

Commercialisation Strategy Update

September 2019

Executive Summary

Globally we have lost ~90% of available insecticides to manage crop destruction & spread of disease

Bio-Gene's technology provides a solution to global insect resistance & toxicity



Significant suite of trial data demonstrating efficacy on resistant pests



Favourable Toxicology studies to-date



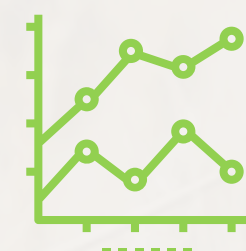
+5000x less impactful on bee populations vs incumbent insecticides



Novel Mode of Action



Strengthened IP portfolio



Scalable technology



Significant global opportunity across multiple verticals



BASF represents third-party validation of technology

The Global Problem of Pest Control

There have been no significant introductions of new chemistry since 2008

The ag-chem industry is seeking new & safer chemistry as global resistance continues to worsen



Grain Losses

Storage pests can cause 25% - 70% loss in stored Grain¹



Pest Resistance

Pests are increasingly developing resistance to current insecticides



Environmental Impact

Public outrage at incumbent products' toxic impact on bees & other beneficial insects



Crop Losses

Insects on average destroy up to 26% of global crop production, reducing food availability, & increasing cost²



Vector-borne Diseases

Cause 17% of global illness & disability e.g. Malaria, Dengue fever & Zika virus³



Consumer Products

Consumers are demanding natural insecticide products

Bio-Gene has two unique compounds

Bio-Gene's novel platform technology is based on a naturally occurring class of chemicals known as Beta-Triketones

Qcide™

Natural Compound

Extract of an Australian eucalypt: 'Gympie Messmate'

Qcide™ is well suited to applications in consumer products, along with public health & crop protection uses where a natural product is preferred

Flavocide™

Nature Identical Compound





A chemical process is used to produce a 'synthetic copy' of the compound that can be mass produced

Well suited for broad & larger verticals:

- 1) Crop Protection
- 2) Public Health

Bio-Gene's technology addresses market needs

Beta-Triketones have demonstrated insecticidal activity via a novel mode of action in testing performed to date

 Efficacy	<ul style="list-style-type: none">• Data shows Flavocide™ & Qcide™ are highly effective for controlling resistant pests across: Crop Protection & Grain Storage, Public Health & Consumer Products
 Safe Chemistry	<ul style="list-style-type: none">• Trials show relatively low toxicity to bees & other beneficial insects• Tox studies to date indicate no observable adverse effects to mammals
 Novel Mode of Action	<ul style="list-style-type: none">• Bio-Gene's compounds operate via a novel Mode of Action, which addresses pest resistance to other classes of chemistry
 Scalability	<ul style="list-style-type: none">• CSIRO collaboration has refined Flavocide production towards commercial viability• James Cook University collaboration is increasing productivity of Qcide, and on-going tree improvements

Bio-Gene has four major target verticals

The Bio-Gene platform is focused on providing new solutions for insecticide manufacturers in applications across four key verticals



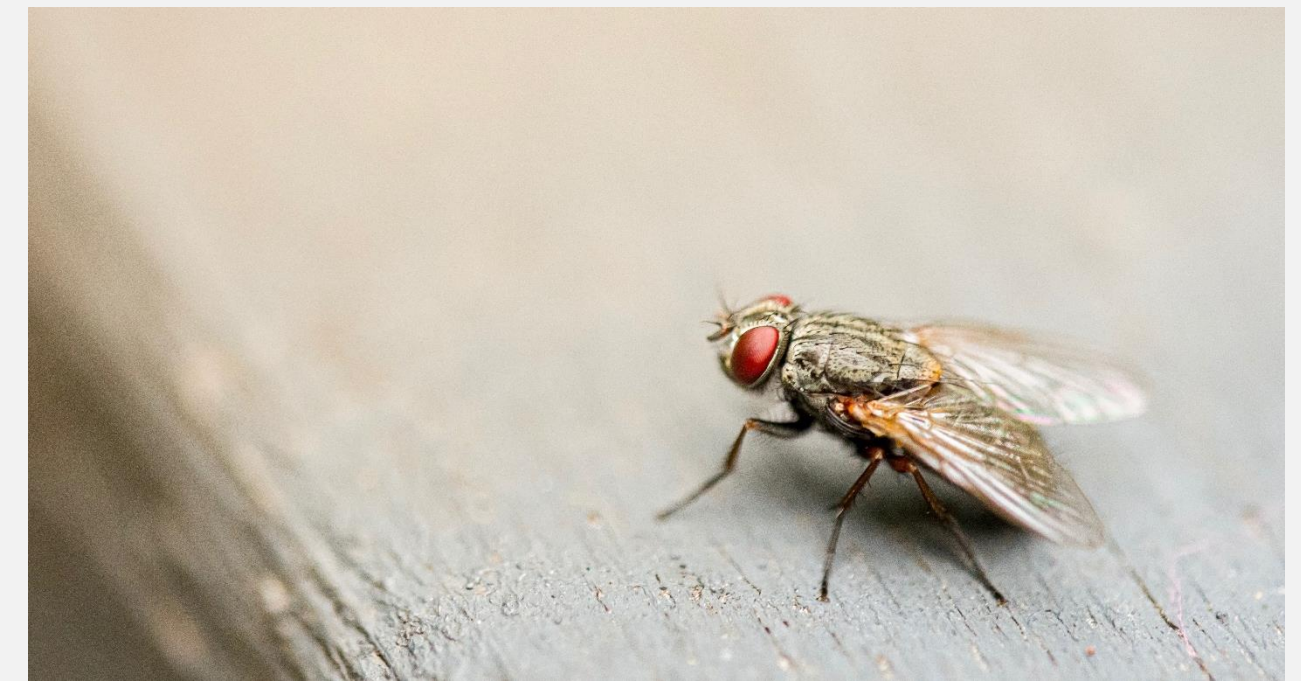
Crop Protection



Grain Storage



Public Health



Consumer Products

Well-defined pathway to commercialisation

WELL
PROGRESSED

A

In-house Testing & Data Generation

- Create suite of trial data & IP relating to efficacy, toxicity, mode of action and manufacturing and refine production to be commercially viable

UNDERWAY

B

Progress Commercial Discussions Globally

- Six Material Transfer Agreements' signed with prospective global partners, with further discussions underway
- Presented Bio-Gene to major Ag-Chem, Government Agencies, NGO's & Philanthropic Organisations

ANNOUNCED

C

Formalise Exclusive Partnership Trial

- Exclusive Grain Storage partnership for Australia signed with BASF
- Continuing to review opportunities for further partnerships

FUTURE

D

Commercial Deals

- Progress evaluation partnerships to a commercial deal
- Focus on multiple verticals and multiple geographies

BASF Partnership represents a major milestone

- First commercialisation partnership to develop Flavocide for use in stored grain with funding provided by BASF and BGT
- Research to be undertaken by application experts: Department of Agriculture & Fisheries, Queensland Government (**DAF**)
- Discussions are ongoing for further opportunities with BASF

Trial Structure

- Three-way collaborative approach between BASF, DAF and BGT to determine a commercially viable formulation including:
 - Best combination for broad stored grain pest control
 - Synergistic effects of the combined chemistry
 - The optimum application rates for resistance management
- The best suited combinations will then be taken to residual efficacy testing

About BASF

- The world's largest chemical company and a leading developer of new chemistry to the agriculture sector with €6.2 bn in annual sales in its agriculture division and an outstanding reputation for agriculture focussed R&D

Australian Stored Grain Pest Control



BASF



BIO-GENE
TECHNOLOGY
LTD



Existing pipeline of further potential partnerships

Currently six 'Material Transfer Agreements' signed to explore opportunities across four key verticals globally

Bio-Gene aims to develop further significant partnerships from existing and future MTA's



Crop Protection



Grain Storage



Public Health



Consumer Products

Current Focus Areas

Bio-Gene has made significant progress to-date and the focus now is on advancing the commercialisation strategy

Progressing trial data relating to vector control to enable BGT to leverage conversations with key stakeholders in this vertical

- BGT has identified the data required to progress trials
- Completing the dataset
- Progressing conversations with key stakeholders in this vertical

Advance MTA's to partnership stage

- Establish evaluation partnerships to determine specific market applications
- Sign new MTA's with additional companies

Continue work on crop protection and consumer health

- Leverage additional studies in this area focus on key market opportunities and discuss with global players

Continue regulation enabling studies

- Design next level of toxicology studies to progress towards registration

Continue to improve production capability

- Pilot plant trials to scale-up production of Flavocide
- Implement development plans for tree cloning and oil extraction

Future Focus Areas

Bio-Gene has a clear roadmap to progress product opportunities

Qcide Production Expansion

- Accelerate cloning program, via James Cook University
- Additional engineering work to improve steam distillation process for oil extraction and deliver higher yield

Flavocide Production

- Additional scale up testing based on CSIRO developed methodology for Flavocide synthesis
- Review of potential global and local manufacturing partners

Advance Mosquito studies to field testing

- Advance field testing for vector control
- Investigate co-investing with other commercial partners on formulation and specific application

Additional value adding exploratory studies

- Better understand specific interaction of compounds and optimum ratios to open up opportunities within crop protection
- Accelerate pipeline development studies around analogue development, and generation of synthetic molecules based around our specific Mode of Action
- Additional studies based on recent observations that may lead to supporting research for patent applications
- Accelerate new pest efficacy studies to identify additional market opportunities



APPENDIX

Board & Management



DON BRUMLEY

Non-Executive Chairman

- 25+ years as a senior partner & leader of Ernst & Young – Oceania
- Significant experience across IPOs, transactions, audit & advising growing entrepreneurial companies



RICHARD JAGGER

CEO & Managing Director

- 20+ years working in agriculture globally
- Most recently employed as Managing Director of Sinochem Australia
- Previously spent 15+ years at Monsanto in various management roles



PETER MAY

Executive Director, R & D

- 20+ years experience in crop protection market with companies Orica & Crop Care Australasia (now Nufarm)
- Founded Xavca, consulted to companies such as Syngenta & Sorex (BASF)
- Former CEO & Chairman of BioProspect (now Medibio, ASX:MEB)



ROBERT KLUPACS

Non-Executive Director

- 30+ years corporate experience in international tech development
- CEO of the Bionics Institute
- Previously MD & CEO of ASX-listed Circadian Technologies Ltd and ES Cell International Pte Ltd
- Registered Australian patent attorney



KEVIN RUMBLE

Non-Executive Director

- Founding Director of Bio-Gene
- 20+ years experience in new plant propagation, farming & live plant transport techniques
- Involved in the development of Qcide™ & development of Flavesone as a first step in the commercialisation of Flavocide™



ROGER MCPHERSON

Chief Financial Officer & Company Secretary

- 15+ years experience as CFO & Company Secretary across both listed & unlisted companies
- Experience in the pharma manufacturing, biotech & biopharma industries
- Previously CFO & Co-Sec of TPI Enterprises (ASX:TPE)

Key Advisors



DOUG RATHBONE
Advisor to the BGT Board

- 40+ years experience in agriculture, most recently as Managing Director of Nufarm, a position he held for 15+ years
- Under his leadership, Nufarm became one of Australia’s most successful agricultural firms with global sales >\$2.5B



PROF. CATHERINE HILL
*Purdue University
BGT Scientific Advisory Board Member*

- Purdue University, Dept. of Entomology
- Showalter Faculty Scholar
- President’s Fellow for the Life Sciences
- Authority in new insecticide development & novel chemistry

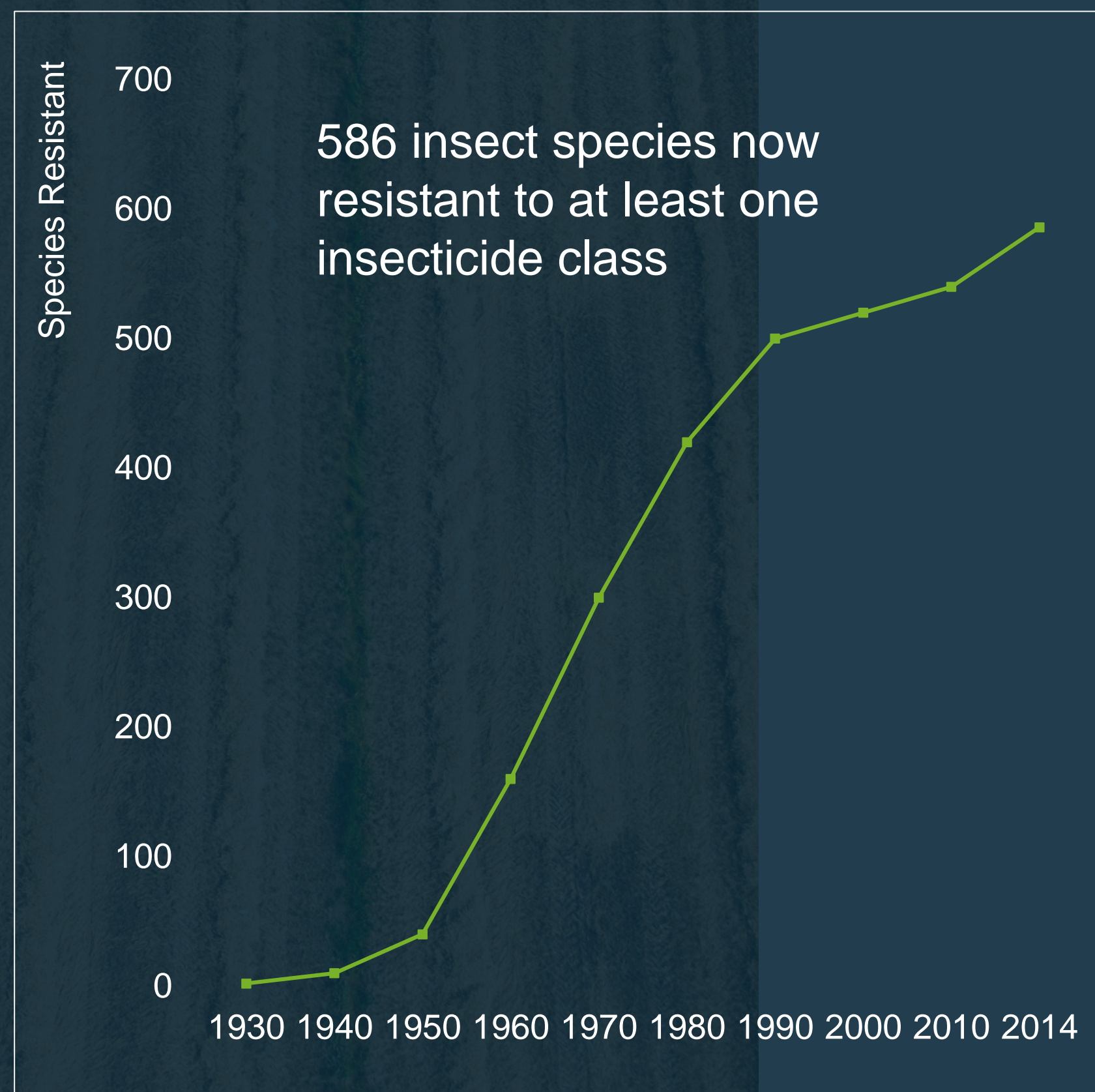


NEIL ANDERSON
Chemistry & Manufacturing Consultant

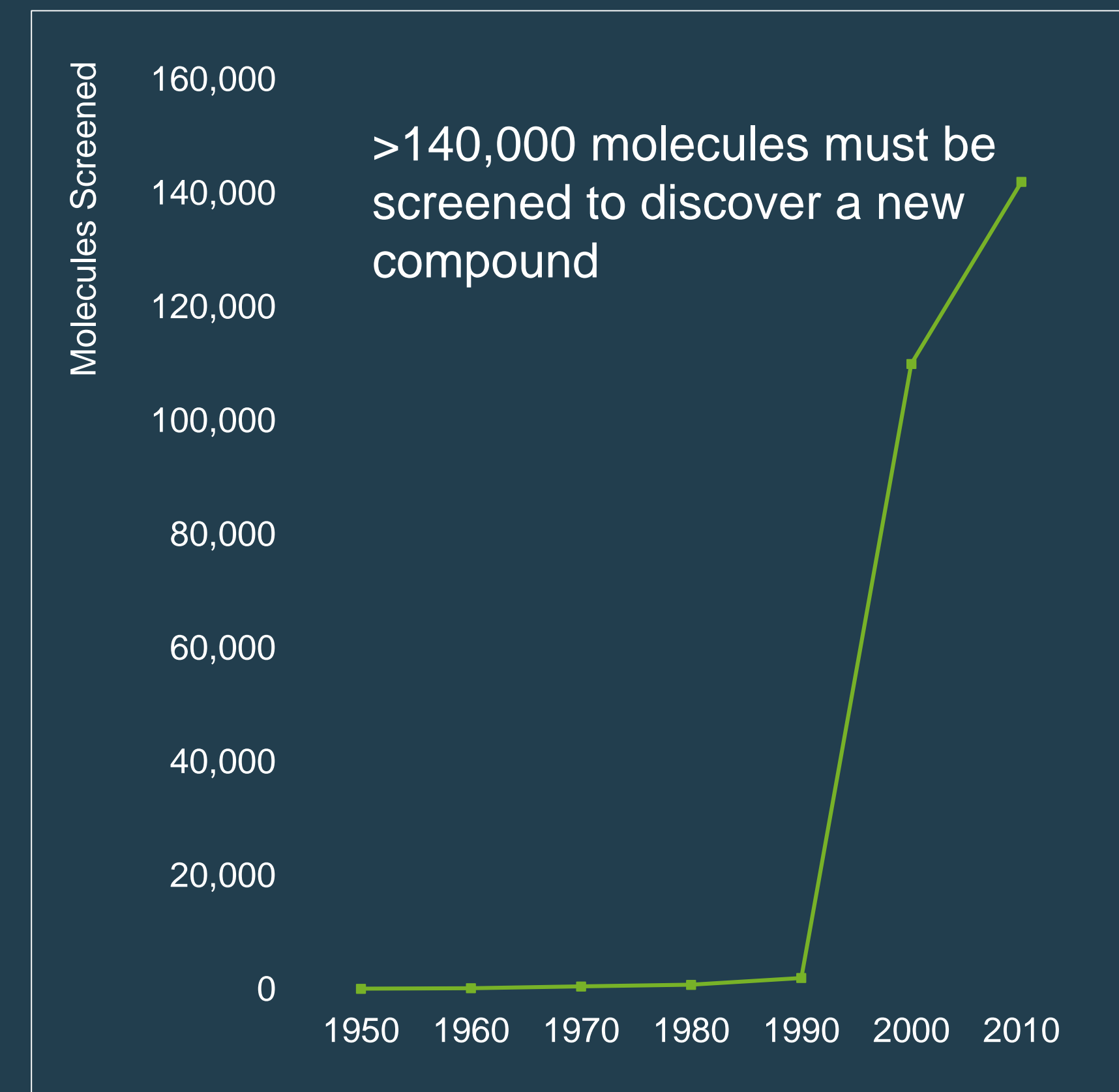
- Industrial Chemist
- Employed by Monsanto for 40 years
- Specialist in formulation development, production, & process management
- Qualified for manufacturing plant audits, quality & environmental management

The problem of resistance is worsening

Increasing number of resistant species



New insecticides are increasingly elusive





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