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Optimising future Australian grain extension systems

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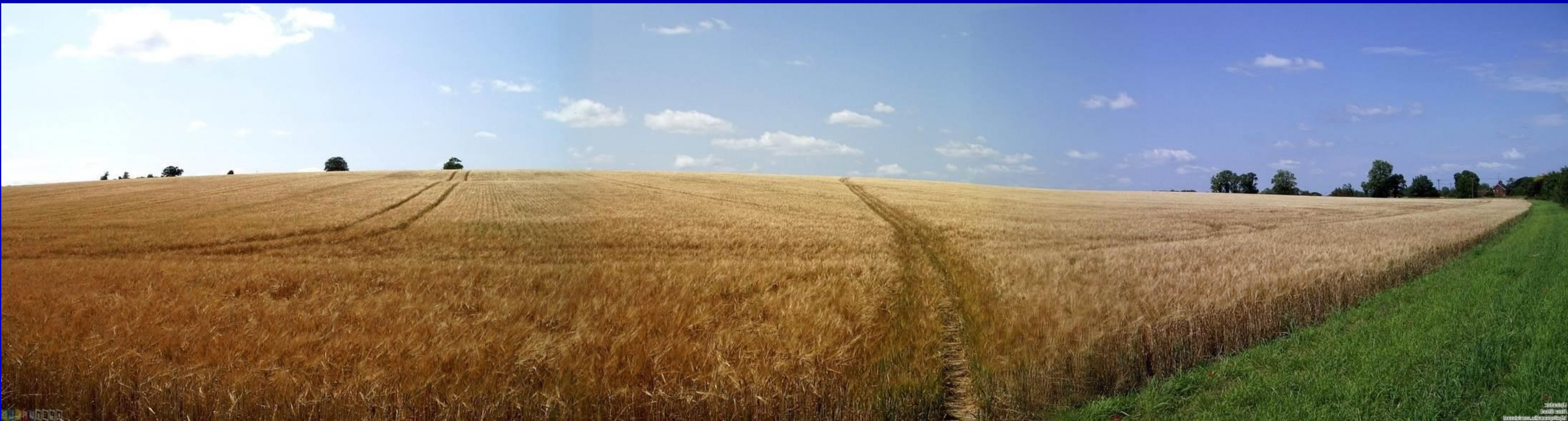

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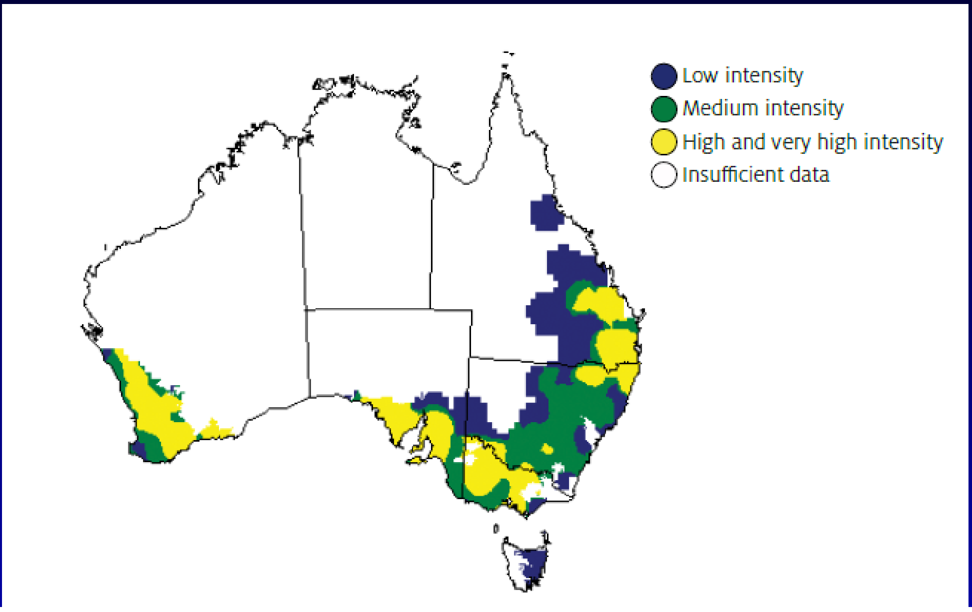
Australian graingrowers

Private sector resources

International models

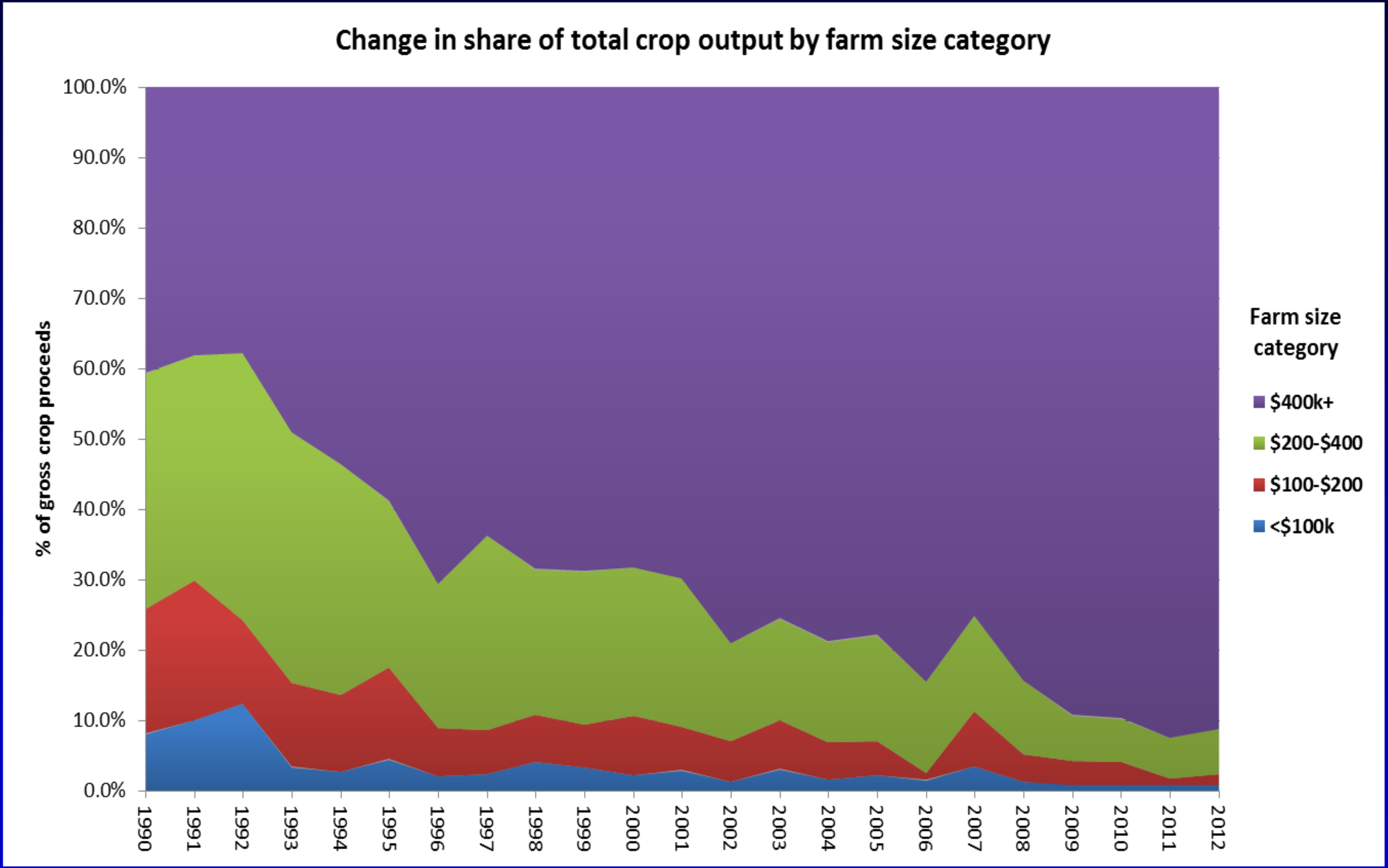
The future

Australian grain farms

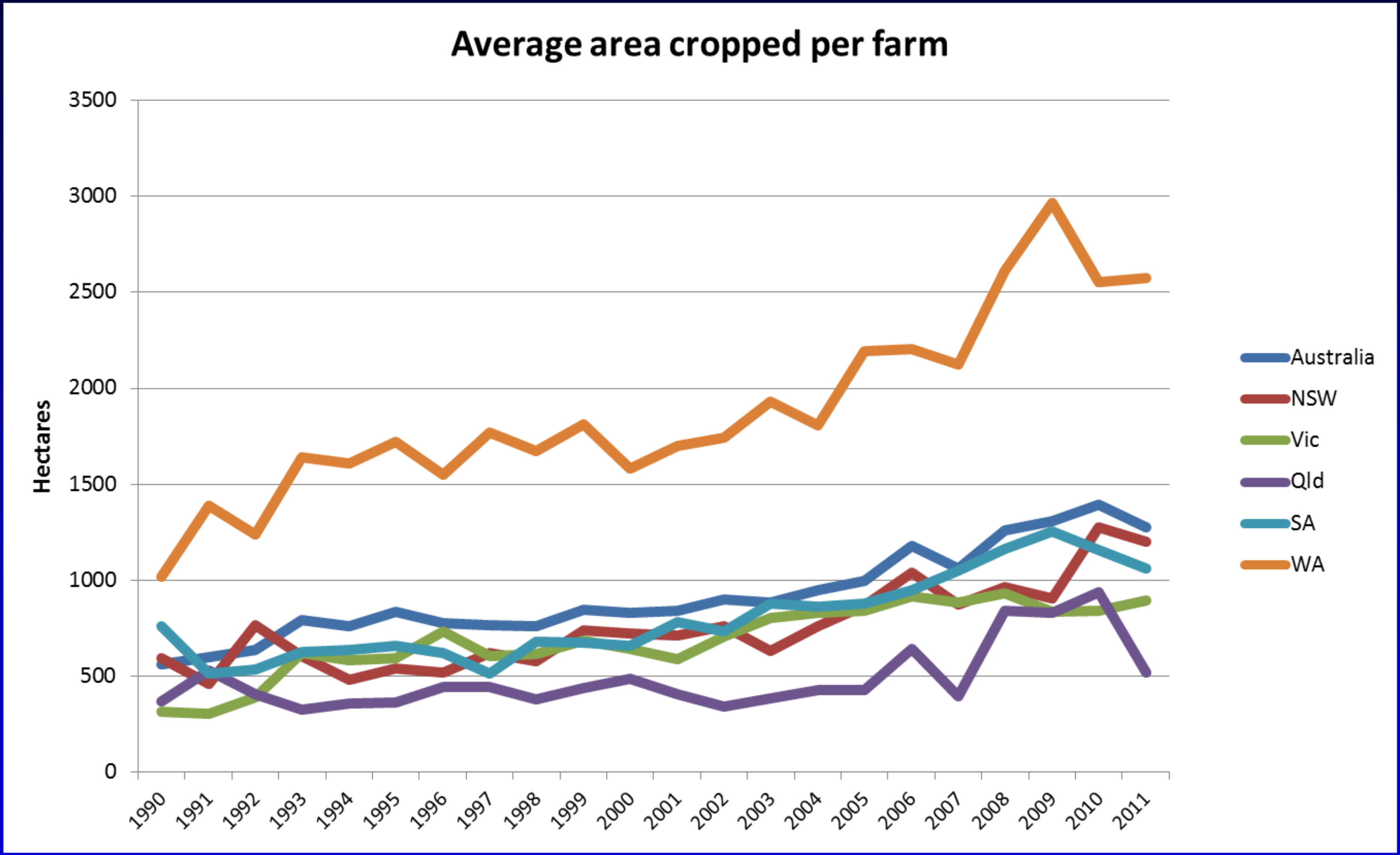


	average number of farms	share of producers	share of area sown to grain crops	share of cropping revenue
		%	%	%
Low intensity	7 243	28	9	6
Medium intensity	6 850	26	18	17
High intensity	7 736	30	44	45
Very high intensity	4 181	16	28	33
Total	26 010	100	100	100

Source: ABARES



Source: ABARES AgSurf



Source: ABARES AgSurf

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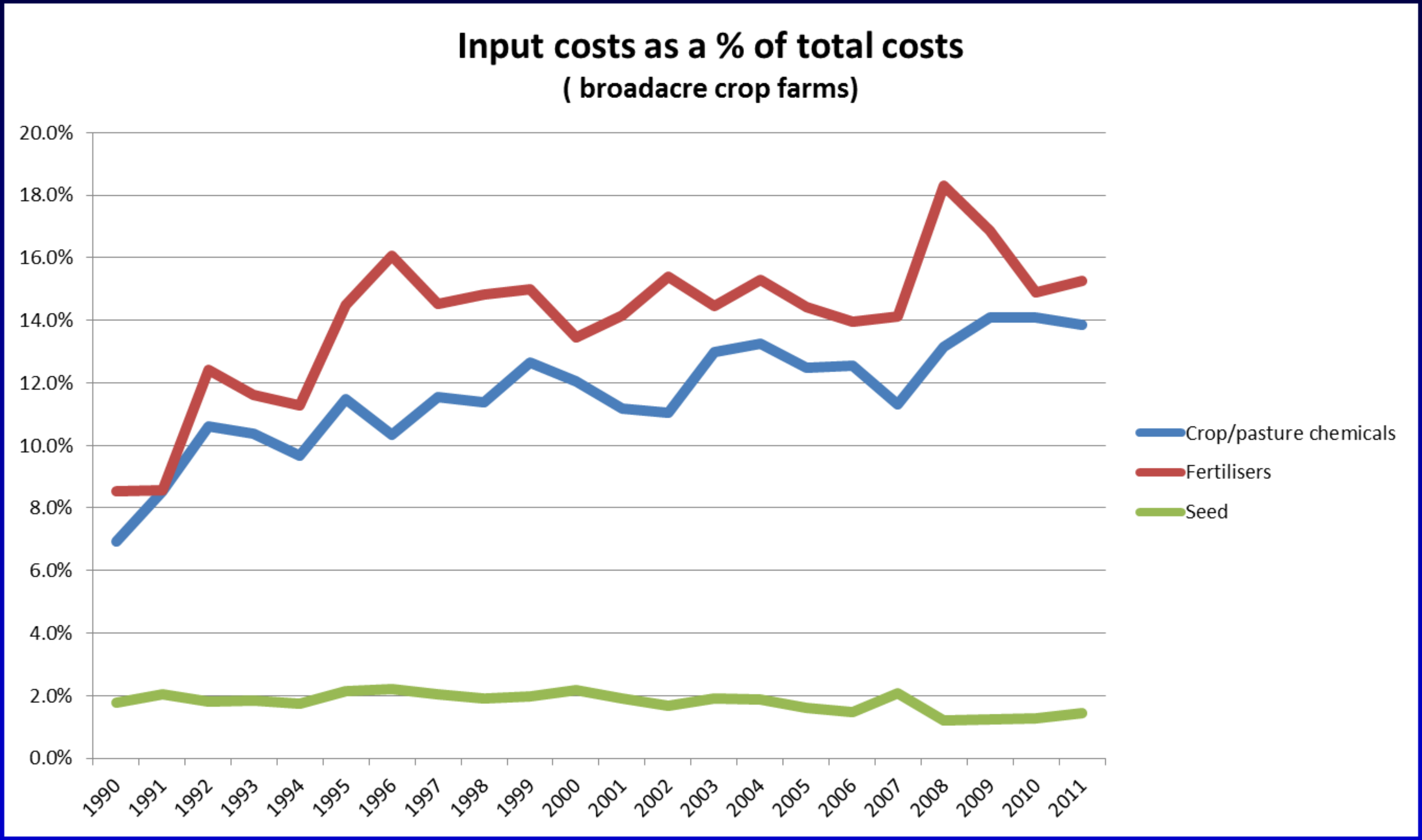

Source: ABARES AgSurf

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Private sector crop advisors

State	Retail advisors	Independent advisors	Total
QLD	166	89	255
ACT	2	3	5
Nth NSW	177	102	279
Sthn NSW	318	141	459
VIC	365	183	548
SA	434	172	606
TAS	37	33	70
Sub-total	1,361	727	
W.A.*	95		95
Total			2,183

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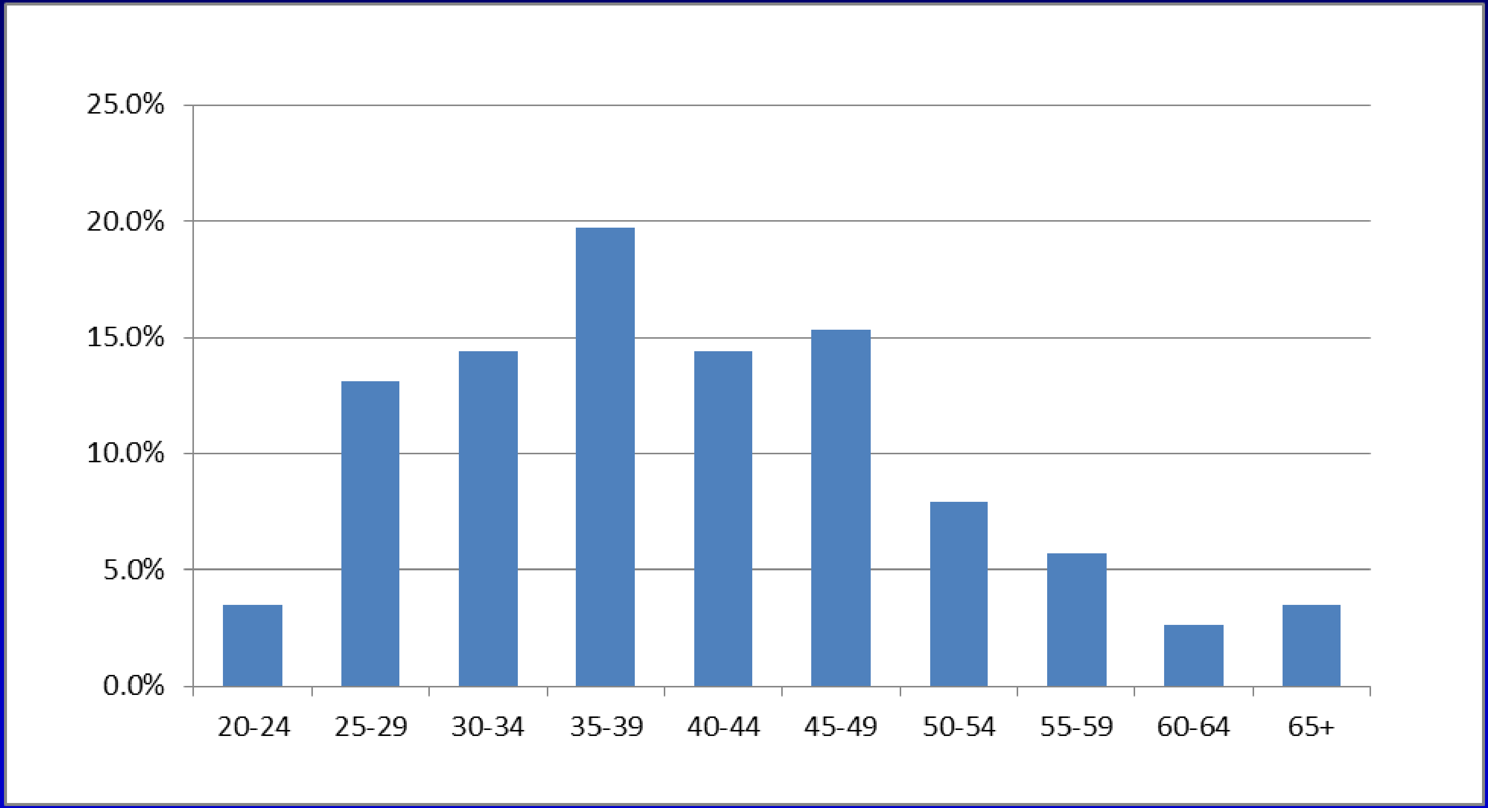
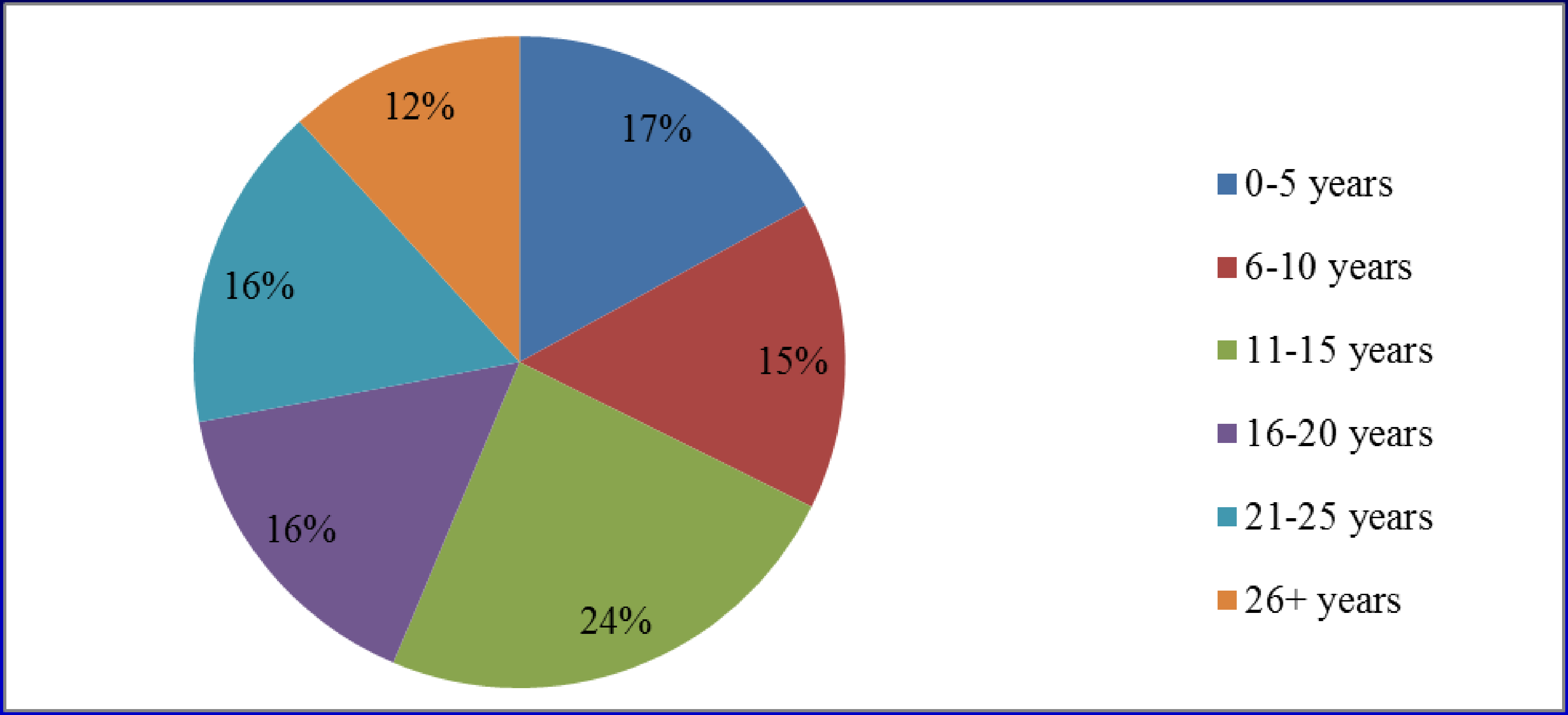
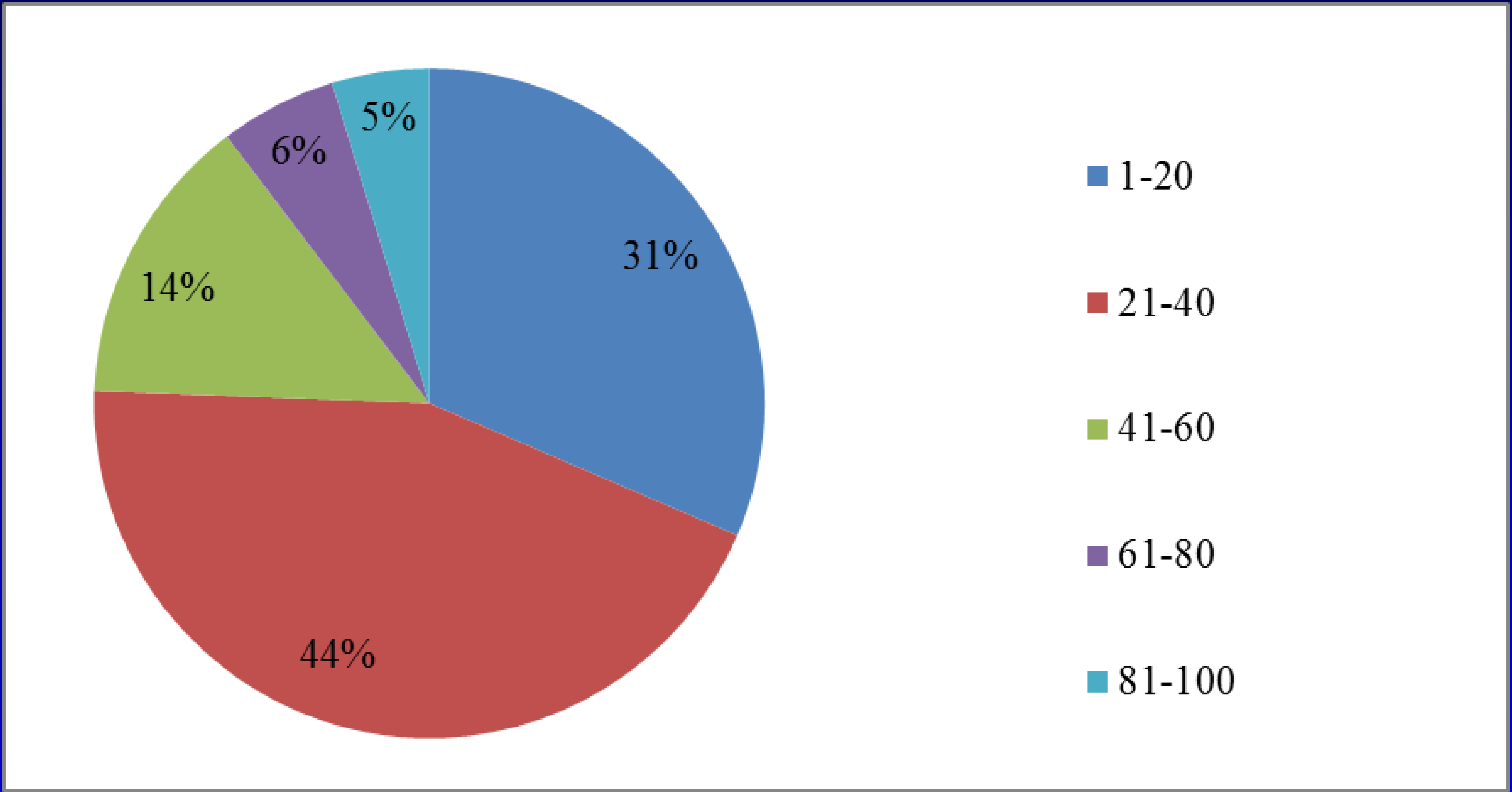
Age distribution of crop advisors



Years of experience



Number of clients



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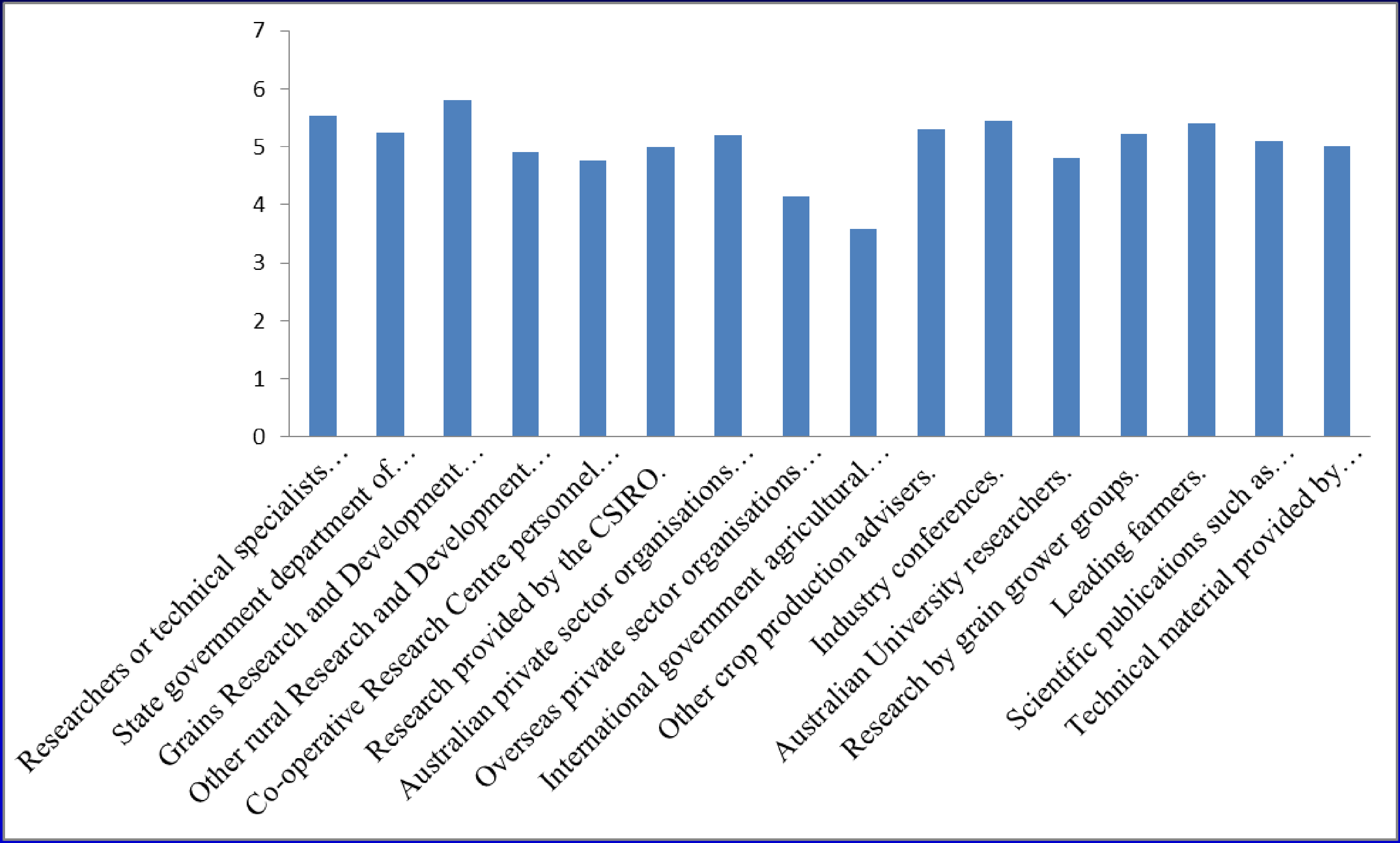
Importance of information sources



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USA

- 2.2 million farms, 350,000 grain and oilseed producers
- Largest 10% of farms produce 65% of total output
- Corn and soy dominate, wheat less important.
- Biofuels and domestic feed market very important.
- Farms are smaller scale than in Australia, but have experienced high profitability over recent years.

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USA Cooperative extension model

- Funding from a mix of Federal, State and County sources.
- Land-Grant Universities receive formula funding from Federal Gov’t via USDA (NIFA)
- Uni researchers have research/extension role
- States – research stations; Counties - Offices
- Public RD&E system stronger in wheat states, private system dominates corn states (CCAs).
- Public system focus on resistance, runoff and farming systems, breeding a lesser priority.

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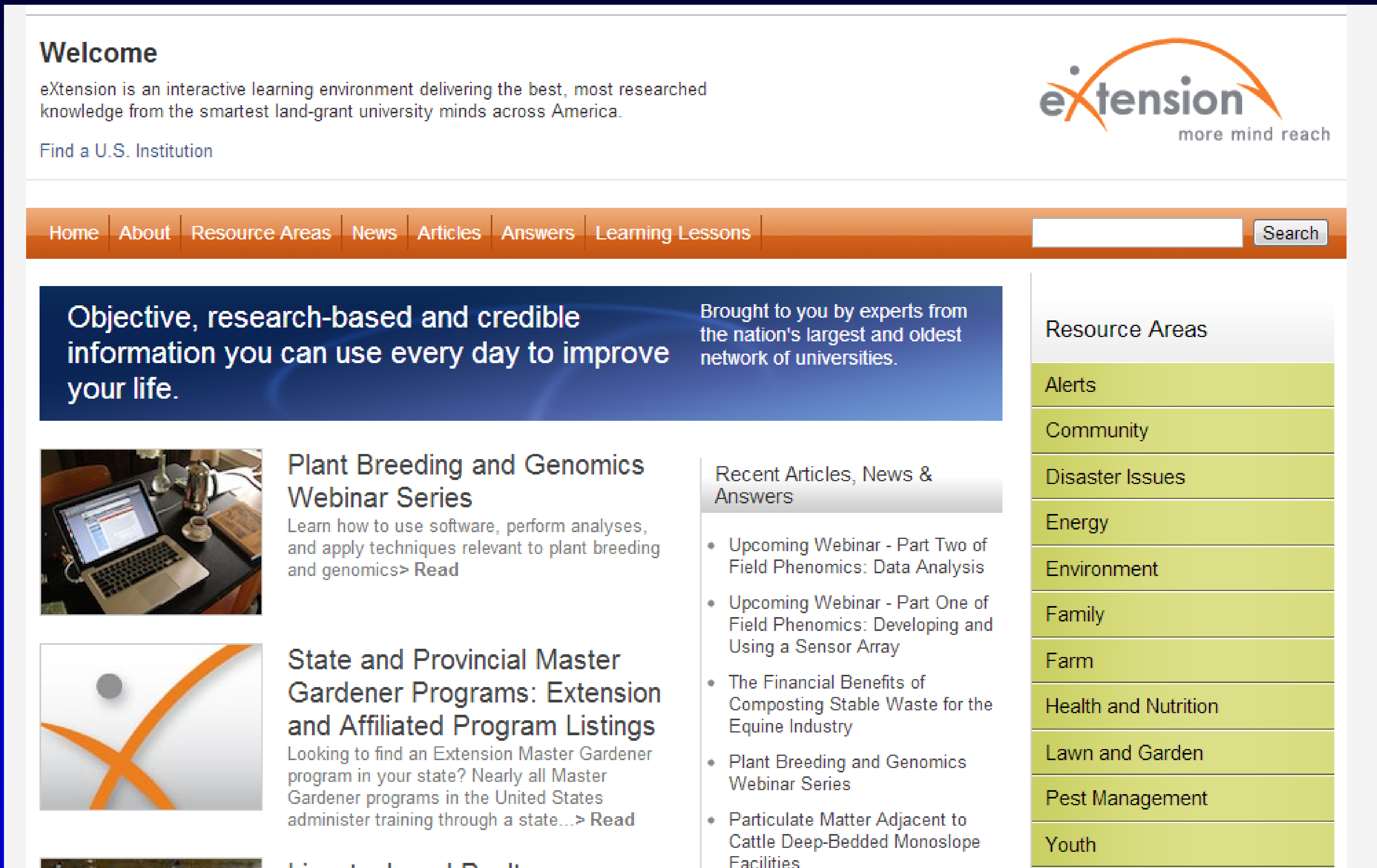

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Brazil

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Brazil

- Agriculture approx. 23% of Brazil GDP ($US 125 bn)
- Agricultural output growing between 5-10% per annum through crop expansion.
- Soybeans, sugar, corn, coffee and fruits are main crops. (Soybeans 45%, Corn 38% of total grain harvest)
- 5 million farm businesses, around 1 million are corporate-scale (76% of area, 62% of total output)

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Brazil RD&E

- Initial agricultural expansion in 1990s relied on Government (EMBRAPA) research outcomes.
- Private sector now dominates corn, soy, cotton RD&E.
- Strong role of co-operatives for farm inputs, marketing, agronomic advice and <u>compliance</u>.
- State-government extension agencies service “family” (near subsistence farming) especially in coastal regions. (EMATER)
- Universities have a strong research and training role, but limited extension role

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Denmark

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Denmark

- 50,000 farms, average size 62 hectares. (Area two thirds Tasmania, 2.5 m ha crops). Most farms mixed livestock/crops.
- Highly regulated farm sector, part of EU CAP.
- Farmers must have a ‘green ticket’ – (4 year trade qualifications) to operate a farm, plus annual pesticide and fertiliser plans (certified).
- Farm inputs dominated by two farmer co-operatives (DLG, DLA)

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Danish agricultural RD&E

- Gov't has limited role mainly confined to environmental impacts. Two Universities incorporate agriculture in general science faculties.

- Danish Agriculture and Food Council the main R&D provider (90% of farmers are members).

- "Knowledge Centre for Agriculture" the key R&D and service provider, associated with 30 regional advisory centres (DAAS).

- Strong reliance on IT/spatial systems for both production and compliance.

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Issues and trends

- Continuing real reduction in public sector extension and R&D resources, and lagging productivity.
- Globalisation of private-sector grains R&D
- New molecules harder and harder to find and gain approval for.
- Increasing reliance on systems, genetics and precision broadacre technologies
- Increasing community scrutiny

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The Integrated Farming Systems platform is dedicated to getting more from every acre by integrating Monsanto's expertise in seed science, field science, data analysis and precision equipment to develop solutions optimized for the conditions of a farmer's field.

The first product from the IFS platform will be FieldScripts for corn. The product is in Ground Breakers® trials for 2013. A commercial launch is expected in 2014.

INTEGRATED FARMING SYSTEMS
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GETTING MORE OUT OF EVERY ACRE

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FieldScripts.

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An optimised future grains extension system?

- A system reliant on accredited private-sector crop advisors undertaking regular formalised professional development.

- A national electronic information platform integrating research outcomes from public and private sector researchers, underpinned by agreed research protocols.

- Agreed national research trial data reporting standards.

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An optimised future grains extension system?

- Strengthened and nationally consistent skills training systems for growers, with a focus on RPL and skills rather than qualifications.
- Enhancement of support and resources for grower groups as an important two-way information conduit.
- Further development of integrated online modelling and decision-support tools for grain growers/advisors.
- Greater recognition of international grains R&D outcomes (private and public) as a source of new information.

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