

# POSITIVE RESULTS FROM GRAIN STORAGE TRIALS

- Flavocide<sup>™</sup> testing results show 100% residual control of offspring of adult Lesser grain borer over a three-month period, further strengthening Flavocide's commercial viability
- These results provide further validation of Flavocide's potential to be used in combination with other compounds to control grain storage pests in commercial applications
- Testing will now progress to determine residual efficacy at six and nine months after initial treatment

Bio-Gene Technology Limited (ASX: BGT, "Bio-Gene" or "the Company") today provided an update on a program of trials that commenced in December 2017, in conjunction with the Department of Agriculture & Fisheries, Queensland Government (DAF). These trials formed part of a collaborative research program that targeted the development of new grain protectants and were aimed at establishing the efficacy of Flavocide against a range of grain storage pests of global significance.

On 28 May 2018, Bio-Gene published initial positive results from trials using Flavocide in combination with different grain protection compounds against a range of key grain storage pests. Combination treatments with Flavocide were shown to control the full spectrum of key pests evaluated, including strains with history of multiple resistance to currently used insecticides. The results demonstrated the potential suitability of Flavocide when used in combination with other compounds in resistance management strategies, currently employed by the international grain protection industry, where insects can cause up to 50% losses in untreated stored grain.

The most recent results relate to a broadening of the scope of work, designed to determine the residual efficacy of Flavocide, initially against both susceptible and resistant strains of the major pest Lesser grain borer. The studies aimed to determine if Flavocide provided a minimum of three months of residual control, considered necessary to create a commercially viable product solution.

Pleasingly, the results showed that Flavocide provided 100% residual control of first generation offspring of adult Lesser grain borer, over a three-month period, therefore confirming Flavocide's potential as a protectant insecticide in grain storage.

These positive results provide the basis for extending residual testing of Flavocide to six- and nine-month assessments and to test the residual efficacy of the product in combination with other classes of chemistry and against a broader range of target pests.

Commenting on the results, Bio-Gene CEO Richard Jagger said, "The most recent data generated from our collaboration with DAF is highly encouraging. The industry is looking for novel insecticides which have potential as effective grain protectants to provide broad spectrum control.

"These results demonstrate the promise of incorporating Flavocide into grain protection pest management programs and further strengthens the commercial viability of our product. Furthermore, we expect these results will support our ongoing partnership discussions in relation to grain storage applications," he said.

Losses of grains and grain-based products caused by insects are a global problem, ranging from approximately 10% in temperate regions to almost 50% in humid tropical areas<sup>1</sup>. The protection of stored grain is an important economic necessity, particularly grain used for domestic human consumption and export which must not contain any live insects<sup>2</sup>.

Dr. Manoj Nayak, Leader of the Postharvest Grain Protection Unit within DAF, who is co-ordinating the collaborative project with Bio-Gene said, "These results are highly encouraging in terms of preventing the survival of the progeny from borer infestations over a three-month period and thus confirming the potential for Flavocide to be used as a residual grain protectant insecticide. The team at DAF are looking forward to continuing the collaboration with Bio-Gene to further progress the Flavocide testing program."

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## **About Bio-Gene Technology Limited**

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.

<sup>&</sup>lt;sup>1</sup> Wijayaratne,L.K.W., F.H.Arthur, S.Whyard (2018) Methoprene and control of stored-product insects. Journal of Stored Products Research Vol 76, March 2018, pp161-169

<sup>&</sup>lt;sup>2</sup> Management of Grain within the Australian Grain Supply Chain – Australian Grain Industry – Code of Practice May 2018 Grain Trade Australia