FEEDBACK FROM CIPAC 2011

PROFICIENCY TESTING FOR PESTICIDE FORMULATION ANALYSIS

Susan Marais
Pesticide Analytical Technology
Pesticide analysis: Residue vs Formulation

- SAME CHEMISTRY
- SAME TECHNOLOGY
- DIFFERENT APPROACH
Some of the Important Differences:

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Pesticide Residues</th>
<th>Pesticide Formulations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Commodities for human consumption e.g. fruit, vegetables, grain</td>
<td>Pure Active Ingredient, Technical grade</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pesticide in formulation, used for spraying the crop</td>
</tr>
<tr>
<td>Sample Preparation</td>
<td>Extensive extraction and sample clean-up</td>
<td>'Dilute &amp; Shoot'</td>
</tr>
<tr>
<td>Chromatographic</td>
<td>Lowest limit of detection</td>
<td>Very little interferences</td>
</tr>
<tr>
<td>expectation</td>
<td>Multi-peak chromatography</td>
<td>Single compound analysis</td>
</tr>
</tbody>
</table>

Precision and Accuracy will be a Common Factor in both Approaches
OUTLINE

1. THE CIPAC ORGANIZATION
2. JMPS (JOINT MEETING ON PESTICIDE SPECIFICATIONS)
3. TECHNICAL LIAISON WITH OTHER ORGANIZATIONS
4. ACTIVITIES OF THE JMPS
5. PESTICIDE QUALITY CONTROL
6. VENUES
7. BEIJING MEETING – JUNE 2011
8. NLA PROFICIENCY TESTING SCHEME FOR PESTICIDE FORMULATIONS.
Collaborative International Pesticides Analytical Council
- non-profitable organisation
- promote agreement on methods for pesticide analysis
- promote inter-laboratory programmes

These methods are published in the CIPAC Handbooks
1967 – 81: Mr HP Beyers (SABS)
1981 – 98: Mr H Carstens (SABS)
1998 – 2001: Dr L P van Dyk (ARC)
2002 – current: Dr ERIC Sandmann (ARC)
WHO: Fight against Vector borne diseases still heavily rely on pesticides

Today, more people die of Malaria than of AIDS

FAO: Provide international Pesticide Specifications

50% of today’s food production would be destroyed without Pesticide Management
Malaria affected areas
Countries/areas where there is a risk of yellow fever transmission*

* Either yellow fever has been reported or the presence of vectors and animal reservoirs creates a potential risk of infection (considered to be endemic areas).
Pesticide Application to produce a better crop
TECHNICAL LIAISON WITH OTHER ORGANISATIONS

- AgroCare (including ALINA, ECCA, PMFAI and CCPIA)
- AOAC International
- ASTM International
- CropLife International (including ECPA)
- EU Food Safety Authority
- American Federation of Agrochemical Societies
ACTIVITIES OF THE JMPS

- Review the draft Specifications from previous meeting
- Review the latest Analytical and Test Methods
- Review the next year plan
- Monitor Quality Control Actions in Participating Countries
- Share information

http://www.cipac.org
http://www.fao.org
http://www.who.org
<table>
<thead>
<tr>
<th>Region</th>
<th>Reporting laboratory</th>
<th>No. of samples tested</th>
<th>Non-compliance</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>No.</td>
</tr>
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<td>277</td>
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<td>639</td>
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<td>Panama</td>
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MEETING VENUES

- International Organization with no affiliation to a specific Country
- Rotation of Venue
- Hosting
- Excursion
2005 - Utrecht, The Netherlands
2007 - Umhlanga Rocks, South Africa
2009 - San Salvador, El Salvador
2010 - Ljubljana, Slovenia
2011 - Beijing, China
BEIJING MEETING
JUNE 2011

ADDITIONAL INFORMATION:

- REPORT BY THE DEPARTMENT OF AGRICULTURE
- ESTABLISH COMMUNICATION CHANNELS
- BETTER COOPERATION WITH ICAMA
NLA

PROFICIENCY TESTING SCHEME

• Active since early 1980’s
• Results presented at CIPAC Symposium 2005
• Labs from abroad included
• Chemical and Physical testing included
• Enjoy SANAS recognition

• 4 exercises annually
• Comments with report-back on possible errors
• Problem areas addressed with annual Workshops and Symposia
Thank You for your attention!