxonomy is as follows: Kingdom – Phylum – Class – Order – Family – Genus – Species.

A good mnemonic for remembering the order of things is Kings Play Chess On Four Green Squares (KPCOFGS). There are many variations of this mnemonic and you may have learned a different one when you were in high school. It does get more complicated than these seven ranks. There are super- and sub-levels. However, they are not mandatory like the ranks listed. For example, you might come across a reference to a subphylum or a superorder. Just know that a subphylum lies between a phylum and a class, and a superorder lies between a class and an order.

To make things more difficult, Latin and Greek are the ancient languages of taxonomy. There is a good reason for this. Latin is a dead language that, except for the Vatican, is not spoken very much in today’s world. It is stable and the meanings of words do not change as they do in modern languages. This way, a name given to an organism cannot be misinterpreted by people in different cultures or as time progresses. For example, Britons, Australians and Americans all speak English, but there are many words in each culture that are not understood by the others.

If you are a crossword puzzle addict, you may be familiar with Greek and Latin words. It is common to find clues such as “wing” or “wings”. The Latin word for wing is alae. Now you know a three-letter word for wing and a four-letter word for wings. If you need a five letter word, try the Greek word for wing, ptera. Many insect order names end with ptera, which means the name is describing something about the insect wings in that order. Names are meant to describe characteristics of an organism or the area where they are found. It is not always so formal, though. Some scientists dare to have a sense of humor as in the following examples:

- *Ytu brutus*, a Brazilian water beetle,
- *Apopyllus now*, a spider from the island of Curacao,
- *Heerz lukenatcha*, *Heerz tooya* & *Verae peculya*, parasitic wasps,
- *Pieza pi*, *Pieza kake* & *Pieza deresistans*, micro bee flies,
- *Gelae baen*, *Gelae belae*, *Gelae donut*, and *Gelae roll*, fungus beetles.

Obviously, these are not all Latin words. The requirement is for words to be “Latinized”. Organisms have also been named after celebrities, like the Australian horse fly, *Scaptia beyonceae*, so named because it has a golden posterior.

Let us use our well known friends, German cockroaches and house flies, as examples of how organisms fit into the hierarchy:

**Kingdom:** Animalia

**Subphylum:** Hexapoda

**Phylum:** Arthropoda

**Class:** Insecta

**Order:** Blattodea

**Family:** Ectobiidae

**Genus:** Blattella

**Species:** Blattella germanica

**Kingdom:** Animalia

**Subphylum:** Hexapoda

**Phylum:** Arthropoda

**Class:** Insecta

**Order:** Diptera

**Family:** Muscidae

**Genus:** Musca

**Species:** Musca domestica

The scientific name for each species is the grouping of the genus and species names, which are always either italicized or underlined. The scientific name for the German cockroach is *Blattella germanica*. The genus name is *Blatella*, which includes several other closely related cockroaches, and the species name is *germanica*, which identifies only this particular species. Other species in this genus that occur in North America include *Blatella vaga*, the field cockroach, and *Blatella asahinai*, the Asian cockroach. Each of these distinct species looks very much like the others in the genus.

From the classification of the German cockroach and the house fly, we can see that all insects belong to the animal kingdom and the arthropod phylum, German cockroaches and house flies are very different. How is it that they are both insects? It is very simple. If you are an arthropod, you only have to have a few things to be an insect. They are mainly: -three body segments (head, thorax and abdomen); -three pairs of legs, all of which are attached to the thorax; -one pair of antennae.

Many insects, such as the ants, have three body segments that are clearly defined. Some insects have the body segments joined so tightly that there is no obvious separation. Anatomically, however, the segmentation is there. What about the scale insects that live and feed on plants? During their first nymphal of “crawler” stage, they have legs and antennae which are lost after the first molt and then a waxy covering is secreted. They don’t always look like insects, but at some point they exhibited all aspects of an insect.

Not all insects have the long antennae that fit our understanding as well. Some flies have very short, stubby antennae that you might not notice until you look under a microscope. The three pairs of legs attached to the thorax is the requirement with the least variation across the class. The legs tend to be where you

continued on page 12
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MINUTES – PURDUE MEETING
January 13, 2015

Meeting was called to order by Mark Swihart. The minutes and treasurer’s reports were read and accepted.

Committee reports:

Education – Scott Robbins mentioned a southern Indiana CCH meeting for 2015. Mark Swihart is organizing one in Warsaw for March. One is being considered for Indianapolis.

Liaison – Ray Siegel reported that WDI regulations are still being sorted out. Pollinator protection policy for Indiana is being developed. Greg Campbell is our representative on this activity.

Public Relations – Kevin Puetz discussed manning our booth to get visibility and that some Facebook ideas are being discussed.

Membership – Carrie Campbell reported 4 new members since July. She presented honorary memberships to Dan Glaze (accepted by son, Scott), Marion Hall, Greg Campbell (accepted by Carrie), Bob Young, (accepted by daughter, Sarah Florey), Bob Jackson (accepted by son, Rob), and Bobby Corrigan.

Summer Meeting – Carrie reported we will meet at the Raddison Star Plaza in Merrillville July 24-25, 2015. Activities and program will be developed this spring. The Brown County Seasons Hotel will be our meeting site in 2016 – July 16-17. The winter meeting in 2016 will be on the Norwegian Cruise liner Escape (tentative). It has ports in St. Thomas, Tortola and Nassau. More details to come. IPMA Hall of Fame – Sid Shah recognized John Walton, Arab of Evansville, for his many years of service. Past presidents, Ray Siegel and Scott Robbins received plaques recognizing their service to IPMA.

New Business – Doug Foster would like to have a training session/workshop on business training. He will survey the interest of our members to gage interest.

The auditor of IPMA, Mike Corbitt, reported the Association’s finances are in good order.

The meeting was adjourned.
Knowing Your Bugs Better*

Continued from page 9

Cherish yesterday.
Dream tomorrow.
Live today!

would expect them,, and for good reasons. Compared to other arthropods that have legs all over the place, having the legs meet at the thorax allows for better control and efficiency of movement.

The order level is where insects are grouped with others that are similar. There are currently 28 insect orders. These are the most relevant orders to the pest management industry: -Zygentoma – silverfish; Dermaptera – earwigs; Derma means skin. Think of dermatologist. So Dermaptera means skin winged. This refers to the leathery forewings that cover the hind wings.

Orthoptera – crickets, grasshoppers, katydids and locusts: Ortho means straight. Think of orthodontists and how they use braces to straighten teeth. Orthoptera means straight wing. When these insects are at rest, their wings fold over the abdomen like a roof and form a straight line down the back.

Blattodea – cockroaches and termites – Blatt is Latin for cockroach. Psocodea – parasitic and non-parasitic lice; Thysanoptera – thrips, Hemiptera – true bugs; Hemi means half like hemisphere. So Hemiptera means half wing. This refers to the forewings of most hemipterans that are half leathery at the base and half membranous at the ends.

Coleoptera – beetles – Coleo means sheath, so Coleoptera means sheath wing. A sheath is a protective covering. The forewings of beetles are hardened to cover and protect the hind wings. This adaptation has led to Coleoptera being the most successful insect order with the largest number of species. –

Diptera – true flies – Di means two, as in two wings. This is the order where insects have one pair of wings.

Siphonaptera – fleas – Siphon means tube and refers to a flea’s mouthpart. The letter a means without, and remember ptera means wing. So Siphonaptera means siphon without wings. – Lepidoptera – moths and butterflies; -Lepido means scale. Moth and butterfly wings are covered in scales that fall off easily and look like dust in your hands. Hymenoptera – ants, bees and wasps; Hymeno is Greek for membrane, so membranous wings. These are current insect orders, meaning they are always changing. The orders were not written in stone at the beginning of science. In taxonomy, scientists tend to be lumpers or ‘splitters.’ As Charles Darwin explained, “Those who make many species are the ‘splitters,’ and those who make few are the ‘lumpers.’” Forty years ago, the order Orthoptera included the walking sticks, praying mantids and cockroaches that have since been split into their own orders. The lumpers have had the upper hand with insects as of late. Several years ago there were 32 insect orders instead of 28. Why all the changes? Organisms used to be classified based mainly on external appearance. Molecular studies have now started revealing either relationships or differences in organisms that cause them to be grouped together or split apart.

*By Erin Monteagudo, Univar USA. Reprinted from Nevada Pest Control Association News.
Because businesses are constantly competing to get attention, the average person’s inbox is bombarded with emails before they even hit the snooze button. You spend a lot of time and effort into putting together and sending out emails to boost sales, so the more that are opened the better. However, if your analytics reveals that your open rate is low it’s important to know why to correct any issues. While email marketing isn’t an exact science, there are several strategies you can implement to help boost open rates and email marketing success.

**Create Great First Impressions** – First impressions are crucial and start with a subject line. Effective subject lines should be short, sweet, and to the point. Businesses are given only a few seconds at most to catch someone’s eye, so the subject line really needs to stand out.

**Personalize It.** Most people would rather open and read an email from someone they know than a faceless business. Putting the recipient’s name into the subject line or greeting is also a great way to make an email more personal. Also consider using your first name for the “from” email address instead of something impersonal like “info@”.

**Include Special Offers** – Emails can also gain more attention when they hold an exclusive (and we mean exclusive) special offer. These offers can be, but are not limited to: DISCOUNTS, FREE TRIALS, SPECIAL EVENT INVITATIONS, FREE WEBINARS OR WHITE PAPERS, AND NEW PRODUCT RELEASE INFORMATION.

**Change Content Regularly** – If your business is sending the same offers repeatedly with little to no diversity, it may actually cause recipients to unsubscribe.

**Create a Posting Schedule** – Set up a regular email sending schedule. Weekly or biweekly emails are enough to get the word out, but not too little to be forgotten about.

**Segment According to Interest** – People choose the emails that they open based on their own interests. If you are not segmenting your emails there is a good chance they are going to people who do not want them. A great way to do this is to ask customers their preferences. Not only does this give businesses a better understanding of their demographic, but it also gives subscribers a way to know what to expect. These interests can even be met in the subject line.

**Make Your Email List Count** – The phrase “the more the better” is one that doesn’t always apply to email marketing lists. Companies that have large subscriber lists may actually be emailing inactive addresses. It is crucial to collect addresses responsibly making sure that they are not only valid, but that they are interested in your content.

**Implement Sign Up Strategies** – Email sign up forms should always be placed on high-traffic website locations that can be accessed on different devices. Many websites will use purchases to ask for email addresses, giving customers a chance to opt-in for future deals.

**Be Clear and Concise** – This not only improves branding, but it also increases open rates. Put yourself in our recipient’s shoes and use what you would want to see in YOUR inbox. Writing to appeal to a large number of people isn’t easy, but writing in a way that feels personal can and will make the difference.

Regularly implement these tips and before you know it, your analytics will steadily reveal higher open rate percentages.

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By Alayna Soriano, Active Web Group
For proper operation and long life, thoroughly clean your sprayer every six months using B&G’s cleaning solution and nylon brush kit. Step-by-step instructions for cleaning the tank, pump tube, hose, extension and nozzle are available below.

While cleaning, inspect the pump tube gasket, check valve, gasket in the base of the hose where it connects to the tank, nylon gasket at the top end of the hose, and the small o-ring hat fits behind the crack-and-crevice straw (you’ll have to unscrew the nozzle tip); replace items that are cracked, damaged or swollen. Clean up hardened grease residue inside the pump tube and add more grease to the plunger cup if necessary. (A B&G gasket kit contains all the necessary parts for routine maintenance.)

Replace nozzle tips more than two years old, said Technical Director Bill Robinson. With regular use, the orifice wears and increases in size, which may cause you to over-apply insecticides and violate labeling requirements, he said. Replace nozzles yearly if using wettable powders, which quickly wear down brass tips.

Maintaining equipment is a chore worth doing. It saves you money – no time is lost on the job due to broken or leaky devices – and ensures you comply with insecticide labeling.

Why wait for something to break when it’s simple to replace worn parts during routine maintenance, asked Bill Robinson, technical director of B&G Equipment Company. “Just do it. Be pro-active and not reactive when it comes to keeping equipment operating,” he advised.

Even routine wear-and-tear takes a toll. Normal nozzle wear on a B&G sprayer can increase the amount of liquid insecticide that technicians apply by 10 to 15 percent each year, said Robinson. This may cause misapplication, contamination or exposure of non-target organisms, resulting in potential regulatory action.

While business is slower this winter, take these steps to improve equipment performance:

Don’t overfill – Insecticide that sits in a device is one of the biggest contributing factors to equipment failure. It corrodes tanks and degrades rubber parts like gaskets, o-rings, hoses and capillary lines. Built-up residue from insecticide suspensions and foaming agents and caked dust products will clog siphon lines and nozzle tips. Mixed formulations can separate and create issues at the tip when a machine is turned back on. Prevent this by filling a device only when the amount of product required for the job; don’t fill a one-gallon tank if you only need one pint of finished product, Robinson said.

Empty Left-Over Product – Remove left-over product per manufacturer directions; never store devices with product in the tank. This will help prevent water-based products from expanding in freezing temperatures and damaging valves, an important consideration in cold-weather markets like Canada, Robinson said. Be sure to drain liquid in extensions and valves back into the holding tanks. For extra protection, bring equipment inside during winter.

Clean and Flush – Flush empty devices with clean, warm water once a month, said Robinson. Every six months, clean equipment with a manufacturer – recommended solution (never use bleach or chlorine-based products) and a nylon brush. Inspect key components for wear and replace as necessary.

Step Away from the Safety Pin – Always use a nylon brush to clean a brass nozzle; never use a steel brush, safety pin or paper clip to unclog the tip, advised Robinson. Steel is harder than brass and will alter or increase the size of the nozzle orifice. A better option; a toothbrush, he said.

IN MEMORIAM: DR. PHIL SPEAR

GAINESVILLE, FL – Dr. Phil Spear, a beloved industry leader and a member of the Pest Control Hall of Fame’s Class of 2010, passed away August 28. He was 98.

Spear was not only the then-National Pest Control Association’s technical director for more than 25 years, he also filled in two terms as acting executive director, for six months in 1976-1977 and for nine months in 1977-78. Upon this retirement from the association in 1980, Spear and his wife, Hazel, moved to Florida, where he became involved with Florida’s associations and research universities.
2016 WINTER MEETING AND CRUISE

NOTE: UPDATED INFORMATION – DATED: FEBRUARY 20TH

DEADLINE TO HOLD A CABIN EXTENDED TO MARCH 25TH

Don’t miss a great trip – send your deposit today to:
Betty Hollingsworth, 9061 Lisering Circle, Indianapolis, IN 46256-4375


Itinerary:
- **Saturday** ....Miami
- **Sunday** ......At Sea
- **Monday** ......At Sea
- **Tuesday** .....St. Thomas
- **Wednesday** ...Tortola
- **Thursday** ....At Sea
- **Friday** ......Nassau
- **Saturday** ....Miami

Rates: Per person, based on double occupancy
- Inside....$629.00 + $120.46 = $749.46
- Outside...$829.00 + $120.46 = $949.46
- Balcony...$1,029.00 + $120.46 = $1,149.46

Payments: Per person, based on double occupancy
- $25.00......to hold a cabin........Deadline Extended to: March 25th
- $225.00.....Balance of deposit......June 15th, 2015
- Balance of Cruise amount....depending on your cabin...October 15th, 2015

This ship is your “cruise” Many activities to do or not to do. There is a Sports Complex, Miniature golf, Huge aqua park, large “hand over hand” rope course, “Sky Rail roller coaster” and Free Fall Bungee Jump.

Entertainment abounds!!! Two broadway shows...“Legally Blonde” and “Rock Of Ages”. A Comedy Club and a 80’s Supper Club. There are 12 Speciality Dinner Restaurants and 18 Bars, most with live entertainment.

Airline costs are not available at this time and are not part of the prices indicated above. We will need to get closer to the date to make these available.

Brochures have been ordered and if you would like to have one, give Betty Hollingsworth, CTC a call at 317-845-1310 or call her with any questions.

Betty Hollingsworth, CTC Phone: (317) 845-1310
All Ways Travel, Inc. Cell: (317) 800-0593 E-mail address: betty@goallwaystravel.com
INDIANA PEST MANAGEMENT ASSOCIATION, TRAINING SESSION

WARSAW MEETING
MARCH 24, 2015
8:00 A.M. – 4:30 P.M.
Registration begins at 7:30 a.m.

Next door to the Wyndam Gardens Hotel
2517 E. Center Road (U.S. 30 and Center Road)
Warsaw, IN 46580
PHONE: 574-269-2323
(Lunch is included with registration.)

SE(357,9),(783,36)(97,9),(427,36)MINAR AGENDA

7:30 – 8:00 a.m. .................................................................REGISTRATION
8:00 – 8:15 a.m. ............................................................... ORIENTATION
8:15 – 9:15 a.m. ...............................................................Anthropology – A Guide to Ant Management
(Gene White, Rentokil)
9:15 – 10:15 a.m. ............................................................... Roaches (Gary Bennett, Purdue University)
10:15 – 10:30 a.m. ............................................................. Break
10:30 – 11:30 a.m. ............................................................ Termites (Todd Brown, BASF)
11:30 a.m. – 12:30 p.m. ....................................................... IGRS (Insect Growth Regulators)
(Loren Cunningham, Zoecon Professional Products)
12:30-1:15 p.m. ................................................................. Lunch
1:15 – 2:15 p.m. ............................................................... Occasional Invaders & Overwintering Insects
(Gene White, Rentokil)
2:15 – 3:15 p.m. ............................................................... Small Fly Control in Restaurants and Food
(Harry Bryan, Nisus)
3:15 – 3:30 p.m. ............................................................. Break
3:30 – 4:30 p.m. ............................................................... State Chemist Updates (Kevin Gibson, Indiana State Chemist’s Office)

CCHs approved for Indiana are as follows:  3A (1); 3B (1); 7A (6); 7B (3); RT (4); 12 (2)

MUST PRE-REGISTER BY MARCH 22
IPMA MEMBERS - $65.00
NON-MEMBERS - $100.00
IPMA MEMBERSHIP - $75.00 (NOTE: JOIN THE ASSOCIATION AT THE MEETING AND RECEIVE THE DISCOUNT ON PRICE.)

SEND REGISTRATION TO:

IPMA – Your Association at Work For You.

MARK SWIHART
ACE PEST CONTROL
P.O. BOX 383
NORTH WEBSTER, IN 46555-0383
PHONE: 574-834-2834
EMAIL: MARKACE2@HOTMAIL.COM

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INDIANA PEST MANAGEMENT ASSOCIATION, INC.
TRAINING SESSION
WARSAW, INDIANA • MARCH 24, 2015
REGISTRATION DEADLINE: MARCH 22, 2015

REGISTRATION FORM

Please type or print clearly

COMPANY _______________________________________________________

TELEPHONE (_________ ) _______________________________________

ADDRESS ______________________________________________________

CITY ___________________ STATE ___________ ZIP ___________

EMAIL ADDRESS _______________________________________________

IPMA Member: [ ] YES [ ] NO   Joining IPMA _____  $___________

Registration:
Member of the Indiana Pest Management Association Cost  $ 65.00
Non-Member Cost  $100.00
(Join the Association and receive the discounted price.)

Attendees – List all individually                   License #

1. ___________________________________________________________
2. ___________________________________________________________
3. ___________________________________________________________
4. ___________________________________________________________
5. ___________________________________________________________

Total for attendees $______________  IPMA – Your Association At
Membership if joining  $______________  Work For You

Total Cost  $______________

Enclosed is a check or money order payable to Indiana Pest Management
Association  OR  If you prefer to use a credit card, please complete information
to the right.

MAIL to: Mark Swihart, Ace Pest Control, P.O. Box 383, North Webster, IN
46555-0383, Phone: 574-834-2834

CALANDAR ITEM:
Plan to attend the Summer Meeting to be held
July 24-26, 2015 at
the Radisson Star Plaza,Merrillville. Golf is
scheduled on Friday and a
CCH Meeting on Saturday morning.....Mark your
calendar. More information
at a later date.

CREDIT CARD CHARGE FOR PAYMENT OF
WARSAW TRAINING SESSION MARCH 24, 2015

Charge to: [ ] MasterCard  [ ] Visa

Name on Card ________________________________

Card Number ________________________________

Exp. Date ________________________________

Amount of Charge $________________________

Billing address (if different than above)________________________

Received from Company or Individual ________________________________

Received by ____________________________________

Signature ______________________________________

INDIANA PEST MANAGEMENT ASSOCIATION
Receipt of payment for Warsaw Training Meeting, March 27, 2014
at Wyndam Gardens

$ ___________________ Paid by Cash, Check, Money Order, Credit Card

Received from Company or Individual ________________________________

Received by ____________________________________

Signature ______________________________________
While PPE is not required for Temprid ReadySpray, Bayer always recommends that appropriate protective clothing be worn as needed. Bayer CropScience LP, Environmental Science Division, 2 T.W. Alexander Drive, Research Triangle Park, NC 27709. 1-800-331-2867. www.BackedbyBayer.com. Bayer, the Bayer Cross and Temprid are registered trademarks of Bayer. Not all products are registered in all states. Always read and follow label instructions. © 2015 Bayer CropScience

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- **A difference of value:** a broad-spectrum insecticide that reduces callbacks, saving you time and money
- **A difference of confidence:** provides proven control you can count on
- **A difference of flexibility:** a go-to product for any pest issue, tough or occasional
- **A difference of convenience:** a single perimeter control solution
- **A difference of satisfaction:** happy technicians lead to happy customers

### THE TEMPRID® DIFFERENCE

Your workload might weigh you down, but your products won’t.

TempridDifference.com