

POSITIVE RESULTS IN EFFICACY TEST FOR FLAVOCIDE™ WITH MAJOR RICE PEST

- Efficacy test shows Flavocide™ controls key insect pest in rice
- Control of larvae and adult stages of brown planthopper demonstrated
- Highlights potential of Flavocide™ for use in a major global food crop
- Rice crop insecticide market greater than \$3.7B per annum

Bio-Gene Technology Limited (ASX: BGT, “Bio-Gene” or “the Company”) is pleased to announce the positive results of a successful Flavocide™ field trial against serious rice pest the brown planthopper (Planthopper; *Nilaparvata lugens*). An estimated A\$3.7 billion is spent on rice insecticides globally*, with much of this directed towards control of Planthopper.

In the field trial, Flavocide™ was shown to:

- be effective against both nymphs and adult Planthopper and was superior to the existing chemistry used, which acted as positive controls for this trial;
- exhibit repellency effects that would potentially assist in preventing re-infestation and virus transmission within the crop; and
- have no observable impact on beneficial species (e.g. predatory mirids and spiders) present in the crop over the course of the trial. This would indicate that Flavocide™ may be compatible with integrated pest management programs in rice.

The field trial with Flavocide™, a liquid formulation containing flavesone (one of the Company’s lead compounds) was performed by Eurofins, an international contract research organisation. It was undertaken in Thailand where rice crops are prone to high levels of Planthopper attack, including from Planthopper strains resistant to many insecticide groups that have been used historically in the region.

Bio-Gene CEO, Richard Jagger commented: “These are positive and encouraging results that demonstrate the potential of Flavocide™ for control of a major rice pest, particularly in Asia, and provides justification for further evaluation to fine tune dose rates and further demonstrate efficacy in a range of field conditions.

“Rice is the staple food of half of the world’s population and more than 90% of the global rice crop is grown in Asia. The Planthopper is a major pest that has been increasingly difficult to control, largely due to its resistance to most insecticides available for use. The unique mode of action of Flavocide™ offers the opportunity to control these resistant strains, where other chemistry is failing. This, along with having no impact on beneficial species, is a real positive towards inclusion in integrated pest management programs, which is of great value to the industry.

“From here we will aim to work with our collaborators to undergo further trials across Asia, and create additional compelling data with the intention of attracting commercial interest from a number of companies that operate within this market,” Mr Jagger added.

“The results also highlight that, like other insecticides, Flavocide™ may have differing effects against different pests which justifies our strategy of evaluating Flavocide™ as widely as possible across pest species both alone and in combination with other insecticides.”

Planthoppers cause major damage to Asian rice crops resulting in yield losses of up to 60% or more, sometimes completely destroying the crop. In addition to direct plant damage, this pest is also an important vector of viral diseases of rice. Its presence also promotes the growth of sooty mould which negatively impacts plant growth and further reduces grain yields.

Thailand is a major rice producing country with 10 million hectares of rice paddy fields. The Flavocide™ trial site was in Chainat Province in central Thailand, a major rice growing region that produces 2-3 crops per year.

* [Kynetec Market Research, 2016](#)

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About Bio-Gene Technology Ltd

Bio-Gene is an Australian AgTech development company enabling the next generation of novel insecticides to address the global problems of insecticide resistance and toxicity. Its novel platform technology is based on a naturally occurring class of chemicals known as beta-triketones.

Beta-triketone compounds have demonstrated insecticidal activity (e.g. kill or knock down insects) via a novel mode of action in testing performed to date. This platform may provide multiple potential new solutions for insecticide manufacturers in applications across animal health and crop protection, as well as in public health, and in consumer applications.

The Company's aim is to develop and commercialise a broad portfolio of targeted insect control and management solutions.