Session ….

47th Meeting of IRAC International, Indianapolis

March 27-30th 2012

MSU Database WG

IRAC
Insecticide Resistance Action Committee

MSU-IRAC Resistance Database WG AGENDA

- Welcome and introductions
- Anti-trust reminder
- General Administration
  - Current Members & Area Leaders
  - Nominations & Election of New Chair
- Database Working Session
  - Overview of MSU and IRAC Sections of DB – David
  - Area Reports and Peer Review of 2011 Data
    - Tips, tricks and issues
  - Review & Update Disclaimers & Guidelines
  - Update Team Goals & Objectives
  - How do we increase credibility
    - Poster, video, advertisements, etc.

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Team Members

- Team Leader & MSU Liaison: Gary Thompson (94-12), Brad Hopkins & Tessa Knox (12-48) new co-Chairs

- U.S. Leads: Brad Hopkins, Caydee Savinelli, John Imaraju, & Dan Vincent (David Rogers), Tim Ksander.
  - To be reviewed by full team
  - 3 University Experts Reviews Scheduled

- EU Team: Chris Longhurst, Ralf Nauen, Verity-Laura Paul (Russell Slater) &Tessa Knox
  - Need Peer review by non-Industry experts
- Malaria Vectors: Tessa Knox
- Brazil: Odeni Fernandez and Luis Pavan
- Australia – Paul Downard * New

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2012 Goals & SMART Objectives

Goals	Objectives	Timeline
Identify and track the scope and nature of insect resistance issues.	• Annual International industry expert survey on the occurrence and impact of insect resistance.	Prior year update by July 1
Inclusion of the IRAC expert survey into the on-line MSU database	• Mostly accomplished. However we need to communicate the accomplishment via editing of the introduction on the Database and with additional communications	Done/2012
Improve utility of survey	• Development of standard reports and mapping functionality. Some feasibility study still needed for mapping.	Make a decision in 2012
Expand geographical coverage of survey and number of human vectors	• Australia added for the 2011 survey. Attempt to add at least one additional geography for 2012 report. • The addition of more human vectors such as bedbugs is highly desirable. Will need to investigate continuity going forward.	Before 2013 Spring Meeting
Expand Member participation	• We need more active member reviews. • GT to work with Brad & Tessa on Best Practices/Methods Manual	2012-13

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How do we improve credibility of database?

- **Improve Content?**
  - Expand coverage to other areas
  - Expand coverage to more human vectors
  - Expand coverage to minor pests
  - Increase external reviewers
  - INTERACTIVE MAPS!

- **Improve Awareness**
  - Posters, videos, presentations, mailings/ (Newsletter/e-Connection)
  - Increase external reviewers

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MSU-IRAC Insect Resistance Database – Possible Addition to Introduction

- The MSU database provides the most comprehensive data source of the first case of an insect pest reported resistant to a mode of action by geography. The IRAC portion of the database lists the recent and historical status and impact of resistance for major crop pests and some human disease vectors. The databases do not cover all insects and geographies, provide real time status or predict the future status or impact.

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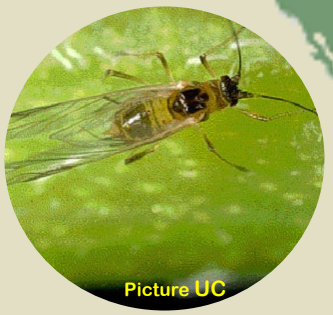
Global Insect Resistance

www.pesticideresistance.org

Insect Resistance Database Report 2012



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MICHIGAN STATE UNIVERSITY EXTENSION

USDA

WERA-60

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- Paul Glasser
- Qiang Xue
- Brittany Harrison
- Jordan Fox
- Andre Holgatea

IRAC MICHIGAN STATE UNIVERSITY EXTENSION USDA WERA-60

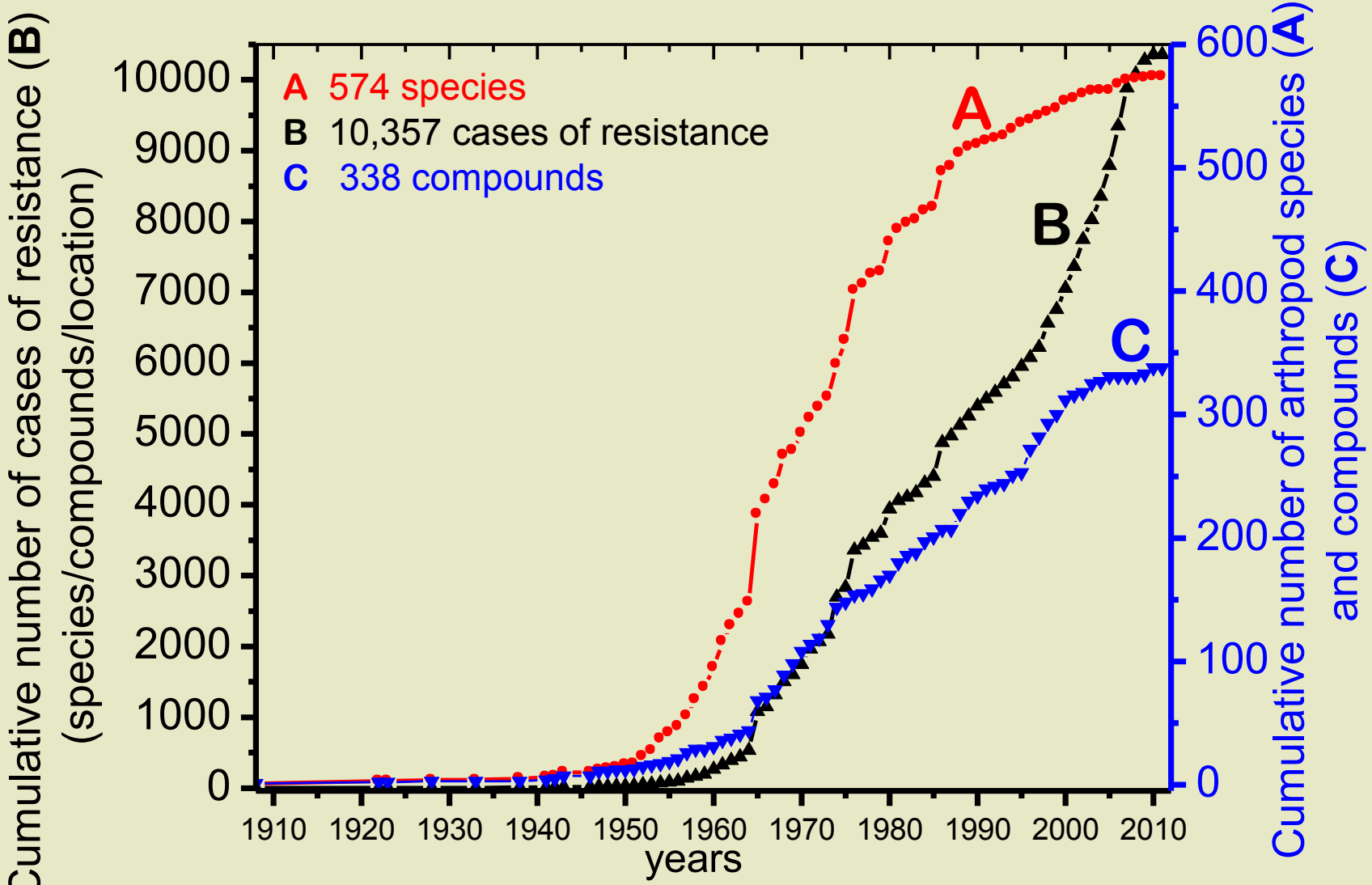
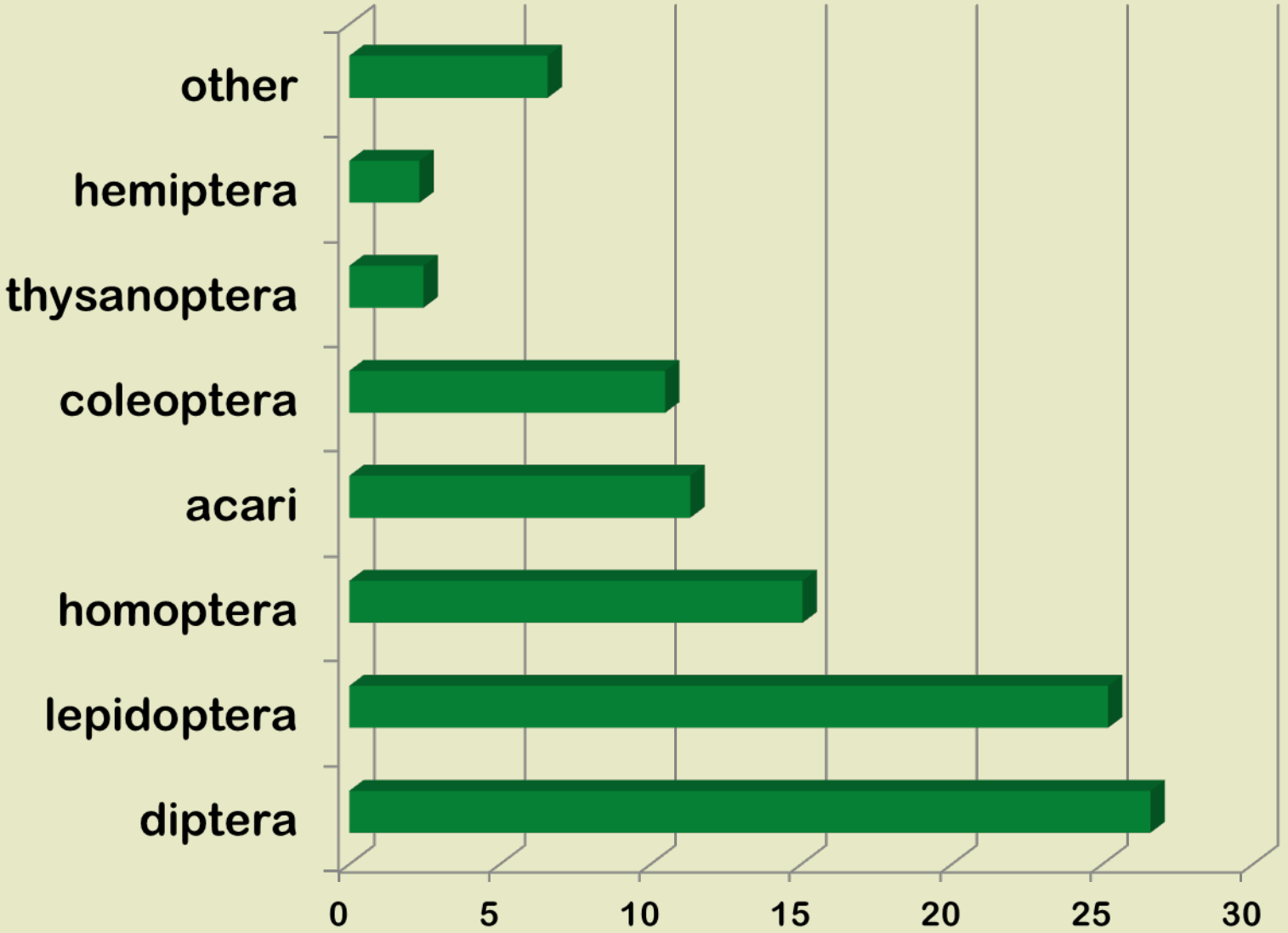


Fig 1. Evolution of arthropod insecticide resistance from 1910 to 2012. (species, compounds and total number of cases).

Percentage of cases by order



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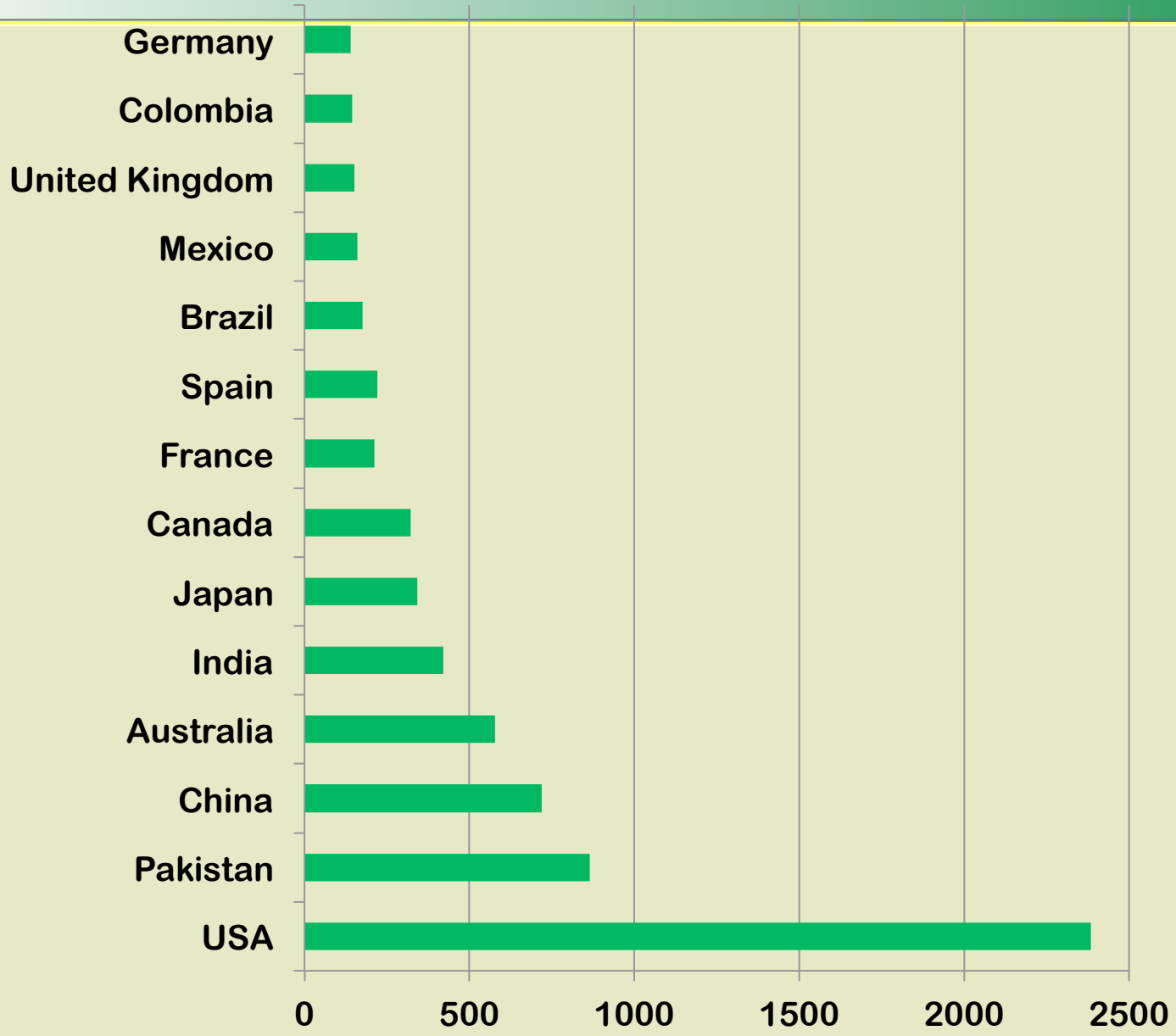
Top 14 countries by number of resistance cases



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Visits to the database by country (in March 2012)

1. United States	18. Switzerland	36. Croatia
2. Germany	19. Belgium	37. Sweden
3. India	20. Egypt	38. Kenya
4. Brazil	21. Chile	39. South Africa
5. France	22. Serbia	40. Austria
6. Japan	23. Argentina	41. Bulgaria
7. Mexico	24. Taiwan	42. Norway
8. Canada	25. Pakistan	43. New Zealand
9. United Kingdom	26. Poland	44. Philippines
10. China	27. Peru	45. Costa Rica
11. Spain	28. Colombia	46. Czech Republic
12. Italy	29. Netherlands	47. Myanmar [Burma]
13. Australia	30. Israel	48. Portugal
14. Iran	31. Ecuador	49. Thailand
15. Turkey	32. Indonesia	50. Uruguay
16. Greece	33. Russia	
17. (not set)	34. South Korea	

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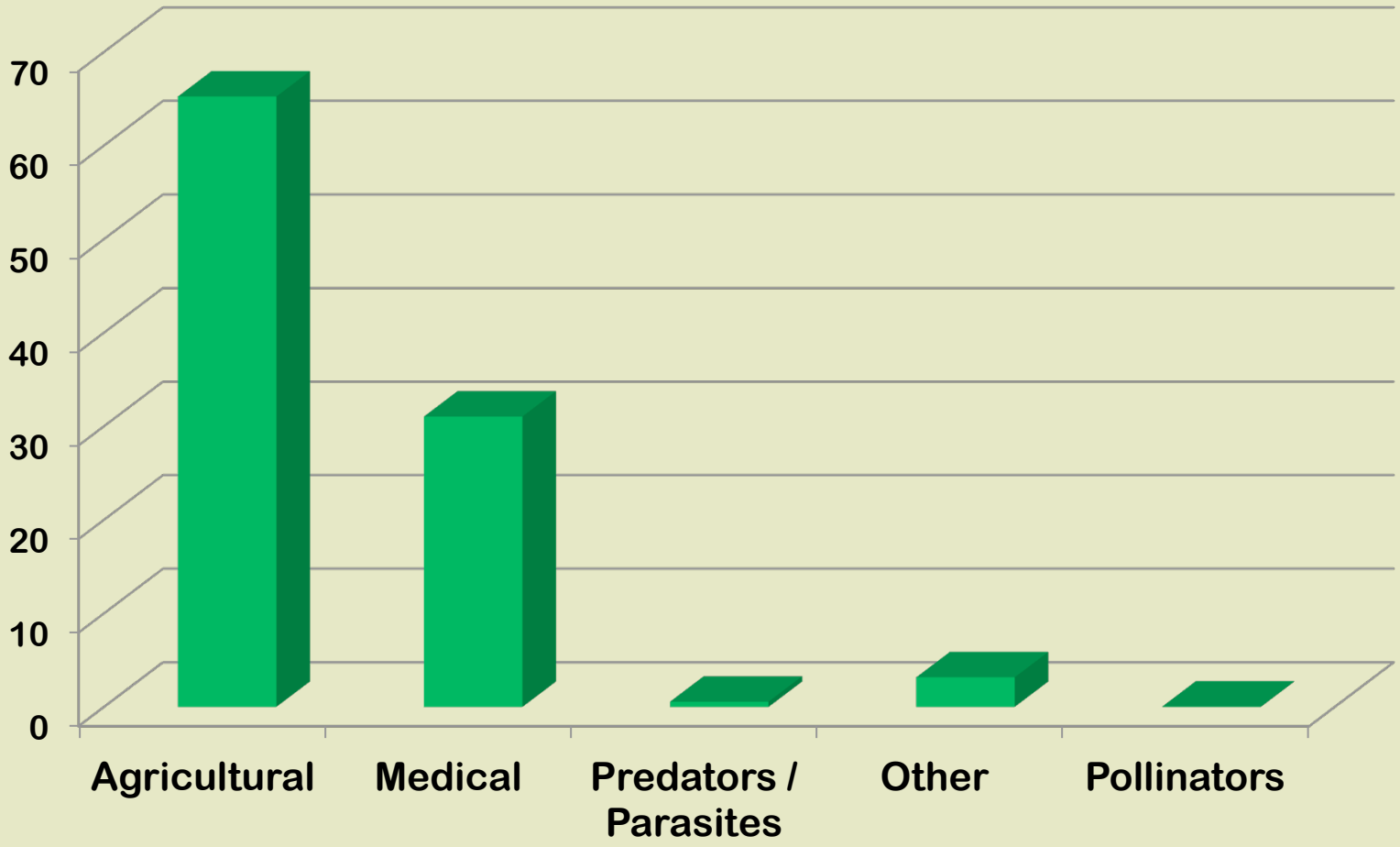
PERCENTAGE OF RESISTANCE CASES BY ARENA



http://www.pesticideresistance.org