

# The effective use of Intellectual Property:

## A case study – Grasslanz Technology Ltd

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### **Executive summary**

Grasslanz Technology invests in the development of plant products and technologies. The intellectual property created is protected and then licensed to companies for manufacture and sale. Retaining part or full IP ownership underpins this business model.

### **Grasslanz Technology Ltd**

Grasslanz Technology is a plant technology provider - its products are primarily proprietary plant varieties and other technologies delivered through seed to the end user - farmers. Grasslanz, a wholly owned subsidiary of AgResearch Ltd, invests in applied research and development (R&D), the outputs from which are licensed to production and marketing companies for sale. It employs neither science nor marketing capability. It establishes alliances with seed companies to co-invest and then most often exclusively licenses the resulting products for production and sale.

Grasslanz specialises in developing proprietary forage varieties and other forage technologies, such as novel fungal endophytes that can be inoculated into ryegrasses and fescues. Grasslanz's product portfolio is based around traditional temperate plant species, namely perennial, Italian and hybrid ryegrasses, tall fescues and white and red clovers, but also bents, bromes, herbs and many others.

Grasslanz, while owned by AgResearch, has the freedom to invest in both public and private research. Investment can be made wherever it expects to obtain the best return in terms of an innovative technology or product that is fit for purpose. However, AgResearch is the preferred R&D provider and receives more than 70% of total R&D investment made by Grasslanz Technology. The majority of Grasslanz plant varieties have been bred out of AgResearch.

Grasslanz develops strong commercial alliances to maintain a channel to market for its plant technologies. Delivery to the ultimate customer, the farmer, is achieved through production and sale of seed by head licensee companies. These companies are based primarily in New Zealand but do include businesses in Australia, USA and Europe. Ironically some companies that are a competitive threat in some technologies are valued customers for other innovations. Grasslanz also manages funding in joint R&D investment programmes on behalf of other R&D investment agencies and commercial companies.

Key factors in Grasslanz Technology Limited's revenue generation include:

- The licensing of proprietary germplasm
- The licensing of proprietary symbionts
- The licensing of plant genes
- The licensing of other relevant/appropriate plant technologies
- Partnering with complementary businesses
- Domestic and International collaborations
- Accessing and capturing third party IP
- Building intellectual capital through the company's people, patents, PVR and trademarks
- Building a strong intellectual property position to facilitate attracting funding and leveraging further alliances
- Regularly monitor the development and protection of international IP of interest.

To successfully pursue these objectives, it is imperative that Grasslanz has a focused, strategic, effective and cost efficient strategy for securing and managing appropriate intellectual property (IP) in a timely manner in identified target markets.

## **Business model**

The Grasslanz Technology business model (Figure 1) is a six step process leading from the identification of a product concept to the product's commercial launch by a seed company partner:

1. Identifying market opportunities, through either market 'pull' or research 'push'
  - Fact finding visit to the market
  - Desk top study/analysis
  - Contract consultants to assess the opportunity
2. Determining the market entry strategy and engage investors/alliances
  - Analyse market opportunities relative to market size and time to market
  - Analyse R&D capability and cost and compare with market opportunity
  - Identify, confirm and involve a commercial partner.
3. Contracting and managing R&D
  - Project managed by milestones and objectives; quarterly and annual reporting
  - Develop and manage the R&D budget
4. Protect intellectual property (IP) and brand  
All or some of the following are used depending on product and market to ensure the exclusive use and protection of technologies for licensees in key forage markets. Our ability to secure this Intellectual Property protection makes it more attractive for companies to license our technologies.

- Withholding publication by the R&D provider of the discovery until IP status is secure
  - Patents – of inventions that are unique, functional and commercially viable.
  - Trade Marks – of brands that are then used by head licensees
  - Plant Variety Rights – protects plant cultivars for exclusive use by head licensees.
5. Deliver technology through nucleus seed to commercial partner  
Grasslanz Technology undertakes the first high grade large scale nucleus seed production of varieties. This is then on sold to the head licensee company for commercial seed production.
  6. Administer licenses and product stewardship in the market place
    - Execute licence agreement and agree on royalty returns to Grasslanz with the commercial partner
    - Support commercial partner in the market place with marketing information, industry training, farmer education, and information to assist with product launch, and management of the new product/technology in the market place
    - Assist in the product launch.

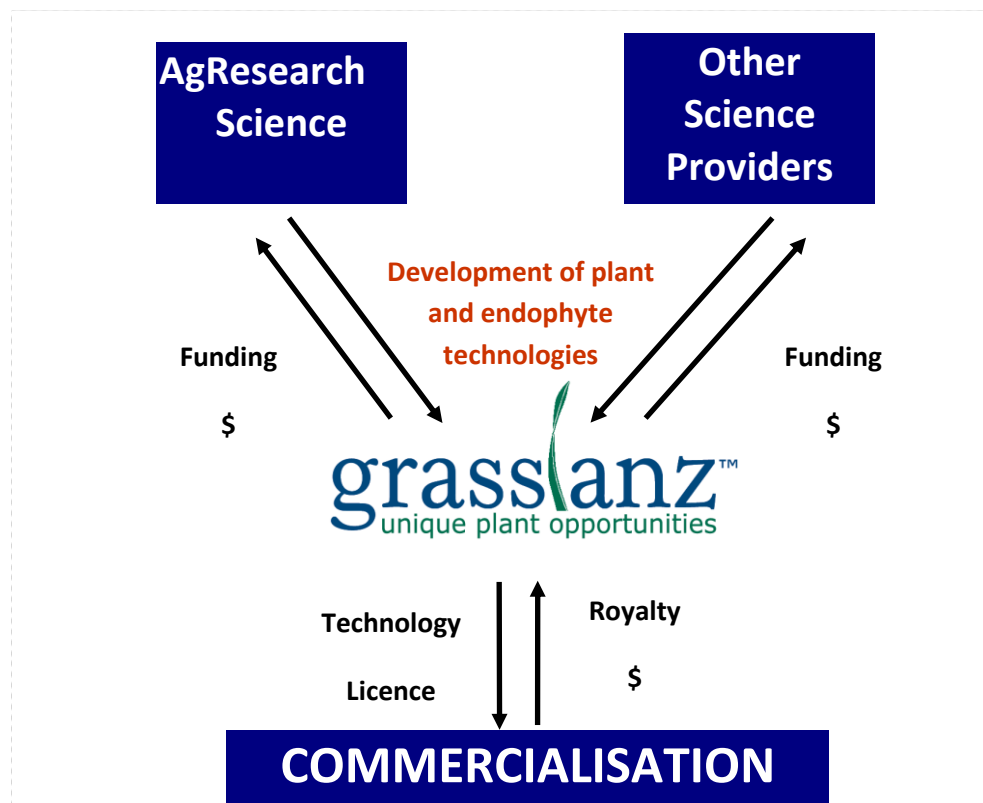


Figure1 - Grasslanz Technology Limited business model

## Intellectual property (IP) protection

Intellectual property protection is at the core of the Grasslanz business success , A full time IP manager is employed to ensure appropriate protection of its commercially important IP occurs through Plant Variety Rights, patents and trademarks. This is managed through:

- Key liaisons between legal advisors and breeders/inventors in the development of new applications;
- Maintaining a review on new IP of interest from potential competitors and collaborators; and
- Interaction with plant breeding governing authorities (e.g. NZPVR office, IP Australia, EU, USA)

The key goals of Grasslanz IP strategy are to:

1. Protect and extend Grasslanz industry and commercial leadership in proprietary fungal endophytes and forage cultivars.
2. Generate revenue via licensing protected intellectual property rights.
3. Allow establishment of a gene trait business, and continued development of novel fungal endophytes and forage cultivars
4. Develop strategic alliances to expand ownership of a broad pipeline of plant technologies.
5. Enable Grasslanz to gain a royalty position in fields of use or geography outside core business.
6. Exploit our Intellectual Property rights
7. Interact with commercial decision makers to ensure correct IP is utilised and maximised

Grasslanz IP strategy is based on:

- Establishing an Intellectual Property (IP) estate that can be used to leverage alliances with other companies
- Encouraging broad claims to IP rights that maximise utility in offering field-of-use licenses outside primary field of interest and helps attract alliances to share R&D costs and allows for cross licensing any improvements
- Identifying IP that can be commercialised and obtain access through ownership or license

To achieve this strategy Grasslanz follows 4 steps:

1. **Assess** the opportunity, potential financial and strategic benefits and value of the IP. Is it novel, can it be protected, will there be freedom to operate and is there an obvious path to market?
2. **Capture** the IP to ensure Grasslanz has freedom to operate and to prevent it unknowingly entering the public domain, and ensure confidentiality is maintained.

3. **Protect** the IP in a way that maximises its commercial potential. Most common types of protection include:

- Patent
- Trade Mark
- Plant Variety Right
- Trade Secret

If the patent option is plausible determine that exemplification of invention can be achieved 12 months from filing date.

4. **Exploit** the IP as quickly as possible to ensure a return on investment within the term of the protection period (e.g. 20 years for patents). Based on market data

- the countries where protection needs to be obtained
- Is licensing or selling the technology to another party a sensible option?
- Risks associated with sales into territories where we do not have IP protection

AgResearch has a long history of high quality plant variety research and development. Its PVR portfolio (now managed by Grasslanz) dates back to the first PVR application filed in 1985 with the New Zealand Plant Variety Rights Office and since then have applied and been granted hundreds of PVRs, many which have exploited their full 20 year protection period. This security of IP has enabled Grasslanz to demand an appropriate royalty on proprietary seed sold to ensure 'adequate' returns on investment and into future R & D

AgResearch/Grasslanz's successful proprietary varieties enables increased monetary return to be invested in other projects – ones which serve farmers directly and generate an effective cycle of providing funding to develop highly innovative products for the agricultural industry which in turn help fund further projects.