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The impact of research on beekeeping practices over the past 100 years

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Aims of Study

1. Identify changes in beekeeping practice over past 100 years, due to research

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2. Investigate the type of research work that has been undertaken

I will also question some of the existing relationships and norms

Practices 100 years ago

Method:

- Digges: The Practical Bee Guide – *A Manual for Modern Beekeeping* (1910 Ed)

- Sold 76,000 copies over 16 editions

Type of research being undertaken

Method:

- Published papers in *Journal of Apicultural Research* and *Apidologie* in 10 year period 2003 to 2012 used
- Random sample of papers (40%) viz, 357 papers in total taken

OECD categories of research (Frascati Manual 2002 Ed)

1. Pure **basic research**
2. Orientated **basic research**
3. Strategic **applied research**
4. Specific **applied research**
5. Experimental development

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6. Routine surveys

Research disciplines

1. Neurobiology
2. Chemical cues
3. Physiology
4. Behaviour
5. Pathology
6. Population genetics
7. Genomics
8. Pollination
9. Hive products
10. Management systems

Findings / conclusions

Context:

- Huge progress had been made in beekeeping practices by 1910
- Looking at impact of science on apiculture in general

Findings / conclusions

i) There is little evidence that research has had a major impact on beekeeping practices in past 100 years

- main exception is varroa treatment

- AFB?

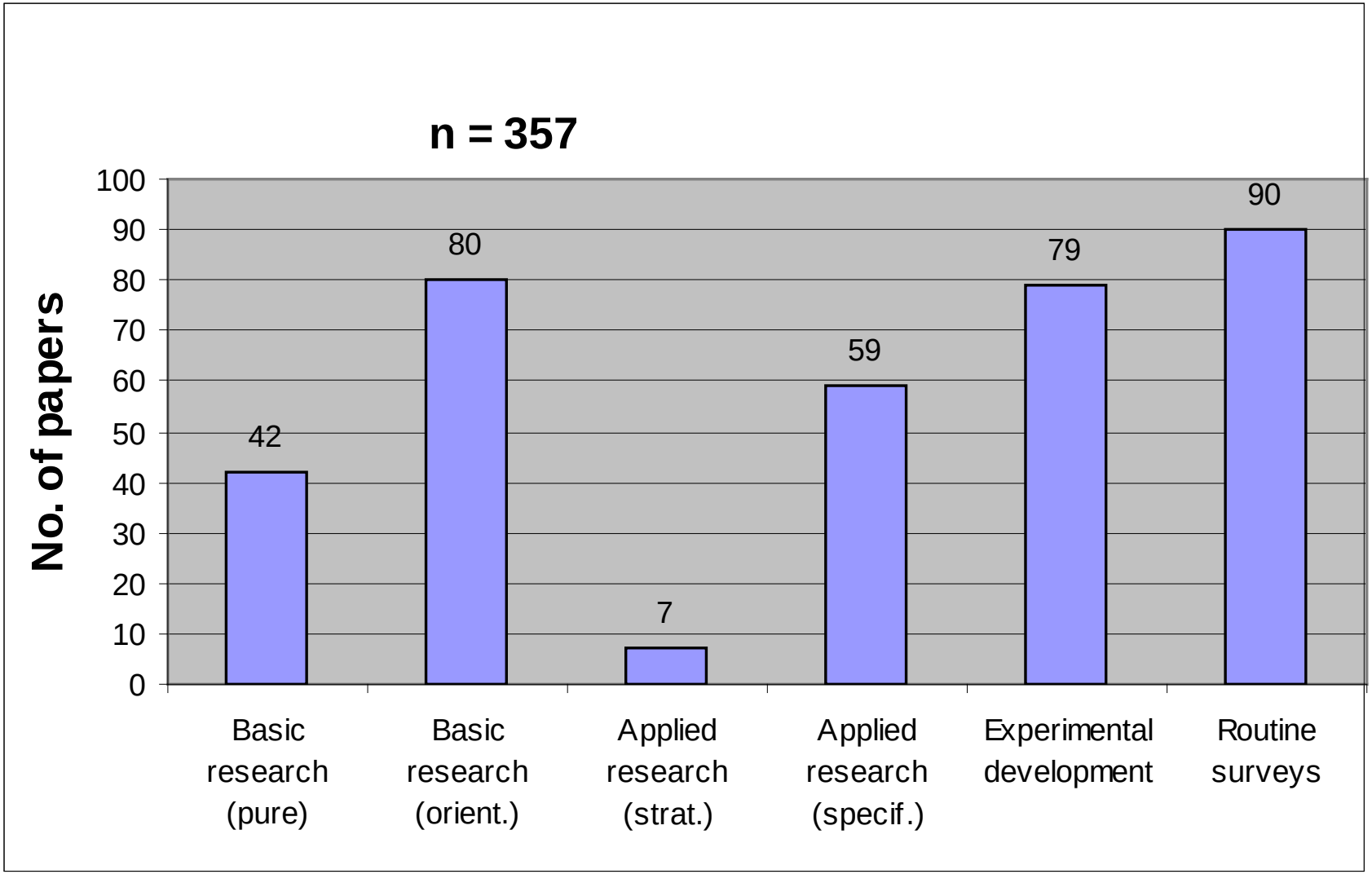
- beekeepers can be slow to introduce change

Findings / conclusions

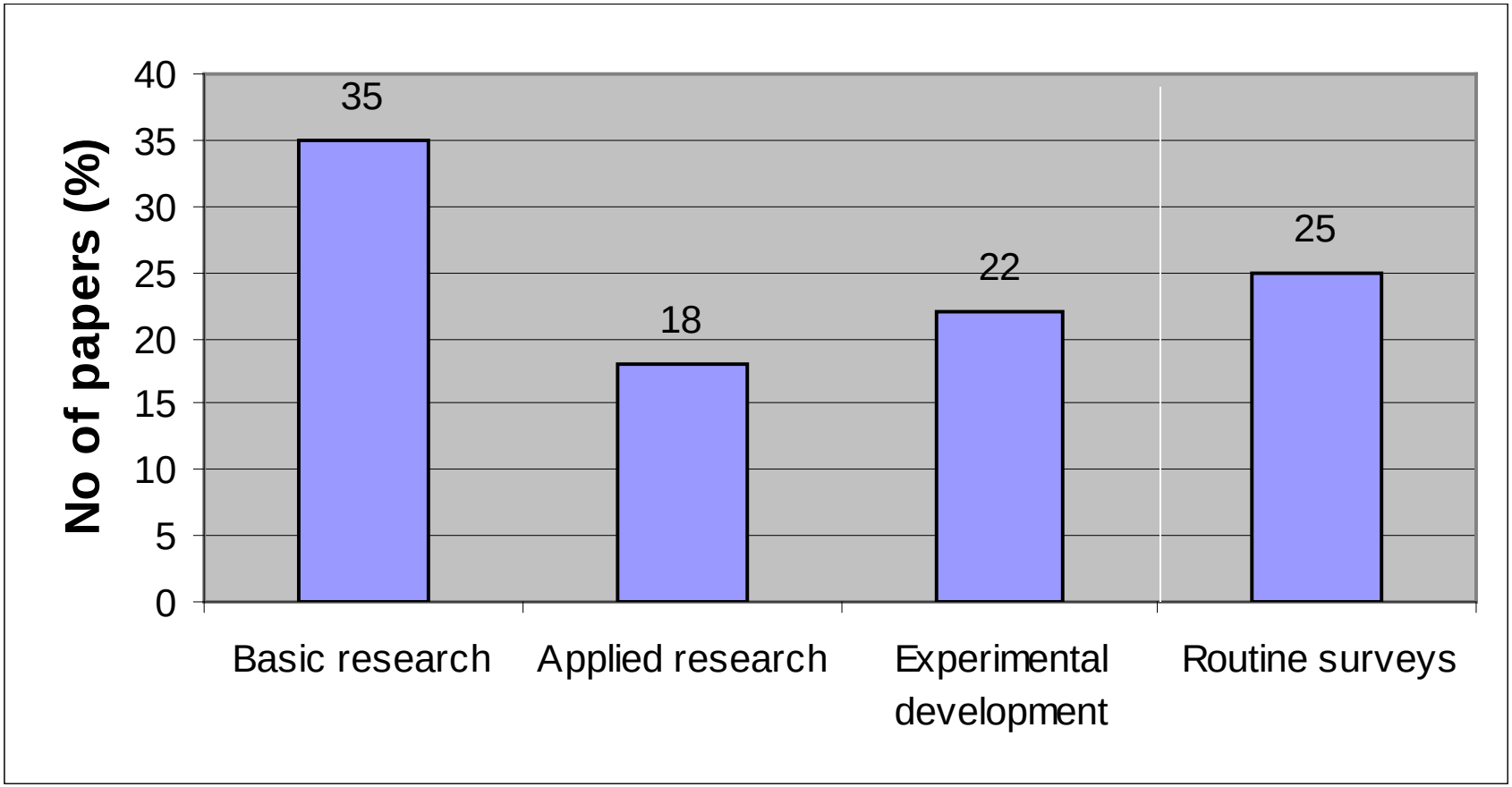
ii) Principal benefits of research

- improved understanding of the honeybee
- its enhanced use as an animal model
- improved teaching in academia

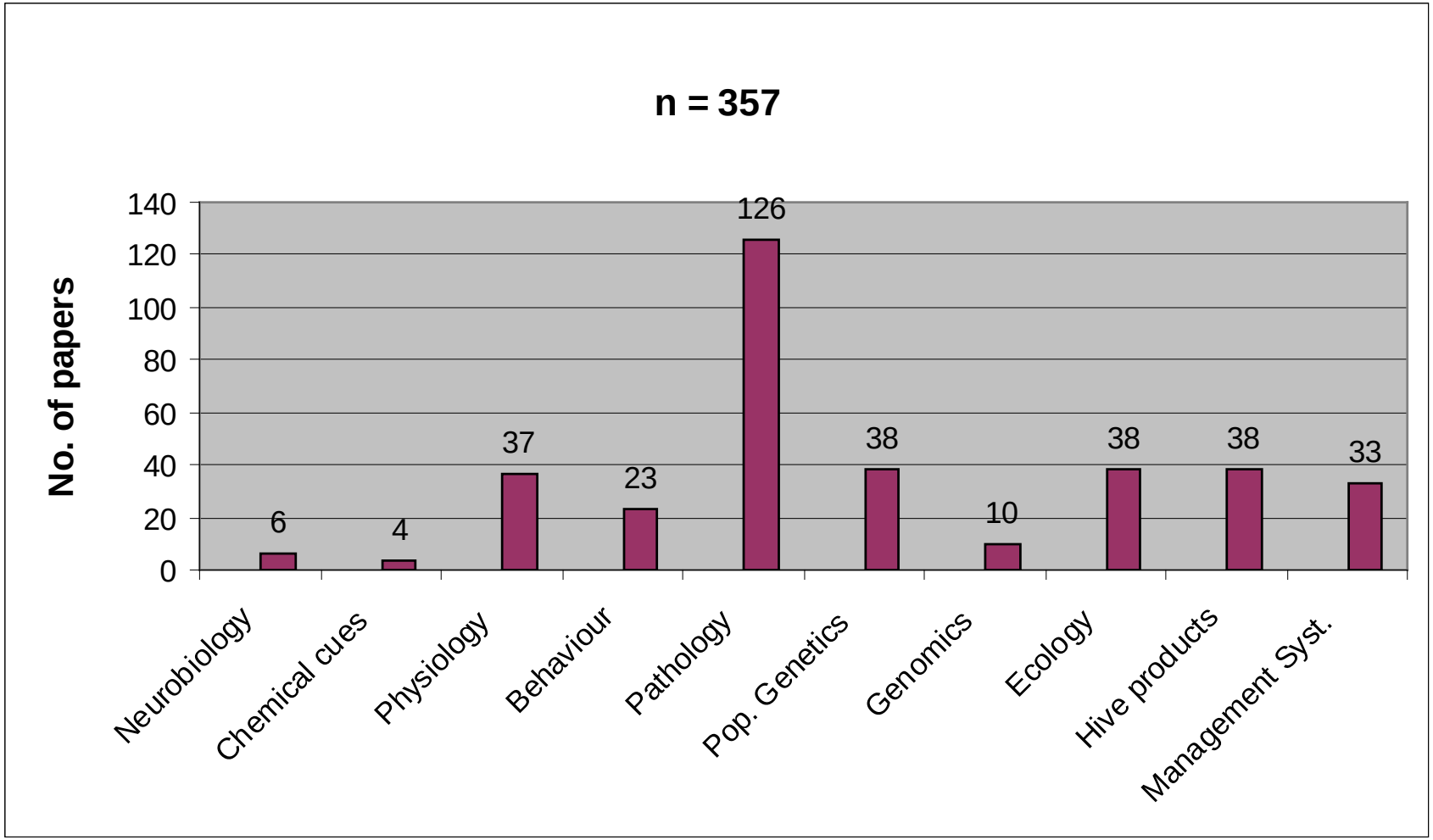
iii) Research categories



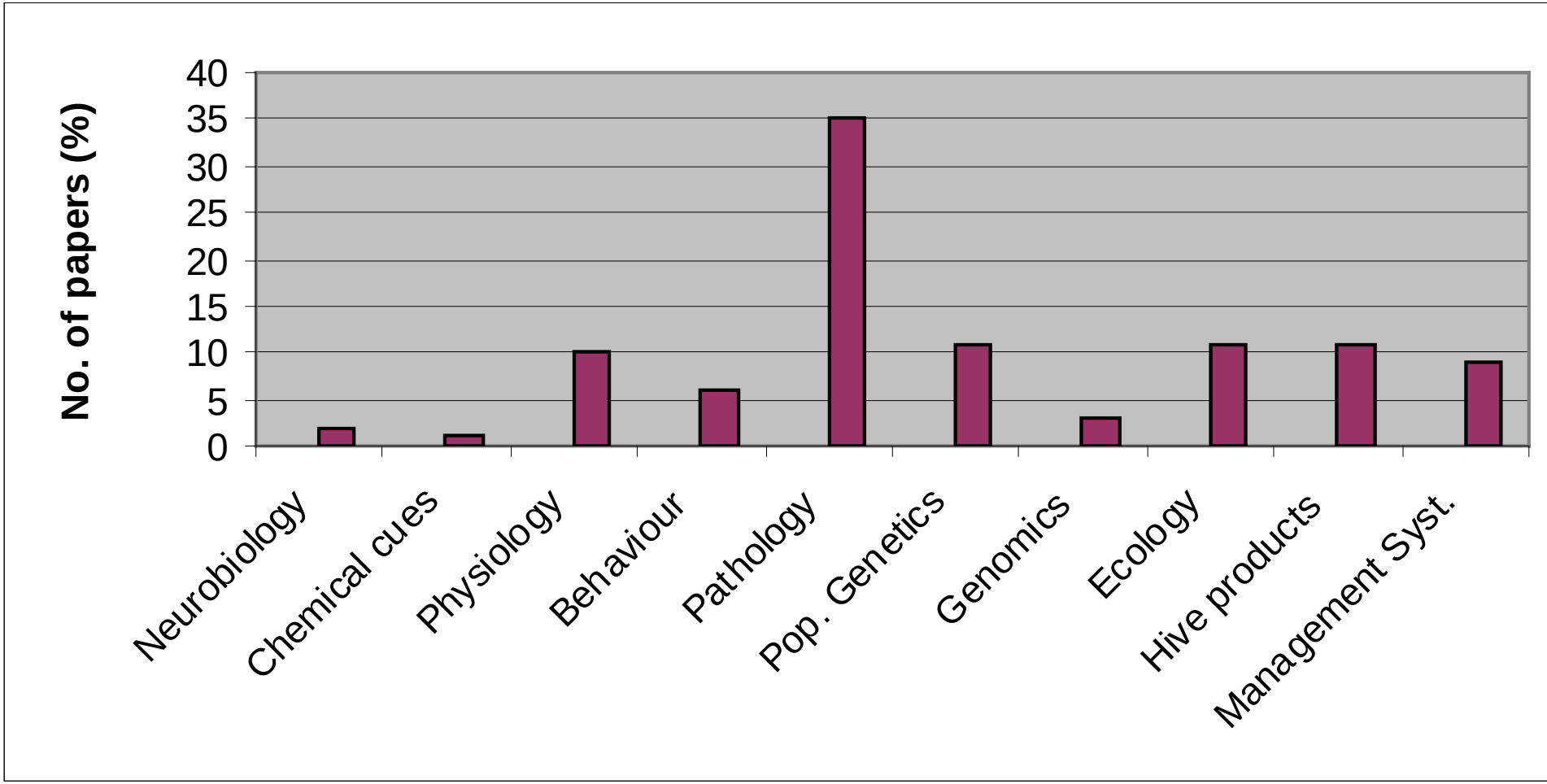
iii) Research categories



iii) Research disciplines



iii) Research disciplines



Findings / conclusions

iv) Many practical issues affecting beekeepers **still not resolved** e.g.

- use of food additives

- relative merits of hives (polystyrene, top bar, open mesh floors)

- colony losses

Findings / conclusions

- Are there structural or other reasons that explain these findings?
- Here are some observations

Findings / conclusions

v) The increased specialisation in research today, which introduces **fragmentation**, can facilitate a movement towards more **basic research** at the expense of the **applied**

Findings / conclusions

vi) Beekeeping research could encompass more disciplines, e.g. **physics**

and a greater coming together of biological disciplines such as **zoology** and **botany**

Findings / conclusions

vii) The **BEEBOOK** will make a major contribution to improving effectiveness and co-operation in research:

A **"Do Things Right"** approach.

Findings / conclusions

vii) The **BEEBOOK** will make a major contribution to improving effectiveness and co-operation in research:

A **"Do Things Right"** approach.

However, there is a stage before this:

A **"Do Right Things"** approach

Findings / conclusions

viii) The process of **selecting research projects** is critical.

It should benefit from **wider consultation**, and an approach that would more closely involve the beekeeping community.

COLOSS returns is one important step in this direction

Findings / conclusions

ix) There would appear to be a missing or weak link between scientific findings and its dissemination to the beekeeping community

Findings / conclusions

x) Authors should demonstrate **uniqueness** and **potential benefit** in submitted research.

Journals should require this to encourage **increased relevance.**

Findings / conclusions

xi) Research funding should be independent.

Funding from **vested** interests can be **selective**, and can **distort findings** to the **long-term detriment** of the honeybee and apiculture.

