

ENABLING THE NEXT GENERATION OF NOVEL INSECTICIDES

BIO-GENE TECHNOLOGY LIMITED

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Company Update

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BIO-GENE
TECHNOLOGY
LTD



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BUSINESS UPDATE AGENDA

- Global challenges & pest control
- Bio-Gene's chemistry & technology platform
- Target Market defined
- Commercialisation pathway & Business Model
- Revenue expectations
- Key partnerships in target segments
- Synergy studies & the upside
- Summary
- Next Steps

GLOBAL CHALLENGES AND RESISTANT PEST CONTROL

Food Security & Public Health

- Growing Population = more food
- Climate Change = more mosquitos

Financial Impact

- Production lost to pests = higher costs, lost income
- Direct & economic impact of disease

Social Impact

- Vector Borne Disease = increased risk to more humans
- More people = Less Arable Land



“Without Crop Protection, crop losses would double each year”

CropLife



“No new public health insecticides have been developed for mainstream vector control for 30 years”

CDC

BIO-GENE'S CHEMISTRY IS A STEP-CHANGE FOR RESISTANT PEST CONTROL

- **Novel Mode of Action (MoA)**
 - Last new MoA commercialised in 2008, with current sales of US\$2.3bn
- **Naturally derived and safe chemistry**
- **Efficacy across a number of target pests**
- **Addresses multiple market segments**
 - Crop protection, grain storage, consumer applications, public health & animal health
- **Third Party Validation**
 - Multiple commercial deals with industry leading companies
- **Multiple revenue streams**
 - Licensing fees, milestone payments, active ingredient supply, royalties



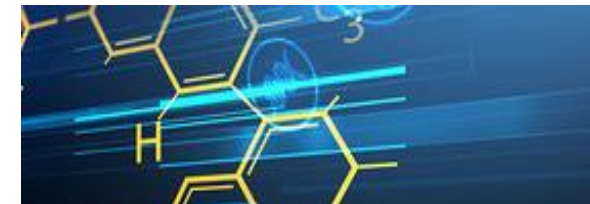
Qcide™

Natural Compound

An extract of a specific cultivar of eucalypt, the Gypmie Messmate

Trees farmed in QLD

The leaves contain oil expressing high levels of Tasmanone,



Flavocide™

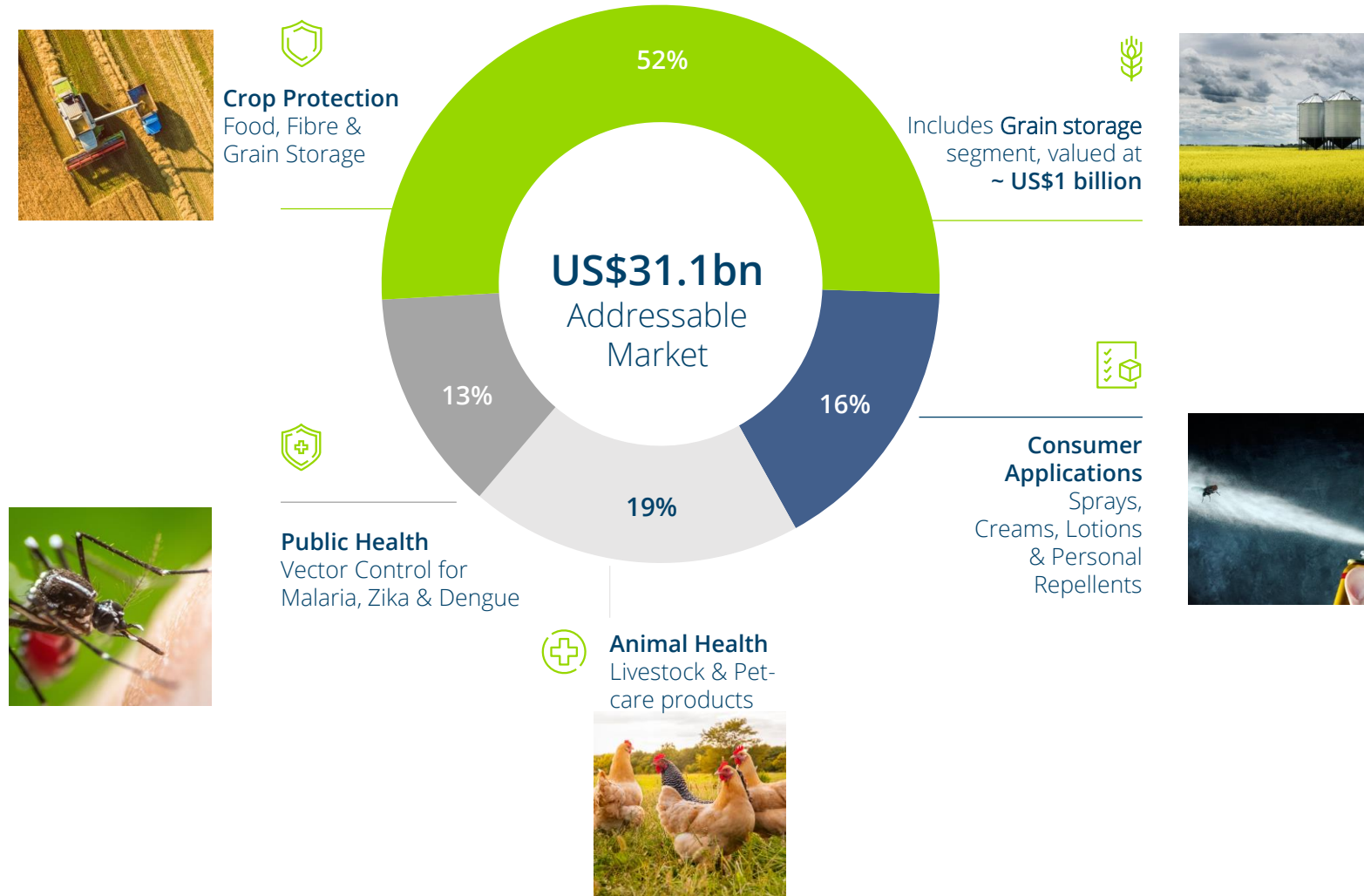
Nature Identical Compound

Active ingredient Flavesone is found in Nature

Synthesised via new proprietary process

Can be produced in large volumes globally

TARGET MARKETS



Bio-Gene's products target five key market segments

COMMERCIALISATION PATHWAY AND BUSINESS MODEL

Commercialisation pathway

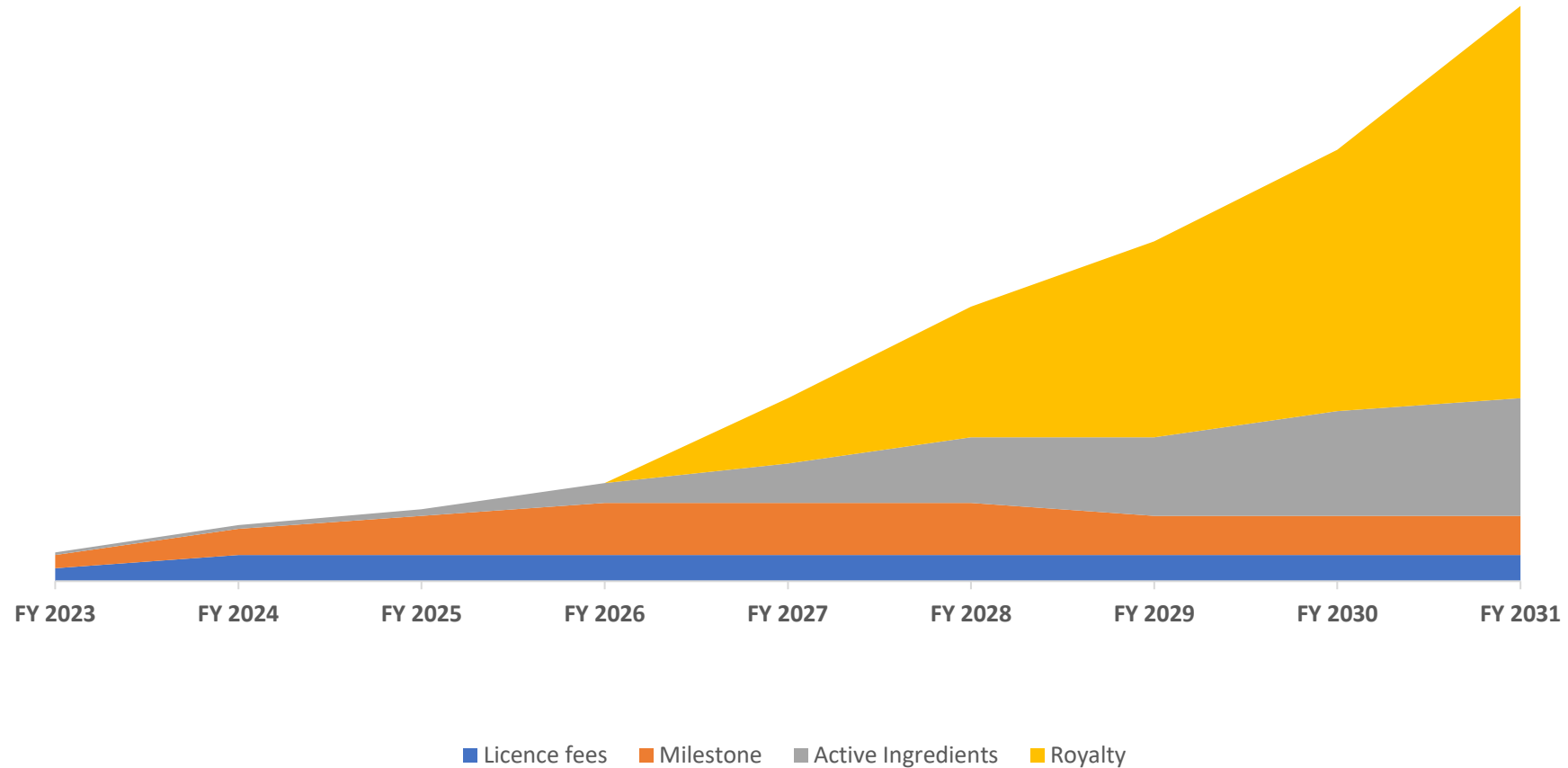
- Active ingredient registrations
- Product development, Marketing & distribution with strong commercial partners
- Developing proprietary manufacturing and production know-how

Revenue drivers

1. Technology licensing fees
2. Milestone payments
3. Active ingredient supply
4. Royalties

REVENUE EXPECTATIONS

Revenue profile (\$m)



Bio-Gene expects highly profitable revenue streams from FY 2026 onwards

TARGET MARKET: PUBLIC HEALTH CLARKE COMMERCIAL DEVELOPMENT AGREEMENT

Clarke is the largest vertically integrated company in public health mosquito control

Extended Commercial Agreement

Now includes professional residential applications

Adds an additional US\$150m market opportunity

Milestones and future royalty payments aligned with original agreement

Territory: USA & Cayman Islands

Validation of work to date

Excellent collaboration between the two companies

Cost of studies borne by Clarke, with shared report of results

Revenue Model

Up-front licence fee

Milestone payments prior to registration

On-going royalties on end-use product sales

Development costs borne by Clarke

Next Steps

Targeted formulation development for different applications

Field studies designed to confirm suitability for field use & EPA registration



Market Opportunity

Initial Field of Use:
US\$100m¹

Extended Field of Use:
US\$250m

TARGET MARKET: CONSUMER PRODUCTS

EVERGREEN COMMERCIAL DEVELOPMENT AGREEMENT

Evergreen is a market leader in consumer products across Europe and in Australia/New Zealand

Initial Field of Use

Flying insect control
Crawling insect control
ROFR to negotiate additional applications within consumer market

Initial Territory

E.U., U.K., A/NZ
ROFR to negotiate additional territories within consumer market

Other market opportunities

Actively exploring additional market opportunities to add to our agreement

Revenue Model

Up-front licence fee
Milestone payments prior to registration
On-going royalties on end-use product sales
Development costs borne by Evergreen

Next Steps

Continue development of market opportunities
Collaborate on registration activities
Strong relationship is emerging between the two companies



Market Opportunity

Initial Field of Use:
US\$600m¹

Total European consumer insecticide market: US\$2b¹

TARGET MARKET: CROP PROTECTION

BINDING TERMS AGREED WITH STK BIO-AG

STK applies advanced botanical science and bio-ag technology in the development & commercialisation of natural crop protection solutions for growers worldwide

Licencing arrangements

STK granted a global non-exclusive licence to develop Qcide for crop protection, aquaculture, & professional turf & ornamental markets

Opportunities to expand manufacturing capabilities

Work with STK to expand production globally drawing on multiple manufacturing sites for ingredient supply

Significant market opportunity

Crop Protection globally is a US\$16 B p.a. business¹. Opportunities for botanical/natural products within this market are increasing rapidly

Registering Active Ingredient

STK will fully fund the registration of Qcide A.I.

Bio-Gene has full registration access to work with partners exclusively in public health, consumer, animal health, & non-exclusively in crop protection, aquaculture & professional turf & ornamental markets

Bio-Gene retains IP relating to Qcide

Revenue Model

Active ingredient supply to STK

On-going royalties on end use product sales with other commercial partners

Alliance, partnerships

Bio-Gene working with STK to develop opportunities for the Qcide business as botanical biopesticides

Evaluation of opportunity for Bio-Gene to be ANZ agent for STK products

Next Steps

Finalise transaction documentation

Develop advisory committee to drive registration of A.I. & develop manufacturing capabilities

Explore agency opportunities



Market Opportunity

Sales of Active Ingredient to STK

Utilisation of STK funded registration for our key markets

Royalty opportunities with BGT customers

¹ Fortune business insights, 2021: Crop protection chemicals market size... 2021-2028.

EXPLAINING SYNERGY – THE HOLY GRAIL

What is Synergy?

- Synergy occurs when the effect of two or more agents (or compounds) in combination is greater than the additive effect of those same agents

Why does Synergy occur?

- Synergy is unpredictable and uncommon, but it can occur when different Modes of Action of two insecticidal compounds interact in a way that enhances the mode of action of one or both compounds.

How is Synergy assessed?

- Using dose range finding tests to determine rates that cause mortality over the range 0% to 100%
- Combination testing of compounds at sub-lethal concentrations
- Statistical analysis of data

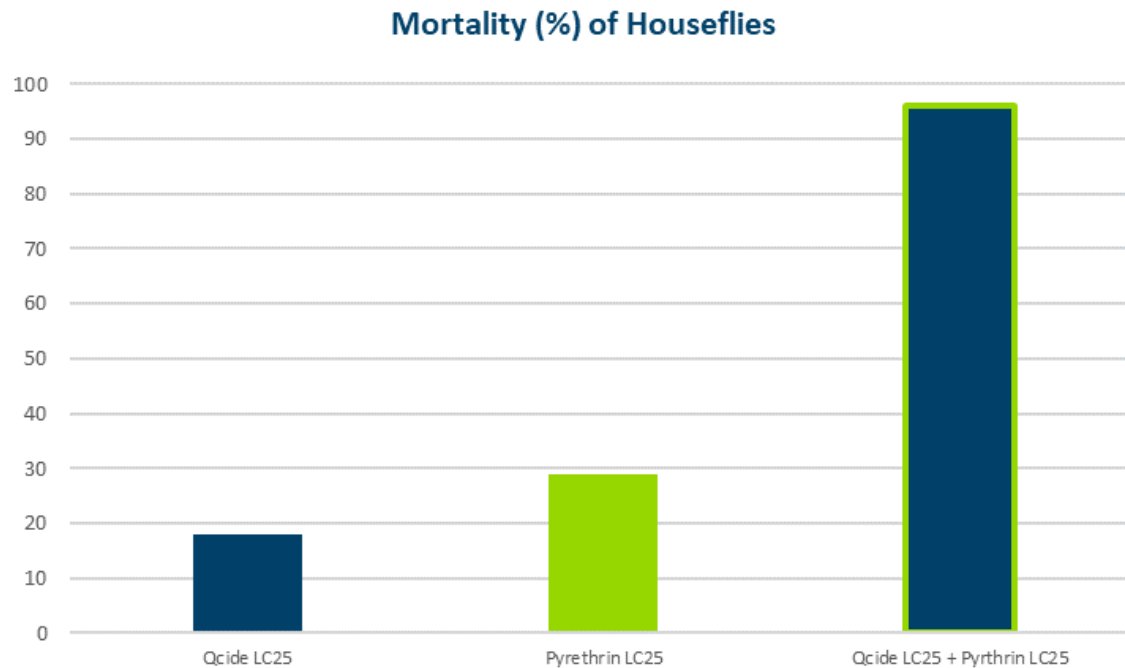
What was tested¹?

- Both Flavocide & Qcide tested in combination with particular commercially important compounds from the chemical groups of pyrethrins, pyrethroids, diamides, carbamates, organophosphates
- Against particular target insect pest species, including both susceptible & resistant strains



STUDIES CONFIRM SYNERGY

Synergy confirmed with Qcide/Pyrethrin combination¹



¹In spray/topical applications, Qcide with pyrethrins against houseflies (*M. domestica*).

- Novel Mode of Action allows for this synergistic effect
- Cost effective at lower rates

Statistically valid results confirmed synergy in this combination

COMMERCIAL OPPORTUNITIES VIA SYNERGY

- Significantly expands commercial opportunities in global insecticide market:
 - Lower dosage requirements, reduced cost and improved environmental safety
 - Addresses resistance issues
 - Extends the value of commercial partner post-patent products with added benefit of increased efficacy against resistant pests
- Synergy shown for particular important molecules & target pests creates opportunity for multiple commercial partnerships & applications
- Reinforces value of Bio-Gene products' unique Mode of Action to provide more effective control and address resistance of pests to these insecticides
- Results support Bio-Gene patents – valuable to commercial partners
- Early-stage results led to a new Material Transfer Agreement with a global company

Synergy creates multiple opportunities and significant value for Bio-Gene and its partners

MANUFACTURING DEVELOPMENTS

- As reported in December 2022 significant progress have been across:
 - Production know-how & trade secrets
 - Scalability of product
 - Cost management
 - Process improvements
 - Manufacturing partner engagement
 - Data development for registration dossiers

SUMMARY

- There is a real need for new Mode of Action insecticides globally
- Our chemistry has been validated by commercial parties
- Key initial partnerships have been established with many more planned
- Business model is developed
- Synergy study results expand commercial opportunities
- We will continue to focus on execution of the plan

NEXT STEPS

- Finalise STK agreement
- Additional Synergy testing
- Advance other commercial partnerships
- Deliver manufacturing partnerships
- Further strengthen our IP platform
- Advance our regulatory applications with governing bodies
- Continue to advance our business model via licences, milestones, active ingredient sales & royalties

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SOURCES

Slide	Sources
6	US EPA 2017, WHO 2017, Zoetis & Provue Market Research, Markets & Markets
9	Global Mosquito Control Market, Research Report 2020, Forecast to 2026
10	Research and Markets report, December 2019: Europe Household Insecticides Market to 2027 - Regional Analysis and Forecasts By Insect Type; Composition; Packaging; Distribution Channel.
11	Fortune business insights, 2021: Crop protection chemicals market size... 2021-2028.
12	What was tested in synergy studies? - Flavocide in spray/topical applications: with pyrethrins against houseflies (<i>Musca domestica</i>); with pyrethroid Permethrin against houseflies (<i>M. domestica</i>) and mosquitoes (<i>Aedes aegypti</i>); with pyrethroid alpha-Cypermethrin against aphids (<i>Myzus persicae</i>); with diamide Chlorantraniliprole against resistant diamondback moth (<i>Plutella xylostella</i>); with carbamate Pirimicarb against aphids (<i>M. persicae</i>); with organophosphate Dimethoate against aphids (<i>M. persicae</i>). Qcide in spray/topical applications: with pyrethrins against houseflies (<i>M. domestica</i>); with pyrethroid Permethrin against houseflies (<i>M. domestica</i>) and mosquitoes (<i>A. aegypti</i>) including resistant strains.