

# **FURTHER POSITIVE RESULTS FROM GRAIN STORAGE TRIALS**

- Flavocide<sup>™</sup> testing results show 100% residual control of offspring of adult Lesser grain borer, a major grain storage pest, over a six-month period, building on previous similar results at three-months post-treatment
- These results provide further validation of Flavocide's potential for control of grain storage pests in commercial applications
- Testing will continue to determine residual efficacy at nine months after initial treatment

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

Previously, on 19 June 2019, Bio-Gene announced positive three-month interim results from its residual trial of Flavocide on the Lesser grain borer. The most recent results relate to the on-going residual efficacy of Flavocide, initially against both susceptible and resistant strains of this major grain storage pest. The studies aimed to determine if Flavocide provides additional residual control beyond the three-month period, which is considered necessary for a commercially viable product solution.

Pleasingly, these most recent results showed that Flavocide provided 100% residual control of first generation offspring of adult Lesser grain borer, over a six-month period. This provides further evidence of Flavocide's potential as a protectant insecticide in grain storage. These positive results provide the basis for extending residual testing of Flavocide to a nine-month assessment 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, "We are delighted that this most recent trial work, to demonstrate the long-term efficacy of Flavocide, has proven to be positive. An increase from 3 months to 6 months residual control is an excellent outcome. This will hopefully create significant potential for commercial opportunities. Obviously long-term efficacy of stored grain pests is an industry target as they look for novel insecticides which have potential as effective grain protectants to provide broad spectrum control.

"These results clearly demonstrate the potential for incorporating Flavocide into grain protection pest management programs and further strengthens the commercial viability of our product," 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 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, "We are pleased to see the latest results of Flavocide testing where it was effective against both the susceptible and resistant strains for 6 months, based on 100% prevention of live F1 adult progeny in bioassays of laboratory and field stored wheat. This further demonstrates the potential for Flavocide to be used as a residual grain protectant insecticide. We will continue to collaborate with Bio-Gene to further progress the Flavocide testing program."

Dr. Nayak will be presenting on Flavocide use in grain storage pest control at the 12<sup>th</sup> Conference of the IOBC-WPRS Working Group on the Integrated Protection of Stored Products (IPSP) in Pisa, Italy on 4<sup>th</sup>- 6<sup>th</sup> September 2019.

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

Bio-Gene is an Australian AgTech company enabling the next generation of novel insecticides to address the global problems of insecticide resistance and toxicity. Bio-Gene's 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, crop protection and storage, public health, and consumer applications. The Company's aim is to develop and commercialise a broad portfolio of targeted insect control and management solutions

### **About Queensland DAF**

DAF works to achieve a productive and profitable agriculture, fisheries and forestry sector by promoting sustainability and innovation; and by providing leadership for the sector which adds value to the Queensland economy and community. DAF manage community resources, applying science to improve production and products, leading the fight on animal and plant pests and diseases, and working constructively with stakeholders for mutual benefit. The department operates in more than 90 locations across Queensland. The post-harvest grain protection team based in Brisbane undertakes a number of projects that support the grain industry in protecting grain from stored product insects by: studying and understanding insect biology, developing effective treatments for protecting wheat, and advising farmers and the grain industry.

### **About IOBC**

The International Organisation for Biological and Integrated Control (IOBC) was established in 1955 to promote environmentally safe methods of pest and disease control in plant protection. IOBC is affiliated with the International Council of Scientific Unions (ICSU) as the Section of Biological Control of the International Union of Biological Sciences (IUBS). IOBC collects, evaluates and disseminates information about biological control, and promotes national and international action concerning research, training of personnel, coordination of large-scale application and public awareness of the economic and social importance of biological control.

<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