

FEDERATION OF ASIAN & OCEANIA PEST MANAGERS ASSOCIATIONS

MAGAZINE

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Special Announcement:
FAOPMA-Pest Summit
Virtual Conference 2020

**SURVIVE COVID-19,
PROTECT YOUR FUTURE**

18-19th November 2020

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Front Cover: disinfecting an office for COVID-19 virus. Source: Ms Regine Lim, General Manager, Entopest Environmental Services, Malaysia.

COVID-19 Continues

With COVID-19 escalating, the world has never been more socially, financially, or politically unstable since World War II.

As of early Aug 2020, human cases of COVID-19 have passed 20 million with more than 717,000 deaths, and new infections rising 250,000 daily. At present, cases are increasing at an alarming rate with no prospect of slowing down.

Beyond the terrible human costs are the fiscal impacts. It has been estimated that the pandemic will cost the global economy a staggering USD\$2 trillion dollars. ...in my mind a totally incomprehensible figure. All we can say is that the future fiscal outlook is very bleak for many sectors in society and the flow on effects to the pest management industry will be profound.

Anecdotally, some pest management companies have already seen a 50% decline in their domestic business accounts during the COVID-19 lock down. While some businesses have moved into the disinfection and sanitation market, this is not making up for current short falls. With increasing unemployment, less money will be available for such things as pest services and so the industry is expected to suffer over the next few years.

With the need to work remotely as much as possible, face to face conferences around the world have been cancelled – it would simply be negligent to hold any large meeting at present. Thus this year's FAOPMA-Pest Summit meeting in the Philippines was postponed for the protection of all. Instead this year, a Virtual Conference will be held over 18-19th November 2020.

In light of the challenges ahead for the industry, the theme of the meeting is **"SURVIVE COVID-19; PROTECT YOUR FUTURE – Safeguarding the Pest Management Industry Through and Uncertain World"**. This will be a business orientated meeting that will help you operate in the new world we are now facing. Assembled are some of the greatest speakers in the industry, including company owners who endured and prospered during the Global Financial Crisis. Details and the draft program are on the following pages. Attending this meeting will help your business to survive into the future - don't become another statistic! ■

Stephen Doggett (Chief Editor)



The Importance of Poo

Faecal matter is of incredible significance to termites and their survival

Don Ewart

Faecal matter is an important indicator of activity for many pests, such as rodents, cockroaches and bed bugs. Faecal matter from termites can sometimes help you identify the type, even the species of the producer.

All animals provide some sort of excrement outputs from their inputs. A few keep this to themselves, like the face mites, *Demodex* that live in the hair follicles of your eyelashes. This creature stores it all, which is nice, but they only live around two weeks. Termites can live for years. Tardigrades, the little water bears, hold onto it all until they moult.

All people who work managing termites understand the importance of moisture. Often, stray moisture is a big factor in whether subterranean termites will attack. The further it is from the food to a moisture source, the less likely they are to feed, but if the wood is moistened to be ready-to-eat, then feeding can be rapid and strong. Dampwood termites are not a big problem as they typically need their wood to be a little rotted, usually beyond what is good for construction. Very often, simply fixing a moisture problem will make the wood become too dry for dampwoods to thrive. In Australia, as their wood dries out, the dampwood termite *Porotermes*, switches from damp poo to small pellets as they seek to

hold on to all the water they can. But most of the time, their poo is very wet and can fill the hollowed inside of a tree so that it looks like a reddish mud.

Subterranean termites produce wet faeces. They do not waste it. It is often used to line their tunnels and as a glue in their constructions. A surface built up with laminar plates of poo and chewed wood is very strong. A thick lining of this material is quite resistant to termiticides so that the interior tunnel may be unaffected by a soil treatment. What termites build with spit, poo, soil and chewed wood can be thought of as skyscrapers. Let's say a termite stands 5 mm tall (usually less), and we know some big mounds are around 9 m high, that's 1,800 times





Northern form of *Coptotermes acinaciformis*

the insect's own height. Say you are 1.8 m tall, the equivalent skyscraper would be more than 3 km high (Burj Khalifa in Dubai is a bit over 800 m). Not only do termites destroy, they can also build great things with poo and spit.

Some termites will fill the holes where they have eaten wood with poo. Others will leave most of the wood clean as they use their poo for building and lining. With many species, only the edge of the wood where they are currently mining stays free of poo marks. How clean the wood looks can help you identify which of your local species is doing the damage. In general, those with small colonies and slower eating habits, tend to fill up behind them but this is by no means a fixed rule. It is important that you learn the local habits of your termites.

The main pellet-producing termites are Drywood termites. Their poo is always in a pellet form. Despite the name, these termites don't seem capable of living in totally dry wood. Some like it almost wet, and many live in trees near water where it never gets dry. Others don't need much moisture at all and produce a lot of what they need from the digestion of the wood. They don't waste any water and their pellets are quite hard and dry. Each termite produces about 1 pellet each day, so the amount of

pellets you find in a timber points to both the size of the colony (never large) and the time that they've been there. It is good to collect these pellets and you can use them to identify the various species in your area, even if you don't find a soldier.

Termite poo isn't just for dumping and building. It can be an important source of nutrition and a store for bad times. Christine Nalepa and crew worked out that

a habit of eating poo was what got termites their efficient gut full of symbionts. Eating poo isn't without risks and Rebecca Rosengaus' idea of disease transmission was easily proven with testing. Whatever is in the nest material of native *Coptotermes*, it is definitely a 'living' product, and in Australia, standard laboratory colonies are always kept in a matrix that includes nest material. I found for product testing that fresh nest matter keeps termites healthier for longer than dried and re-wetted material. *Coptotermes* kept without this material do not thrive. It is as if the poo in the nest is still a living part of the colony. ■

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Further Reading:

Mirabito D and Rosengaus RB. 2016. A double-edged sword? The cost of proctodeal trophallaxis in termites. *Insectes Sociaux*, **63**(1), 135-141.

Nalepa CA, Bignell DE and Bandi C. 2001. Detritivory, coprophagy, and the evolution of digestive mutualisms in Dictyoptera. *Insectes Sociaux*, **48**(3), 194-201.