



**International Workshop of GMO-analysis
networking
8 – 9 April 2013
JRC Ispra (VA) Italy**

**LATIN AMERICA AND THE CARIBBEAN
REGION**

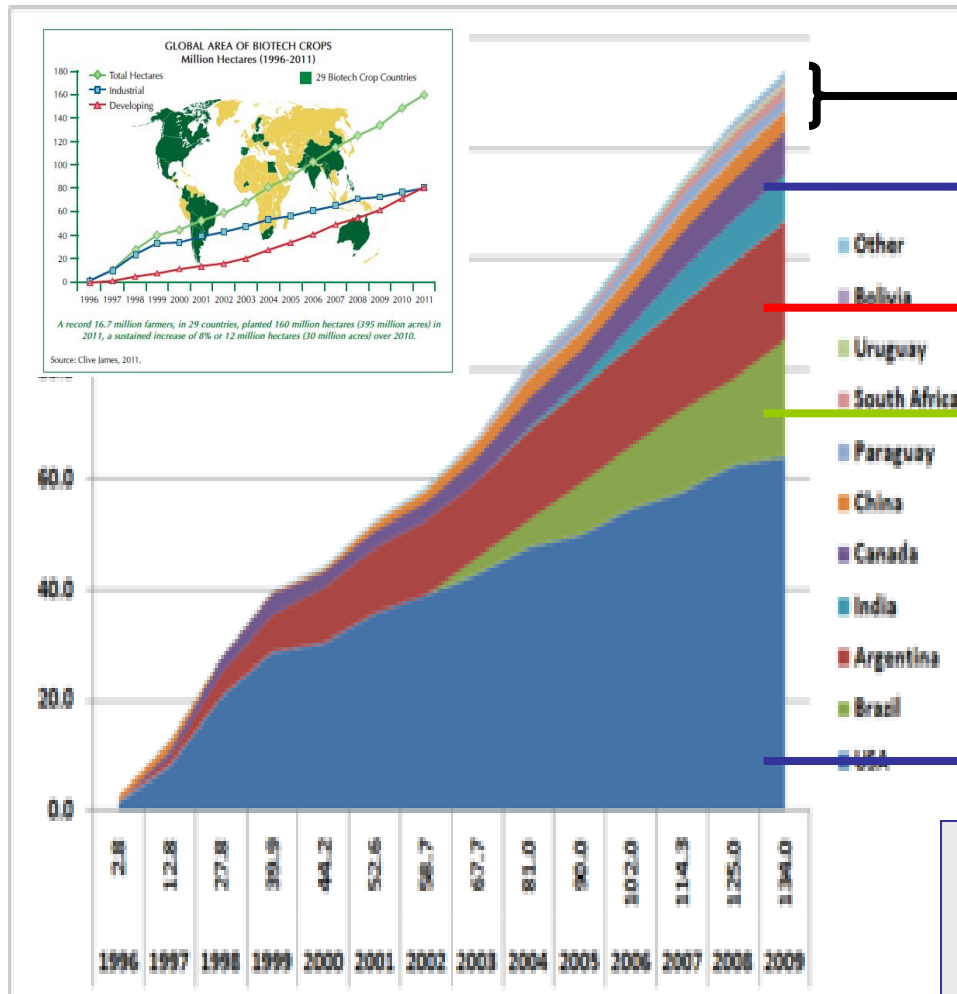
Challenges on global GMO detection & analysis



Latin America & Caribbean (LAC)



LAC Context in terms of global GMO production



PARAGUAY
URUGUAY
BOLIVIA

CANADA

ARGENTINA

BRAZIL

USA

5th

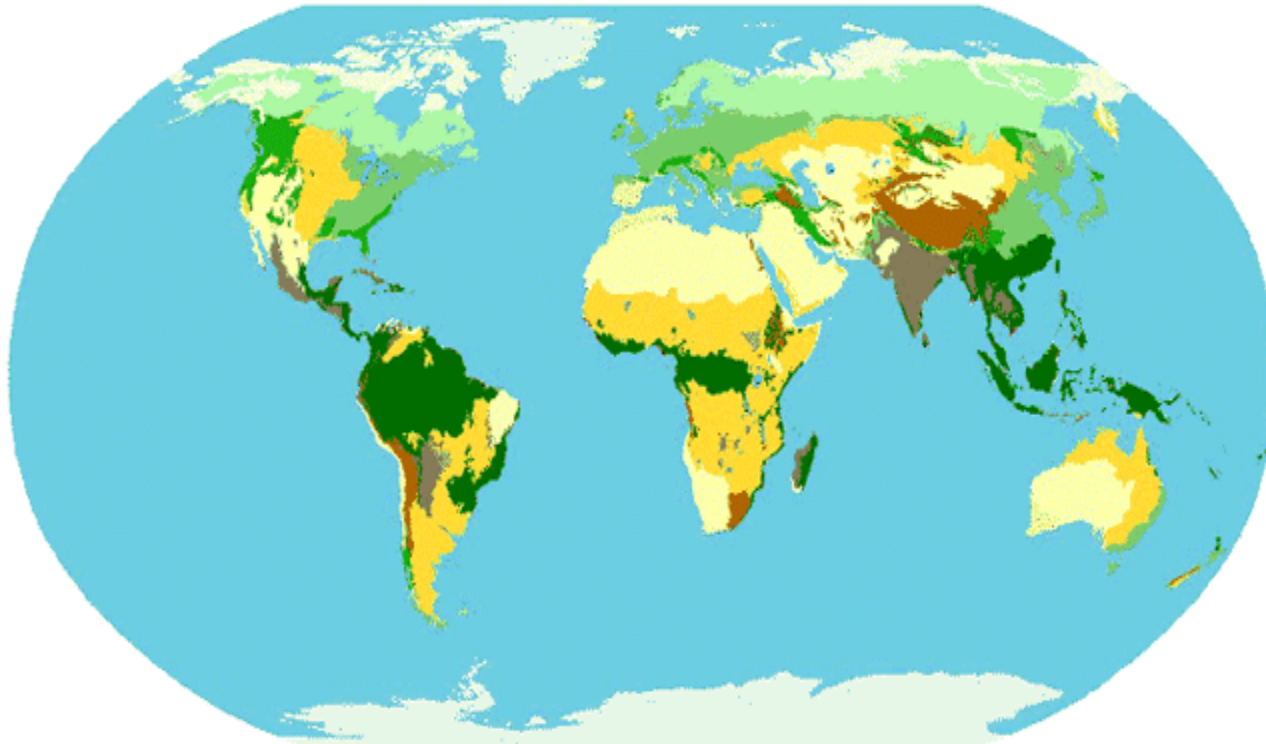
3rd

















2nd

1st

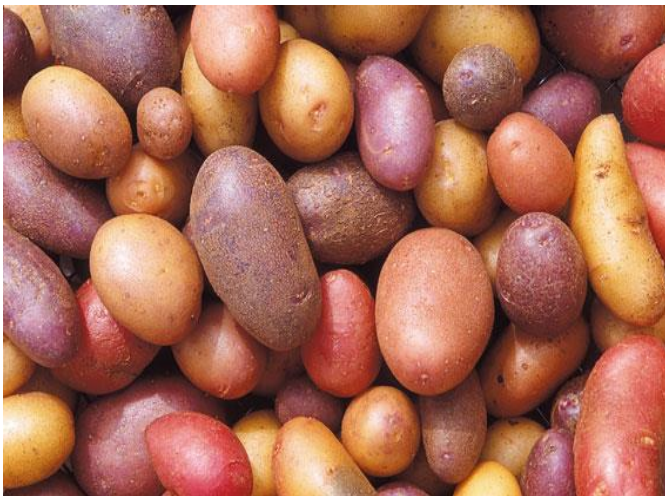
GM CROPS: Maize, Soybean, Cotton, Canola, Sugarbeet, alfalfa, papaya, squash

Large extensions with highly regarded Biodiversity Areas



- | | |
|---|--|
|  Boreal forests |  Temperate grasslands and savannas |
|  Deserts |  Tropical and subtropical coniferous forests |
|  Wetlands |  Tropical and subtropical dry seasonal forests |
|  Mangroves |  Tropical and subtropical grasslands and savannas |
|  Chaparral |  Tropical Rainforests |
|  Grasslands |  Tundra |
|  Temperate deciduous and mixed forests |  Water |
|  Temperate coniferous forests |  Ice |

Center of Origin and/or Diversity of several relevant crop species





RLAC-OGM who are we?



RLAC-OGM who are we?

RLAC is a network that reunites specialists that represent:

16 LAC countries

37 Laboratories from the National Competent Authorities and/or their recognized entities. Several labs have been Accredited or are in the process of its obtention.

2 National Lab Networks within the network





RLAC-OGM who are we?

Technical capabilities:

Detection

- Screening Methods
- Event Specific Methods
- In house methods for

CHALLENGE: #1
 Heterogeneous methods & analytical capacity
 As well as different know-how

Techniques

- Quantitative methods
- Qualitative methods
- Sequencing

CHALLENGE: #2
 Different regulatory systems and different
 approaches towards GMO legislation

CHALLENGE: #3
 Articulate all suitable mechanisms for
 building capacity and sharing infrastructure
 /expertise according to local regulations.

Reference Material





RLAC-OGM Network Concept

The network represents a vehicle for technical and scientific cooperation among the main Laboratories that are responsible for performing GMO analysis including detection, identification and quantification procedures in Latin America and the Caribbean.

MAIN OBJECTIVE:

Strengthen the capacities of laboratories that are specialized in GMO detection within the region with the purpose to integrate the local technical and scientific capabilities in support of the GMO Biosafety decision-making process as well as sharing expertise among its members.

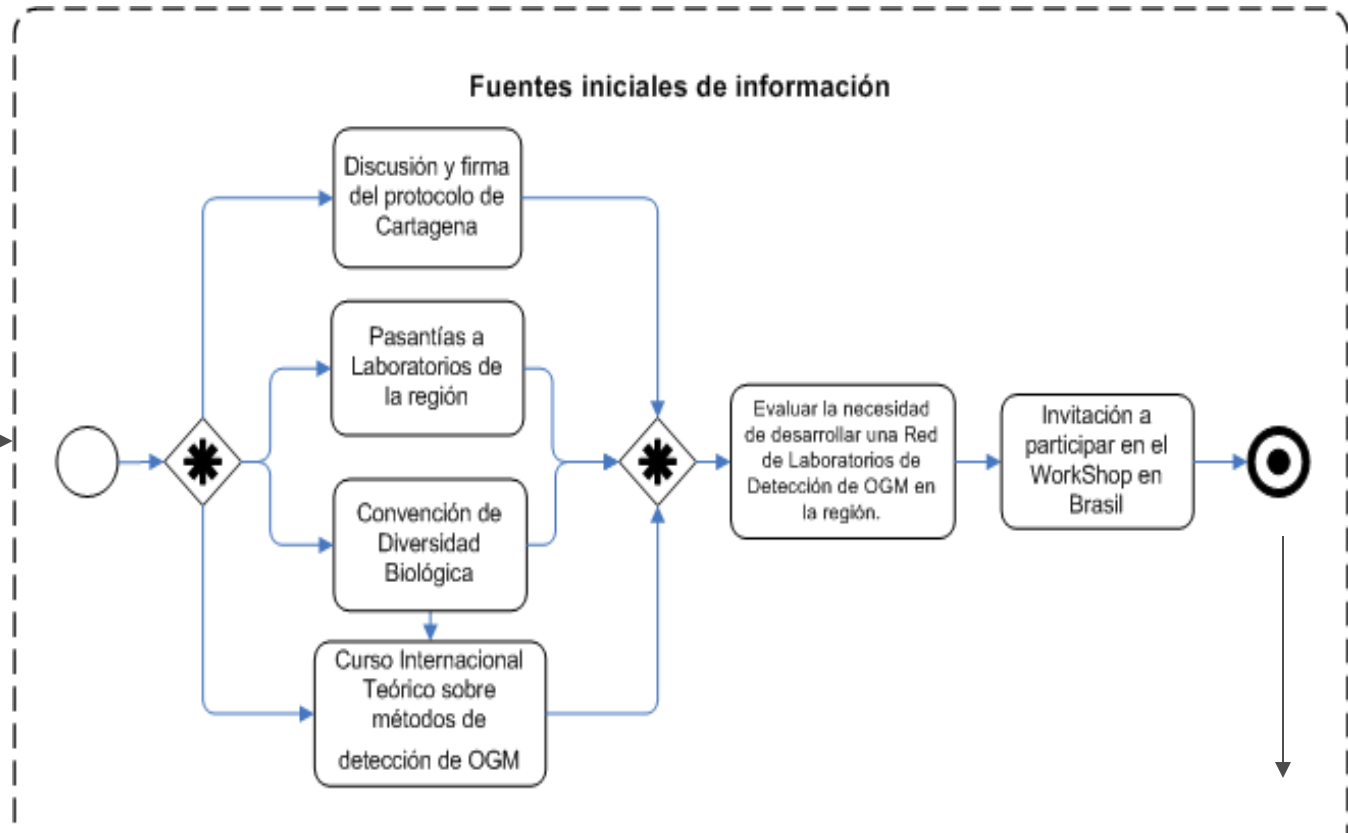


RLAC-OGM where are we?





RLAC-OGM Timeline



Before 2008

Independent efforts.
Bilateral collaborations
or invitations dependant
on the interest in the topic

From 2009 onwards:

3 Regional Workshops Organised by JRC
+ several parallel activities among RLAC members

Foz do Iguazú, Brasil

2009



2011



2nd International Workshop on Harmonisation of GMO Detection and Analysis for Central and South America

Merida, Mexico 2-3-March 2011

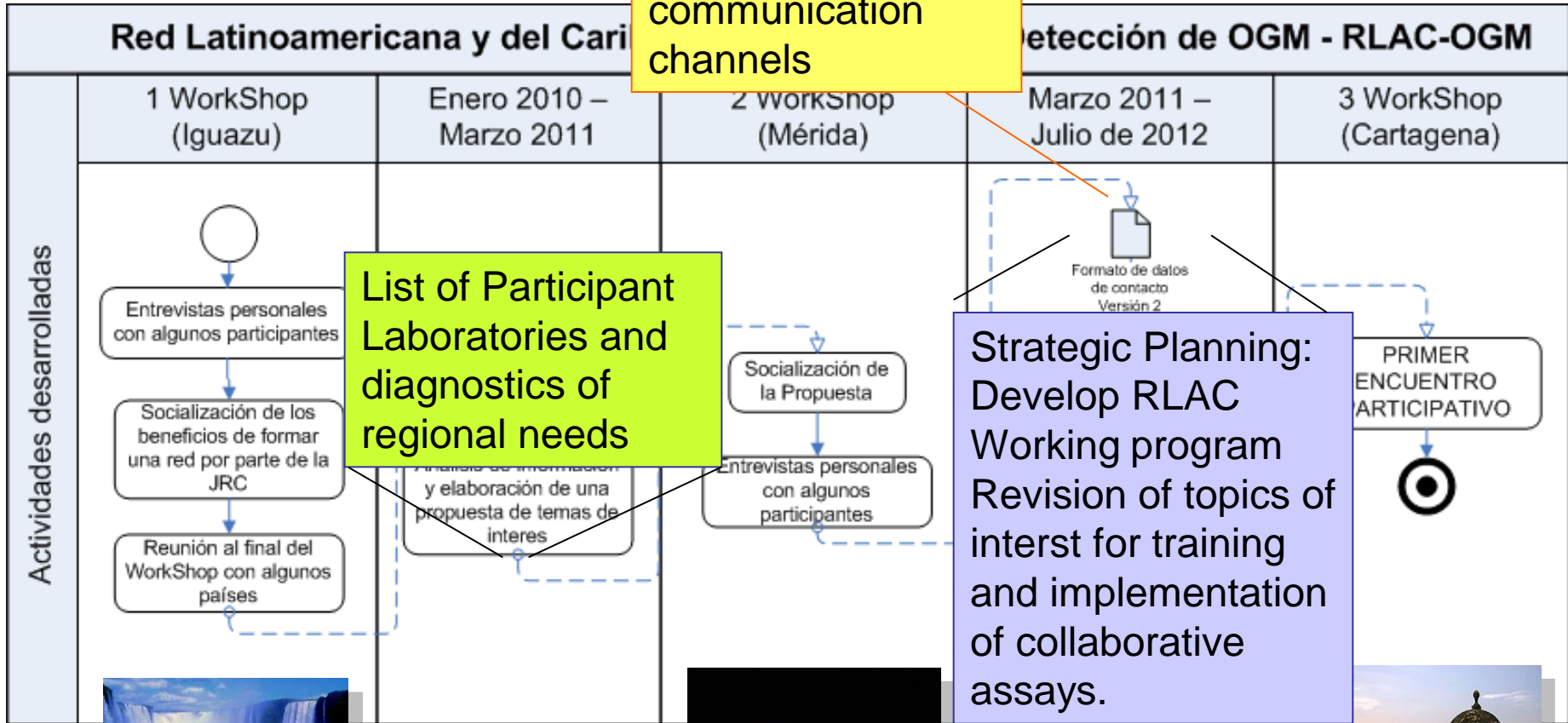
2012



Cartagena de Indias, Colombia



RLAC-OGM Timeline





3rd International Workshop on Harmonisation of GMO Detection and Analysis for Central and South America

Cartagena, Colombia 4-5-May 2012

IWGN Experience

Preparative work:

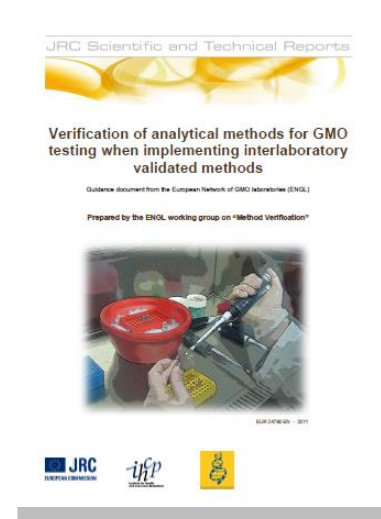
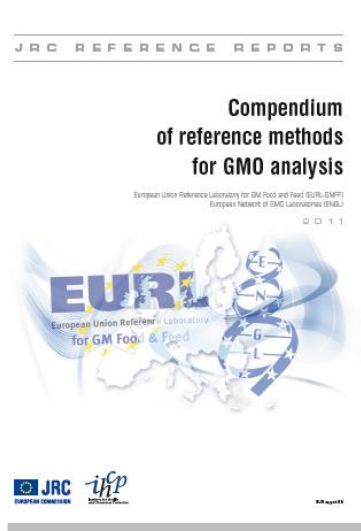
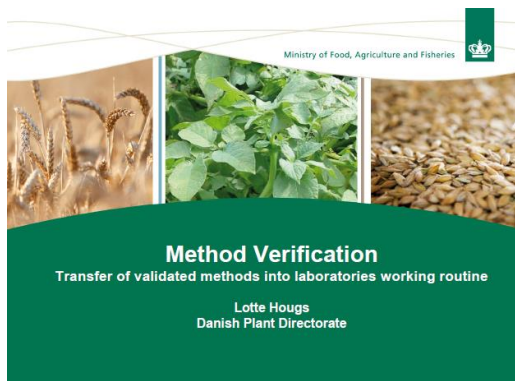
- Virtual Aula meetings
- Focal point representative consultations
- Integrate comments as Working Documents

Outcomes from the International Workshops on Harmonisation of GMO Detection and Analysis for Central and South America

JRC Technical Updates have helped the region rise awareness and build up technical capacities on current or emerging issues:



- Available Reference Methods
- Novel detection strategies
- Method Validation & Verification
 - Standards & Proficiency testing schemes
 - Monitoring GMOs at the field level
 - Biosafety Regulation related to Labs (EU)



Outcomes from the International Workshops on Harmonisation of GMO Detection and Analysis for Central and South America



- Consolidating RLAC-OGM Networking, Planning integration & Sharing experiences



- Updates on novel biotech applications developed at RLAC-OGM countries.



Addressing common issues of interest with members of the region such as uncertainty measurement.

... or test current capacities for
preparing CRM
running local proficiency tests

National Metrology Center as a Primary reference laboratory of RNLD-OGM*

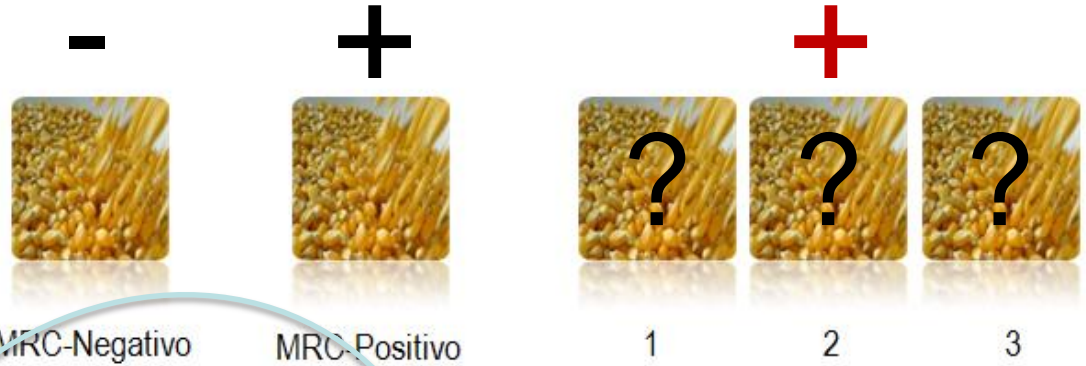


- Development of MRCs.
- Std Protocol
- Ring trials.
- Method Validation

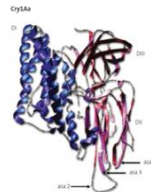
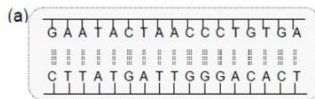
www.cenam.gob.mx

* RNLD-OGM=Nacional Laboratory Network in México

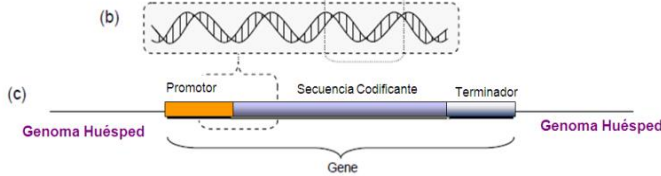
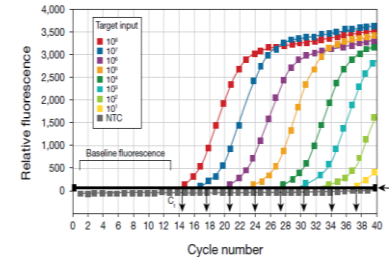
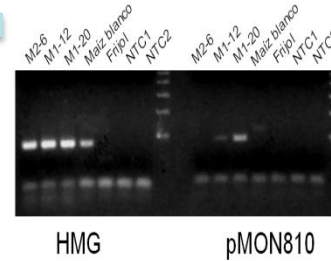
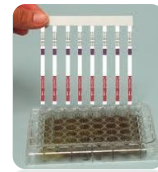
Proficiency Testing among Mexican Laboratories



GEN EXÓGENO
(Nueva combinación
de material genético)



NUEVA
PROTEÍNA
(Proteína
Heteróloga)



Interlaboratory assays allowed for:

- Obtaining a Real Capacity Diagnostics Guidelines for local Proficiency tests
- Harmonization of Analytical procedures
- Validate methods and Certify Reference Material
- Exchange Technical and Scientific expertise

Applicability and country experiences

MEXICO

- Selecting suitable proficient labs according to experimental data and minimal performance criteria



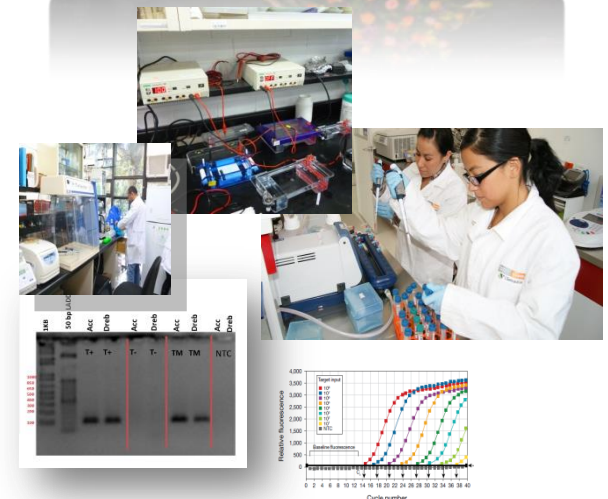
COLOMBIA, CHILE, ARGENTINA

- Availability of RM not yet certified
- Experience with detection of several GM events



BRASIL

- Method verification
- Uncertainty measurement
- Plasmid RM





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Discussion point: Regional meetings – Region LAC

1. Forthcoming regional technical challenges for GMO analysis

Outcome of the meeting:

Priority:

Training in specific techniques according to Identified needs

Local Method Validation

Development of CRMs (sharing of CRMs and experience for local facilities)

Training for national accreditation bodies.

New events as countries within the region test novel biotech applications.

Others: Ongoing production of plasmids as CRMs in Brazil and Mexico.

Interest in Consolidate labs and exchange expertise. Generate capacities for unauthorised events. Recognising regulatory differences and addressing relevant issues.



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Regional meetings – Region LAC

Discussion point:

2. Regional needs to meet these challenges

Outcome of the meeting:

Creation of infrastructure at some countries,
Improving capabilities of current labs,
Training staff in accreditation procedures,

Develop useful CRMs of regional interest.

Proposal for having Regional producer center(s) of CRMs (set up laboratory(ies) in place and producing of some CRMs, Brasil and Argentina also interested in establishing a collaborative nuclei). The facility could be used as hub for training courses, updates, experts collaborative exchange. Consolidate the Latin America network.



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Discussion point:

3. Road map / Prioritisation of necessary actions

Outcome of the meeting:

Road map depends on the needs that each country has manifested and is reflected on the RLAC strategic planning documents (details in Annex).

Take capacities from own experienced labs

1. RLAC-OGM Work Program
2. Strategic Platform Document



Program of Training courses
Regional Ring trials

Expert Collaborations wellcome & Invitation extended to interested parties!



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Regional meetings – Region LAC

Discussion point:

4. Next steps at regional level / training needs that JRC could help to meet

4. Next steps at regional level / training needs that JRC could help to meet

- Stewarding/Expert advice at some topics for training
 - Reference Material Production
 - Method Validation
 - Accreditation

For authorized events within the LAC region, expert support is sought.

Design of CRMs with a mix of the events that are of interest to the region and at higher concentration levels.

- Address Intellectual/practical challenges for entire region = “think-tank”
 - New technologies
 - Monitoring at field level, etc.
- Develop capacities on Bioinformatics as some solution to new challenges
- Develop common effective strategies for e.g. non authorized events.
- Common interest to be part of the global network initiative.
- Intergovernmental/Interinstitutional cooperation on GMO legislation issues.

4. Next steps at regional level / training needs that JRC could help to meet

- Official establishment of the network
Difficulties in communication with stakeholders.
Memorandum of understanding (supported by the JRC)
- Technical organization of the labs.
- Seeking proactive for collaborations on key issues.



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Regional meetings – Region LAC

Discussion point:

5. Identification of up to 3 regional representative) as contact persons

Outcome of the meeting:

1. Brasil
2. Mexico
3. Argentina

Caribbean

1. Belize

Central America

2. Nicaragua

South America

3. Argentina



Network Networking: Advantages and expectations

- Support for solving technical issues and global/regional shared challenges.
- Harmonization of detection methods.
- Development of relevant research projects.
- Customized training and staff exchange/short stages.
- International visibility for labs and institutions
- Validity of analytical results, confidence and reliability.
- Proficiency testing/Ring trials.
- Development of needed Reference Materials.

= BUILDING CAPACITIES TOGETHER!



Gracias! Obrigado! Thank you!