Using Metrics to Improve your Journal
Veterinary Journal Editors Meeting,
Wiley-Blackwell Publishing

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Journal Citation Reports® and the Impact Factor

- Journal Selection Process
- Successful evaluation: appropriate subject categories & products assigned
- Inclusion in Journal Citation Reports® (JCR)
- Impact Factor & ranking in subject category

Journal Selection Process

- Select most important, internationally influential publications for Thomson Scientific database
- Over 2,000 journals evaluated yearly
- 10-12% of journals are selected
- http://scientific.thomson.com/free/essays/selectionofmaterial/journalselection/

Factors Considered

- Basic Journal Publishing Standards
- Editorial Content
- International Diversity
- Citation Data Analysis
- Self-Citation Rate

Journal Publishing Standards

- Timeliness of publication
- International editorial conventions
- English language bibliographic information
- Peer review system
- Grant supported research
- Print or e-only journals

Editorial Content

- Will the journal add value to products?
- Does the subject category need enhancement?
- Does the journal offer a different perspective or focus than current coverage?
International Diversity

- Authors, editors, editorial advisory board members?
- Does journal reflect the global context in which scientific research takes place?
- If a regional journal, how does it compare with other journals from the same area?
- Is the country well or under-represented?

Citation Data Analysis

- Capture all cited references to
  - articles in indexed journals
  - articles in non-indexed journals
- Established journals: overall citation rate, impact factor, immediacy index
- New journals: authors and editorial board members citation history
- Citation rates vary by discipline
  - Life Sciences: rapid citation growth
  - Arts & Humanities: slow citation growth

Self-citation Rate

- Self-cited rate may reflect the subject field
- High self-citation may mean the field is small
- Multidisciplinary journals tend to have low self-cites
- 80% of journals in JCR Science Edition have self-citation rates of <20%
- Excessive self-citation may result in suspension or deselection

Journal Accepted for indexing!

- Subject category or categories are determined
  - Scope of journal and categories compared
  - Cited and citing journals
- Thomson Scientific products are assigned, for example:
  - Science Citation Index Expanded
  - Current Contents/Agriculture, Biology and Environmental Sciences
  - Focus On: Veterinary Science & Medicine, etc...
- Document Types assigned to items in journal

Subject Category Scope Notes of Interest

- Veterinary Sciences
  Veterinary Sciences covers resources concerning both the research and clinical aspects of animal health, diseases, injuries, nutrition, reproduction, and public health. This category includes materials on companion, farm, zoo, laboratory, wild, and aquatic animals.

- Agriculture, Dairy & Animal Science
  Agriculture, Dairy & Animal Science covers resources on the selection, breeding and management of livestock, including animal science, animal nutrition, poultry science, animal breeding and genetics, dairy science, and animal production science.

- Zoology
  Zoology covers resources concerning a broad range of topics on the study of animals. This category ranges from animal behavior and animal physiology to some aspects of animal ecology. This category does not include veterinary medicine, ornithology, or most aspects of entomology.

- Marine & Freshwater Biology
  Marine & Freshwater Biology covers resources concerning many aquatic sciences, including marine ecology and environmental research, aquatic biology, marine pollution and toxicology, aquatic botany and plant management, estuarine and coastal research, diseases of aquatic organisms, molluscan and shellfish research, fish biology and biofouling.
JCR Performance Metrics

- **Impact Factor**: Average number of times recent articles in a journal were cited in a particular year
- **Immediacy Index**: Measures how quickly the average article in a journal is cited
- **Cited Half-Life**: Benchmarks the age of cited articles; useful in collection development

![JCR Performance Metrics Diagram](image)

**Immediacy Index**

- Source paper – published in 2006

![Immediacy Index Diagram](image)

**Cited Half-Life**

- Source paper – published in 2006
- Cited reference – published in 2003 or previous years

![Cited Half-Life Diagram](image)

**Medical and Veterinary Entomology**

![Medical and Veterinary Entomology Diagram](image)
Impact Factor in Context: Category

Medical and Veterinary Entomology: 2006 IF of 2.033
Rank: 5 of 128 in Veterinary Science
6 of 69 in Entomology

Top 10 Veterinary Science Journals by Impact Factor

Top 10 Entomology Journals by Impact Factor

What an Impact Factor IS:
• A journal level metric: normalizes citation count by the amount of scholarly citable content

What an Impact Factor is NOT:
• A metric of the quality of an individual’s, department’s, or institution’s scientific contribution
• An article level metric. Individual article citation counts vary greatly even within a single volume and year

What gets counted in the IF?

Citable Items:
• Original research articles
• Review articles
• Technical notes
• Special issues/supplements: evaluated on a case-by-case basis; articles will count

Characteristics of Citable Items

• Descriptive article title
• Named author with address information
• Abstract
• Article length
• Cited references
• Data content
What’s not counted?
- Editorials
- Discussions
- Commentaries
- Meeting abstracts
- Book reviews
- News items
- Letters typically not counted unless they function as “articles”

How to improve the journal’s Impact Factor?
- Clear instructions on how to cite the journal
- Title variants are unified in Thomson Scientific database
- Journal title and year required for IF
- Effect of adding new sections to a currently indexed journal
- Supplements and special issues

More things to consider…
- Frequency of publication and missing issues
- Title changes:
  - First year: New title with immediacy index, superseded title with normal impact factor
  - Second year: New and superseded titles listed with impact factors
  - Third year: Only new title is listed
- Attract and publish the best papers

Article Level Metrics
- “Times Cited” increments dynamically as articles are indexed
- Citation accuracy is key: journal title, author name, volume, page or article #, and year
- Able to identify highly cited articles and authors

Top authors: Veterinary Dermatology

Top Authors:
- GLOD, DH (11)
- JIRGENS, LD (10)
- MILLER, JR (10)
- WENDEL, MB (9)
- MC CORMACK, WC (9)
- SAILOR, DM (9)

Top authors in Veterinary Dermatology

Top authors: Veterinary Dermatology
### Top Cited Articles in Veterinary Dermatology

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Journal</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Impact of...&quot;</td>
<td>Smith, J. et al.</td>
<td>Veterinary Dermatology</td>
</tr>
<tr>
<td>&quot;The Effect of...&quot;</td>
<td>Johnson, K. et al.</td>
<td>Veterinary Dermatology</td>
</tr>
</tbody>
</table>

### Other Thomson Resources

**For potential author mailing lists:**

*Scientific Direct™* is an effective marketing solution that provides targeted, custom-prepared lists of qualified prospects in all areas of science, technology, & social sciences.

Searches the database by keywords, subject, contributing authors to journals, cited journals, and cited authors.

### Thomson Resources Available

**ISI Highly Cited**

- Freely accessible Web site identifies researchers, departments, laboratories that made significant contributions to science and technology

  [http://isihighlycited.com/](http://isihighlycited.com/)

### TS Research Services Group

- Provides customized datasets for citation analysis based on your variables: author, papers, periods, affiliation, subject category, citing references, etc.
- Types of analysis that you can do:
  - Identify which papers contribute to a journal’s Impact Factor
  - Compare Citation Impact (avg. cites per paper) of a journal or group of journals for periods up to 24 years.
  - Identify highly cited authors, papers, or institutions
  - Analyze impact of special issues and supplements

### Key Points

- Good journal content
- Accurate citations to the journal
- Timely receipt of journal issues
- Impact Factor meaningful only when used to compare journals within a discipline
Thanks for your attention!

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