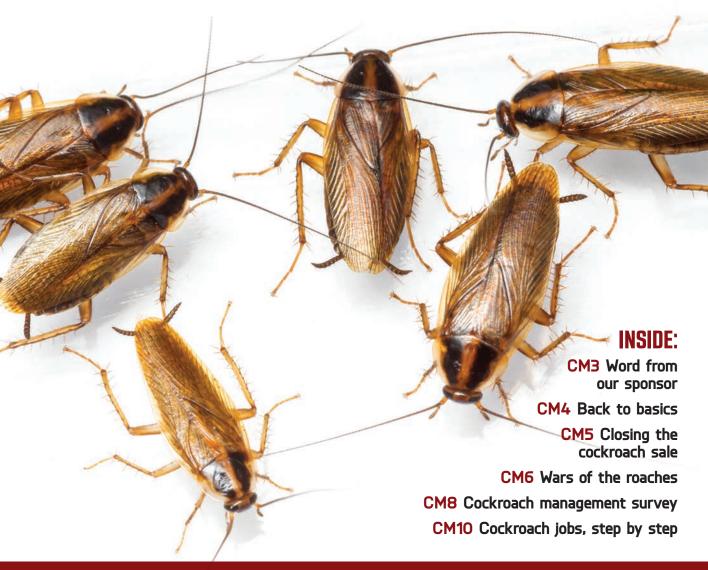
PestManagement PROFESSIONAL



BACK TO BASICS for cockroach IPM

BROUGHT TO YOU BY



TAURUS® SC

Fipronil 9.1%

Guaranteed Results







The Secrets to cockroach **SUCCESS**

BY **DR. JANIS REED** | PCO Technical Services Manager, Control Solutions Inc. (CSI)

odern pest management did not really come into existence until the 1940s, around the time of the advent and discovery of the insecticidal properties of dichlorodiphenyltrichloroethane (DDT). Up to and during this time, entomologists were hard at work studying an insect that had already gained a foothold in American homes: Blattella germanica.

Prior to World War I, German cockroaches were known as "croton bugs." named after the Croton Reservoir, which began supplying water to New York City in the late 1800s. They were notorious for infesting tenement buildings, dwelling homes, meat shops, hotels and water pipes, and have been a constant problem in American homes and businesses ever since.

To understand their hardiness, we need to examine how cockroaches — and specifically, German cockroaches — live their lives. The first thing to consider is their egg case, or ootheca. These purse-shaped egg depositories are the first of many defensive plays cockroaches have developed. They are impervious to almost all insecticides, protect the eggs from desiccation, and are often dropped just before hatching in secluded, protected environments.

The next hurdles we must overcome are the nymphal stages. German cockroaches have loose family groups and there is some parental care, further protecting offspring. After adulthood and mating, the female cockroaches safeguard the next generation by holding the oothecae until just before hatching. And finally, the sheer number of eggs (30 to 50, on average) that can be contained in a single egg case means control is a numbers game in which they have the advantage.

Another factor in their extremely successful existence is their ability to not only reproduce extremely rapidly, but to quickly adapt to their everchanging environments. Within just a few generations, major changes can be made to entire populations of insects, rendering control efforts useless. This is made possible by a relatively simple genetic makeup.



DR. REED is technical services manager for pest control operators for Control Solutions Inc. (CSI), a member of the ADAMA Group. She may be reached at janis.reed@ controlsolutionsinc.com.

Of the common peridomestic and domestic cockroaches, the German cockroach is by far the most infamous. It seems every year, newer and better products are developed to help pest management professionals (PMPs) provide management, including non-repellent insecticides, bait products, insect growth regulators (IGRs) and new bait formulations. Unfortunately, the cockroaches do not go quietly into the night; they evolve to survive and they do it well.

As an industry, we have faced chemical resistance to many common insecticides and behavioral resistance in the form of bait aversion. These problems have led to increased callbacks, and ultimately, the possible loss of the service account. Yet we continue the fight. A recent innovation by Control Solutions Inc. is Tekko Pro, which is quickly becoming the IGR of choice for many PMPs for cockroach control. Tekko Pro's dual IGR mode of action provides unprecedented control of German cockroaches, killing immature insects rather than causing the typical crinkled wings. And as every PMP knows, having no adult roaches equals happier customers.

We as an industry have a duty to provide excellent pest management to our customers under the current restrictions and challenges. CSI continues to innovate creative solutions to cockroach problems and other pests. Our mission is to develop synergistic products using Combination Chemistry to help in the resistance management fight, as well as better formulations to advance every PMP's results and income potential.

"Some folks get upset when they have a cockroach issue, but we remind them, 'Do you go to the grocery store? Every box you buy has glue — a food source made of animal fat. Roaches produce like wildfire, but we're here to help you get rid of them."" -HG



A strong economy and a wealth of readily available tools make it a good time to be a PMP who offers COCKroach service. BY HEATHER GOOCH | Editor

ach year, the professional pest management industry becomes a little more sophisticated. There are new software apps, techniques and products to try — all to ensure pests are controlled and customers are happy.

While optimizing the technician's time spent on a job is a useful pursuit, it makes sense to also keep the fundamentals of inspecting, identifying and choosing the right strategy for a particular account. It's especially true with cockroaches, where a one-size-fitsall approach can lead to callbacks and worse, a resistant population. That's the advice several pest management professionals (PMPs) gave among their responses to our 2017 Cockroach Management Survey.

It's advice that many PMPs must be following, too, as 43 percent of our survey respondents report a projected 2017 revenue of \$100,000 or more in the cockroach segment. Of these, 8 percent plan to generate \$1 million or more from cockroaches alone.

Unsurprisingly, the strong economy makes for an optimistic outlook: A full 82 percent of respondents expect their cockroach management revenue to rise this year over 2016, with 9 percent of them hoping for 50 percent or more.

The majority of respondents offer monthly service for cockroaches, with others reporting quarterly, and even

weekly stops. Eighty-five percent of respondents report callbacks to be in the single digits, with 56 percent reporting the rate at less than 5 percent — and 12 percent reporting no callbacks on cockroaches at all.

And while it would seem that the industry has got the cockroach game down pat, some obstacles still rear their head now and then, including the continued abundance of do-it-yourself products on the market; having to take time to educate home and business owners; and fierce pricing competition in their markets. For a breakdown on what exactly you should be charging at a cockroach account, particularly in a multiple-family housing setting, check out PMP Hall of Famer Bob Kunst's take on p. CM10.

Smart PMPs know to take an integrated, individualized approach to cockroach accounts — one strategy is not going to fit every job. Baits, liquids, insect growth regulators (IGRs), glue boards and sanitation techniques are in our respondents Top 5, closely followed by dusts, vacuuming, exclusion techniques, granulars and where warranted, fumigation.

For more data to digest when it comes to cockroaches, as well as tips, advice and a few good old-fashioned war stories, read on. PMP

You can reach GOOCH at hgooch@ northcoastmedia.net or 330-321-9754.

Swat: 'The science behind pest control'

While today, Jim Schaefer is specialty pest manager at Evansville, Ind.-based Swat Pest, focusing on bed bugs and termites, his 16 years in the industry means he's dealt with plenty of cockroaches. And as it does with other pests, Swat Pest has developed regimens for various species of cockroach control — primarily brown-banded, German and Oriental species. The regimens are not only for the technicians to go through and decide what the optimal approach is at an account, but also for Swat customers to do to solve the problem more quickly and **SCHAEFER** prevent a reinfestation.

"For example, if they have Oriental cockroaches, those get through the drains quite often," Schaefer says. "We suggest, and can even install, fine mesh screens over their drains after treatment. For German roach accounts, we tell them that for about three to four months after treatment, they need to keep food from setting out on the stove, and to wrap the gas stove burners with foil (so the

With a tagline of "Science behind pest control" and a Purdue-educated entomologist, Brandon Runyon, on staff, Swat endeavors to not only educate its customers, but to reassure them that pests affect everyone; they are not alone.

Closing the cockroach sale

PMP asked readers to share some of their best business tips for cockroach accounts. Got a tactic we didn't include? Email pmpeditor@northcoastmedia.net and we'll continue the conversation. BY HEATHER GOOCH | Editor

he results of *Pest Management Professional's* (PMP's) 2017 cockroach management survey indicate that this pest segment is a profitable one, with few callbacks and high volume. But even a great service has room for improvement, which is why we asked readers to share what they're doing when selling cockroach accounts that set them apart from the competition.

BE ON THE LOOKOUT AT EVERY ACCOUNT

Edward Schwartz, ACE, advises colleagues to conduct a complete inspection at every account, because you never know what might

have come along since your last visit.

"I have a church that I serviced for rodents only, but during one inspection I found German cockroaches that they never knew they had," says Schwartz, owner



EDWARD SCHWARTZ

of Paladin Pest Control. Colorado Springs, Colo. "They are no longer a rodent-only customer."

After each inspection, communicate with the client. Matthew Winder, branch manager of Avani Pest Control, St. George, Utah, advises to "Let customers know what you see after you service their home."

EDUCATED CUSTOMERS WILL PAY A FAIR PRICE

When a customer understands just what goes on in gaining control over a cockroach account inspection, sanitation, exclusion, and the proper mix of chemical and monitoring treatments — he or she often is more willing to pay a price that truly reflects the labor and expertise involved. A quick lesson in cockroaches (and their possible health risks) also can encourage customers to clean and do what it

takes to help the treatment strategy along.

Steve Finley, owner of Finley's Lawn & Pest, Fredonia, Kan., has a tried-and-true tactic with cockroach accounts: "We charge per application. This approach usually gets us immediate customer cooperation."

STEVE FINLEY

BUILD YOUR REP ON WORD-OF-MOUTH

Schwartz advises PMPs to think of their clients as extensions of their sales staff. As such, he also offers referral bonuses.

"But if you offer a referral bonus, make sure your client is aware of it. They are more apt to refer someone else if there is something in it for them," he adds.

Building your company's reputation often hinges on technicians being active listeners, empathizing with the concerns and fears of their customers, notes Charles Osborne, ACE.



CHARLES

"Spend ample time inspecting and treating to provide quality service, then you will get referrals from a happy customer," says Osborne, owner of Osborne Pest Management, Colorado Springs, Colo.

Not every technician can hit the ground running with smooth communication skills. Chris Snyder, president, Quest Termite & Pest, Bethlehem, Pa., suggests specifically training them to ask for referrals.

"They should be able to educate customers on cleaning and storage practices, and how to prepare for the service," he continues. "They should also know everything they can about the products they are using."

Bill Miller, owner of Community Pest Control, Jensen Beach, Fla., suggests an easy way to promote your wordof-mouth referrals: "Make a list of your most successful jobs, then present the evidence when canvassing."

"Watch for new restaurants opening," advises Michael Patton, owner of Patton Termite & Pest Control. Wichita, Kan. "They need your service. You should also join local apartment and restaurant associations."



MICHAEL PATTON

THE FINAL WORD

Chad Betts, manager of Betts Pest Control, Wichita, Kan., surmises, "If you do good work, educate your customers and are friendly, these things will get you referrals." PMP

You can reach GOOCH at hgooch@northcoastmedia.net or 330-321-9754.

Wars of the roaches

PMP asked readers to share some of their best battles with cockroach accounts. If you've got a story you'd like to share, email pmpeditor@northcoastmedia.net and we'll continue the conversation.

OVERRUN APARTMENT REQUIRES AGGRESSIVE EFFORT

At a vacant apartment, German roaches could be seen from the outside through both the front and back doors. Like a horror movie, tens of thousands ran like a cloud of swarming bees to appliances, cabinets, walls and ceilings. Every inch was covered in cockroaches. Floors and walls were covered in brown sputum, like someone painted it brown to outline each appliance.

The estimated breathing time on a full face respirator was 10 minutes. This four-bedroom unit was unfit for human occupancy. I am certain the former tenants had respiratory and other health issues, including the occasional bout of food poisoning.

I took all precautions to prevent transporting them home, but it was impossible. My equipment was swarmed as soon as it hit the floor. My truck had cockroaches coming out of it for two to three weeks. And a month later, three showed up in my kitchen.

I eradicated the infestation at the apartment in two treatments and a 30-day bleed-out period. Appliances were scrapped. An employee who managed the property vacuumed nearly 50 gallons of dead cockroach bodies out of there.

> My technique is aggressive in a case like this. It did require all electrical outlets to be removed. We had to drill 1/4-in, holes under kitchen cabinets to treat those voids.

This service required two residuals, an insect growth regulator, dust and a vacuum. I used a stainless steel air duster, vacuum, a compressed air sprayer, an electric sprayer, a portable aerosol system delivery unit, a rechargeable drill, a flathead screwdriver, flashlights and extra lighting.

A week after the first service, we had the unit cleaned, then retreated. We vacuumed daily, then weekly. Total elimination was achieved in 30 to 45 days. We cleaned again and put monitors under the sinks, and to my surprise there was not one cockroach, even five months later.



Many years ago, I treated a restaurant that couldn't open for business because roaches were running everywhere. It was a family-style restaurant that had already cooked all its food for the day. I sat down in the dining room, alone but with roaches running everywhere, and ate lunch. I was young, trying to survive in business and probably close to starving, so I had no problem eating.

 Dayton Hylton, President, Dayton's Pest Control Services, Knoxville, Tenn.

'MOVING WALLS' **ADD TO ALLERGENS**

An abandoned Baltimore row house was being used as a crackhouse. It was infested with American, German, Oriental and brown-banded cockroaches, all at the same time. The walls were moving, as there were no hiding places left for harborage. It was one of the few places that when I left. I wanted an immediate shower, and to wash my hair and throw my clothes in the trash. The allergen load was so heavy I always came out of this place wheezing and sneezing. - Dr. Kathy Heinsohn, BCE, Entomologist,

American Pest, Fulton, Md.

ROACHES RESORT TO 'ALL-FIBER' DIET

In an apartment that was not treated for years, there were literally hundreds of roaches everywhere. There was not enough food, so they started eating the labels off bottles and cans, and even the ink on a stack of takeout food menus.

- Michael Morris, Owner, Knock-Em-Dead Pest Control, Ozone Park, N.Y.



CSI insect growth regulator catches attention of new customer

Assured Environments incorporates Tekko Pro into its comprehensive cockroach protocol

ndrew Feldstein, vice president of operations for New York Citybased Assured Environments, understands the importance of adopting products that complement your existing pest

management protocols.

"We take a very pragmatic approach to cockroach infestations," says Feldstein, who has 29 years of experience in the pest management industry.

To eliminate cockroaches, Assured Environments first utilizes non-insecticidal measures, such as introducing structural and environmental modifications and improved



sanitation practices. Feldstein says the company then proceeds with a selection of gel baits, granular baits, dust or liquid applications,

depending on the unique needs of the job.

One of the newest additions to Assured Environments' cockroach management arsenal is Tekko Pro by Control Solutions Inc. (CSI).

"We've had very positive results using Tekko Pro at several new client locations – both commercial and residential – where we encountered significant cockroach activity," says Feldstein. Each application of Tekko Pro proved successful in furthering the elimination of the clients' cockroach problems.

Assured Environments, which most commonly receives calls for the German cockroach (*Blattella germanica*) and American cockroach (*Periplaneta americana*), also uses CSI's D-Fense Dust to combat cockroaches.

"The CSI team is very personable, easy to work with and receptive to developing new products to meet ever changing pest management professional needs," says Feldstein.

TEKKO PRO: A TWO-FOLD COCKROACH ELIMINATION STRATEGY

New York City-based Assured Environments trusts Tekko Pro, a new insect growth regulator (IGR) by Control Solutions Inc.,

> for its effectiveness in eradicating difficult cockroach infestations.

Tekko Pro features two modes of action:

- 1. A chitin synthesis inhibitor (novaluron) prevents the development of a new exoskeleton.
- 2. A juvenile hormone analog (pyriproxyfen) prevents the development of normal adulthood and causes sterilization.

The IGR offers long-term control of

cockroaches, fleas, ticks, flies, mosquitoes and other labelled pests, and inhibits reinfestation of labeled cockroach species for up to six months.

Pest management professionals can use Tekko Pro on furniture and carpets, and it is safe to use around food and non-food areas.

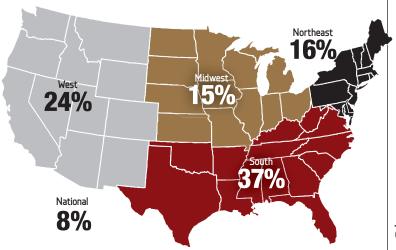
"Tekko Pro's two different modes of action and two active ingredients make it an especially attractive product," says Andrew Feldstein, vice president of operations at Assured Environments.





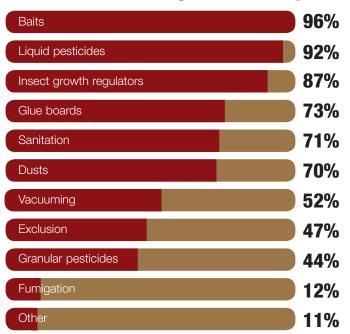
Cockroach Management Survey

Respondents' Area of Operations

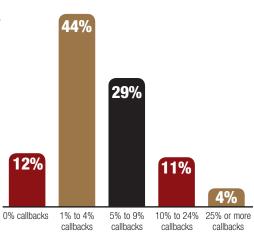


SOUTH (AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV) WEST (AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY) MIDWEST (OH, IN, IL, MI, WI, MN, MO, IA, ND, SD, NE, KS) NORTHEAST (CT, DE, ME, MD, MA, NJ, NH, NY, PA, RI, VT, DC)

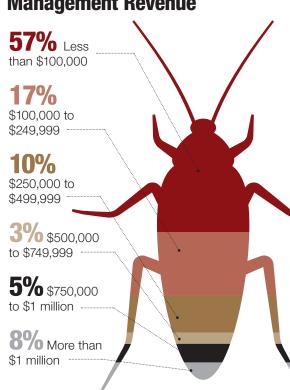
Cockroach Technologies & Techniques



Cockroach Management Callback Rates



Projected 2017 Cockroach Management Revenue



Cockroach Management Revenue — 2017 Projections vs. 2016 Actuals

Increase 50% or more	9%
Increase 25% to 49%	15%
Increase 10% to 24%	36%
Increase 9% or less	22%
Remain flat	16%
Decrease	2%

Account Types Served

Addamit Typod dollada	
Single-family homes	92 %
Apartments & Multi-family housing	82 %
Restaurants	79 %
Schools & Daycare centers	55 %
Resorts & Hotels	47 %
Healthcare facilities	43%
Food processing plants & Warehouses	40%
Planes, Trains & Buses	20%
Other	20%

Profitability by Account Type

- Single-family homes
- (tie) Apartments & Multi-family housing (tie) Restaurants
- Food processing plantsWarehouses
- Resorts & Hotels
- Schools & Daycare centers
- Healthcare facilities
- Planes, Trains & Buses

Most-requested Cockroach Management Service Frequency

- Monthly
- Quarterly
- Weekly

Top 3 Cockroach Management Drivers

- We're capturing more repeat business and referrals
- Control solutions are more effective today
- Awareness of public health issues has increased

Top 3 Cockroach Management Obstacles

- Do-it-yourself (DIY) products
- Educating home and business owners and municipalities on related public-health risks
- Fierce pricing competition

PROJECTED 2017 COCKROACH MANAGEMENT REVENUE BY STRUCTURE TYPE



- **47%** generate 50% or more of their cockroach management revenue from residential
- **17%** generate 25% to 49% of their cockroach management revenue from residential
- **36%** generate 24% or less of their cockroach management revenue from residential



- **24%** generate 50% or more of their cockroach management revenue from commercial
- **25%** generate 25% to 49% of their cockroach management revenue from commercial
- **51%** generate 24% or less of their cockroach management revenue from commercial



10% generate 25% or more of their cockroach management revenue from government/municipal
90% generate 24% or less of their cockroach management revenue from government/municipal

Cockroach jobs, step by step

There's no such thing as a "typical" cockroach account, but arming yourself with several essentials will go a long way toward success.

BY ROBERT KUNST, ACE | Contributor

anaging cockroaches has always been, and will always be a significant part of the professional pest management business. Each species has its own problems and its own best practices. But let's look at one of the most common and pervasive problem accounts: German cockroaches (Blattella germanica) infesting a subsidized multi-family housing apartment complex.

This type of housing calls for simple equipment, but more than just a compressed air sprayer. To control German cockroaches, you'll also need:

- Philips and straight-edge screwdrivers for removing switchplate covers, electric receptacle covers, and other items.
- Flashlight.
- Small Swiss Army Knife in case you may need a thin edge to start an edge on appliance backing.
- Glue monitoring traps.
- Small paint scraper.
- Vacuum to suck up any and all adult cockroaches. Control in these types of accounts is neither easy nor quick, so set aside enough time to properly treat the account. We perform the service once annually, and in most accounts we have one callback per complex per year.

As you embark on your initial inspections, use a checklist to indicate the intensity of the cockroach infestation in each unit. Keep it simple: Just write in the apartment number and check a box to indicate the level as "none," "light," "moderate" or "heavy."

This will help you keep track (and reflect back on whether a neighboring unit is a source) if you get a retreat call or you need to schedule an additional service call.

GET COOKIN' IN THE KITCHEN

Inside each apartment, inspect the kitchen first:



ROBERT KUNST, ACE

- **1** Start with the stove. Pull out the unit and look behind it. Pull out its bottom oven drawer and examine the roller slides and top of the compartment. Pull off the stove's control knobs and check those areas.
- **2** Move on to the refrigerator. Examine the condensation tray for signs of cockroaches, and check for live infestations in the electric wire coil found behind most refrigerators.
- **3 Proceed to the dishwasher.** Examine the exterior closely, especially where the wall meets the floor or where there is cove molding. Treat accordingly while you have everything exposed.
- **Turn your attention to the cabinets.** Pull out every cabinet drawer and inspect behind them. Treat accordingly. Then examine the cabinets, door frames (especially the top hinges), the pantry and the sink. Remove and examine every object hanging on the walls — including window coverings, if possible. Vacuum window treatments thoroughly.
- Place at least two monitors in the kitchen area. By now, some of you probably are saying you do not have the time to do all of this. I am saying charge enough so you can do this. It will help; you only will have to do this once per year and maybe perform a couple of retreatments on some units.

GO TO THE BATHROOM

Oconduct a thorough inspection. Concentrate on any loose fixtures, including light fixtures and wall plates surrounding the plumbing fixtures. Do not forget the razor disposal slit in the bathroom

cabinet. Treat door hinges and the backs of loose wall plates.

- ②Install rubber plate backers on all electrical outlets so as to seal the opening. Check out the electrical outlet insulators in your local hardware store; they are inexpensive.
- Place one monitor close to the bath trap, if possible.

WHAT'S IN THE CLOSET?

- **Open the hall closet,** which typically houses the heating, ventilation and air-conditioning (HVAC) system as well as the water heater. These closets usually are dimly lit or not lit at all, so carry a good flashlight with you.
- **Focus on sanitation and exclusion.** Use your vacuum to get the dirt out and then caulk, screen or stuff the holes around the walls and wall penetrations. If warranted, treat closet corners and inside door hinges.
- Place one monitor in the hall closet.

REMAINING ROOM ROUNDUP

Finally, go through the rest of the residence and carefully pay attention to, and treat the following areas as warranted and allowed on the label:

- Loose wallpaper (use your paint scraper to check).
- Bookshelves.
- Seat cushions and loose upholstery on any recliners.
- Decorative objects.
- Underneath beds.
- Live plants.
- Electrical switches and outlets.

It's been my experience to be very careful inspecting under sofas. They are a prime harborage for brown recluse and black widow spiders, and on occasion even snakes.

WHAT'S NEXT

After you finish your inspection and treatment, you can perform any exclusion

work you noticed needed to be done — provided the property owners are paying you for it. If they are not, make very specific notes with photos for the building's maintenance staff to follow through on the necessary repairs. Very minor exclusion work pays great dividends, and really impresses the owners and/or management company.

Combine the work you've completed so far with sanitation, the single most important control and prevention task that exists, and the one on which you *must* keep notes. Sanitation is critical to preventing and eliminating any cockroach infestation. Keep photos of any issues you find, and send them with a list that shows their relationship to your infestation findings. A note that an apartment has a heavy cockroach infestation is one thing, but when coupled with a photo showing extremely poor sanitation, the management can then start eviction proceedings and send that occupant away.

PRICE FOR PROFIT

To succeed with cockroach accounts in multi-family housing apartment complexes, you *must* negotiate a fair price for the amount of work you need to do and the amount of work the building's management needs to do. This should be common practice, but somehow or other I keep running into pest management firms that perform monthly apartment services for less than a dollar per unit per month.

To perform an annual service on this type of account successfully, you need between 15 to 25 minutes per unit. In other words, one technician can handle about 24 units per day. Take the production value you need per day per technician, and divide it by 24; that is your annual per-unit charge for cockroaches only. If the building's management company wants you to cover other pests, you need to charge for them. PMP

KUNST is a 2010 *PMP* Hall of Famer and consultant with Fischer Environmental Services, Mandeville, La. Contact him at rlk@fischerenv.com.

THE NEXT GENERATION OF IGRS

INTRODUCING NOVALURON





TEKKO® TECHNOLOGY

PROPRIETARY CHEMISTRY | INNOVATIVE SOLUTIONS