

NEMGENIX PTY LTD

19 October 2011



Presenter: Dr Sean Hird (CEO)

www.nemgenix.com

NEMGENIX

- An agricultural biotechnology company.
- Based at the WA State Agricultural Biotechnology Centre.
- Developing novel GM crop protection solutions to control plant parasitic nematodes.
- \$1bn+ market.
- CEO: Dr Sean Hird
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- CSO: Prof Michael Jones
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COMPANY OVERVIEW

2007

- Formed by Dr Hird (20 years senior executive positions in the life science sector, Ph.D plant molecular biology, UK solicitor) and Professor Jones (Director WA SABC, world expert in field of plant nematology).
- Awarded Federal Government research grant (re nematode resistance in wheat).

2008

- \$500k venture capital investment.
- Signed research services agreement with the Indian Institute of Technology, Kanpur.

2009

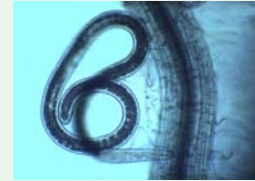
- 2 year collaboration with Prof Waterhouse commences (supported by ARC-Linkage grant).
- Collaboration with Dow AgroSciences commences.
- Awarded Federal Government 'Climate Ready' research grant (re nematode resistance in sugarcane).

2011

- PCT patent application filed (multiple nematode targets, multiple species, multiple crop species).
- Licence agreement signed with world no.1 in sugar beet.

PRODUCT PIPELINE

- **Product:** synthetic 'gene(s)' that when incorporated into a plant's genome confers resistance to plant parasitic nematodes.
- Proof-of-concept demonstrated in wheat and sugarcane (and, indirectly, in sugar beet).
- Each synthetic gene comprises a fragment of a nematode gene.
- The Company has screened circa. 20 separate nematode gene fragments to assess their utility and commercial potential.
- The Company now possesses transgenic (GM) wheat and sugarcane plants with resistance to plant parasitic nematodes



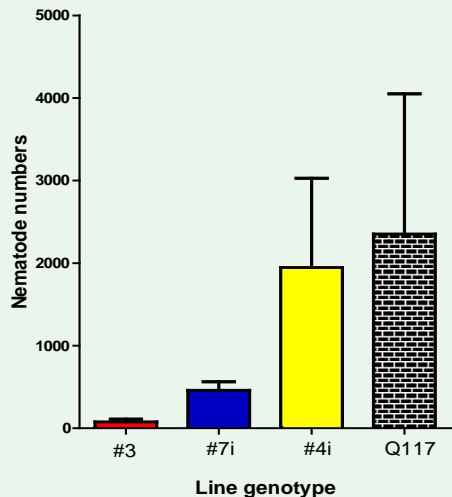
LEAD PRODUCT(S)

- 8 nematode gene fragments (5 covered by the PCT application), with POC data (ie transgenic plants which have been challenged with soil inoculations of plant parasitic nematodes).
- 3 lead programmes (re wheat, sugarcane and sugar beet).
- Most advanced programme is for sugarcane.
- Yield loss in sugarcane in Australia and elsewhere circa. 15% (re independent CSIRO supported study).
- Additional markets of soybean and corn available.



LEAD PRODUCT RESULTS

Transgenic sugarcane challenge with *Pratylenchus zeae* (1)
Total nematodes in roots



Note:

(a) Q117 = wildtype sugarcane challenged with nematodes.

(b) #3, #7i and #4i = different (2nd generation) homozygous transgenic sugarcane plants each incorporating the synthetic gene (albeit with different sites of insertion in the sugarcane genome) tested.

(c) #3 sugarcane plants with circa. 97% nematode resistance.

COMMERCIALISATION STRATEGY

- Realisable market re sugarcane: annual royalties of circa. \$20m/pa based on 20% market penetration in major (IP recognising) countries, and having confirmatory field trial data.
- Competitive edge: world-class expertise in plant parasitic nematodes; patent protected gene targets and a pipeline of new targets; expertise in plant biotechnology and state-of-the-art facilities.
- Collaboration on sugar beet just signed, discussions with multinationals initiated.
- Company has clear focus re nematode resistance, and the business is extendable to other crops (inc. the major GM crops of soybean and corn).



FINANCIALS

- Market Valuation: post money valuation in Jan. 2008 was \$1.1m.
- VC monies raised to date = \$500k.
- Expenditure to date of circa. \$2.5m (funded by VC investment, government grants and collaboration fees [eg Dow]).
- Cash on hand: circa. \$175k.
- Burn rate: circa. \$25k/month.
- Shareholders: Founders 44%, Westscheme(Australian Super) 41%, Murdoch University 11%, SRV 4%.