

**GRDC** Canadian Presentation 17 March '06

**GRAINS RESEARCH & DEVELOPMENT CORPORATION**

Terry Enright  
Chairman

www.grdc.com.au Australian Government  
Grains Research and Development Corporation

**GRDC** Grains Research & Development Corporation

**Rural Research & Development Corporations**

- Established in 1990 and operate under PIERD Act.
- RDCs as an industry driven approach to deliver world's best practice R&D
- Based on a strong rural innovation culture, 'market pull' and a sound strategic management system
- Linkages across business systems

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**The RDC Model (cont.)**

- A partnership approach involving industry and government
- Targeting higher rates of adoption of R&D to:
  - increase industry capacity to adapt to change and remain globally competitive
  - deliver triple bottom line outcomes

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**GRDC Achievements – Meeting Grower Needs**  
Annual Broadacre Productivity Growth in Australia  
1977-78 to 1998-99

Category	Productivity Growth (%)
Crop specialist	3.6
Mixed crops - livestock	2.6
All crop farms	3.2
Grains R&D	1.7

Source: "Productivity Growth in the Australian Grains Industry", ABARE

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**SMART OZ: Agriculture**

**RISING PRODUCTIVITY .....**  
Annual Productivity growth  
Average from 1977-78 to 2001-02

Category	Productivity Growth (%)
CROPS	~3.2
BEEF	~1.8
DAIRY	~1.5
SHEEP	~0.8

"Agriculture is reaping the benefits of a revolution in skills and technology ..."

Source: Australian Financial Review  
Tuesday 22 March 05  
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Source: ABARE

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### GRDC Achievements – Meeting Grower Needs

- Grains R&D would deliver an on-farm benefit-cost ratio of **6.6:1**, based on conservative assumptions. When account is taken of benefits flowing to off-farm businesses, the benefit-cost ratio increases to **7.8:1**, that is about **\$3 billion** in terms of net present value. (CIE and Hassall Study)
- Nationally, **67%** of growers claim to have benefited directly from GRDC related activities in the past 5 years

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### GRDC Achievements – Meeting Grower Needs

- **76%** of growers surveyed believe that grains research is addressing long-term sustainability threats
- **74%** of growers rate GRDC performance as high or very high (down from 79% in 2002)
- Most significant benefits resulting from grains research in the last 5 years relate to: **New varieties, Disease control and Better practices**
- Strength of RDC model

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### Successes under the Model

- Industry ownership/cultural change
- Investment increase 1984/85 – 2003/04 \$67m to \$425m (industry \$27m to \$222m; government \$39.9m to \$203m)
- Total portfolio investment over \$1b
- Average 7:1 benefit over cost ratios

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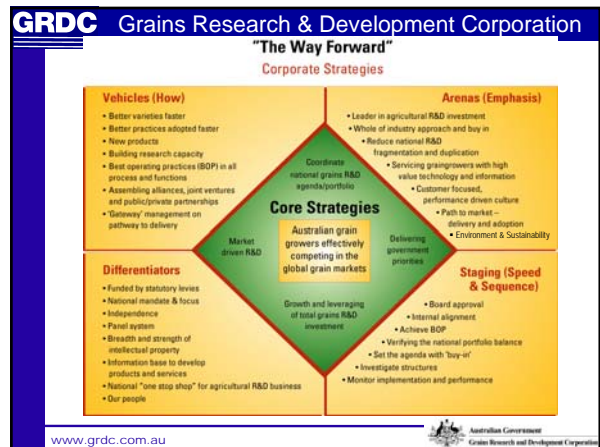
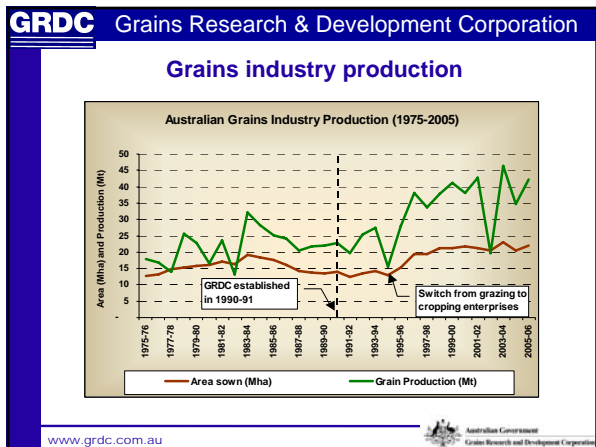
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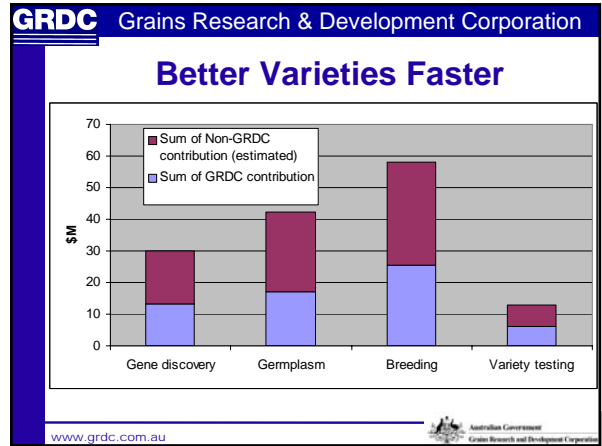
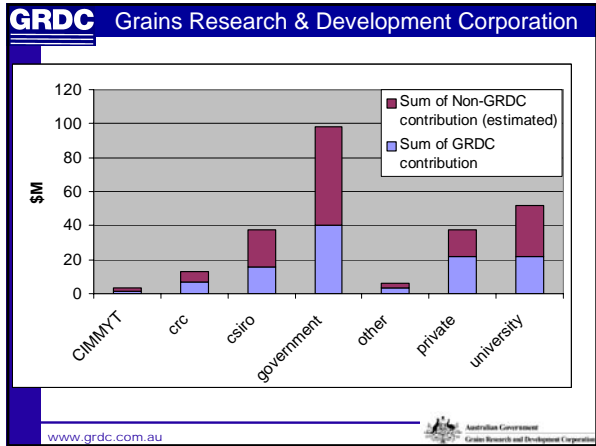
### Grains Industry Profile

- Since GRDC establishment in 1990-91:
  - Average annual production increased by around 86% from 23 to 43 million tonnes per annum
  - Derived from a 64% increase in area planted, up from 14 to 23 million hectares
  - Total factor productivity of grain farms has continued to grow at 3.2% per annum over this period
  - Estimated number of grain farms – 38,000
  - 5-Year average\* production and yield, 2001-02 to 2005-06:
    - wheat – 24.5 million tonnes, 1.9 t/ha
    - barley – 9.0 million tonnes, 2.1 t/ha
    - canola – 1.6 million tonnes, 1.3 t/ha
    - GVP – approx \$9 billion per annum

\* ABARE Australian Commodities Report, March 2006 (excluding 2002-03 drought)

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#### Strategic Driver – Better Varieties Faster

	Gene discovery	Germplasm	Breeding	Commercialisation	Variety testing
<b>Descriptions</b> <i>Key activities in each phase of development</i>	Breeding technologies, Genetic resource centres, Functional genomics	Germplasm development, Molecular markers, Genetic transformation	Wheat, Barley, Pasture, Pasture-based Cereals, Durum, Other	Seed increase, Distribution and marketing	National variety trials, Quality evaluation
<b>Average duration</b>	3.5 yrs	3-4 yrs	6-12 yrs	2 yrs	3 yrs
<b>Average probability of commercialisation</b>	5 percent	25 percent	50 percent	85 percent	90 percent
<b>Average time to delivery</b>	12-15 yrs	9-17 yrs	6-15 yrs	2 yrs (commercial variety testing)	3 yrs (2 yrs commercial commercialisation)
<b>Total expenditure (estimated 2004/05)</b>	\$29.6M	\$43.0M	\$56.2M	-	\$13.6M
<b>GRDC expenditure (2004/05)</b>	\$13.1M	\$17.3M	\$25.5M	0	\$6.2M
<b>No. of projects</b>	22	75	91	6	25
<b>Key research providers</b>	Australian Centre for Plant Functional Genomics, CSIRO Entomology, IPGR, CRC for Value Added Wheat, Uni of Adelaide, Murdoch Uni	CSIRO Plant Industries, CRC Molecular Plant Breeding, Uni of Adelaide, Uni of Sydney, CIMMYT	ADWEST, CSIRO, NSW Agriculture, ARC, CSIRO, Uni of Adelaide, Uni of Western Australia, CSIRO Plant Industries		ARC, ACDC, ADWEST, NSW Agriculture, SARDI, DPI Victoria
<b>% of National Grains R&amp;D</b>	12%	17%	22%		5%

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