

PestXpert

NEWS & ADVICE

ISSUE 3

Maxforce® Quantum has arrived

Following years of intensive trials the most impressive and broadest spectrum ant control bait is now available.

- *Controls all major ant species
- *Fast acting
- *Quick and easy to apply
- *Remains attractive for up to 3 months

Maxforce® Quantum controls sweet and protein loving ants including:

1. Pharaoh Ants (*Monomorium pharaonis*)
2. Ghost Ants (*Tapinoma malenocephalum*)
3. Black Ants (*Lasius niger*)
4. Argentine Ants (*Linepithema humile*)



A significant reduction in ant activity can be expected within days after treatment, followed by colony elimination within weeks (depending on

ant species and size of nest (e.g. Pharaoh Ants 1-2 weeks and Black Ants 2-3 weeks). An initial increase in ant activity might be seen (as they are attracted to the bait).

Maxforce® Quantum's transparent formulation will allow you to apply the product quicker than other conventional treatments (especially bait stations).

The 30g cartridge contains 150 single doses (0.2g), which is enough to cover 150m² (this will treat approximately 15 apartments).

Maxforce® Quantum's unique non-drying formulation is highly attractive to ants and remains active for up to 3 months due to Bayer's exclusive bait matrix technology. Ants are drawn to the droplets to feed, before returning to their nest along with some of the droplet and subsequently eradicating the colony.

Maxforce® Quantum can be used in domestic premises (including kitchens), food

processing and preparation areas, public buildings (including hospital wards) and outdoors (terraces, patios etc.).

Maxforce® Quantum requires no preparation or spraying equipment, there is no risk of spillage and little opportunity for operator error.

Maxforce® Quantum is thick liquid (similar consistency to honey) containing imidacloprid (0.03%). Maxforce® Quantum should be applied using a standard gel applicator on to horizontal surfaces or within an appropriate bait station. Small drops (1cm diameter) should be placed where there are ant trails, cracks and crevices, nest entrances, kitchen cupboards, in the vicinity of electrical and electronic equipment and any other areas where ant activity has been identified. To treat a 10m² kitchen would require 10 droplets.

For full product information on this innovative new product please visit www.pestcontrol-expert.com or call us on 00800 1214 9451.



Bayer Environmental Science

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Watch out for us at
PestEx 22nd & 23rd April

Full product and label
information is available at

pestcontrol-expert.com

WHAT'S NEW

K-Obiol®



Now available in Ireland -

K-Obiol® EC25 and
K-Obiol® ULV6 Grain
Protectants.

Pyrethroid formulations

Both products are modern pyrethroid formulations containing Deltamethrin, synergised with piperonyl butoxide for the control of all stored product insects known to infest grain and pulses. This pyrethroid formulation is an ideal alternative to organo-phosphorus formulations.

No with-holding period

The Maximum Residue Limit (MRL) nominated for deltamethrin is 2mg/kg in grain. When K-Obiol® EC25 or K-Obiol® ULV6 are applied at their recommended rate, the residue level (0.25mg/kg) will be 8 times lower than the MRL. On finished, manufactured product, flour and bread: no residues over the MRL are found as deltamethrin does not significantly penetrate the grain but remains on the bran.

K-Obiol® is accepted for use by the Brewing Research International (BRI), the National Association of British and Irish Millers (NABIM) and Trade Association for Combinable Crops (TASCC).

Admixture and building fabric treatment

Both formulations are liquid grain protectant admixtures. K-Obiol® EC25 can be applied to the fabric of buildings.

Areas of use

Both formulations can be used as admixtures during grain harvesting. However, K-Obiol® EC25 can also be used as a fabric of the building treatment (see application rates).

Insects controlled

Both formulations control stored product pests including crawling insects such as grain weevils, flour beetles, grain borers, saw-toothed grain beetles, bean weevils and flying insects such as rice moths, indian meal moths and grain moths.

Psssst...now available!

The NEW Bayer aerosols are the perfect replacements for the extremely effective and reliable 'ProControl' Flying Insect Killer and 'ProControl' Crawling Insect Killer aerosols, which were removed from the market on the 22nd August 2008 due to one of the active ingredients (S-bioallethrin) not being supported through the Biocidal Product Directive.

The two new Bayer aerosols contain a new formulation with a new active ingredient. The best aerosols just got better!



Spring sunshine - the wake-up call for the Cluster fly

In the late winter or early spring, adult cluster flies (*Pollenia rudis F.*) will 'magically' appear in windows, in light fixtures or on ceilings of brightly lit rooms. The flies are frequently reported as 'big house flies' that are slow, lethargic and easy to swat and kill. Unlike other large related flies, cluster flies are not pests of decaying organic matter.

They lay their eggs in cracks in soil in autumn and then seek to over winter in structures. The emerging maggots feed on worms. Natural sites for over wintering include; under tree bark, in tree holes, and caves. Structures offer cluster flies very favourable over wintering shelter. Flies will congregate on the southern and western exposures of buildings as autumn day temperatures drop. Sensitive to heat sources, the adult flies will enter buildings through any crack or opening that exists into the structure.

Cluster flies commonly enter buildings around door and window frames, through eaves and soffits, through vents and along unsealed trim work. Once inside the adult flies will go dormant inside wall voids, attics and other building spaces. It is not unusual to find thousands of over wintering flies 'clustered' together in a void of only a few square feet.

On sunny days in late winter or early spring, growing warmth in the infested void will cause some adults to become active. Looking to escape, they will seek out bright lit areas, thus appearing in windows and light fixtures of suspended ceilings. The most effective



means of controlling cluster flies, although often difficult, is physical exclusion. Seal cracks around doors and windows. Screen vents and soffit openings. Seal around trim work to exclude fly entry points. If cluster flies are a problem you can assume that they will be a twice a year problem on the way into the building and on the way out!

Insecticide applications

Insecticides have demonstrated effective control of cluster flies when applied at times of activity. Coopex® Smoke Generators will effectively control flies on the wing (in flight). Residual insecticides such as K-Othrine® (WG or SC10) or Ficam® W can be applied onto landing sites (resting areas) in and around buildings where cluster flies may enter the premises.

Dormant cluster flies can be physically removed with a vacuum cleaner. Be prepared for removing significant amounts of insects!

For further information on all Bayer products visit:
www.pestcontrol-expert.com

FIGHTING THE CLUSTER FLY

Coopex®
smokes



Ficam® W



K-Othrine®



USE BIOCIDES SAFELY.
ALWAYS READ THE LABEL
AND PRODUCT INFORMATION
BEFORE USE.

The science behind good cockroach control



What's your flavour? It's all in the formulation.

You may think that if you have access to a good active ingredient it is enough to manufacture good cockroach gel baits. Many have tried but very few succeed. As a matter of fact, the insecticide is a key component and will drive the kinetic of the insect death but it is nothing without a good matrix.

The beauty of a cockroach gel bait is that its application will be discreet and non-intrusive. The amount of insecticide placed in people's environment is very limited and hidden. But in order to be effective the bait will have to first attract the cockroaches and then lead them to consume it (palatability).

The whole process is starting with an extensive screening in which individual compounds will be assessed for their attractivity and palatability. They will have to be submitted to the selective mandibles of several species of cockroaches (american cockroach, german cockroach, oriental cockroach, brown banded cockroach, australian cockroach and smokey-brown cockroach) but also various strains to ensure that they have not developed aversion to those ingredients.

The selected compounds will have then to be formulated in a stable formulation. The trick is to mix attractive compounds with others which by nature are repellent: gelling agents, solvents, preservatives, anti freezing agent. They may be



repellent but key to ensure that the product is stable and will easily be handled by the applicators. A good cockroach gel will not start to rot after a couple of days in a cartridge, it will not run on vertical surface, it will not separate phase, it will keep the same consistency if its 0°C or 35°C (or 54°C for Maxforce White IC).

The final rate of all those elements will be decided upon the results of the stability trials and efficacy testing. Any gel available in the market contains anywhere between 8 and 30 compounds, some of them being quite exotic (fish flavour, crushed crickets!). The successful one in the market will be the one who will manage to ensure a steady and standardized supply of those elements in a comprehensive industrial process.

In conclusion the performance of a gel is a combination of the impact it will have on cockroach population but also its ease of use for the applicators. Even if this goal feels natural and easy to formulate the work necessary to produce a good gel bait is very important and complex.



Trojan tactics to control ants



Black Ants



Ghost Ants



Pharaoh Ants



Argentine Ants

Ants are mostly seen as a nuisance because massive numbers enter and may infest homes and places of work, but, in some species, the nuisance factor becomes a danger. The many species of Fire Ants found in the Americas and Asia, for example, have potentially lethal stings. In hospitals, species such as Pharaoh Ant can pose a threat by spreading germs after traveling through unsanitary areas.

Controlling all kinds of ants is a major challenge as only about 5% of the insects (sterile females known as workers or foragers) actually leave their colony in search of food, marching in long rows along their distinctive pathways.

Since most colonies are inaccessible, effective ant

control requires the foragers to be attracted by bait containing the active ingredient, which, when taken back to the colony to nourish the other ants, leads to the destruction of the ant nest.

"You really have to develop a Trojan horse strategy to eliminate ants," says Dr. Volker Gutschmann, Bayer Environmental Science, Bayer Environmental Science Product Development Manager. Pest Management Professionals (PMPs), also known as Pest Control Operators (PCOs), begin by inspecting the premises thoroughly to plot the trails and foraging patterns. They then identify the species and recommend a targeted treatment that usually includes both insecticides and other measures, such as eliminating moisture or removing dead organic material.

"What complicates matters is that each species is unique in terms of nesting sites, behaviour and, above all, eating habits," explains Volker Gutschmann. "For example, some ant species like sugars, typically sucking the 'honey dew' from aphids, while others are fond of protein."

Until recently, this made life complicated for PCOs who had to identify the ants they were dealing with and set the right bait, for example products from the Maxforce® range, with different formulations targeting different species. Now the Professional Products team has developed Maxforce® Quantum, an innovative and highly effective liquid bait that attracts most varieties of ants, whatever their food preferences. *Continued on page 7.*

PestEx 22nd - 23rd April

The Bayer team look forward to welcoming you at our stand (number 38 & 39) at PestEx this year. As usual we'll be offering expert advice and giving away our excellent 94 page Product and Insect Manual!

Come and see us!



\$1 Million Endowment from Bayer CropScience for Sustainability Chair

Partnership with North Carolina University next step in evolution in company's sustainability culture

Bayer CropScience and the North Carolina State University (NCSU) have formed a historic partnership. Pascal Housset, Head of the Business Operations unit Environmental Science at Bayer CropScience, presented Dr. Johnny Wynne, NCSU's dean of the College Agriculture and Life Sciences (CALS), with a \$1 million endowment to establish a Chair of Sustainable Development at the NCSU.

"We are honored to have Bayer as a partner in our research efforts to find solutions to the complex problems and issues like global climate change, population growth, and food and water shortages present" said Wynne. "Under Pascal Housset's leadership, Bayer Environmental Science has discovered new and innovative ways to marry business and the environment, to the benefit of both."

Vital to the sustainability culture that Housset has worked hard to cultivate at Bayer Environment Science is the notion that partnership — in this case with academia — is critical to success. "We cannot achieve our goals alone. That is why the research expertise of North Carolina State makes the university an ideal partner," Housset said. "It is within our power to achieve great success for our company while effecting critical change that will benefit society as a whole. It is simply essential to protect the world in which we live and work. Together with the university, we will take great strides in that direction."



Engaging in partnerships with results that go far beyond its campus borders is nothing new for NCSU. "It (partnering) is an important part of who we are," Wynne said. "Here at NCSU we have a long history of partnerships in the public and private sector." Those partnerships have produced more than 70 start-up companies and a NCSU portfolio consisting of more than 600 patents. NCSU partnership activities also include 61 corporations and government agencies that employ more than 1,500 employees who work alongside NCSU researchers.

The sustainability culture that Bayer Environmental Science shares with NCSU is reflected throughout the company internally and externally through various business practices that include the development of new products dedicated to reducing carbon in the Earth's atmosphere by promoting plant health. "As the world becomes more conscious of the climate change crisis, demand for products that meet

the dual needs of business and the environment increases," Housset said. "Events such as the NCSU symposium provide a wonderful opportunity to enlist the help of the academic and research communities to support those dual objectives. All of us at Bayer Environmental Science are excited about this new chapter in our partnership with NCSU."

Bayer is a global enterprise with core competencies in the fields of health care, nutrition and high-tech materials. Bayer CropScience AG, a subsidiary of Bayer AG with annual sales of about EUR 5.8 billion (2007), is one of the world's leading innovative crop science companies in the areas of crop protection, non-agricultural pest control, seeds and plant biotechnology. The company offers an outstanding range of products and extensive service backup for modern, sustainable agriculture and for non-agricultural applications. Bayer CropScience has a global workforce of about 17,800 and is represented in more than 120 countries.

Trojan tactics to control ants

Continued from page 5

"The seed for Maxforce® Quantum was borne in Australia," says Justin McBeath, Development Manager, Australia, "and it grew into the Maxforce® Quantum project after discussions with the Global Development Group, late in 2004. We wanted to find a formulation that would be palatable to most ants and remain attractive for longer than existing gels that dry up in one or two days. Also, we wanted something containing very low doses of active ingredient, to give it a good environmental profile. Together with the Formulation Technology Group in Monheim, we developed the idea further and came up with a formulation that, like honey, is highly palatable to ants and remains a viscous liquid for long periods."

The new formulation, using imidacloprid as the active ingredient, was first launched in Australia in 2007. Sales teams there promoted the product to PCOs during a four-

month road show and produced a toolset for its effective and safe use.

"The acceptance has been great," says Justin McBeath. "The only complaint we've had from PCOs is that it works so well that they have less reason to go back as often to treat their customers properties! In fact, it builds up customer loyalty and improves business through word of mouth."

Registration is currently pending in the US, and similar results are expected for the 20,000 PCOs operating there. "Ants are the number one reason that makes their phones ring," says Gordon Morrison, Maxforce Market Manager, USA, "and they are also the main cause of failed treatments. We work closely with PCOs to train them on our solutions and also work with them in the field to identify the species they are dealing with.

Maxforce® Quantum will take our portfolio a step further by offering a complementary, all-purpose solution to help make the PCOs' job simpler," adds Gordon Morrison.

Maxforce® Quantum has just been launched in the UK and Ireland



BUG WATCH

Wasps Characteristics:

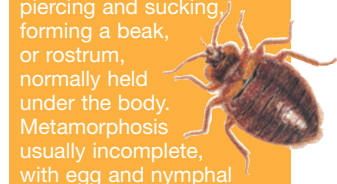
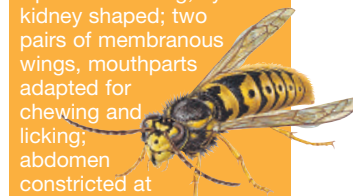
Up to 30mm long; eyes kidney shaped; two pairs of membranous wings, mouthparts adapted for chewing and licking; abdomen constricted at base giving appearance of a waist; metamorphosis complete, with egg, larval, pupal and adult stages; typically possess complex social system.

Bed Bugs Characteristics:

Two pairs of wings normally present; mouth parts piercing and sucking, forming a beak, or rostrum, normally held under the body. Metamorphosis usually incomplete, with egg and nymphal stages.

Black Ants Characteristics:

Elbowed antennae; biting mouthparts; if present, two pairs of membranous wings, fore and hindwings hooked together; abdomen constricted at base giving appearance of a waist which bears characteristic nodes or scales; metamorphosis complete, with egg, larval, pupal and adult stages; possess complex social system.





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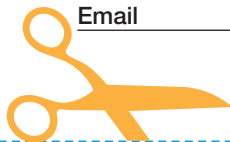
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USE BIOCIDES SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.
Full details of all active ingredients and products referred to in this newsletter can be found at
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