IFAH Global Benchmarking Survey (GBS) 2011



Contents

- Survey Statistics
- Key Recommendations
- Major Challenges
- Major Trends
- Regulatory environments by region



Survey statistics

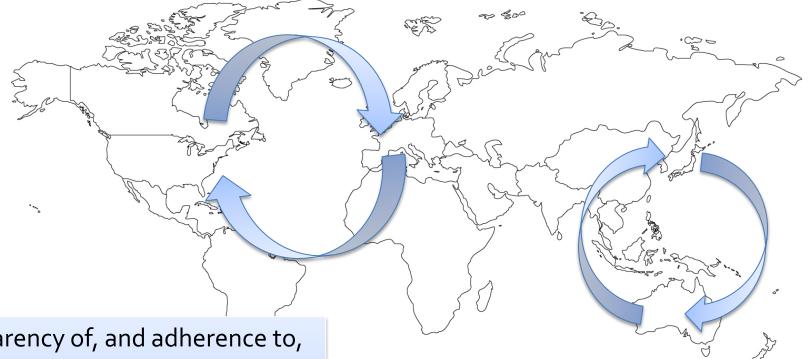
- Recurring survey (every 5 years) in the major regulatory regions
- 60 companies responded from 5 regions
- 72 interviews average 1.5 hours each
- 21,000 individual data points and up to 400 freetext responses
- Members provide 85%-90% of the veterinary products in their markets
- USA and Europe each account for approximately one third of global sales



Key recommendations



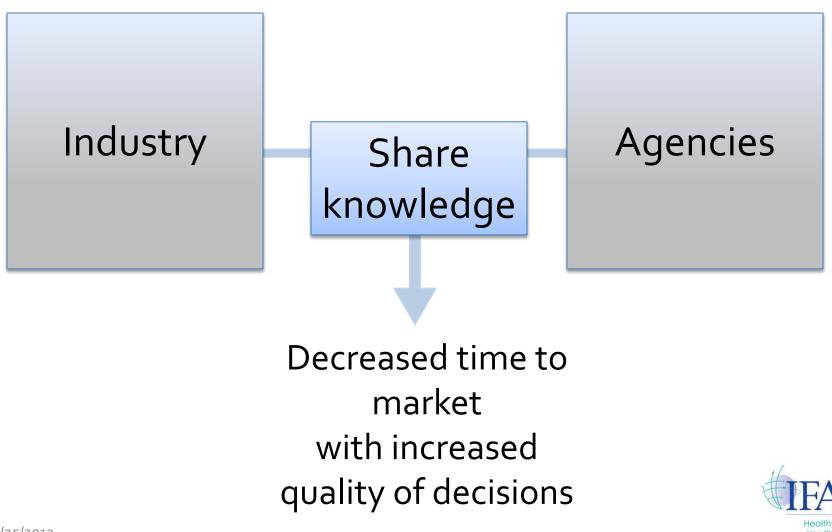
1. <u>Best practice</u> in one region to be considered in others.



- Transparency of, and adherence to, timelines
- Consultation between industry and regulators
- Acceptance of foreign data / dossiers

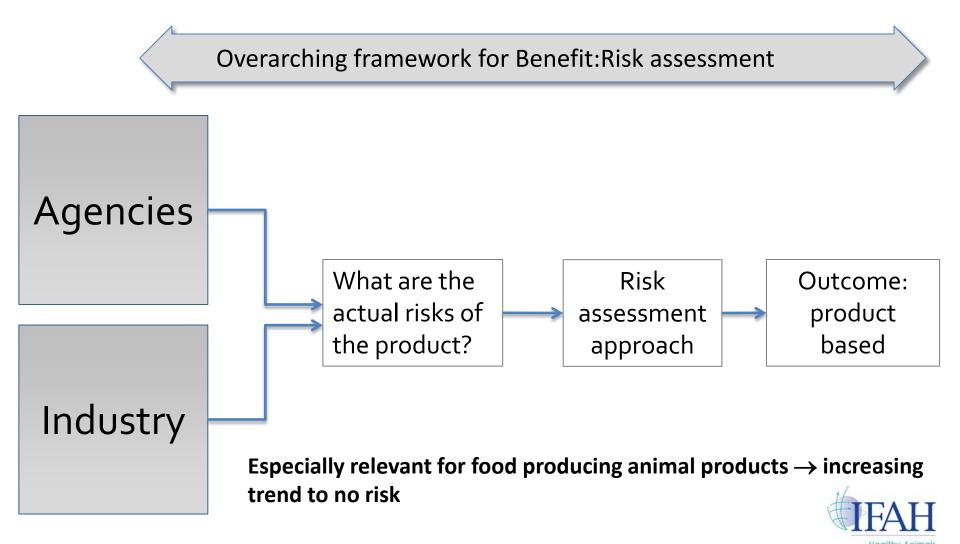


2. Sharing of <u>information</u> on veterinary knowledge and joint workshops on innovation.



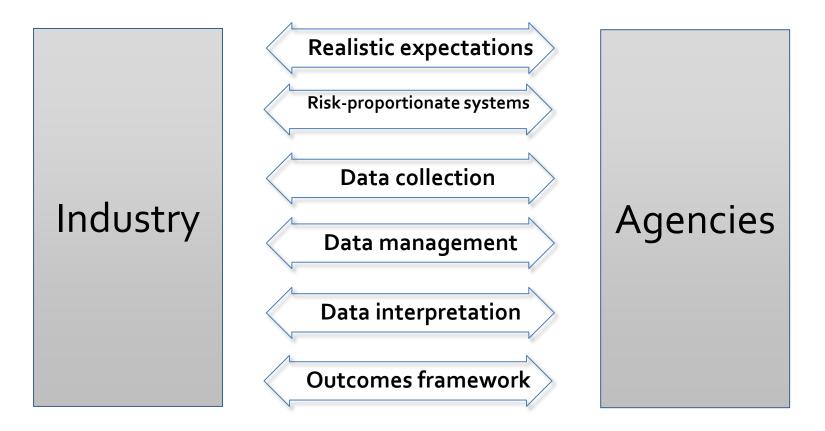
IFAH GBS 2011 / KEY RECOMMENDATIONS

3. Continued dialogue between industry and regulators to introduce a realistic <u>risk assessment</u> approach.



IFAH GBS 2011 / KEY RECOMMENDATIONS

4. Reach an adequate framework for animal health pharmacovigilance.

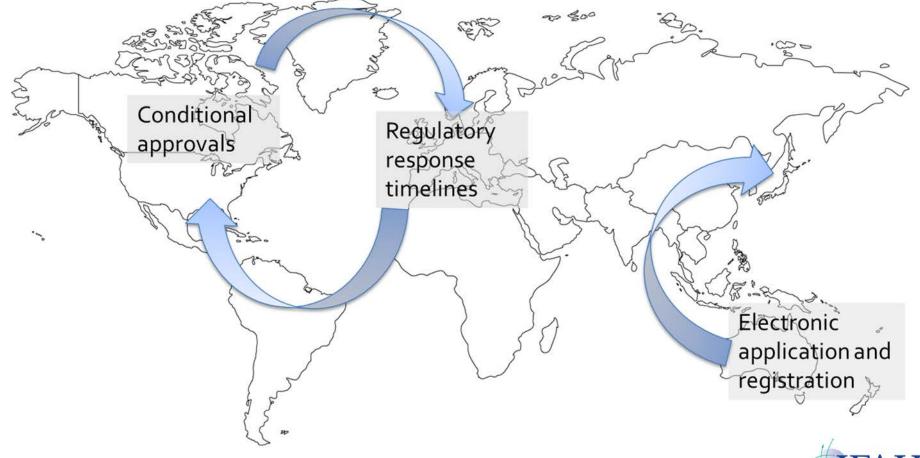


- \rightarrow Increased requirements
 - \rightarrow Unpredictable outcomes
- \rightarrow Increased regulatory burden



IFAH GBS 2011 / KEY RECOMMENDATIONS

5. Where not in place, <u>introduction of common processes</u> such as timelines for regulatory responses, systems for tracking dossier progress preferably on line.



► IFAH GBS 2011 / KEY RECOMMENDATIONS

6. Message that <u>small or fragmented markets</u> cannot stand up to over-regulation or inefficient regulation was reinforced.

Aus/Can

- > Multiple species
- Multiple agencies

Of Australian interviewees believe the regulatory framework is one of the biggest obstacles to innovation.

Europe

- Multiple species
- Multiple agencies
- Multiple (inefficient) procedures

3/25/2013

Major challenges



Average registration time (yrs)* 1.

Registration time Major new FAP	AUS	CAN	EU	JP	USA**
Pharmaceuticals	2.3	2.6	1.7	3.2	9.4
Biologics	2.3	1.4	1.5	2.3	4.3
Pesticide-based product	2.8	2.5	2.0	3.0	6.0

Registration time Major new CAP	AUS	CAN	EU	JP	USA**
Pharmaceuticals	1.8	2.3	1.5	2.1	6.4
Biologics	1.8	1.2	1.5	2.0	4.1
Pesticide-based product	2.1	1.7	1.4	3.0	3.5

Registration time Major new [MU]MS	AUS	CAN	EU	JP	USA**
Pharmaceuticals	-	2.0	1.7	2.4	6.0
Biologics	-	-	1.5	-	5.5
Pesticide-based	-	-	2.0	-	-

* Registation times based on first regulatory submission

****** USA = phased review applications (note: incorporates complete duration of development program) 3/25/2013



2. Average registration costs (US\$M) (2010)

The approximate cost New FAP	AUS*	CAN	EU	JP	USA
Pharmaceutical product	48	1.23	29.0	1.6	38.8
Biological product	77	0.003	20.0	1.3	10.8
Pesticide-based product	30	-	46.7	-	14.0

The approximate cost New CAP	AUS*	CAN	EU	JP	USA
Pharmaceutical product	34	0.25	16.0	1.7	21.6
Biological product	24	0.003	18.4	1.2	11.8
Pesticide-based product	28	-	32.5	-	22.6

The approximate cost New MUMS product	AUS	CAN	EU	JP	USA
Pharmaceutical product	-	-	11.7	0.7	21.6
Biological product	-	-	8.0	-	11.8
Pesticide-based product	-	-	20.0	-	22.6

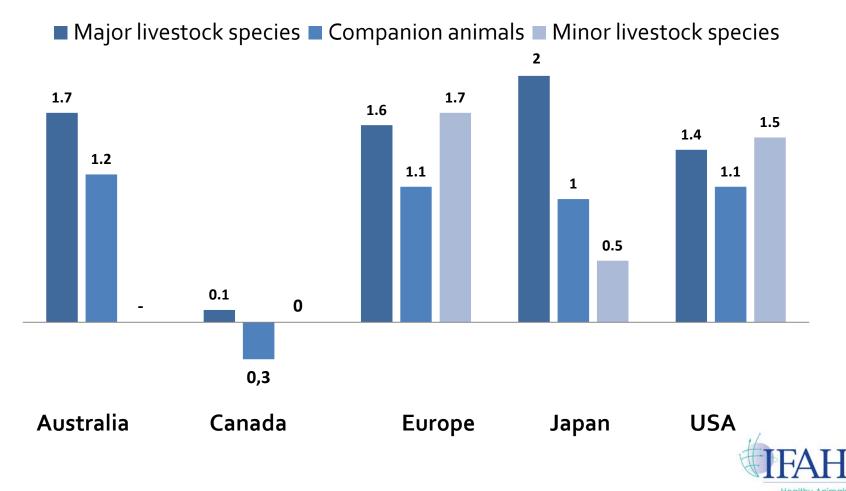


Healthy Animal

Healthier World

3. Increased registration time since 2006 (yrs)

The time to gain registrations has significantly increased in all regions except Canada.



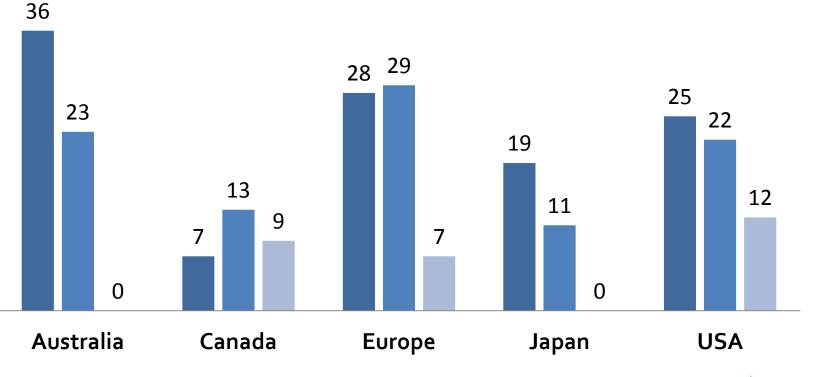
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Healthier World

4. Increased registration costs since 2006 (%)

The cost of gaining registrations has increased significantly in some regions.

Major livestock species





5a. Registration costs (mandatory defense)

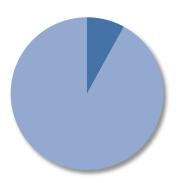
The costs due to demands on existing products consume considerable R&D budget limiting investment on innovation.

Proportion of total R&D budget spent on Mandatory Defensive R&D 51% 26% 27% 16% 14% 15% Japan USA Australia Europe Local Canada Europe Globa Multinational **Healthier World**

<u>5b. Registration costs (mandatory defense)</u>

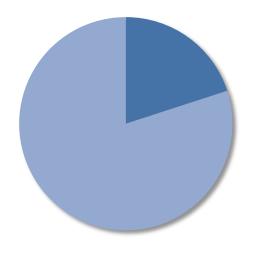
The growing cost of Mandatory R&D in one global multinational.

EU Mandatory R&D Budget as Proportion of Total R&D Spend 2006



8 %

EU Mandatory R&D Budget as Proportion of Total R&D Spend 2011



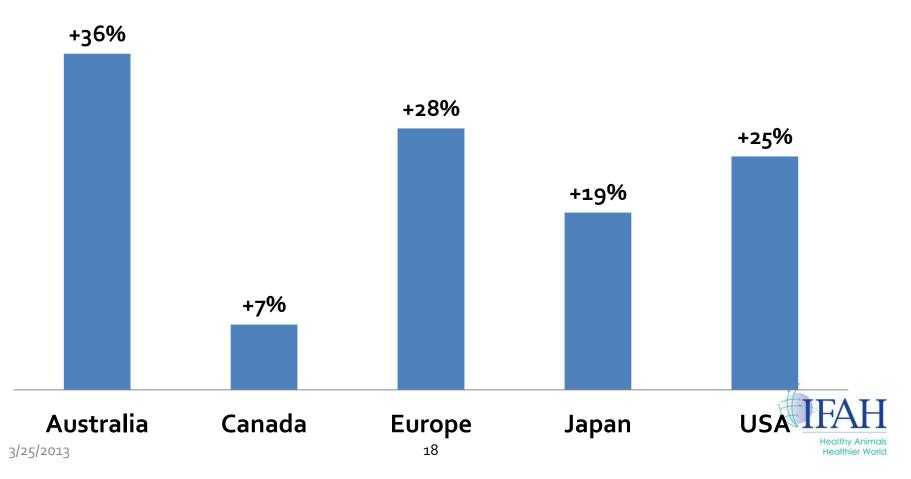
20%



6. Impact of regulatory factors on development costs since 2006

The involvement of human health agencies continues to have a disproportionate and inappropriate impact.

Major Livestock Species



7a. Zero risk trend

The trend towards a zero-risk approach is seen as highly significant.

- Lack of acceptance of high quality data e.g. for food producing animals
- Increasing demands for pharmacovigilance data without a clear outcome or framework e.g. specialized PSURs, increase regulatory burden
- Zero-risk approach compounded when more than one agency involved e.g. perception of higher requirements following US/EU collaborative assessments
- Regulatory burden after mergers and acquisitions greater than expected e.g. huge numbers of product transfers etc.



7b. Zero risk trend

An appropriate benefit:risk approach is one of the industry's most widely held hopes.

Hopes & Expectations	Australia	Canada	Europe	Japan	USA
Increasing trend to move from a zero-risk approach to a benefit:risk assessment.	+56%	+100%	+59%	+92%	+83%



8. Provide knowledge to authorities

There is widespread support to share knowledge with agency staff

- Support the sharing of knowledge of disease, disease management and practicalities of product use with agency staff.
- Support expanding agency expertise in scientific innovation.
- Support agency staff improving the clarity-of risk assessments.



Major trends



1. Market





Strong growth in China, India and parts of South America.



Long term growth in other emerging markets.



Increasing negativity towards food animal antibiotics in Europe and other developed nations.



Companion animal sectors to follow general economic trends – growth in emerging markets expected.



2. Operational activities

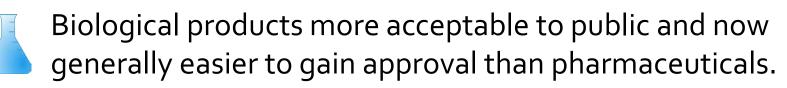
- Innovation programmes to be planned globally.
- Stricter ROI criteria and risk assessments for development plans.
 - Some success with pre-submission discussions.
 - Improvements in existing products and greater operational
 efficiencies seen as key to success.



3. Technology & innovation



Replacement / supplementation of treatment with prevention products e.g. vaccines, probiotics, increasing husbandry standards





Continued innovation in product delivery expected e.g. needleless injectors, oral vaccines, transdermal



4. Regulatory

Trends regarded as positive in all regions:

- Full acceptance of VICH-compliant data.
- In general, acceptance of CODEX agreements and standards.
- Moves towards electronic submission. (e.g. AUS, US, EU)
- Move from zero-risk to benefit:risk (e.g. EU)



Regulatory environments by region



Australia

- Lack of trust between industry and regulators.
- Lack of timeliness, predictability and consistency in APVMA.

Challenges

- Australian Quarantine and Inspection Service (AQIS) causes significant delays
- Export Slaughter Intervals not imposed based on science-based risk studies.
- Ectoparasiticide rules excessive.

- Introduction of Electronic Application and Registration system.
- Creation of 'Tiger Teams' in which junior evaluators can learn from more experienced ones .
- Phased dossier review.
- Use of international guidelines and reduction in burden for minor changes.



Canada

- Considerable improvement since 2006 in some agencies.
- Small market sensitive to over-regulation.

Challenges

- Lack of action on importation and use of non-registered pharmaceuticals.
- Unaligned manufacturing, quality and inspection staff at the Veterinary Drugs Directorate (VDD).
- Antimicrobial and environmental regulations.
- Manufacturing requirements that equal those of human health.

- Management of submissions improved.
- Time from submission to approval shortened significantly.
- Improved review performance at Canadian Centre for Veterinary Biologics.
- Introduction of Low Risk Veterinary Health Product Notification Program.
- Move towards benefit:risk approach at VDD.
- Industry / regulator co-operation and problem-solving.



Europe

- Introduce highly efficient regulatory systems to reduce administrative burden.
- Support pharmacovigilance, but avoid it becoming the next 'bureaucratic monster.'

Challenges

- Political pressure on food animal antimicrobials now critical.
- Directive 2004/28/EC forces originators to standardise product literature across the EU when a generic is authorised, causing a massive burden.
- Opportunities for unreasonable disagreement by Member States on marketing authorisations still exist ("1 *MS can de-rail the procedure"*).
- Insufficient alignment of best practice across national agencies.

- Regulators willing to engage with industry on specific concerns.
- Variations regulation.
- European Commission 'Better Regulation' initiative.



Japan

Challenges

- Too many committees involved in J-MAFF review process.
- Processes sequential, not parallel.
- Lack of pre-submission discussion on biologicals with the NVAL.
- Continued insistence on full Japanese translation of dossiers.
- Inflexibility in applying local study requirements when not required.

- Increasing acceptance of high quality test results from other sectors and regions.
- Decrease in time between investigation and division committee stages of J-MAFF.
- Revision of the Pharmaceutical Affairs Law to allow domestic and overseas manufacturing sites to be treated equally.
- Reduction in restrictions on minor changes for existing products.
- Provision in advance of discussion points for J-MAFF hearings.



USA

Challenges

- EPA: performance lowest of the surveyed agencies.
- CVB: increasingly reliant on biometrics not clinical outcomes.
- CVM: End Review Amendment is used as a compendium of points that could have been answered with less stress during earlier stages of the process; lengthy overall approval process times with few obvious reasons.
- Lack of clear lines of responsibility between the three agencies for biotechnology-derived products.

- Greater openness and interface between regulators and industry.
- CVM Innovation Exploration Team Initiative promising.
- USDA requalification rules for foundation seed antigens.

