Successfully taking new products to market: A case study – Grasslanz Technology Ltd

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Grasslanz Technology Ltd

A subsidiary of AgResearch
a world leading pastoral research company

We fund development and then license plant technologies for commercialisation
Content

• Grasslanz Technology - a commercialising agent of publically and privately funded R&D
• Elements of a successful business model that develops and commercialises innovations
• Interacting with R&D providers and their scientists
• Factors required for successful commercialisation
• Lessons from successfully commercialised innovations – case studies
• Lessons learnt from commercialising products aimed at the global market
How do we operate?
• Identify market opportunities

• Determine the market entry strategy
• Contract and manage R&D
• Protect intellectual property
• Deliver technology through nucleus seed

• Product stewardship in the market place
Company structure

- Owned by AgResearch
- Statuary Board
- 12 staff
Business model

AgResearch

Other Technology Providers

Intellectual Property Rights

R&D Investment $$$

R&D Investment $$$

Royalty $$$

Marketing Rights

SEED COMPANIES
### Grasslanz commercialisation process

<table>
<thead>
<tr>
<th>Stage</th>
<th>Project</th>
<th>Primary Driver</th>
<th>Research Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivar Concept and Collaboration</td>
<td>Opportunity identified</td>
<td>Grasslanz Seed Company Research provider</td>
<td>Plant Breeding and innovation in plant biology</td>
</tr>
<tr>
<td>Plant Breeding and Evaluation</td>
<td>Product Created</td>
<td>Research provider</td>
<td>Grasslanz</td>
</tr>
<tr>
<td>PVR and Nucleus Seed</td>
<td>Ownership secured</td>
<td>Grasslanz</td>
<td>Plant Variety Protection, nucleus seed, finance</td>
</tr>
<tr>
<td>Production and Processing</td>
<td>Inventory build-up</td>
<td>Seed Company</td>
<td>Seed production and processing, marketing, finance</td>
</tr>
<tr>
<td>Market Delivery</td>
<td>Farmer delivery</td>
<td>Seed Company</td>
<td></td>
</tr>
<tr>
<td>Value Created</td>
<td>Product support</td>
<td>Grasslanz Seed Company Research provider</td>
<td></td>
</tr>
</tbody>
</table>
Success factors

- Product development focus
- Match up suitable partners
- Clear path to market
- Tight-knit small team
- Access to multidisciplinary research
Importance of IP protection to Grasslanz as a commercialisation agent

- Provides an incentive to be inventive
- Provides the inventor/owner:
  - Some exclusivity
  - Some control
  - Financial return
  - A valuable asset
- Provides the world access to new ideas, products and technologies
Attracting investors

- Credibility and ability to deliver
- Provide reasonable proof of concept (if a product)
- Know the market – work with the investor
- Willingness to collaborate with other R&D organisations
- Being an ally of the investor – become part of their strategic planning sessions
Interaction with research providers

- Outsource all R&D
- Not exclusive to AgResearch
- Invest with the best capability that will deliver – not the cheapest
- Need to be focused on product and technology delivery, not just research
- High level cost benefit – heavily weighted by size of market opportunity
Product commercialisation

“The process of generating new products that begins with idea generation and concludes with commercialisation” – GlaxoSmithKline
Product commercialisation

Factors required for successful commercialisation:

- Innovation – the invention
- Benefit to cost ratio – return on investment
- Protection of the ‘invention’
- Path to market – who will sell it, who will buy it?
- Time to market
- Size of potential market
- Market dynamics – acceptance of value added products
New Product Development

Ease of Change vs. Cost of Change

Ease of Change

Cost of Change

Concept
Project Stage
Product
Case study – a product success in NZ
Fungal endophyte
Grass endophytes

- Ryegrass has a naturally occurring symbiont – a fungal endophyte
- In 1981 AgResearch found the symbiont was causing the animal health problems
- The endophyte also protects ryegrass from insect pests
- It infects the seed ensuring survival from generation to generation
- In the plant the endophyte produces alkaloids
Effects on ryegrass

What the endophyte imparts to ryegrass

- Insect resistance
- Drought tolerance
- Reduced overgrazing by livestock
- Benefits the grass by increasing growth, persistence and seed production
Endophyte infected

Endophyte free
AR1 endophyte

- Ryegrass endophyte that does not cause ryegrass staggers but provides Argentine stem weevil resistance
- Non-exclusive release
- Initially targeted for Australasia
- Uptake rate
AR1 - Pastoral industry benefits

AR1 a technological breakthrough

- Prevents ryegrass staggers
- Does not cause heat stress
- Reduces fly strike
- Increases live weight gain >10%
- Increases milk solids 9%
- Dargaville trial showed 122kgMS/ha or a $840/ha today return for a $160/ha investment in seed
Delivering AR1 to farmers

Step One

- Seed company’s proprietary cultivar is inoculated with AR1
- Alkaloid profile of the inoculated cultivar is verified as safe
- Effective seed transmission of endophyte confirmed
Delivering AR1 to farmers

Step Two

Animal safety is verified
Delivering AR1 to farmers

Step Two

Agronomic performance is tested
Step Three

Seed company markets the new AR1 cultivar

Ensures farmers know how to establish and manage AR1 pastures

Delivering AR1 to farmers
Uptake – AR1 case study

AR1 - Royalties

$000's

2,500
2,000
1,500
1,000
500
0


Calendar Year
Lessons we have learnt

For products aimed at the global market:
• Identify your commercialisation partner carefully
• Understand the market into which you are selling
• Use the best R&D capability available
• Keep focused on the product output
• Have good data to back your claims
• It may take longer than you think
• Remain intimately involved with the commercialising company
• It can be very successful
Grasslanz - Delivering value in forages

- World leading investor in forage improvement and biotechnology

- Commercialisation of forage technologies through Grasslanz Technology – managing IP and licensing out to marketing companies

- Main market is NZ; but also significant markets in Australia, USA, Europe and South America.