منظمة الأغذية والزراعة للامم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Agricultura y la Alimentación

暂定议程议题 2.1

粮食和农业遗传资源委员会

第十三届例会

2011 年 7 月 18-22 日，罗马

发展中国家的农业生物技术：种植业、林业、畜牧业、渔业和涉农产业应对粮食不安全和气候变化挑战的选择和机遇（ABDC-10）报 告

委员会第十二届例会对粮农组织于 2010 年 3 月 1-4 日在墨西哥瓜达拉哈拉举行的“发展中国家的农业生物技术：种植业、林业、畜牧业、渔业和涉农产业应对粮食不安全和气候变化挑战的选择和机遇（ABDC-10）”这一国际技术大会表示欢迎。委员会要求粮农组织准备一份有关该大会的成果及相关后续活动的报告，提交下届例会。本文后附大会报告。

更多情况可参阅《生物技术促进农业发展》，该粮农组织出版物为 ABDC-10 技术大会文件汇编，将于 2011 年年中出台。该出版物包括为技术大会编写的粮农组织系列背景文件，涵盖内容广泛，侧重发展中国家种植业、林业、畜牧业、渔业/水产养殖业和食品加工/安全领域生物技术现状和备选方案，以及相关政策问题与备选方案，特别包括：针对贫困人口的农业生物技术；促进农业生物技术研发；确保获得研发带来的惠益。其中一个章节专门介绍作为技术大会一部分的电邮会议情况。此外，该出版物还包括技术大会期间 27 场平行会议的报告，其中大多数平行会议由各政府间组织和非政府组织以及区域论坛负责召集，同时包括主旨发言以及大会最后一天在瓜达拉哈拉通过的大会报告。

منظمة الأغذية والزراعة للامم المتحدة
联合国粮食及农业组织
Food and Agriculture Organization of the United Nations
Organisation des Nations Unies pour l'alimentation et l'agriculture
Продовольственная и сельскохозяйственная организация Объединенных Наций
Organización de las Naciones Unidas para la Agricultura y la Alimentación

粮农组织国际技术大会

发展中国家的农业生物技术：种植业、林业、畜牧业、渔业和涉农产业应对粮食不安全和气候变化挑战的选择和机遇（ABDC-10）

2010 年 3 月 1－4 日，墨西哥瓜达拉哈拉

报 告

I. 会议开幕

1. 发展中国家的农业生物技术：种植业、林业、畜牧业、渔业和涉农产业应对粮食不安全和气候变化挑战的选择和机遇（国际技术大会）于 2010 年 3 月 1 日至 4 日在墨西哥瓜达拉哈拉举行。代表和观察员名单见**附录** D。

II. 粮农组织和墨西哥政府分别致开幕词

2. 哈利斯科州农村发展部秘书 Alvaro García Chávez 先生（墨西哥）欢迎代表和观察员来到美丽的城市瓜达拉哈拉，指出哈利斯科州是主要农业生产州。他强调了及时举行的本次全球会议的重要性，说明农业需要改进的技术和工具来应对全球粮食不安全和贫困带来的挑战。García Chávez 先生指出，需要负责任地使用和生产生物技术工具和产品来实现粮食安全，同时确保生物安全和环境保护。

3. 粮农组织农业及消费者保护部助理总干事 Modibo Traoré 先生欢迎代表和观察员。他代表粮农组织总干事雅克•迪乌夫博士感谢墨西哥政府主办该次会议，感谢粮农组织伙伴参与该项活动，这些伙伴包括：墨西哥农业、畜牧业、农村发展、渔业和食品部，国际农业发展基金会（农发基金），国际农业研究磋商组织，全球农业研究论坛，国际遗传工程和生物技术中心，世界银行。该次会议使粮农组织成员国的政策制定者、科学家、民间社会和私营部门一起评估生物技术在发展中国家粮食和农业部门的应用情况，以便利用成功经验和吸取失败教训，描绘出将来更好的路线图。Traoré 先生强调国际社会应当在支持发展中国家方面发挥重要作用，具体途径是发展伙伴关系，提供国际合作框架，为适当生物技术的发明和采用提供资金。他的讲话见**附录** B.1。

4. 墨西哥农业部副部长 Mariano Ruíz-Funes Macedo 先生欢迎代表和观察员。他表示与智利一起应对该国最近的自然灾害和挑战。Ruíz-Funes Macedo 先生指出，不断增长的人口对粮食和其他农产品的需求增加，而同时需要确保自然资源保持及生物多样性保护。他说明墨西哥正在为培养有技能的技术员和科学家提供投资，以开发和有效利用生物技术，同时认识到需要使现代新技术与传统知识和方法相结合。Ruíz-Funes Macedo 先生表示希望该次大会有助于改进对发展中国家的生物技术工具的提供，以利于加强农业生产，同时保护环境。他的西班牙文讲话见**附录** B.2。

III. 主旨发言

5. 粮农组织的一位代表代表 M.S. Swaminathan 研究基金会主席、大会指导委员会名誉主席 M.S. Swaminathan 先生宣读了主旨发言。他指出生物多样性不仅是

食品和健康保证的原料，而且还是气候变化管理的原料，但遗憾的是正在迅速丧失。Swaminathan 先生说明了《生物多样性公约》和《粮食和农业植物遗传资源国际条约》对于生物多样性保护及可持续公平使用的重要性，并认为每个国家对保护本国的生物多样性负有责任。Swaminathan 先生指出，分子遗传学和遗传工程等领域为应对当前全球挑战带来机遇。他还指出，每个国家应当设立一个独立的国家生物技术管理部门，以确保政策有利于农民和消费者的福利、环境保护和农产品贸易安全。Swaminathan 先生希望大会提供一个路线图以帮助实现可持续粮食安全。他的发言见**附录** B.3。

IV. 选举主席、副主席和报告员

6. Jeffrey McNeely 先生当选为主席。Marilia Regini Nutti 女士（巴西）和 Priyanjalie K.M. Wijegoonawardane 女士（斯里兰卡）当选为副主席。Fernando Gómez Merino 先生（墨西哥）被选为**报告员**。

V. 通过议程

7. 议程获得通过，见**附录** A。

VI. 针对贫困人口的生物技术

8. 粮农组织秘书处介绍了背景文件《发展中国家农业生物技术政策选择》第一部分，[1]该部分为针对贫困人口的生物技术提供一个框架，强调将生物技术纳入国家农业和农村发展及科技更广泛政策的重要性，同时强调这些政策的国际范围及确定重点活动的重要性。

9. 国际技术大会感谢秘书处提供了资料丰富的文件。大会注意到，发展中国家生物技术的使用受到以下各种因素的影响：是否有生物技术的政策和管理框架，费用，农民和公众对生物技术潜在利益的认识，消费者对食品安全和环境保护的关注，市场条件和产品需求及新的生物技术的获取和使用能力。大会注意到，当农民使用其他多种生物技术产品如生物肥料和生物农药时，关于生物技术的讨论往往注重转基因生物，以及注重农业部门内使用的许多工具和方法。

10. 大会强调国家间和国家内有各种情况，就像有各种问题一样，并强调对当前生物技术使用情况的分析将大大有助于确定发展中国家生物技术的对象。大会还指出，良好的生物技术政策、条例、管理战略、风险评估、成本效益分析和宣传战略将有助于生物技术的进一步发展和应用，并强调应当在国家总体发展战略

[1] ABDC-10/8.1（ABDC-10/8.2 综合篇）

范围内制定国家生物技术战略。

11. 大会指出，需要采用参与性方法来促进考虑生物技术的开发和使用。农民、农民组织、生产者、地方社区和其他利益相关方需要充分参与这些进程，科学家在进行生物技术研究时需要更好地了解农民的需要和生产条件。大会强调，必须有发展中国家小农和生产者的参与以了解其特别挑战和需要，决定生物技术的适当使用来帮助小农。

12. 大会注意到现代生物技术与传统知识和方法相结合的重要性，新的工具、政策和方法应当帮助农民和生产者保持恢复力和独立性，继续采用生态可持续方法。大会还注意到，农民是否愿意采用新的工具和方法取决于他们对所带来的利益的了解和参与，这种利益包括增加产量，提高生产力或延长农产品保存期限。大会强调目的是使农民和小农场主从生物技术受益。

13. 大会认为，许多发展中国家的生物技术开发和应用将从国际和区域合作以及国际组织提供的技术和其他援助受益。大会注意到，需要继续支持公共研究以发展生物技术工具、产品和最佳可持续方法，国家和区域优秀人才中心是潜在合作机制，并需要使生物技术研究更好地针对农民需要。

VII. 第一天平行会议总结

14. 大会收到关于在发展中国家种植业、畜牧业、林业、渔业、水产养殖业和涉农产业成功应用生物技术实例研究的具体部门圆桌会议结果总结报告。大会还收到了关于具体部门背景文件的平行会议结果总结报告[2]，这些背景文件说明了发展中国家当前生物技术状况和选择。每次会议的总结报告可从大会网站获取[3]。

VIII. 对农业研究和农业生物技术的投资

15. 国际农业发展基金会（农发基金）执行政策和技术咨询司司长 Rodney Cooke 先生介绍了关于对农业研究和农业生物技术投资的一份文件。鉴于粮食不安全和贫困水平以及需要采用有效农业适应战略应对气候变化挑战，他强调世界不能继续对农业投资不足。Cooke 先生指出，需要着重注意提高小农场主和生产者，包括女性农民的生产力。

16. Cooke 先生指出，虽然农业投资证明对于减贫高度有效，但是对于大多数发展中国家而言，很难保证对农业科技的连贯供资水平，需要改变这种状况。他强调，农业投资计划必须与国家总体经济发展和扶贫计划一致。Cooke 先生要求

[2] ABDC-10/3.1 至 ABDC-10/7.1（ABDC-10/3.2 至 ABDC-10/7.2 综合篇）

[3] www.fao.org/biotech/abdc/parallel/en/

采取以农民为本的农业研究参与性方法，使战略和应用研究的产品从科学家转向农村社区农民，农村社区的需求和当地知识流向科学家。他介绍的文件以其原始语言载于**附录** B.4。

IX. 促进农业生物技术研发

17. 大会审议了背景文件《发展中国家农业生物技术的政策选择》第二部分[4]，涉及促进适当应用农业生物技术的公共政策，包括：科技能力建设；规划和供资办法及机制；关于确保通过环境和食品/饲料安全条例安全使用农业生物技术的要求。一些代表说明其国家已制定生物技术政策和法律框架，包括生物安全。

18. 大会强调需要进行能力建设以进一步制定发展中国家的生物技术政策和法律框架。由于许多发展中国家在制定和实施生物技术政策及法律框架方面已经积累了大量经验，大会要求发展中国家之间进一步合作，特别是交流经验和方法。大会还要求粮农组织和其他相关国际组织在制定生物技术政策和法律框架方面提供所需支持。

19. 大会注意到，政策和法律框架可以确立明确的审批和监测程序及开发和利用生物技术的责任及能力，使生物技术的开发者和使用者以及投资者清楚明了。大会注意到生物技术迅速发展并且不断演变，生物技术政策和法律框架需要不断审查和更新以确保适合最新情况及发挥作用。

20. 大会强调，在制定和实施生物技术政策及法律框架方面需要宣传战略以促进参与准备过程，提高对管理和其他要求及责任的认识，以及促进生物技术的利益。

21. 大会强调非常需要进行持续的科学培训和教育以促进发展中国家的生物技术发展。通过研讨会、专题讨论会、电子会议、科学网络和交流及其他手段使科学家了解最新情况，将是有益的。研究机构之间建立或加强联系以及加强信息交流也是能力建设的有效手段，同利用或建立优秀人才中心及举行区域层面培训班一样有效。大会注意到，有时需要进行快速培训回应以应对影响农业生产和生产力的疾病暴发。

22. 大会还看到需要提供长期教育投资来培养下一代生物技术科学家和农业推广人员。可能需要采取刺激手段来鼓励年轻科学家在发展中国家进行研究以减少科学家流向发达国家。

23. 大会指出，生物技术能力建设活动应当考虑到现有专业知识和设施，战略

[4] ABDC-10/8.1（ABDC-10/8.2 综合篇）

性地针对国家需要和挑战。代表们说明了能力建设的许多领域，包括：增强法律专业力量来制定、管理和实施生物技术法规；在风险评估和风险管理方面进行能力建设；更好地应对影响农业生产的疾病暴发；促进可持续农业及满足小农和生产者的需要；更好地利用当地品种及开发水产养殖资源；加强对基因库的支持以帮助保护遗传多样性作为进一步发展生物技术的基本资源。

24. 考虑到民间社会代表提出的建议，会上表示关注的是，不应当将转基因生物强加到发展中国家农民身上，特别是如果这些转基因生物可能不利地影响小农生计的话。

X. 第二天平行会议总结

25. 大会收到了关于以下跨部门问题的平行会议结果的总结报告：开发基因组资源：当前状况和将来前景；基因组应用：发展中国家的分子育种；增强人员能力：培训及教育；确保公平获得技术，包括性别问题；使公众能够参与知情决定；确定农民的优先作用；公私伙伴关系。每次会议的总结报告可从大会网站获取[5]。

XI. 各国际农业研究中心的生物技术发展概况

26. 国际农业研究磋商组织所属国际玉米小麦改良中心总干事 Thomas Lumpkin 先生在开始发言时提到已故 Norman Borlaug 在绿色革命和建立全球农业研究网络方面的重大贡献。他概述了生物技术在国际农业研究磋商组织研究中的应用，强调需要在农业研究和技术方面提供更多投资才能在土地和水资源减少并且在减少对环境影响的情况下应对供养不断增长的人口的挑战。

27. Lumpkin 先生指出，已经使用各种生物技术帮助保护遗传资源以及对遗传资源进行特性鉴定，提高农业产量和生产力，生产疫苗，改进食品安全。他还指出，生物技术的进一步开发和利用将需要处理一系列问题，例如发展中国家对转基因生物的利用，成本效益，建立公私伙伴关系。鉴于农业的潜在利益，Lumpkin 先生指出我们必须一道应对挑战和关注。

XII. 确保利用研发成果

28. 大会审议了背景文件《发展中国家农业生物技术的政策选择》第三部分[6]，涉及确保利用生物技术成果，探讨了知识产权、公众认识和参与及推广服务的作用等问题。大会重申需要与所有利益相关方进行有效交流以促进生物技术的开发和利用。必须进行对话以避免单项交流，需要采用各种交流手段以便与农村人民交流。

---

[5] www.fao.org/biotech/abdc/parallel/en/

[6] ABDC-10/8.1（ABDC-10/8.2 综合篇）

29. 然而，一些代表指出，虽然他们制定了包括生物安全在内的生物技术政策和管理框架，但是往往很难确保小农和生产者参与决策过程，赋权当地人们及确定社区领导将促进有效参与。缺乏现代交流手段如互联网以及缺乏教育，是有效参与决策过程的挑战。缺乏资源也严重阻碍贫穷农民和生产者参与。

30. 一些代表说明成功地使利益相关方认识到利用生物技术的机遇。这方面的例子包括使农民具有生物技术方面的亲身经历，使这些农民向其他农民传授知识。一些国家的推广服务证明也很有效，同农民和生产者培训班一样有效。利益相关方论坛用于使科学家和生产者定期聚会讨论一些国家的机遇和关注。国际农业研究磋商组织在生物技术能力建设方面的重要作用得到承认，要求这些中心提供进一步援助。

XIII. 《粮食和农业植物遗传资源国际条约》多边系统的技术转让问题；南南合作

31. 《粮食和农业植物遗传资源国际条约》秘书 Shakeel Bhatti 先生概述了于 2004 年开始生效的该项《国际条约》。他说明了《国际条约》的范围及其实施方面取得的进展，包括正在广泛采用的《标准材料转让协定》的使用。Bhatti 先生还报告了《国际条约》多边系统项下的技术转让和迄今为止的其他成就。该系统范围内的种质转移不断增加，业务程序完善，一些地方植物遗传资源项目正在得到《条约供资战略》的支持。

32. Bhatti 先生指出，《国际条约》规定进行技术转让和有关人员能力建设。他指出，《条约》的实施将有助于适应气候变化的工作，途径是：加强植物遗传资源保护，促进技术转让，向发展中国家提供资金。Bhatti 先生概述了关于进一步促进《国际条约》运作的部分需要。

XIV. 第三天平行会议总结

33. 大会收到了具体区域平行会议结果的总结报告：拉丁美洲及加勒比；近东和北非；撒哈拉以南非洲；亚洲及太平洋；东欧和中亚。在这些会议上审议了一系列专题文件。还收到了专门关于以下跨部门问题的平行会议的总结报告：植物用于非食品利用：挑战和前景；区域层面的政策连贯性；在生物安保更宽范畴内维护生物安全；农业生物技术的知识产权；粮食和农业遗传资源的保存和可持续利用。每次会议的总结报告可从大会网站获取[7]。

[7] www.fao.org/biotech/abdc/parallel/en/

XV. 超越常规计划：发展中国家的政策选择；超越常规计划：国际社会行动的优先重点

34. 大会审议了背景文件《农业生物技术促进粮食安全和可持续发展：发展中国家的政策选择和国际社会行动的优先重点》[8]。秘书处介绍了该文件，指出大会的结论将大大有助于促进粮农组织领导机构讨论农业生物技术。大会主席编写了主席的文本，利用大会的结论促进关于发展中国家的政策选择和国际社会行动的优先重点的讨论。

35. 大会要求考虑开始讨论制定粮食和农业动物遗传资源共享和利用国际协定。

36. 大会再次强调了联合国千年项目的一个结论，即科学、技术和创新有助于实现所有千年发展目标。

主要结论

37. 国际技术大会认识到：

a) 农业生物技术[9]包括种植业、畜牧业、林业、渔业、水产养殖业和涉农产业中更大程度地应用的广泛的工具和方法，以利于减轻饥饿和贫困，帮助适应气候变化，在发展中国家和发达国家保持自然资源基础。

b) 在许多发展中国家尚未广泛采用各种农业生物技术应用方法，没有使小农和生产者及消费者充分受益。

c) 更多的农业生物技术研发应当注重小农和生产者的需要。

d) 政府需要制定本国关于生物技术作用的远景和政策，在国家经济、社会和农村可持续发展及环境战略、目标和计划范畴内研究政策选择和机遇。

e) 必须制定有效的宣传和参与战略以鼓励以及促进公众参与有关生物技术开发和利用的决策过程，并赋予他们权力。

f) 加强国家之间和国家内的伙伴关系将有助于生物技术的开发和利用，包括南南联盟和区域联盟；结合传统知识；有利于经验、信息和技术交流的公私伙伴关系及研究伙伴关系。

38. 国际技术大会同意：

---

[8] ABDC-10/9

[9] 该定义为广义，依据《生物多样性公约》第 2 条，该条指出生物技术是指“使用生物系统、生物体或其衍生物的任何技术应用，以制作或改进特定用途的产品或工艺过程”。‘农业生物技术’一词所包含的具体生物技术种类在 ABDC-10/3.1 至 ABDC-10/7.1 具体部门文件中做了说明。

a) 发展中国家应当大量增加对能力建设及生物技术开发和安全使用的投资；结合其他农业技术包括传统知识，保持自然资源基础以扶持小农场主、生产者和以生物技术为基础的小企业；采用有效参与性方法使利益相关方在决策过程中提供重要投入。

b) 粮农组织和其他相关国际组织及捐助者应当更加努力地支持加强国家在开发和适当使用有利于穷人的农业生物技术的能力，这些生物技术应当针对发展中国家小农场主、消费者、生产者和以生物技术为基础的小企业的需要。

c) 政策和管理机制的缺失以及过于严格的法规阻碍生物技术的开发和获取。有效的国家生物技术政策和科学管理框架能够促进发展中国家生物技术的开发和适当使用；对现有生物技术政策和管理框架的不断审查、改进和协调一致可以使他们适合最新情况以及保持合理。

XVI. 闭幕词

39. 粮农组织农业及消费者保护部助理总干事 Modibo Traoré 先生首先感谢墨西哥政府和哈里斯科州主办该次大会以及他们的盛情款待。他对那些与粮农组织合作组织和举行该次大会的组织表示感谢，有来自 68 个不同国家的大约 300 名人员参加了该次大会。Traoré 先生感谢那些为确保大会顺利举行而在大会之前和期间做了工作的所有工作人员。他指出，“知识共享交易会”对大会作出了重大贡献，对参加交易会的 22 个组织表示感谢。

40. Traoré 先生感谢代表和观察员在大会期间提出建议和建设性意见，使大会得出了明确而切合实际的结论。他注意到，大会确认在种植业、畜牧业、林业、渔业和涉农产业使用生物技术有助于发展中国家减轻饥饿和贫困及促进农村发展。Traoré 先生还注意到，大会还强调各国致力于帮助发展中国家的贫穷小农、渔民和林农，确保他们获得着重解决其问题的适当生物技术，使他们充分参与有关生物技术开发和使用的决策过程。

41. 美洲农业合作研究所总干事 Victor M. Villalobos 先生注意到，在人口不断增长及气候变化的情况下实现和维持粮食安全给农业带来了许多挑战。他指出，关于作物用作燃料和其他非食物用途的需求及上涨的价格也影响到发展中国家特别是农村穷人的粮食安全。

42. Villalobos 先生强调许多农业生产目前不可持续，这种状况必须改变。他指出，利用良好的生物技术可以在投入物减少并且减少对环境不利影响的情况下帮助应对供养日益增长人口的全球挑战。他提醒大会，我们过去曾面对其他许多挑

战，现在需要一起努力解决当前的问题。

43. Villalobos 先生注意到，关于转基因生物的讨论两极化。他指出，我们不能放弃在农业领域使用转基因生物，但是我们必须适当使用这种生物以帮助实现可持续性目标并且不会对环境产生不利影响。为了实现这一目标，他强调关键是根据科学作出决定以及使所有角色共同努力实现粮食安全和可持续农业。Villalobos 先生指出，大会为发展中国家生物技术的发展和利用提供了宝贵的建议，现在所有国家需要在前进的道路上认真考虑这一建议。

XVII. 大会闭幕

44. 国家林业、农业和畜牧业研究所协调员 Salvador Fernández Rivera 先生代表农业部副部长 Mariano Ruíz-Funes Macedo 先生感谢粮农组织和其他伙伴在墨西哥组织该次重要会议。他指出，许多发展中国家有着共同的问题，大会表明国家和专家愿意共同努力解决问题，在不造成自然环境退化的情况下实现粮食安全的全球共同目标，应对气候变化。Fernández Rivera 先生对于会议结论表示满意，指出工作尚未完成，希望在每个国家建立机制来落实会议结论。他强调每个国家需要自己作出关于利用农业生物技术的决定，他宣布大会闭幕。

附录 A

议 程

I. 开幕及组织事项

1. 会议开幕
2. 选举主席和副主席
3. 通过议程和时间表
4. 任命报告员
5. 粮农组织和墨西哥政府分别致开幕辞
6. 主旨发言

II. 第一次全会

7. 针对贫困人口的生物技术

III. 平行会议（提交并讨论关于发展中国家生物技术成功应用的分部门实例研究）

a) 种植业
b) 畜牧业
c) 林业
d) 渔业和水产养殖业
e) 涉农产业

IV. 平行圆桌会议（提交并讨论发展中国家成功应用生物技术的分部门实例研究）

a) 种植业
b) 畜牧业
c) 林业
d) 渔业和水产养殖业
e) 涉农产业

V. 第二次全会

8. 总结第一天会议成果
9. 农业研究和生物技术投资
10. 促进农业生物技术研发

VI. 平行会议（跨部门问题）

a) 基因组应用（与国际农业研究磋商组织协作）
b) 强化人员能力：培训和教育（与国际遗传工程及生物技术中心协作）
c) 确保公平利用技术，包括社会性别问题（与乐施会协作）
d) 赋权公众参与知情决策（与国际自然资源保护联盟协作）
e) 确定农民的优先作用（与国际农业生产者联合会协作）

VII. 第三次全会

11. 总结第二天会议成果

12. 各国际农业研究中心的生物技术发展概况（国际农业研究磋商组织发言）

13. 确保利用研发成果

14. 《粮食和农业植物资源国际条约》多边系统的技术转让问题

15. 南南合作

VIII. 平行会议（分区域讨论）

a) 拉丁美洲和加勒比地区（与美洲农业合作研究所、拉美和加勒比地区植物生物技术合作网络协作）
b) 近东和北非地区（与近东和北非农业研究所协会协作）
c) 非洲撒哈拉以南地区（与非洲农业研究论坛协作）
d) 亚太地区（与亚太农业研究所联合会协作）
e) 东欧和中亚地区

IX. 平行会议（跨部门问题）

a) 区域层面的政策连贯性（与联合国贸发会议协作）
b) 在生物安保更宽范畴内维护生物安全
c) 知识产权（与世界知识产权组织协作）
d) 植物用于非食品用途：挑战与前景（与联合国工业发展组织协作）
e) 粮食和农业遗传资源保护和可持续利用（与国际农业磋商组织联合主持）

X. 第四次全会

16. 总结第三天会议成果

17. 超越常规计划：发展中国家的政策选择

18. 超越常规计划：国际社会行动的优先重点

19. 通过大会报告

20. 致闭幕辞

21. 大会闭幕

附录 B.1 粮农组织农业及消费者保护部助理总干事，莫迪博·特拉奥雷（Modibo Traoré）先生

墨西哥农业部副部长，马里亚诺·鲁伊滋·富内斯·马塞多先生，
哈利斯科州农村发展部秘书，阿尔瓦罗·加西亚·查韦斯先生，
总务委员会各位委员，
尊敬的各位代表，
各位同事，
女士们，先生们，

今天我很高兴的和你们在一起，欢迎各位参加粮农组织“发展中国家农业生物技术国际技术大会”。首先，我要感谢墨西哥政府在瓜达拉哈拉这样一个美丽的城市举行这次会议。我还要感谢倡议举行这次会议的我们的合作伙伴们，包括墨西哥农业部，国际农业发展基金，国际农业研究磋商组织，全球农业研究论坛，国际遗传工程与生物技术中心，以及世界银行。 我代表粮农组织总干事雅克·迪乌夫博士，感谢你们所有的支持与承诺，将来自我们各成员国的决策者、科学家、民间团体、私营部门聚集在一起，共同来探讨粮食和农业生物技术的选项和机遇，以面对粮食不安全、气候变化和自然资源退化带来的挑战。

本次会议的一个主要目标是考察发展中国家不同粮食和农业部门的生物技术应用状况。我们期望汲取过去成功和失败的教训，为将来制订出更好的方针计划。本次对话的时机非常的恰当，因为它是在去年 11 月在粮农组织总部举行的世界粮食安全峰会宣言之后举行的一峰会曾指出，21 世纪的农业，特别是在发展中国家，将面临着到 2050 年粮食产量翻番的多重挑战。需要有明确和适当的技术与工具来由下而上的支持各国投资和执行恰当的各项政策，以应对这些挑战[1]。

现代和传统的生物技术为农业部门，包括渔业和林业，提供了各种有力的工具。生物技术，当与其它应用于粮食生产、农产品和服务的技术进行妥善整合后，就可以极大地帮助满足日益扩大和增长的城市化人口的需求。在过去的几十年中，生物技术领域已以强大的发展速度发展进步，特别是在医药领域以及一些农业领域产生了大量的创新发明。特别是在发达国家的粮食和农业部门，它有助于减少一些病虫害带来的损失，提高环境的可持续性。基因组学和生物信息学当前的新突破，也正在拓展我们对它的性质和不同功能的了解。

尊敬的各位代表，各位同事，女士们，先生们，

尽管有传统技术和生物技术的这些贡献，但今天在这世界上吃不饱的人数比我们以往历史上的任何时候还要多，大约有 10 亿人左右。大约有 75％的世界饥饿和贫困人口生活在农村地区，并且以农业为生。目前粮食不安全的不如意局面正因气候变化的不确定性而恶化，其对发展中国家打击更为甚烈。与此同时，存在着由城市化和收入增长所驱动的对农产品品种改良，质量和安全的需求。

---

[1] ftp://ftp.fao.org/docrep/fao/Meeting/018/k6050c.pdf

我们的挑战是通过科学和可持续的实践以及资源的有效利用来增加粮食生产，同时保护自然资源基础和环境质量。这些现实要求采取可持续生产集约化的战略方法：即一种采用良好耕作方法来有效利用自然资源的更有效和弹性的生产体系，配之以有利的政策和制度框架，以提供充足的优质食品供应。集约化还必须给农民的生计带来好处，特别是资助对实现粮食安全关键的小农们。

科技进步必将加强可持续生产的集约化。需要有一种农业研究和开发的新方法来支持更广阔和更明智地利用农业生物多样性，以促进粮食安全的发展和改善。新技术也将以更好地管理投入提高收益效率以及生物多样性来作出其贡献。这将需要更多的农民、机构和社区的参与。同时将需要其它的各种有利因素，例如政策、制度的支持，并在人力和有形资本上的投资以及国内能力的建设。粮农组织将其活动重点集中于支持小农们上，以可持续地提高农业生产，改善市场准入和提高生活水平。

生物技术应以其贡献和创新发挥更直接和关键的作用。生物技术应建立在现有传统知识和技术基础上进行开发和利用。目前大多数发展中国家缺乏合适和有用的技术、政策、技术能力，以及必要的基础设施来用于它们的发展、评估和部署。由于不能与生产体系的要件很好地整合，所以大部分生物技术往往还不能得到充分的利用。通常只是强调了转基因生物，而忽视了所有其他生物技术以及它们对农业的潜在贡献。此外，公共和私营部门间的协作还需要来加以利用，以用于实现预期的目标。因而在大多数发展中国家，生物技术尚未在人们的生活中产生重大的影响。

本次会议是关于如何将各种生物技术重定向于贫穷国家的贫困农民以使他们获益，而不是仅仅有益于富裕国家的农民。国际社会应通过加强伙伴关系以及提供一个用于产生、适应和采用合适的生物技术的国际合作和资助的框架，在支持发展中国家中发挥关键作用。这一进程将包括产出的利用，各国政府的现有能力，国际农业研究磋商组织以及其它合作伙伴为所有发展中国家直接获取生物技术而致力提供的公共产品。粮农组织将继续提供一切协助来加强国家和地区作出有关使用生物技术明智决策的能力。

尊敬的各位代表，各位同事，女士们，先生们，

“千年发展目标”要减少一半饥饿和极端贫困的目标用“一切照常”的办法将无法从现在起的五年内实现。如果在发展中国家，以适宜的生物技术来应对小农户的问题和需求，同时辅以必要的投资加以支持，加强国家的技术和政策能力，就可以为达到这一目标而作出贡献。未来对农业来说就意味着一系列复杂的挑战，但我们与饥饿开展的斗争必须获得胜利。

我期望各位有一个卓有成效的大会，并期待着你们审议的成果。

谢谢各位。

附录 B.2 Mr Mariano Ruíz-Funes Macedo, Subsecretario de Agricultura, SAGARPA, Mexico

Muy buenos días a todos;

- Sr. Secretario De Desarrollo Rural del Gobierno del Estado de Jalisco, **Sr. Álvaro García Chávez**;
- Representante personal del Director General de FAO, **Sr. Modibo Traoré**;
- Honorables miembros del presídium;
- Señoras y señores investigadores y conferencistas, funcionarios y amigos que nos acompañan, sean todos ustedes bienvenidos a México.

Es un honor para mí acompañarlos en la inauguración de esta **Conferencia Técnica Internacional sobre Biotecnologías Agrícolas en los Países en Desarrollo**, de gran relevancia para el sector agroalimentario mundial, y de particular interés del Secretario Francisco Mayorga, quien les envía un cordial saludo.

Agradezco a la FAO haber elegido a México como anfitrión de este evento, lo que es particularmente significativo porque nuestro país fue pionero en la Revolución Verde, que generó un cambio de paradigma en las prácticas agrícolas de numerosas zonas del mundo, con el consecuente incremento de la producción de alimentos. Nuestro recuerdo y reconocimiento para el Dr. Norman Borlaug y al grupo de científicos mexicanos que la hicieron posible.

El reto para producir mas alimentos sigue presente; En congruencia con los objetivos de aumentar la productividad agrícola y la seguridad alimentaria, conservando los recursos naturales y la biodiversidad del planeta, establecidos por FAO, resulta relevante esta Conferencia, que debe ser un ejercicio técnico de análisis sobre las experiencias, situación actual y perspectivas del uso de la biotecnología en el sector agroalimentario, a fin de coadyuvar a la alimentación de millones de personas en el mundo.

****

Los desafíos no son menores. De acuerdo Naciones Unidas, la población mundial alcanza 6 mil 800 millones de habitantes, más de 2.5 veces que en 1950, y se estima que alcanzará 9 mil millones en 2045, lo que se traducirá en una enorme demanda de alimentos.

Ese reto es aún mayor si se toman en cuenta los efectos negativos del cambio climático en la producción agropecuaria, y el deterioro de los recursos naturales, como resultado de las actividades humanas.

Por ello, las acciones deben orientarse a buscar la seguridad alimentaria mediante la producción de alimentos suficientes, inocuos, accesibles y de calidad, pero cuidando en todo momento los recursos naturales y el medio ambiente. Se requiere aumentar la disponibilidad de semillas, recuperar la fertilidad de los suelos, hacer un uso eficiente del agua y darle valor agregado a la producción primaria.

Esta Conferencia es una oportunidad para analizar la problemática técnica y científica de la producción de alimentos desde diversos puntos de vista. La pregunta relevante es ¿Cómo la biotecnología contribuirá a atender la demanda alimenticia en un contexto caracterizado por consumidores cada vez más exigentes, mejor informados y más preocupados, no sólo por el contenido mismo de los alimentos, sino por cómo se produjeron y comercializaron?

La biotecnología ha permitido el desarrollo de nuevas herramientas que, sumadas al mejoramiento convencional de cultivos y animales, pueden aplicarse con diversos fines, como el mejoramiento genético de variedades vegetales y poblaciones animales; el aumento de rendimientos; la caracterización y conservación de los recursos genéticos; y el diagnóstico y prevención de enfermedades.

La gama de posibilidades que ofrece la biotecnología también debe responder a los cambios en los patrones de consumo, como los alimentos con propiedades nutraceúticas, con más vitaminas y minerales, y que resistan mejor el transporte y el almacenamiento. A la vez, debe propiciar que las actividades productivas sean más rentables, se produzcan en menores superficies y con un uso mas racional del agua. Esa es la relevancia y el potencial del tema que hoy nos ocupa.

****

En México, uno de los principales objetivos del **Plan Nacional de Desarrollo**, es “abastecer el mercado interno con alimentos de calidad, sanos y accesibles provenientes de nuestros mares y campos”, mediante el desarrollo, adaptación y adopción de nuevas tecnologías.

Múltiples de los desafíos que enfrenta el sector agrícola en México son fundamentalmente técnicos, y deben ser abordados con esa orientación. De ahí la importancia de emprender un cambio que, por un lado, se base en la experiencia de nuestros agricultores en el manejo de técnicas tradicionales y reconozca nuestra riqueza y diversidad biológica y, por otro, aplique nuevas tecnologías, para incrementar la productividad.

Actualmente, México cuenta con capital humano e infraestructura para contribuir a los avances de la biotecnología y transformarla en un instrumento estratégico para su desarrollo.

En las últimas tres décadas, en el país se ha generado una red de investigación en biotecnología, con más de mil investigadores de alto nivel y cerca de cien instalaciones con capacidades competitivas internacionalmente, en diferentes disciplinas.

Asimismo, para fortalecer la formación de talentos, el país cuenta con universidades e institutos que ofrecen programas de postgrado en Biotecnología y Ciencias Agrícolas, que han abierto sus puertas a estudiantes e investigadores de otros países.

Por otra parte, el país tiene un elevado potencial de crecimiento industrial, en particular en las áreas relacionadas con recursos biológicos. Existen empresas mexicanas que han incursionado exitosamente en el desarrollo y fabricación de productos a partir de biotecnologías modernas. Ese es el caso de procesos para biofermentación y producción de bioenergéticos alternativos; biofertilizantes; y la mejora de las características agronómicas de cultivos de alta importancia económica, principalmente las relacionadas con la resistencia al estrés biótico.

De acuerdo con la estrategia establecida por el Presidente Felipe Calderón, en el sector agropecuario se trabaja en cuatro ámbitos: uso eficiente de agua, manejo de enfermedades y plagas, mantenimiento de la fertilidad del suelo y mejoramiento genético de variedades.

****

Como en la década de los sesenta, la biotecnología debe ser un instrumento para que los países en desarrollo, aprovechen su riqueza biológica e, insisto, con respeto al medio ambiente, a la diversidad y a la salud, a fin de impulsar la productividad del sector agropecuario, incrementar la oferta de alimentos y mejorar las condiciones de vida de millones de personas en todo el mundo.

Parte importante del desarrollo de esos países dependerá de su habilidad para adquirir, adoptar, desarrollar y difundir innovaciones de productos y procesos basados en la biotecnología, científicamente sustentada y adecuada al contexto de cada país.

Esta Conferencia es una oportunidad para mirar hacia el futuro, conjuntar esfuerzos e identificar líneas de acción, que sirvan de marco para la cooperación internacional y el financiamiento de desarrollos biotecnológicos.

Por último, quiero hacer un reconocimiento a todos ustedes, investigadores destacados de varias partes del mundo. Gracias a su labor y compromiso, hoy vemos en la biotecnología una herramienta para avanzar en el propósito de poner alimentos disponibles y accesibles para los próximos años, mejorar las condiciones de vida de casi mil millones de personas, que padecen hambre y pobreza en muchas regiones del planeta.

Muchas gracias y les deseo el mayor de los éxitos.

附录 B.3 印度钦奈研究基金会主席 M S 斯瓦米纳坦 (Swaminathan) 先生

生物技术，打造未来的粮食安全

人口爆炸，环境污染，栖息地的破坏，生态领域的不断扩大，普遍存在的饥饿和不可持续的生活方式，以及气候变化的潜在不利影响，所有这些都威胁了人类的粮食，水资源，健康和生活保障制度的未来。2010 年似乎是不确定天气模式和极端气候行为的开始年。诸如气温升高，干旱，洪水，沿海风暴和海平面上升的事件可能给公众、专业人士和决策者带来了新的挑战。迄今为止，生物多样性一直充当了可持续粮食和健康安全的原料来源，其在发展气候性弹性耕作和生活体系中发挥了类似的作用。生物多样性同时也是生物技术的工业原料来源。令人遗憾的是，由于栖息地破坏、外来物种入侵以及农业体系遗传同质性的扩大，遗传侵蚀和物种灭绝现象现正在加快发展。遗传同质性的增加使得遗传资源面对生物和非生物胁迫时更加脆弱。为了增强对保护生物多样性的广泛兴趣，联合国大会已宣布将 2010 年定为国际生物多样性年。

生物多样性：生物技术产业的原料：

2002 年在里约热内卢举行的联合国环境与发展会议上通过的全球生物多样性公约（CBD）以及 2001 年联合国 FAO 成员国通过的粮食和农业植物遗传资源国际条约为生物多样性的保护和可持续性以及公平使用提供了一个路线图。生物多样性公约强调，在一个国家存在的生物多样性是这个国家人民的主权财产。因此，保护生物多样性，对其的可持续和公平利用以及为子孙后代保护生物多样性是每个国家的主要责任。这意味着所有国家都应进行各种发展计划对**生物多样性影响的分析**，以确保经济增长没有与生物多样性丢失相联系。代与代间的公平性要求我们必须为后人保存我们这个星球当前存在的生物多样性的至少一个有代表性的样本。

FAO 全球重要农业文化遗产系统和联合国教科文组织世界文化遗产地区的确认举措对引发公众的兴趣以保护和丰富独特的生物多样性地区非常重要。除了恰当的管理措施以外，必须特别重视通过公共教育和社会动员来进行保护区的保护。不幸的是，许多保护区、国家公园和生物圈保护区正面临着沉重的人为压力。根据 M S 斯瓦米纳坦研究基金会（MSSRF）开发的印度马纳尔湾（Mannar）生物圈保护区保护的生物圈托拉斯模型，生物圈保护区可由当地社区和政府部门来共同管理。参与性森林管理的概念应被拓展至国家公园和生物圈保护区上。

特别要注意生物多样性的热点地区。通过公众合作，应将这些地区转化为生物多样性的“快乐点”，即，那里的生物多样性可持续利用将有助于创造新的就

业和收入。沿海生物多样性还没有得到足够的重视。红树林湿地正存在不同程度的退化。由 MSSRF 开发的红树林联合管理程序应在任何仍有红树林遗传资源的地方执行。

生物多样性保护和可持续管理应当成为一个国家的道德规范。包括像印度**乡村行政委员会**那样的地方自治政府部门在内的政府机构都可以在这方面发挥重要作用，如通过社区生物多样性名册来拓展生物多样性的扫盲工作，以及建立诸如基因和种子库那样的必要基础设施。生物多样性与人类健康和农业动物生存的关系应成为普遍共识。

妇女在生物多样性保护和可持续利用上起着主导作用。在所有粮食安全和资源保护计划上，性别特点的主流化是必须的。通过提供必要的基础设施支持，女性保护者应能够继续其保护精神。农业生物多样性是文化多样性与生物多样性两者之间相互作用的结果。文化多样性的一个重要方面是饮食的多样性。应将传统智慧与现代科学相结合，采取每一个步骤来认识和保护文化多样性。

生物多样性不仅是粮食和健康安全的原料，而且还可以用于处置由气候变化引起的温度，降水和海平面的变化。一个正在变暖星球上的基因库已成为推动适应气候变化耕作体系的迫切需要。我们必须要为后人保存现行所有生态系统的遗传变异样本。在这方面，挪威政府在接近北极的斯瓦尔巴地区（Svalbard）的永久冻土条件下建设全球种子地下保险库的倡议是人类与遗传侵蚀斗争的一个重要里程碑。印度国防研究与发展组织（DRDO）最近也在喜马拉雅山张拉（Chang La）地区的永久冻土条件下设立了一个国家基因库。气候变化的前景已经对保存现今存在于我们星球上的每一个基因和物种的努力增添了紧迫性。

良好的生物安全：成功的生物技术企业的先决条件：

对农民和农业在减缓气候变化上的作用至今仍没有得到充分的承认和赏识。农民可以帮助建立土壤碳银行，同时通过肥料树木来改善土壤肥力。红树林是非常有效的碳封存。沼气工厂可以帮助将甲烷排放转化成家庭能源。因此，应在全球、各国和地方各级层面上开展一项运动，在每个农场使所有具有少量家产和一些家畜的农民建设蓄水池塘，种植一些肥料树木和建造沼气厂。一个农场池塘，少量肥料树木以及沼气工厂将有助于每一个小型农场对减缓气候变化，增进土壤健康和作物生长用水的节水灌溉做出贡献。

我，作为 1950 年至 1952 年间剑桥大学的一名遗传学学者，跟随了从沃森和克里克发现 DNA 分子双螺旋结构时代以来的分子遗传学的发展。分子遗传学已为

解决农业和医药方面的长期问题创造了难得的机遇。虽然像微繁殖生物技术和食品加工的所有方面都是重要的，但生物技术的核心内容是重组 DNA 技术。我们现在能够跨过性屏障精确地转移基因。标记辅助选择（MAS）已经加快了植物育种的发展速度。由 MAS 所开发的各种品种已被允许在有机农业上使用。

我们现在已经进入了一个气候变化的时代，气候变化导致了对气温，降水和海平面的潜在不利影响。我们需要新的基因来应对地球变暖带来的挑战。开发具有耐干旱和盐碱化等生物和非生物胁迫的新品种需要基因工程的帮助。

虽然没有像医药生物技术领域那样的严重伦理冲突的存在，但对粮食生物技术来说也有威胁人类健康和环境的担忧。因此，每个国家应有一个国家生物技术管理部门来进行自主、专业的领导，这将鼓舞公众，政治，专业和传媒的信心。**“我们国家农业生物技术政策的底线应该是经济上对农民家庭有利，有利于国家粮食安全、消费者健康、农业和健康的生物安全性，有利于环境保护和国家及国际农产品商品贸易的安全”**。

我希望本届生物技术会议将提供一个将新遗传学利益最大化和潜在风险最小化的路线图。生物技术可帮助打造可持续粮食安全的未来。

附录 B.4 Mr Rodney Cooke, Director, Operational Policy and Technical Division, International Fund for Agricultural Development (IFAD), Italy.

Investing in agricultural research and agricultural biotechnologies

I. The scale of these challenges and why we need to invest

The climate change negotiations of 2009 looked to political will to secure a future worth living for our children. A future in which there is food security for all. A future in which the challenge of climate change is acknowledged, addressed and overcome. Critical to achieving both of these goals is rural development.

The first MDG which was adopted by the world leaders of the UN in 2000 was an undertaking to reduce the number of hungry people by half by 2015 from 850 million, at that time, to around 400 million. A few years ago, little progress had been made and the food price crisis of 2007-08 actually led this figure to rise to over 1 billion people. Serageldin (2009)[1] referred to this "silent holocaust which causes some 40,000 hunger-related deaths every day".

In IFAD we believe the world community has learnt important lessons from the recent food price crisis:

First: The world can ill afford to under-invest in agriculture. While the food crisis of 2007/2008 was exacerbated by short-term developments -- such as crop failures in major cereal producing countries - it was fundamentally a reflection of the failure of world supply to keep pace with growing demand, largely due to declining or stagnant agricultural productivity in developing countries after two decades of under investment.

Second: In today's interconnected world, food crises will undoubtedly have an immediate and massive impact on the poor in developing countries. Recent estimates indicate that more than 100 million people joined the ranks of the hungry as a result of the food and global economic crises.

The world's population is projected to grow from 6.8 billion to 9.1 billion by 2050. Most of the growth is expected to take place in developing countries. Feeding 9.1 billion will require that overall global food production increases by 70 percent. Production in the developing countries would need to almost double. Over the past

[1] I. Serageldin, 2009 National Academy of Sciences, 25 (4) 35-38

three decades, agricultural productivity in developing countries has been stagnant or in decline, as a consequence of under-investment in the sector. Developing countries' public spending on agriculture declined from 11 per cent of national budgets in the 1980s to 7 per cent in recent years. And the share of ODA allocated to agriculture dropped from about 20 per cent to 4 per cent.

While increased food production is necessary, it is not sufficient on its own to avert food crises. Food security requires distribution mechanisms that enable equal access to food for all people. It is not enough to increase production and productivity; farmers should be linked to markets; not necessarily international markets but the last mile to vibrant and competitive local markets. Smallholder farmers need to increase their production to enhance national food security, but governments have to create the environment to enable them to do so. The crisis has shown that smallholder farmers often find it difficult to respond to sharp increases in demand and higher food prices in the absence of supporting institutions and appropriate infrastructure.

Climate change is expected to put some 49 million more people at risk of hunger by 2020[2.] And in Africa alone, where about 95 per cent of agriculture depends on rainfall, climate change is expected to cause severe water shortages that will affect between 75 million and 250 million people by 2020. In some countries yields from rain-fed agriculture could fall by 50 per cent by the same date. In other words, the people that will pay the price of climate change are the poor and vulnerable, and especially the three quarters of the world's poor living in rural areas and depending on agriculture. These people stand to be hit first and hardest.

But agriculture is not just a victim, it is also in part a culprit creating climate change. Agriculture and deforestation together account for an estimated 26 to 35 per cent of greenhouse gas (GHG) emissions. Afforestation and reforestation, better land-management practices such as agro-forestry, rehabilitation of degraded crop and pasture land and better farming practices can all contribute significantly to reducing greenhouse gas emissions.

In other words, agriculture – as well as being part of the problem – can also be part of the solution to climate change and food security. But most of the key players are the poor and vulnerable: rural people in developing countries. There are five hundred

[2] The Intergovernmental Panel on Climate Change (IPCC) 2007

million smallholder farms worldwide supporting around two billion people, or one third of the world's population. They farm 80 per cent of the farmland in Asia and Africa. They produce 80 per cent of the food consumed in the developing world and they feed one third of the global population. Our focus should be on increasing smallholder productivity, and reducing their vulnerability.

Rural women in particular need to be able to fulfill their potential. Women are increasingly the farmers of the developing world, performing the vast majority of agricultural work and producing between 60 and 80 per cent of food crops. To boost smallholder productivity and production will require consistent and sustained investment in agriculture. Such investment can pay huge dividends: GDP growth generated by agriculture is at least twice as effective in reducing poverty than growth in other sectors (World Development Report, 2008).

Two key challenges face humanity, namely our ability to meet the goal of food security for all while managing climate change. Both of these simultaneously constitute a tremendous challenge. Old failures in rural development and now these new challenges call for new solutions in approaching rural poverty reduction. This indicates the important role for research, but in effective innovation systems.

II. Innovation Systems: Effective investments in agricultural research

Agricultural investment plans must be coherent with overall national plans for economic development and poverty reduction. They must distinguish between situations which are amenable to economic development through technical advances, and in cases where the lot of the poor can be better or must first be improved by other means, such as support for health, domestic water, education or infrastructure programmes. The planning process will be country specific. An essential need in an agricultural research plan is that it provides for knowledge and information flow in two directions. A farmer-centric participatory approach requires that the products of a strategic and applied research is moved from trained scientists to farmers in rural communities and that the demands and indigenous knowledge of the rural community should flow to the scientists. This is multi-disciplinary in its approach to constraint identification and alleviation and must widen stakeholder participation to engage the contributions of those concerned with the non-technical constraints to poverty reduction. These innovation systems intend to lead to sustainable production systems

which include the following attributes[3]:

- Utilises crop varieties and livestock breeds with high productivity per externally derived input.
- Avoids the unnecessary use of external inputs.
- Harnesses agro-ecological processes such as nutrient cycling, biological nitrogen fixation, etc.
- Minimise the use of practices that have adverse impacts on the environment and health.
- Makes productive use of human and social capital in the form of knowledge and capacity to adapt and innovate, and to resolve common landscape-scale problems.
- Minimises the impacts on externalities such as GHG emissions, clean water availability, carbon sequestration and conservation of biodiversity.

It is essential that rural people are provided with the means to adapt to climate change. They need seeds that are more resistant to drought or to floods and they need cutting-edge agricultural technologies. This must be linked to rural financial services to allow them to invest in the future and to help tide them over in lean times.

III. What does this mean for agricultural biotechnologies?

Paper ABDC-10/8.1 reminds us that "Science, technology and innovation underpin every one of the MDGs – it is inconceivable that gains can be made without a focused science, technology and innovation policy" (UN Millennium Project, 2005). Yet the almost total neglect of S&T in the Poverty Reduction Strategy Papers emphasizes again the need for more joined-up S&T management. Securing appropriate and consistent levels of funding for agricultural S&T has consistently been hugely problematic for most developing countries.

Options to increase the levels of funding and increase the impact of S&T (derived from Section B of ABDC-10/8.1) include:

- Increased funding:
  - redirecting part of the total public support package for agriculture to innovative technological packages;
  - developing much closer partnerships with R&D supported by other ministries and their donors;
  - encouraging commercialization of agricultural R&D;

[3] Adapted from "Reaping the Benefits", The Royal Society 11/09 (2009)

- introducing commodity levies and tax check-offs to support “pro-poor” agricultural R&D.

- Efficiency and targeting of funding:
  - moving progressively away from traditional arrangements for centrally-based national agricultural research organization;
  - changing the criteria for priority setting and procedures for allocating funds;
  - linking research priorities more explicitly to wider social and economic needs;
  - creating formal structures and mechanisms for stakeholder participation in R&D policy;
  - giving increasing priority to research that is jointly formulated and implemented through public-private partnerships;
  - giving increased priority to research projects on local and regional product value chains and production systems;
  - In general establishing S&T and innovation funding windows based on thematic "problem-based" priorities and "value chains;
  - encouraging and enforcing intellectual property protection.

In the crops background paper (ABDC-10/3.1) priority options for developing countries are brought together under eight headings. But the sequence or flow of these headings should be perhaps recast as follows:

Policy development and priority setting

- Countries should develop expertise to ensure that they can make sovereign decisions about adopting biotechnologies and be able to carry out their own independent, broad based risk/benefit analyses of implementing such technologies

Linkages Biotechnology/Other agricultural R&D

- Biotechnological research should be more effectively linked to strong and well resourced agricultural R&D programmes.

Capacity development

- Countries should develop biotechnology capacities of the National Agricultural Research Systems.

Regulation of biotechnology utilization

- All countries should be encouraged to establish consistent and transparent, evidence-based decision-making processes to regulate crop biotechnology R&D, and its application.

Shared access to technologies

- Effective and equitable mechanisms for PPP and South-South collaboration should be established, where appropriate.

Uptake of biotechnologies

- Biotechnology development should be strongly linked with strategies for its widespread dissemination. Stronger extension services involving participatory crop improvement programmes, should be an integral part of national/regional agricultural support structures, including enhanced seed production and distribution systems.

Documentation of development and impact

- Developing countries should document and analyse the adoption and socio-economic impacts of crop biotechnological innovation to advise policy makers on the cost/benefit implications of biotechnology application.

Investments in Biotechnology R&D

- Developing countries, possibly working in regional groups, should build up indigenous research, development, and advisory capacities for generation, assessment and adoption of appropriate biotechnologies.

In the livestock paper for this conference (ABDC-10/5.1), the way forward notes that the application of such biotechnologies should be supported within the framework of a national livestock development programme. Secondly, that the targeted users of these biotechnologies are normally resource poor farmers with limited purchasing power, therefore appropriate models are needed to ensure that the eventual products are acceptable to them. Thirdly, if biotechnologies are to be adopted they should build upon existing conventional technologies.

IV. Agricultural biotechnologies, sustainable agriculture and agricultural biodiversity

Professor Swaminathan, in his opening message to ABDC-10, observed that Biodiversity has so far served as the feedstock for sustainable food and health security and can play a similar role in the development of climate resilient farming and livelihood systems.

The UN General Assembly has declared 2010 as the International Year of Biodiversity. Sustainable agriculture comes with the notion of financial and institutional viability but also ecological soundness and technological appropriateness. Farmers in climatically unreliable, low-external-input environments usually need to maintain more diversity by default: they plant more than one variety per crop, using traditional varieties that have been adapted to environmental variation and uncertainty as well as to local preferences

and socio-economic settings through repeated reproduction and selection.

However, we must recognise that these traditional farm-based systems usually have fewer opportunities for genetic recombination and cross-breeding, and often perform poorly in the production of disease-free seed and in seed storage, which are some of the domains in which formal institutional seed systems appear to be far more effective.

This calls for the development of synergies between formal science and informal knowledge systems and requires the design of new, specific and locally adapted approaches to analyze genetic diversity and farmers' practices – the intellectual property embedded in these which drives the incentive structure of farming communities to sustain such diversity – and ultimately the sustainability of the agricultural production system. There is a need to identify the relevance and the dynamics of genetic variability conservation in the context of small-holders' coping strategies, enhance the use of diversified plant genetic resources for sustainable agriculture and sustained improvements in food production – towards better household food security. Recent studies indicate that too narrow a range of crops is leading to reduced honey bee populations in many countries - bees seem to require pollen from a diverse range of flowering plants if they are to develop strong immune systems that are essential to survival. This is an example of one of many "knock-on effects" of diminishing plant diversity in rural areas.

IPR and Traditional Knowledge and Germplasm: The Role of CBD

The Convention on Biological Diversity (CBD) mandates that the contracting party shall: "respect, preserve and maintain knowledge, innovations, and practices of indigenous and local communities embodying traditional lifestyle relevant for the conservation and sustainable use of biological diversity".

Today, IFAD commits three-quarters of a billion dollars annually to loan and grant-financed projects to fight rural poverty. This is set to average around 1 billion US dollars per year in the next three years. All Fund-financed projects and programmes impinge on agricultural production systems and, so, have an impact on agricultural biodiversity. We have long recognised that the rural poor and the farming communities, who our projects are designed to benefit, are in fact the custodians of a diverse gene pool and are the main purveyors of agricultural agro-biodiversity.

Through its focus on a pro-poor innovations agenda, IFAD supports the generation, development and diffusion of sustainable agricultural technologies. This means that we

clearly recognise that technological change should not happen at the expense of the natural resource-base. IFAD's projects and programmes address around 30 million smallholder farmers every year – and a large majority of these eke out a survival in remote, marginalised agro-ecosystems where the conservation of their fragile agricultural biodiversity is critical to the sustainability of their livelihood systems. This requires application of significant local knowledge, skills, ingenuity and innovation to the biophysical resources at hand – and equally to the conservation and utilization of germplasm – local planting material that is adapted to the local conditions.

With financial support from IFAD, Bioversity International has investigated sustainable utilisation of plant genetic resources in desert-prone areas of Mali and Zimbabwe. Through programmes of action–research, scientists worked with farmers to develop innovative methods to identify, protect and utilize endangered traditional crops. These genetic resources were, are and hopefully will continue to be of significant importance to the food security of poor rural communities. Of particular importance was the testing of alternative models for community-based in-situ seed conservation in conjunction with farmers benefiting from development projects financed by IFAD loans. Using participatory methods, appropriate sites rich in crop genetic diversity were identified, selected, and then mapped before drawing up procedures for the conservation of the genetic resources. Farmers were encouraged to build upon their own knowledge to enable them to identify and characterise traditional varieties and seed-systems. This work resulted in prototype models for in-situ gene-banks, on-farm seed production, storage and exchange between small farmers. Replication of successful models have not only led to better on-farm management of crop genetic resources but have promoted sustainable improvement of rural livelihoods through the forging of strategic partnerships between public and private sector entities, such as farmers organisations, government entities and seed companies. Another successful model led to the development of "Seed Diversity Fairs" which provide space for interaction between farmers, development workers and researchers that leads in turn to decentralized approaches in research, training and curriculum development in plant breeding and seed systems. Crops involved in the programmes described included millet, sorghum, cowpea and Bambara groundnut – important crops in desert margin areas.

The impact of intellectual property rights on farmers' seed systems

Pro-poor IPR systems build on the comparative advantage of these communities as custodians of the genetic resources, local know-how and innovation capacity. In order to foster creativity and innovation to promote sustainable agriculture – it is imperative

to develop and deploy an appropriate system of intellectual property rights (IPRs) systems for fair and equitable sharing of benefits of new or original knowledge or capital embedded in germplasm – for instance, a landrace.

In general, very few investors in agriculture and rural development have adequately realized the role that agricultural biodiversity can play in addressing poverty and household food security, in an eco-sustainable way. One way forward is the link between IPRs, incentives and agricultural biodiversity-conservation-based sustainable production systems.

Farmers often receive commercial varieties as part of a package that includes, credit, seed and agro-chemicals. In many cases accepting such packages is the only way farmers can access credit in rural areas. The end result is a progressive marginalization or disappearance of local varieties. This follows the questionable idea of progress favouring the replacement by high yielding ("improved") varieties of traditional crop varieties in the most productive areas. And farmers' seed systems are important to resource poor farmers in poor agro-ecological environments because of the importance of locally adaptive varieties. In other words, intellectual property rights are working to reward standardization and homogeneity, when what should be rewarded is agro-biodiversity particularly in the face of climate change and the need to build resilience by encouraging farmers to rely on a diversity of crops. For this reason member states should promote innovation in both the commercial seed systems and the farmers' seed systems, ensuring that innovation in both works for the benefit of the rural poor.

附录 C
文件清单

粮农组织文件

ABDC-10/1 Rev.1	议程和时间表
ABDC-10/2	暂定注释议程和时间表
ABDC-10/3.1	发展中国家种植业生物技术现状和选择
ABDC-10/3.2	综合篇：发展中国家种植业生物技术现状和选择
ABDC-10/4.1	发展中国家森林生物技术现状和选择
ABDC-10/4.2	综合篇：发展中国家森林生物技术现状和选择
ABDC-10/5.1	发展中国家畜牧业生物技术现状和选择
ABDC-10/5.2	综合篇：发展中国家畜牧业生物技术现状和选择
ABDC-10/6.1	发展中国家渔业和水产养殖业生物技术现状和选择
ABDC-10/6.2	综合篇：发展中国家渔业和水产养殖业生物技术现状和选择
ABDC-10/7.1	发展中国家食品加工和食品安全生物技术现状和选择
ABDC-10/7.2	综合篇：发展中国家食品加工和食品安全生物技术现状和选择
ABDC-10/8.1	发展中国家农业生物技术政策选择
ABDC-10/8.2	综合篇：发展中国家农业生物技术政策选择
ABDC-10/9	农业生物技术促进粮食安全和可持续发展：发展中国家的政策选择和国际社会行动的优先重点
ABDC-10/10	粮农组织电子邮件会议“吸取过去20年发展中国家农业生物技术的成功经验和失败教训”的背景文件。

非粮农组织文件

ABDC-10/Swaminathan	生物技术，打造未来的粮食安全
ABDC-10/IFAD	农业研究和农业生物技术投资
ABDC-10/AARINENA	近东和北非农业研究所协会关于西亚和北非地区的专题文件
ABDC-10/APAARI	亚太农业研究所联合会专题文件：在亚太地区利用生物技术促进粮食安全
ABDC-10/ECA	欧洲和中亚区域会议专题文件
ABDC-10/FARA	非洲农业研究论坛专题文件
ABDC-10/IICAREDBIO	拉丁美洲及加勒比会议的背景文件

ABDC-10/Biosecurity “在生物安保更宽范畴内维护生物安全”会议专题文件

附录 D
与会者名单

粮农组织成员国代表

ALGERIA
Irekti Hocine
Director, l'Institut National de la Recherche Agronomique d'Algérie (INRAA)
2 rue des Freres Ouaddak
BP 200 Hassan Badi El Harrach Alger
Algérie
Tel: +21321521281
E-mail: irekti_ho@yahoo.fr

Djenadi Chafika
Researcher
INRAA
2 rue des Freres Ouaddak
BP 200 Hassan Badi El Harrach Alger
Algérie
Tel: +213792285727
E-mail: cdjenadi@yahoo.fr

ARGENTINA
María Daniela Guaras
Technical Advisor
Dirección de Relaciones Agroalimentarias Internacionales (DRAI)
Ministerio de Agricultura, Ganadería y Pesca
Av. Paseo Colon 922 - PB - Officina 36
Argentina
Tel: +(5411) 4349-2019
E-mail: mguara@minagri.gob.ar

Elisa Carrillo
Director del Instituto de Biotecnología, Centro de Investigaciones en Ciencias Veterinarias y Agronómicas (CICVyA)
Instituto Nacional de Tecnología Agropecuaria (INTA)
Calle Repetto y De Los Reseros s/n; (C.P. 1686)
Hurlingham
Argentina
Tel: +54114621 0199
E-mail: ecarrillo@cnia.inta.gov.ar

Gerardo Petri
Asesor del Ministerio de Agricultura, Ganaderia y Pesca
Av paseo colon 922, PB, Anexo Jardin
Argentina
Tel: +5411 43492211
E-mail: gpetri@minagri.gov.ar

BHUTAN
Tashi Samdup
Director
Council for Renewable Natural Resources Research of Bhutan (CoRRB)
Ministry of Agriculture,
P.O Box 119, Thimphu,
Bhutan
Tel: +75 17114221
E-mail: tashi_samdup2001@yahoo.com

BRAZIL
Arthur da Silva Mariante
Project Leader, Researcher A
Embrapa Cenargen C. Postal 02372 CEP 70770-913 Brasilia, DF
Brazil
Tel: +(55) 61 3448-4904
E-mail: asmariante@gmail.com; mariante@cenargen.embrapa.br

Francisco Jose Lima Aragão
Leader Researcher A
Embrapa Cenargen, PqEB W5 Norte, 70770-913 Brasilia, DF,
Brazil
Tel: +55-61-34484642
E-mail: aragao@cenargen.embrapa.br

Milton Kanashiro
Researcher
Embrapa Amazônia Oriental, Trav. Eneas Pinheiro s/n, Marco. 66.095-100, Belém-Para,

Brazil
Tel: +55-91-3204 1121
E-mail: milton@cpatu.embrapa.br
José Luiz Viana de Carvalho
Researcher - Embrapa Food Technology
Embrapa Agroindustria de Alimentos
Av. Das Américas, 29501
23020-470 Rio de Janeiro, Brazil
Tel: 55-21-24107448
Fax: 55-21-24101090
Email: jlvc@etaa.embrapa.br

Mônica Cibele Amâncio
Technological Management Coordinator
Embrapa, PqEB W3 Norte FINAL, ED.
Caixa Postal 040315
CEP 70770-901 Brasilia, DF
Brazil
Tel: +55 61 3448-4545
E-mail: monica.arancio@embrapa.br

Juliana Ribeiro Alexandre
Federal Inspector, GMO Biosafety Coordination
Secretariat of Animal and Plant Health
Ministerio de la Agricultura e del Abastecimiento (MAPA)
Esplanada dos Ministérios
Bloco “D” Anexo “B” Sala 420
Brasília, DF – Brazil - CEP 70.043-900
Tel: 55 61 32182320
Fax: 55 61 32183075
E-mail: juliana.alexandre@agricultura.gov.br

Marilia Regini Nuti
Researcher - Embrapa Food Technology;
Brazilian Biofortification Coordinator for Biofortification HarvestPlus,
AgroSalud and BioFORT Projects
Embrapa Agroindustria de Alimentos Av das Americas 29501 - Guaratiba
Rio de Janeiro RJ CEP 230120 -470
Brazil
Tel: +552136229755
E-mail: marilia@ctaa.embrapa.br; mnutti@uninet.com.br

CAMEROON

Christine Madiesse Epse Pedhom
Sub Director of Seeds and Plants
Ministry of Agriculture and Rural Development
BP 1531 Yaoundé
Cameroon
Tel: +23799887995; 23722070570
E-mail: cpedhom@yahoo.fr

CANADA

John P. Phillips
Professor Emeritus
Dept Mol & Cellular Biology,
University of Guelph, Guelph, ON N1G2W1
Canada
Tel: +1 519-824-4120 x52796
E-mail: jphillip@uoguelph.ca

Mark Jordan
Research Scientist
Agriculture and Agri-Food Canada,
195 Dafoe Rd, Winnipeg, MB, R3T 2M9,
Canada
Tel: +1 (204) 983-1453
E-mail: mark.jordan@agr.gc.ca

William Paul Francis McCaughey
Science Director,
Bioproduct platforms and Genomics
Agriculture and Agri-Food Canada,
Research Centre,
107 Science Place, Saskatoon, Saskatchewan
Canada S7N 0X2
Tel: +1-306-956-7211
E-mail: paul.mccaughey@agr.gc.ca

Lou Skrinar
Veterinary Counsellor

Canadian Food Inspection Agency
Embassy of Canada
Schiller 529, Col. Polanco
México, D.F.
Tel: +52 55) 5724 7976
E-mail: lubos.skrinar@international.gc.ca

CAPE VERDE

Regla Viviana Amorós Hernández
Researcher
Instituto Nacional de Investigação e Desenvolvimento Agrário (INIDA)
Achada de São Filipe, CP#621, Praia,
Santiago,
Cap-Vert
Tel: + (238) 998 78 76
E-mail: reglah@hotmail.com

COOK ISLANDS

Anthony Maine Brown
Secretary General Ministry of Agriculture
Box 96, Rarotonga,
Cook Islands
Tel: +682 28711
E-mail: abrown@agriculture.gov.ck

CUBA

Merardo Mariano Pujol Ferrer
Head, Plant Division,
Center for Genetic Engineering and Biotechnology,
Ave. 31 e/ 158 & 190, POB 6162, ZIP 10600,
Cubanacan,
Playa, Havana, Cuba
Tel: +(53-7) 2716022, Ext 1244
E-mail: merardo.pujol@cigb.edu.cu

DOMINICAN REPUBLIC

Bernarda Altagracia Castillo
Directora Esecutiva
Instituto de Innovación en Biotecnología e Industria (IIBI)
Av. Núñez de Caceres Esq. Oloff Palme
Santo Domingo
República Dominicana
Tel: +809-566-8121
E-mail: bcastillo@iibi.gov.do

Hector A. Rosario
Asesor Dirección Esecutiva, IIBI
Av. Núñez de Caceres Esq. Oloff Palme
Santo Domingo
República Dominicana
Tel: +809-566-8121
E-mail: hectorrosario@hotmail.com

EGYPT

Mohamed Khalifa Hassan
Technical Manager
National Laboratory for Veterinary Quality Control on Poultry Production (NLQP)
Nadi El Seid Street - Dokki- Giza
Egypt
Tel: +202-33380121
E-mail: mkahassan@hotmail.com

Mona Mehrez Aly
Director
Animal Health Research Institute (AHRI)
Nadi El Seid Street - Dokki- Giza
Egypt
Tel: +202-33380121
E-mail: monaaly5@yhoo.com

EL SALVADOR

Claudia Isabel Morales Arévalo
Auxiliar del Departamento de Biotecnologìa
Km 33 1/2 Carretera hacia Santa Ana,
Ciudad Arce, La Libertad
El Salvador
Tel: +(503) 23 66 4841
E-mail: clauk06@hotmail.com

GABON

Mesmin Ndong Biyo'o
Chef, Laboratoire de Biotechnologies Végétales,
lnstitut de Recherches Agronomiques et Forestières
BP: 2246
Gabon
Tel: +(241) 07252751

E-mail: ndong_ndong@yahoo.fr

Paul-Henri Nguema Meye
Conseiller du Ministre de l'Agriculture pour les questions économiques et financières
BP: 11200
Gabon
Tel: +(241) 07295144
E-mail: nguemameye@yahoo.fr

GAMBIA

Jato S. Sillah
Minister of Forestry and the Environment
Ministry of Forestry and the Environment
GIPFZA House
1st floor
Kairaba Avenue, KMC
The Gambia
Tel: +220 439 9445
E-mail: jato_s_sillah@hotmail.com

Mariama Khan
Acting Director, Policy Analysis Unit,
Office of the President
The Gambia
Tel: +220 7000681
E-mail: khanmariama@yahoo.com.

Momodou S. Kah
Deputy Minister for Agriculture
The Gambia
Tel: +220-4226389

Nfamara Jerro Dampha
Director of Fisheries
Fisheries Department
6, Marina Parade - Banjul
The Gambia
Tel: +220 4223373
E-mail: d.nfamara@yahoo.com

GRENADA

Malachy Dottin
Director of Research & Development & Biotechnology laboratory
Ministry of Agriculture
Ministerial Complex
St Georges,
Grenada, W.I.
Tel: +473 4054490; +473 4403083
E-mail: malachyd@spiceisle.com

GUATEMALA

Arnoldo Roberto Cobaquil García
Jefe Area Fitozoogenética,
Unidad de Normas y Regulaciones,
Ministerio de Agricultura Ganadería y Alimentación
7a. Av. 12-90 zona 13, Guatemala,
Guatemala
Tel: +(502) 24137468, 24137469, 52025161
E-mail: coba.vincen@gmail.com;
rcobaquil@maga.gob.gt

HAITI

Carl Benny Raymond
Conseiller,
Representant Permanent Adjoint
Ambassade d'Haiti en Italie
Rome, Italy
Tel: +39-3339651179
E-mail: rcarlraymond@gmail.com

INDIA

Vinod Kumar Yadava
Director, Integrated Pest Management (IPM),
Directorate of Plant Protection, Quarantine & Storage,
Ministry of Agriculture,
CGO Complex, NH-IV, Faridabad-121001
Tel: +910129-2413023 (Office); +91 9868518268 (Mobile)
E-mail: dipm@nic.in;
vinodkyadava@hotmail.com

INDONESIA

Anneke Angraeni
Scientist
Indonesian Research Institute for Animal Production
PO. Box 221, Bogor 16002,
Indonesia
Tel: +62 251 240 751
Fax: +62 251 380 588
Mobile: +62 813 8922 1689
E-mail: annekeanggraeni@yahoo.co.id

Anto Rimbawanto
Research Scientist
Forestry Research and Development Agency (FORDA)
Centre for Forest Biotechnology and Tree Improvement
Jalan Palagan T. Pelajar, Km 15.
Purwobinangun
Pakem Yogyakarta,
Indonesia 55582
Tel: +62274897305; 62274895954
E-mail: rimba@indo.net.id

Bahagiawati Amirhusin
Scientist
Indonesia Center for Agriculture Biotechnology and Genetic Resources Research & Development
Jl. Tentara Pelajar 3 A, Bogor 16111,
Indonesia
Tel: +62 251 831 6897
Fax: +62 251 833 8820
Mobile: +62 812 848 9050
E-mail: bahagiawati@indo.net.id

Erizal Sodikin
Agriculture Attaché Indonesian Embassy/APR to UN Food Agencies in Rome
Embassy of the Republic of Indonesia
Via Campania, 55
00187 Rome
Italy
E-mail: attani@indonesianembassy.it; erizalsodikin79@yahoo.com

Purnomo A. Chandra
Multilateral Counsellor
Embassy of the Republic of Indonesia
Via Campania, 55
00187 Rome
Italy
E-mail: purnomo.chandra@gmail.com

Annisa Tyas Purwanti
3rd secretary
Indonesian Embassy,
Julio Verne 27
Mexico City
Mexico
E-mail: annisatyas.kbrimexico@gmail.com

KENYA

Emilio Ndwiga Mugo
Senior Deputy Director
Kenya Forest Service
Kenya
Tel: +254 733823873
E-mail: enmugo@kenyaforestservice.org

Jacinta Ngwiri
Agriculture Attache
Kenya Embassy
Via Archimede 164 Rome
Italy
Tel: +39068082714
E-mail: jacintamngwiri@yahoo.com

Susan Muriuki
Deputy Director of Agriculture
P. O. Box 30028 -00100 Nairobi,
Kenya

Tel: +2542718870
E-mail: susannairobi@yahoo.com

LESOTHO
Mofihli Motsetsero
Chief Crops Production Officer
Department of Crops Services, P.O. Box 7260, Maseru 100,
Lesotho
Tel: (+266) 22324827; (+266) 22324029
(+266) 58781043
E-mail: Mofihlizm@yahoo.com; motz.com@gmail.com

MALAWI
Alfred P. Mtukuso
Director, Department of Agricultural Research Services
Ministry of Agriculture and Food Security
P.O. Box 30779, Lilongwe 3,
Malawi
Tel: +265 1 707 398
E-mail: agnc-research@sdnp.org.mw; apmtukuso@yahoo.com

MALAYSIA
Umi Kalsom Abu Bakar
Director of Biotechnology Research Centre,
Malaysian Agricultural Research and Development Institute (MARDI)
P.O.Box 12301 GPO, 50774 Kuala Lumpur,
Malaysia
Tel: +603-8943 7305
E-mail: uab@madi.gov.my

MEXICO
Mariano Ruíz-Funes Macedo
Subsecretario de Agricultura
Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA)
Mexico
Tel. +52 38 71 10 84
E-mail: m.ruizfunes@sagarpa.gob.mx

Salvador Fernández Rivera
Coordinador de Investigación
Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias (INIFAP)
Mexico
Tel: +52 (55) 36 26 86 42
E-mail: fernandez.salvador@inifap.gob.mx
Fernando Gómez Merino
Director de Investigación
Colegio de Postgraduados
Mexico
Tel: +52 01 55 58045911; +52 5959574677 (mobile)
E-mail: fernandg@colpos.mx; dirinv@colpos.mx

Elías Reyes Bravo
Subdirector de Enlace con Instituciones Internacionales
Coordinación de Asuntos Internacionales
SAGARPA
Mexico
Tel: +52 38 71 10 00 Ext. 28192
E-mail: ereyes.dgai@sagarpa.gob.mx

Marco Antonio Caballero García
Subsecretaría de Agricultura
SAGARPA
Mexico
Tel: +52 (55) 38 7110 00 Ext. 33334
E-mail: mcaballero.dgvdt@sagarpa.gob.mx

Sol Ortíz García
Directora de Área de la Secretaría Ejecutiva de la Comisión Intersecretarial de Bioseguridad de los Organismos Genéticamente Modificados (CIBIOGEM)
Mexico
Tel: +52 (55) 55756878
E-mail: sortiz@conacyt.mx

Dvorak Montiel Condado
Miembro del Consejo Consultivo Científico de la CIBIOGEM
Facultad de Ciencias Biológicas,
Universidad Autonoma de Nuevo Leon
Mexico
Tel: +52 (818) 3294110
E-mail: dvorakdna@hotmail.com

Miguel Rubio-Godoy
Miembro del Consejo Consultivo Científico de la CIBIOGEM
Instituto de Ecología, A.C.
Xalapa, Veracruz 91070
Mexico
Tel: +52 (228) 8421849 Ext. 6208
E-mail: miguel.rubio@inecol.edu.mx

Santy Peraza Echeverría
Profesor-Investigador
Unidad de Biotecnología
Centro de Investigación Científica de Yucatán (CICY)
Calle 43 No. 130, Colonia Chuburná de Hidalgo, C.P. 97200
Mérida, Yucatán, México
Tel. +52 (999) 942 83 30 Ext. 202
Fax +52 (999) 981 39 00
E-mail: santype@cicy.mx

Felipe Sánchez Teyer
Investigador de la Unidad de Biotecnología
Centro de Investigación Científica de Yucatán A.C, (CICY)
C 43 # 130 Col. Chuburná de Hidalgo. C.P. 97200
Mérida, Yucatán, México
Tel: + (52)-999-9428330 Ext. 204
Fax: + (52)-999-9813900
E-mail: santey@cicy.mx

Hilda Victoria Silva Rojas
Encargada del Laboratorio de Biotecnología de Semillas (COLPOS)
Mexico
Tel: +52 595 95 202 00 Ext. 1514/1386
E-mail: hsilva@colpos.mx

Higinio López Sánchez
Profesor Investigador experto en Recursos Genéticos (COLPOS)
Mexico
Tel: +52 01 222 285 0013
E-mail: higiniols@colpos.mx

Leovigildo Córdova Téllez
Coordinador del Sistema Nacional de Recursos Fitogenéticos para la Alimentación y la Agricultura (SINAREFI),
Campus Montecillo (COLPOS)
Mexico
Tel: +52 (595) 95 202 00 Ext. 1511
E-mail: lcordova@colpos.mx
Amalio Santacruz Varala
Profesor Investigador experto en mejoramiento genético asistido por marcadores moleculares (COLPOS)
Mexico
Tel: 595 95 202 00 Ext. 1570
E-mail: asvarela@colpos.mx

Gerónimo Hernández Angeles
Jefe del Departamento de Asuntos Multilaterales
Coordinación General de Asuntos internacionales
SAGARPA
Mexico
Tel: +52 38 71 10 00 Ext. 28201
E-mail: ghernandez.dgai@sagarpa.gob.mx

Felipe de J. Legorreta Padilla
Coordinación de Investigación
INIFAP

Mexico
E-mail: legorreta.felipe@inifap.gob.mx

Alejandra Mora Avilés
Biotecnología Agrícola
INIFAP
Mexico
Tel. +52 461 6115323 Ext. 186
E-mail: mora.alejandra@inifap.gob.mx

Moisés Cruz
Biotecnología Forestal
INIFAP
Mexico
Tel: +52 555 626 8700 Ext. 607
E-mail: cortes.moises@inifap.gob.mx

Edith Rojas Anaya
Biotecnología Pecuaria
INIFAP
Mexico
Tel: +52 3618-0800 Ext. 25/41
E-mail: Edith_ra23@yahoo.com.mx

Jesús Vázquez Navarrete
Biotecnología Alimentaria
INIFAP
Mexico
Tel: 36 18 08 00 Ext. 44/45
E-mail: vazquez.jesus@inifap.gob.mx

Fernando de la Torre Sánchez
Biotecnología en Recursos Genéticos
INIFAP
Mexico
Tel: +52 (01) 378 78 203 55 Ext. 144; +52 333 441 68 94 (Mobile)
E-mail: delatorre.fernando@inifap.gob.mx

Saúl Hernán Aguilar Orozco
Asesor de la Comisión de Ciencia y Tecnología
H. Cámara de Senadores
Mexico
Tel: +52 53 45 30 00 Ext. 3550
E-mail: saguiloro@hotmail.com

Genoveva Ingle de la Mora
Dirección General de Investigación en Acuacultura
Instituto Nacional de la Pesca (INAPESCA)
Mexico
Tel: +52 38 71 95 54
E-mail: genovevaingle@yahoo.com.mx

Araceli Avilés Quevedo
Dirección General de Investigación en Acuacultura
INAPESCA
Mexico
Tel: +52 01 612 123 01 22 Ext. 123
E-mail:
Araceli.aviles@inapesca.sagarpa.gob.mx

Enriqueta Molina Macías
Directora del Servicio Nacional de Inspección y Certificación de Semillas (SNICS)
Mexico
Tel: +52 (55)36220667 al 69
E-mail: enriqueta.molina@sagarpa.gob.mx; enriqueta.molina@snics.gob.mx

José Manuel Chávez
Subdirector de Control de Calidad
SNICS
Mexico
Tel: +52 (55)36220667 al 69
E-mail: manuel.chavez@sagarpa.gob.mx; manuel.chavez@snics.gob.mx

Octavio Javier Angel Carranza de Mendoza
Director General de Inocuidad Agroalimentaria, Acuícola y Pesquera
Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria (SENASICA)
Guillermo Pérez Valenzuela N° 127
Col. Del Carmen Coyoacán
CP 04100. México, D.F., Mexico
Tel: +52 50903000 Ext. 51502
E-mail: octavio.carranza@senasica.gob.mx

Silvia Elena Rojas Villegas
Director de Bioseguridad para Organismos Genéticamente Modificados (DGIAAP-SENASICA)
Guillermo Pérez Valenzuela N° 127
Col. Del Carmen Coyoacán
CP 04100. México, D.F., Mexico
Tel: +52 50903000 Ext. 51502
E-mail: silvia.rojas@senasica.gob.mx

Alma Liliana Tovar Díaz
Subdirectora de Regulación de Organismos Genéticamente Modificados (DGIAAP-SENASICA)
Guillermo Pérez Valenzuela N° 127.
Col. Del Carmen Coyoacán
CP 04100. México, D.F., Mexico
Tel: +52 50903000 Ext. 51502
E-mail: alma.tovar@senasica.gob.mx

Abraham Itzcoatl Acatzi Silva
Encargado del Centro Nacional de Referencia en Detección de Organismos Genéticamente Modificados (SENASICA)
Guillermo Pérez Valenzuela N° 127.
Col. Del Carmen Coyoacán
CP 04100. México, D.F., Mexico
Tel: +52 50903000 Ext. 51502
E-mail: abraham.acatzi@senasica.gob.mx

Amanda Gálvez Mariscal
Coordinadora del Programa Universitario de Alimentos y Profesora Investigadora de Facultad de Química del Depto de Alimentos y Biotecnología
Universidad Nacional Autónoma de México
Circuito de la Investigación Científica s/n
Edificio de Programas Universitarios
Ciudad Universitaria
México D.F. 04510, Mexico
Tel: + 52-55-5616-6816; 5622-5208; 5622-5217
Fax +52-55-5622-5223
E-mail: galvez@unam.mx

Marcela Castillo Figa
Jefa del Departamento de Bioseguridad e Inocuidad Alimentaria
Programa Universitario de Alimentos
Universidad Nacional Autónoma de México
Circuito de la Investigación Científica s/n
Edificio de Programas Universitarios
Ciudad Universitaria
México D.F. 04510, Mexico
Tel: + 52-55-5622-5208; 5622-5217
Fax +52-55-5622-5217
E-mail: figa26@hotmail.com

Luis Herrera Estrella
Investigador del Laboratorio nacional de Genómica para la Biodiversidad del Centro de Investigaciones y Estudios Avanzados en Biotecnología Agrícola (CINVESTAV-Unidad Irapuato)
Mexico
Tel. +52 (462) 1663008; 1663008
E-mail: lherrera@ira.cinvestav.mx

Jaime A. Paz Arresola
Secretario Ejecutivo del Sistema Nacional de Investigación y Transferencia Tecnológica para el Desarrollo Rural Sustentable (SNITT)
Mexico
Tel: +52 (55) 56-39-89-16
E-mail: jpaz@snitt.org.mx

Dalia de la Peña Wing
Coordinadora del Programa Nacional de Cultura Para la Biotecnología Agroalimentaria (SNITT)
Mexico
Tel: +52 (55) 56-39-89-16
E-mail: daliadelapena@yahoo.com.mx

Raúl G. Ovando Rodríguez
Coordinador de Programas y Proyectos (SNITT)
Mexico
Tel: +52 (55) 56-39-89-16
E-mail: rgobando@snitt.org.mx

Julián Javier Esquivel Hernández
Subsecretaría de Agricultura SAGARPA
Mexico
Tel: +52 (55) 38 71 10 00 Ext. 34437
E-mail: julian.esquivel@sagarpa.gob.mx

José Juvenal Castorena Contreras
Subsecretaría de Agricultura SAGARPA
Mexico
Tel: +52 38 71 10 00 Ext. 33294
E-mail: jose.castorena@sagarpa.gob.mx

Arnulfo del Toro Morales
Subsecretaría de Agricultura SAGARPA
Mexico
Tel: +52 38 71 10 00 Ext. 33327
E-mail: Arnulfo.deltoro@sagarpa.gob.mx

Guillermo del Bosque
Subsecretaría de Agricultura SAGARPA
Mexico
Tel: +52 38 71 10 00 Ext. 33304
E-mail:
Guillermo.delbosque@sagarpa.gob.mx

José de Anda Sánchez
Director General del Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco (CIATEJ)
Mexico
Tel: +52 (33) 3345 52 00 Ext. 1101
E-mail: Janda@ciatej.net.mx
Benjamín Rodríguez Garay
Director de Biotecnología Vegetal CIATEJ
Av. Normalistas No. 800
Col. Colinas de la Normal
Guadalajara, Jalisco, México
Tel: +52 (33) 33 45 52 00 Ext. 1700
E-mail: brodriguez@ciatej.net.mx;
agavero01@hotmail.com

Alberto García Fajardo
Director de Tecnología Alimentaria CIATEJ
Mexico
Tel: +52 (33) 33 45 52 00 Ext. 2218
E-mail: jgarcia@ciatej.net.mx

Alvaro García Chávez
Secretario de Desarrollo Rural del Gobierno del Estado de Jalisco
Mexico
Tel: +52 38 26 46 57
E-mail: alvaro.garcia@jalisco.gob.mx

Francisco Medina Gómez
Director General del Consejo Estatal de Ciencia y Tecnología del estado de Jalisco (COECyTJAL)
Mexico
Tel: +52 33-35856599, 35856601 Ext. 211/ 212
E-mail: francisco.medina@jalisco.gob.mx

Adolfo Ruíz Aceves
Coordinador de Comunicación Social y Difusión
Mexico
Tel: +52 33-35856599, 35856601 Ext. 225
E-mail: Adolfo.ruiz@jalisco.gob.mx

Alberto Cárdenas Jiménez
Presidente de la Comisión de Agricultura y Ganadería
Torre Azul, Piso 13, Oficina B
Reforma 136, Col. Juárez
Del. Cuauhtémoc, México DF, 06600
Tel: +52 53-45-30-00 Ext 3322/ 3323
E-mail: acardenas@senado.gob.mx

Luis Esteban Alva
Secretaría de Desarrollo Rural
Mexico
Tel: +52 3030 0600 Ext. 56634
E-mail: luis.alva@jalisco.gob.mx
Jessica Varela Romero
Subdirección de Control Operativo y Seguimiento
SAGARPA, Mexico
Tel: +52 38 71 10 00 Ext. 33087

E-mail: jessica.varela@sagrpa.gob.mx

Jose Luis Velasco Lino
Camara de Diputados
Av. Congreso de la Unión #66
Col. El Parque,
Delegación Venustiano Carranza
C.P. 15969, México, D.F., Mexico
E-mail: jose.velasco@congreso.gob.mx

MOROCCO
Iraqi Driss
Maître de Recherche,
Coordinateur de l'Unité de Recherche en Biotechnologie
Unité de Biotecnologie
Avenue de la Victoire, B.P. 415
Rabat, Morocco
Tel: 06 61 16 46 16
E-mail: iraqid@yahoo.fr

NETHERLANDS
J.B.F.C. van den Assum
Coordinator Biotechnology,
Ministry of Agriculture, Nature and Food Quality
PO Box 20401, 2500 EK, The Hague,
The Netherlands
Tel: +31 703784981
E-mail: J.b.f.c.van.den.assum@minlnv.nl

NIGERIA
Ayodele Ganiat Jokotade
Assistant Director (Collaboration and Partnership)
Planning, Policy Analysis and Statistics (PPAS)
Federal Ministry of Agriculture and Water Resources (FMAWR)
Area 11, Abuja,
Nigeria,
Tel: +234-8033152257
E-mail: ganiatayodele@yahoo.com

Omuetha Michael Ediga
State Authorizing Officer (Collaboration and Partnership)
PPAS,
FMAWR, Area 11, Abuja
Nigeria
Tel: +234-8033831173
E-mail: mikeomue@yahoo.com

PAKISTAN
Naveed Kamran Baloch
Secretary to Government of Sindh, Food Department,
Sindh Secretariat Building No.1, 4th Floor, Karachi
Pakistan
Tel: 021-99211184, 021-99211515
E-mail: naveed.baloch@gmail.com

PANAMA
Graciela Martiz
Tecnica Ambiental
Ministerio de Desarrollo Agropecuario (MIDA)
Aptdo. Postal 5390, zona 5,
Panama
Tel: 507-507-0652; 6642-0974
E-mail: gmartiz@mida.gob.pa; g_martiz@yahoo.com

PERU
Amalia Del Pilar García Góngora
Coordinadora del Programa Nacional de Investigación en Biotecnología
Instituto Nacional de Innovación Agraria (INIA)
Calle Floripondio Mz 5 Lt 20

3492600 Anexo 284
Peru
E-mail: agarcia@inia.gob.pe

QATAR

Masoud J. Al-Marri
Director, Biotechnology Center
Ministry of Environment
P.O.Box 7634 Doha
Qatar
Tel: +974 5082211
E-mail: mjmmarri@moe.gov.qa

SENEGAL

Makane Guisse
Directeur de Cabinet – Diplomate
Ministre de l'Agriculture
Building Administratif – 3 ème étage
B.P: 4005 Dakar
Senegal
Tel: +221 77 819 63 57; +221 33 849 75 77
E-mail: makanekg@yahoo.fr

Mame Codou Gueye
Researcher
Institut Sénégalaise de Recherches Agricoles
BP: 3320 Thiés
Senegal
Tel: +221 77 533 03 10
E-mail: mcodougueye1@yahoo.fr

SRI LANKA

Priyanjalie Kumari Mary Wijegoonawardane
Senior Research Officer
National Aquatic Resources Research Development Agency (NARA)
Crow Island, Mattakkuliya, Colombo15
Sri Lanka
Tel: +94112521006; 94112521000
E-mail: priyanjalie2000@yahoo.com; priyanjalie@nara.ac.lk

SURINAME

Ashmie Jairam
Ministry of Agriculture, Animal Husbandry and Fisheries
L. Vriesdelaan 8-10, Paramaribo
Tel: + (597) 8546376
E-mail: lvv.bz@sr.net; ashmie@caribline.com

Biedjaiperkash Jhagroe
Director of Agriculture
Ministry of Agriculture, Animal Husbandry and Fisheries
Letitia Vriedsdelaan 10
Paramaribo
Suriname
Tel: + (597) 4 76887 (office)
Fax: + (597) 4 70301
E-mail: lvvodl@yahoo.com

TANZANIA, UNITED REPUBLIC OF

Fred Donati Tairo
Senior Agricultural Research Officer
Mikocheni Agric Research Institute (MARI)
P.O Box 6226, Dar es Salaam,
Tanzania
Tel: +255 713 409123
E-mail: ftairo@yahoo.com

THAILAND

Alongkorn Korntong
Director, Biotechnology Research and Development Office
Department of Agriculture
Ministry of Agriculture and Coopertives,
85 Rangsit-Nakhonnayok Road
Thanyabury, PathumThani 12110
Thailand
Tel: +66 081 9277282
E-mail: akorntong@yahoo.com

TRINIDAD AND TOBAGO

Gita Cynthra Persad
Director Research
Ministry of Agriculture, Land and Marine Resources,
Research Division, Central Experiment Station,
Centeno, Caroni North Bank Road,
Trinidad and Tobago
Tel: +868-646-7657; 868-646-1646
E-mail: cynthra.persad@gmail.com

TURKEY

Taner Akar

Head of Plant Breeding Department
Central Research Institute for Field Crops
PO Box: 226 06042 Ulus-Ankara
Turkey
Tel: +90 312 3272289
E-mail: yezakar66@yahoo.com

UNITED STATES OF AMERICA

Carlos A. González
Senior Agricultural Attaché
Office of Agricultural Affairs – U.S. Embassy Mexico City
Paseo de la Reforma No. 305, Col Cuahutemoc,
Mexico, D.F. 06500
Tel: + (52-55) 5140-2600
E-mail: Carlos.Gonzalez@fas.usda.gov

David Patterson Lambert
Distinguished Fellow, Iowa State University
5105 Yuma Street, NW, Washington, DC 20016
United States of America
Tel: +1 202-966-5056
E-mail: lambertdp@yahoo.com

Gregory Jaffe
Director, Biotechnology Project
Center for Science in the Public Interest
1875 Connecticut Avenue, NW, #300
Washington, DC 20009
United States of America
Tel: +1 202-332-9110, ext. 369
E-mail: gjaffe@cspinet.org

John McMurdy
Biotechnology Advisor
U.S. Agency for International Development
International Research and Biotechnology Team
1300 Pennsylvania Ave., NW, Washington, DC 20523-3800
United States of America
Tel: +1 202-712-5652
E-mail: jmcmurdy@usaid.gov

Judith Chambers
Director
Program for Biosafety Systems
International Food Policy Research Institute
2033 K St. NW
Washington, DC 20006-1002
United States of America
Tel: +1 202-862-5600
E-mail: J.Chambers@cgiar.org

Kathleen McAveney Jones
Immunologist
Food and Drug Administration,
CVM/ONADE, HFV-100, 7500 Standish Place, Rockville, MD 20855
United States of America
Tel: +1 240 276-8243
E-mail: Kathleen.Jones@fda.hhs.gov

Kay Simmons
Acting Deputy Administrator
Crop Production and Protection
Office of National Programs
USDA, Agricultural Research Service
5601 Sunnyside Ave., Room 4-2202
George Washington Carver Center
Beltsville, MD 20705
United States of America
Tel: +1 301-504-5560
E-mail: Kay.Simmons@ars.usda.gov

Leah Wilkinson
Director of Policy and Industry Relations
ViaGen
12357-A Riata Trace Pkwy, Suite 100
Austin, TX 78727
United States of America
Tel: +1 512-401-7003
E-mail: leah.wilkinson@viagen.com

Michael G. Schechtman
Biotechnology Coordinator
Agricultural Research Service
U.S. Department of Agriculture
1400 Independence Avenue, SW
Washington, DC 20250
United States of America
Tel: +1 202-720-3817

E-mail: Michael.schechtman@ars.usda.gov

Pace Lubinsky
Agricultural Biotechnology Advisor
New Technologies and Production Methods Division
Foreign Agricultural Service
U.S. Department of Agriculture
1400 Independence Avenue, SW
Washington, DC 20250
United States of America
Tel: +1 202-720-0404
E-mail: Pace.Lubinsky@fas.usda.gov

Roger N. Beachy
Director
National Institute of Food and Agriculture (NIFA),
U.S. Department of Agriculture,
1400 Independence Ave,
Washington D.C. 20250
United States of America
Tel: +1-202-720-4423
E-mail: RBeachy@nifa.usda.gov

Saharah Moon Chapotin
Biotechnology Advisor
U.S. Agency for International Development
International Research and Biotechnology Team
1300 Pennsylvania Ave., NW
Washington, DC 20523-3800
United States of America
Tel: +1 202-712-4022
E-mail: schapotin@usaid.gov

Scott C. Fahrenkrug
Director, Animal Biotechnology Center
Stem Cell Institute
Center for Genome Engineering
University of Minnesota
495 ANSCI/VMED, 1988 Fitch Avenue
Saint Paul, MN 55108
United States of America
Tel: +1 612-624-7216
E-mail: Fare001@gmail.com

Susan J. Owens
Director
U.S. Department of Agriculture
Foreign Agricultural Service
Office of Capacity Building and Development
Trade and Scientific Capacity Building
1400 Independence Ave, SW
Washington, DC 20250
United States of America
Tel: +1 202-720-0303
Fax: +1 202-720-1320
E-mail: Susan.J.Owens@fas.usda.gov

Suzanne Heinen
Agricultural Minister-Counselor
United States Mission to the UN
Agencies for Food and Agriculture
Rome, Italy
Tel: + (39) 06-4674-3507
E-mail: Suzanne.Heinen@fas.usda.gov

Rachael F. Goldfarb
Senior Advisor to Director of NIFA, USDA
1400 Independence Ave SW, Rm 330,
Washington D.C. 20250
United States of America
Tel: +1 202 720 8885
E-mail: r.goldfarb@osec.usda.gov

URUGUAY

Enzo Benech
Presidente
Instituto Nacional de Semillas (INASE)
Cno. Bertolotti s/n y Ruta 8 Km 29
Canelones
Uruguay
Tel: +(598 2) 288 7099
E-mail: ebenech@inase.org.uy

ZAMBIA

Jack Chipili
Programmes Officer/Principal Agricultural Research Officer
Mt. Makulu Research Station
P/B 7 Chilanga,
Zambia
Tel: +260211278130/380
E-mail: jackchipili@yahoo.co.uk

ZIMBABWE

Edward M Nengomasha
Deputy Director, Division of Animal & Pastures Research
P.O. Box CY594, Causeway, Harare,
Zimbabwe
Tel: +263-4-704531-9
E-mail: ednengos2004@yahoo.co.uk

Tasiyiwa Priscilla Madhibha
Research Officer (Tree Breeding)
1 Orange Groove Drive, Highlands, Harare,
Zimbabwe
Tel: +263-4-498861; +263-4-298816
E-mail: tasi@frchigh.co.zw

OBSERVERS FROM INTERGOVERNMENTAL AND NON-GOVERNMENTAL ORGANIZATIONS

AFA

Isidoro O. Angcog
Area Management Team Coordinator
Asian Farmers' Association for Sustainable Rural Development (AFA)
Room 206, 2F Partnership Center,
59 C. Salvador St., Varsity Hills Subd.,
Loyola Heights, Quezon City
Philippines
Tel: +63 2 436 4640
E-mail: boy_ancog@yahoo.com;
pakisama.natl@yahoo.com;
afa@asianfarmers.org

AGROBIO

Karen Guadalupe García Valdivia
Agro BIO Mexico
Dakota 204 oficina 302,
Col. Nápoles C.P. 03810 México D.F.
Mexico
Tel: + (52 55) 55 43 84 89

Alejandro Monteagudo Cuevas
Agro BIO Mexico
Dakota 204 oficina 302,
Col. Nápoles C.P. 03810 México D.F.
Mexico
Tel: + (52 55) 55 43 84 89

BIO

Eric Sachs
Lead, Global Scientific Affairs,
Monsanto Company,
Biotechnology Industry Organization (BIO)
800 North Lindbergh Blvd.
St. Louis, MO 63167
United States of America
Tel: +1 314-694-1709
E-mail: eric.s.sachs@monsanto.com

BIOVERSITY INTERNATIONAL

Nicolas Roux
Senior Scientist
Bioversity International
Parc Scientifique Agropolis II
34397 Montpellier Cedex 5
France
Tel: +33.4.67.61.13.02
E-mail: n.roux@cgiar.org

CATIE

José J. Campos
Director General
Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)
CATIE 7170
Cartago, Turrialba 30501

Costa Rica
Tel: +506 25582551
E-mail: jcampos@catie.ac.cr

Galileo Rivas
Líder Producción Agroecológica de Cultivos Alimenticios
Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)
CATIE 7170
Cartago, Turrialba 30501
Costa Rica
Tel: +506 2558 2391
E-mail: grivas@catie.ac.cr

CENESTA
Taghi Farvar
Secretary General, World Alliance of Mobile Indigenous Peoples (WAMIP) and Chair, Centre for Sustainable Development (CENESTA)
108 Azerbaijan Avenue
13169 Tehran,
Iran
Tel: (+98 21) 66-972-973 (office); (+98 912) 176-4908 (Iran mobile); (+41 79) 283-0812 (Swiss mobile)
E-mail: taghi@cenesta.org; taghi.farvar@gmail.com

CGIAR ISPC
Peter Gardiner
Acting Director,
Consultative Group on International Agricultural Research Independent Science and Partnership Council (CGIAR ISPC)
c/o FAO, Via delle Terme di Caracalla
Rome 00153, Italy
Tel: +39 06 570 52458 (office); +39 346 016 5738 (mobile)
E-mail: peter.gardiner@fao.org

CGRFA
Alvaro Toledo
Programme Officer
Commission on Genetic Resources for Food and Agriculture (CGRFA)
c/o FAO, Via delle Terme di Caracalla
Rome 00153, Italy
Tel: +39 06 57054497
E-mail: alvaro.toledo@fao.org

Eva Hain
Commission on Genetic Resources for Food and Agriculture (CGRFA)
c/o FAO, Via delle Terme di Caracalla
Rome 00153, Italy
Tel: +39 06 570 53270
E-mail: eva.hain@fao.org

CIAT
Francisco José Escobar Correa
Communication Regional Thematic Leader - LAC Bisafety Project
International Center for Tropical Agriculture (CIAT)
Km. 17 Recta Cali Palmira - Palmira, Colombia
Tel: (57) 2 - 4450000 Ext 3347
E-mail: f.j.escobar@cgiar.org

CIMMYT
Thomas Lumpkin
Director General
International Maize and Wheat Improvement Center (CIMMYT)
Apdo. Postal 6-641, 06600 Mexico DF, Mexico
E-mail: t.lumpkin@cgiar.org

Jean-Marcel Ribaut
Director
The Generation Challenge Program
c/o International Maize and Wheat Improvement Center (CIMMYT)
Apdo Postal 6-641
06600 Mexico DF
Mexico

Tel: +52 (55) 5804 2004 ext. 1312
Email: j.ribaut@cgiar.org

Nathan Russell
Senior Communications Officer
International Maize and Wheat Improvement Center (CIMMYT)
Apdo. Postal 6-641, 06600 Mexico DF, Mexico
E-mail: n.russell@cgiar.org

Thomas S. Payne
Head, Wellhausen Anderson Genetic Resource Center
International Maize and Wheat Improvement Center (CIMMYT)
Apdo. Postal 6-641, 06600 Mexico DF, Mexico
Tel: +52-55-5804-2004 ext. 2506
E-mail: T.Payne@cgiar.org
Laura Yates
Communications Consultant
International Maize and Wheat Improvement Center (CIMMYT)
Apdo. Postal 6-641, 06600 Mexico, D.F. Mexico
Tel: 52 (55) 5804-2004
E-mail: l.yates@cgiar.org

CNCINPRO
Rosa Maria Armendariz Muñoz
Presidenta Nacional
Confederacion Nacional Campesina de Indigenas y Productores Rurales A.C. (CNCINPRO)
Puebla 302 – 601 Col. Roma
Delegacion Cuauhtemoc C.P. 06700
Mexico
E-mail: cncinpro_ac@yahoo.com.mx

CROPLIFE INTERNATIONAL
Deborah Carstoiu
Director of Communications
c/o CropLife America, 1156 15th St, NW, Suite 400,
Washingon, D.C. 20005
United States of America
Tel: +1 202.330.2194
E-mail: deb.carstoiu@croplife.org

Denise Dewar
Executive Director, Plant Biotechnology
1156 15th st. NW suite 400 Washington, DC 20005
United States of America
Tel: +1 202-872-3846
Fax: +1 202-872-3878
Email: Denise@croplife.org

ECLAC
Braulio Serna Hidalgo
Jefe de la Unidad de Desarrollo Agrícola
Sede Subregional en México
Economic Commission for Latin America and the Caribbean (ECLAC)
Presidente Masary No. 29, Piso 11
Col. Polanco
11570 México, D. F., Mexico
Tel: + (5255) 5263-9659
E-mail: braulio.serna@cepal.org

ETC GROUP
Patrick Roy Mooney
Executive Director
ETC Group (Action Group on Erosion, Technology and Concentration)
431 Gilmour St, Second Floor, Ottawa, ON K2P 0R5,
Canada
Tel: +1 613-241-2267
Fax: +1 613-241-2506
E-mail: mooney@etcgroup.org

EXECUTIVE OFFICE OF THE SECRETARY GENERAL, UN
Kathryn Stokes
Programme Officer
Strategic Planning Unit
Executive Office of the Secretary-General
Room NL-2074B
United Nations Headquarters
New York
NY 10017,
United States of America

Tel: +1-212-963-1815
E-mail: stokesk@un.org

IAEA
Pierre Lagoda
Section Head
International Atomic Energy Agency (IAEA)
Wagramerstrasse, 5
P.O. Box 100
A-1400 Vienna
Austria
Tel: +43 1 2600 21626
E-mail: p.lagoda@iaea.org

ICARDA
Michael Baum
The International Center for Agricultural Research in the Dry Areas (ICARDA)
P.O. Box 5466 Aleppo,
Syria
Tel: +963-21-221-3433/269-1474
Fax: +963-21-221-3490
E-mail: m.baum@cgiar.org

ICGEB
Decio Ripandelli
Director, Administration and External Relations
International Centre for Genetic Engineering and Biotechnology (ICGEB)
c/o AREA Science Park, Padriciano 99,
34149 Trieste,
Italy
Tel: +39 040 375 7345
Fax: +39 040 375 7363
E-mail: decio@icgeb.org

Sudhir Kumar Sopory
Group Leader, Plant Molecular Biology
International Centre for Genetic Engineering and Biotechnology (ICGEB)
Aruna Asaf Ali Road,
New Delhi 110067,
India
Tel: +911126742962
E-mail: sopory@icgeb.res.in

Maria Elena Simonelli
Personal Assistant to the Director,
Administration and External Relations
International Centre for Genetic Engineering and Biotechnology (ICGEB)
c/o AREA Science Park, Padriciano 99,
34149 Trieste,
Italy
Tel: +390403757344
E-mail: simonelli@icgeb.org

ICRISAT
David A Hoisington
Deputy Director General-Research
International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
Patancheru, Andhra Pradesh 502 324
India
Tel: +91 40 3071 3221
E-mail: d.hoisington@cgiar.org

Rajeev Varshney
Principal Scientist (Applied Genomics)
ICRISAT and Leader, Sub Programme 2 : Genomics towards Gene Discovery (Generation Challenge Programme)
Centre of Excellence in Genomics (CEG),
Building # 300 ICRISAT
Patancheru - 502 324, Greater Hyderabad,
India
Tel: +91 40 30713305 (Off); +91 9949994070 (Mobile)
E-mail: r.k.varshney@cgiar.org

IFAD
Rodney Cooke
Director, Technical Advisory Division,

International Fund for Agricultural Development (IFAD)
Via Paolo di Dono, 44 Rome,
Italy
E-mail: r.cooke@ifad.org

IFPRI
Patricia Zambrano
Research Support
Environment and Production Technology
International Food Policy Research Institute (IFPRI)
2033 K Street, NW, Washington, DC 20006
United States of America
Tel: +1 202-862-5600
E-mail: p.zambrano@cgiar.org

IICA
Victor Villalobos
Director General
Inter-American Institute for Cooperation on Agriculture (IICA)
PO Box 55-2200, San José, Vázquezde Coronoado, SanIsidro, 11101,
Costa Rica
E-mail: vmva1950@yahoo.com.mx

Ramon Lastra
Coordinator, Biotechnology Program
Inter-American Institute for Cooperation on Agriculture (IICA)
PO Box 55-2200, San José, Vázquezde Coronoado, SanIsidro, 11101,
Costa Rica
Tel: +50622160326
E-mail: ramon.lastra@iica.int

Bryan Munoz
Biotecnology and biosafety specialist
Inter-American Institute for Cooperation on Agriculture (IICA)
PO Box 55-2200, San José, Vázquezde Coronoado, SanIsidro, 11101,
Costa Rica
Tel: +50622160361
E-mail: Bryan.munoz@iica.int

ILSI
Morven A. McLean
Director, Center for Environmental Risk Assessment,
International Life Sciences Institute Research Foundation (ILSI)
1156 Fifteenth Street N.W., Washington D.C. 20005-1743,
United States of America
Tel: +1 (202) 659-3306
E-mail: mmclean@ilsi.org

ITPGRFA
Shakeel Bhatti
Secretary,
International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)
c/o FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +39 06 570 53441
Fax: +39 06 570 56347
E-mail: shakeel.bhatti@fao.org

IUCN
Jeffrey A. McNeely
Senior Science Advisor
The World Conservation Union (IUCN)
Rue Mauverney 28, 1196 Gland,
Switzerland
E-mail: jam@iucn.org

Keith A. Wheeler
Chairman, IUCN-CEC
The World Conservation Union (IUCN)
633 Royal Circle State College PA 16801
United States of America
Tel: +1-814-238-1676

E-mail: keith@ffof.org

LA VIA CAMPESINA
Alberto Gomez
La Via Campesina
Juan de Dios Arias, n 48 Col. Vista AlegreDelegación Cuauhtemoc,
CP 06860 México D.F.
Mexico
Tel: +52-55-57-4150 65
Fax: +52-5557-40 04 86
E-mail: viacammexico@hotmail.com

MIJARC
George Dixon Fernandez
International President
Mouvement international de la jeunesse agricole et rurale catholique (MIJARC)
53, Rue Joseph Coosemans, 1030, Brussels
Belgium
Tel: +3227349211(Office); +32479710788 (Mobile)
E-mail: georgedixon72@yahoo.co.in

OECD
Bertrand DAGALLIER
Administrator, Biosafety and Food Safety
Organisation for Economic Co-operation and Development (OECD)
Environment Directorate-EHS,
2 rue André-Pascal, 75775 Paris Cedex 16,
France
Tel: +33-145248451
E-mail: bertrand.dagallier@oecd.org

OIE
World Organisation for Animal Health (OIE)
Anne MacKenzie
Consultant, Food Safety and Animal Health
6442 Aston Rd., Manotick, ON,
Canada K4M 1B3
Tel: +1 613 692 0211
E-mail: amackenzie@rogers.com

OXFAM INTERNATIONAL
Gigi Manicad
Oxfam Novib
Programme Officer
Global Strategies and Alliances
Mauritskade 9, P.O. Box 30919, 2500 GX
The Hague
The Netherlands
Tel: +31 (0)70 342 1853
E-mail: gigi.manicad@oxfamnovib.nl

UMAGRI
Abdelaziz Mabrouk
Advisor
Union Maghrébine des Agriculteurs (UMAGRI)
141 – 143 Avenue de la Liberté,
1002 Tunis,
Tunisia
Tel: +216 98 35 3711
E-mail: abdelaziz_mabrouk@yahoo.fr

UNCTAD
Lea Masin
Economic Affairs Officer
Science, Technology and ICT Branch
Division on technology and Logistics
United Nations Conference on Trade and Development (UNCTAD)
Palais des nations
CH-1211 Geneva 10
Switzerland
Tel: +41 (0) 22 917 4651
E-mail: menelea.masin@unctad.org

UNESCO
Lucy Hoareau
Programme Specialist
Division of Basic and Engineering Sciences,
United Nations Educational, Scientific and Cultural Organization (UNESCO)
1 rue Miollis, 75732 Paris Cedex 15,
France
Tel: +33-1 45683895
E-mail: l.hoareau@unesco.org

UNIDO

George T. Tzotzos
Senior Industrial Development Officer
United Nations Industrial Development Organization (UNIDO),
Vienna International Centre, P.O. Box 300,
A-1400, Vienna,
Austria
Tel: +43 1 26026 4336
Fax: +43 1 26026 6810
E-mail: g.tzotzos@unido.org

WFFP
Wijethunge Herman Kumara
General Secretary
World Forum of Fisher People (WFFP)
No.10, Malwatta Rd. Negombo.
Sri Lanka
Tel: + 94773184532
E-mail: hermankumara@gmail.com

WIPO
Anja von der Ropp
Consultant, Global Challenges Division,
World Intellectual Property Organization (WIPO)
34, chemin des Colombettes,
1205 Geneva
Switzerland
Tel: +41 22 338 9071
Fax: +41 22 338 7020
E-mail: Anja.VonDerRopp@wipo.int

WORLD BANK
Eija Pehu
Advisor, World Bank
1818 H St, Washington DC, 20433,
United States of America
Tel: +1 202-458-2422
Fax: +1 202-522-3308
E-mail: epehu@worldbank.org

ADDITIONAL MEMBERS OF THE CONFERENCE STEERING COMMITTEE

Adama Traoré
Executive Secretary
Comité National de la Recherche Agricole (CNRA)
Mali BP: E1911
Tel: +(223) 20227165
E-mail: adama.traore@afribone.net.ml

Ariel Alvarez-Morales
Executive Secretary, CIBIOGEM
San Borja 938, Col. Del Valle,
Del. Benito Juárez,
México D.F. 03100
Tel: +52 (55) 5575 6878
E-mail: ralvarez@conacyt.mx;
aalvarez@ira.cinvestav.mx

Baskaran K. Krishnapillay
Chief Executive Officer
Pulau Banding Foundation,
Unit 3a-3, Level 4,
Perdana the Place, Jalan PJU 8/5G,
Bandar Damansara Perdana, 47820 Petaling Jaya,
Selangor Darul Ehsan,
Malaysia
Tel: +603 7710 7066
E-mail: baskaran.pbanding@gmail.com

Charles Spillane
Professor of Science, Genetics and Biotechnology Laboratory
Botany and Plant Science
National University of Ireland
Galway
Ireland
E-mail: charles.spillane@nuigalway.ie

Claire Williams Bridgwater
CEO Silver Springs
1289 North Fordham Blvd #184 Chapel Hill
NC 27514
United States of America

E-mail: claire-williams@fulbrightmail.org

Denis Murphy
Head of Biotechnology Unit & Head of Research
University of Glamorgan,
Glyntaf Campus, CF37 4AT,
United Kingdom
Tel: +44 1443 483 747
E-mail: dmurphy2@glam.ac.uk

Dominic Glover
Postdoctoral fellow, Technology and Agrarian Development, Wageningen University
PO Box 8130, 6700 EW Wageningen,
The Netherlands
Tel: +31317484018
E-mail: dominic.glover@wur.nl

Eugenio Julio Cap
Director-Institute of Economics and Sociology-INTA
Área Estratégica Economía y Sociología
Cerviño 3101, 2nd floor
Buenos Aires
Argentina
Tel: +54-11-4806-5329
E-mail: ecap@correo.inta.gov.ar

Guy Van den Eede
Head of Unit "Biotechnology and GMOs"
European Commission Joint Research Centre Institute for Health and Consumer Protection
Ispra (Varese) I-21020
Italy
Tel: +39 0332 78 9738
E-mail: guy-den-eede@ec.europa.eu
Harinder Paul Singh Makkar
Professor
Institute for Animal Production in the Tropics and Subtropics (480b),
University of Hohenheim, 70593 Stuttgart,
Germany
Tel: +49 71145923640
E-mail: makkar@uni-hohenheim.de

Idah Sithole-Niang
Associate Professor
University Of Zimbabwe,
Biochemistry PO MP 167 Mt. Pleasant,
Harare,
Zimbabwe
Tel: +263-733-412-801
E-mail: isn@mweb.co.zw;
isniangzw@yahoo.com

John Benzie
Professor of Molecular Marine Biodiversity
Environmental Research Institute,
University College Cork, Lee Road, Cork
Ireland
Tel: +353-21-420-5285
E-mail: j.benzie@ucc.ie

Manjit Kumar Misra
Director, Seed Science Center
102 Seed Center, Iowa State Uinversity,
Ames, Iowa 50010
United States of America
Tel: +1 515-294-6821
E-mail: mkmisra@iastate.edu

Mohammad Pourkazemi
Director
International Sturgeon Research Institute
P.O.B. 41635-3464, Rasht
Iran
Tel: +98-911-1310470; +98 132-574-3721
E-mail: pkazemi_m@yahoo.com

Olivier Sanvido

Research Scientist
Agroscope Reckenholz Tänikon Research Station ART,
Reckenholzstrasse 191, CH-8046 Zürich,
Switzerland
Tel: +41 44 377 73 04
E-mail: olivier.sanvido@art.admin.ch

Olusola Oyewole
Senior Expert (Higher Education)
Education Div (Scholarship Unit),
Human Resources, Science and Technology (HRST) Directorate,
African Union Commission,
P.O. Box 3243, Addis Ababa,
Ethiopia
Tel: +2519128622; +234 803 335 1814
E-mail: oyewoleb@yahoo.com

Roberto Tuberosa
Professor, University of Bologna
Dept. of Agroenvironmental Sciences and Technology,
Viale Fanin 44, 40127 Bologna,
Italy
Tel: +39 512096646
E-mail: roberto.tuberosa@unibo.it

William Roca
Consultant to CIAT
Coordinator LAC-Biosafety Project
International Potato Center (CIP),
Av. La Molina 1895,
La Molina, Apartado 1558, Lima 12,
Peru
Tel: +51-1-3496017 (Office); 51-1-3484354 (home)
E-mail: w.roca@cgiar.org

RESOURCE PEOPLE AND OTHER INVITEES

Ahmad Abdulkader
Head of Biosafety Unit
General Commission for Agricultural Scientific
Research (GCSAR) Biotechnology Department
Damascus, P.O. Box 35158
Syria
Tel: +963 956749671
E-mail: ahmad59@gmx.de

Alexander Percy-Smith
Coordinator for International Relations
Faculty of Agricultural Sciences
Aarhus University
Research Centre Flakkebjerg
Forsøgsvej 1
DK-4200 Slagelse
Denmark
Tel: +45 89993710
E-mail: Alex.percysmith@agrsci.dk

Andrew Mushita
Executive Director
Community Technology Development Trust (CTDT)
P.O. Box 7232 Harare
Zimbabwe
Tel: +263 4 589169
E-mail: andrew@ctdt.co.zw

Antonio Paes de Carvalho
Emeritus Professor - Federal University of Rio de Janeiro, and President, Extracta Moleculas Naturais S/A
Extracta Moleculas Naturais S/A
Polo BIORIO - Av. Carlos Chagas Filho 791
Cidade Universitaria - Rio de Janeiro
Brazil 21941-904
Tel: (+5521) 3867-5608 or 8131-8301
E-mail: apc@extracta.com.br;

apaescarvalho@uol.com.br
Atanas Atanassov
President
Black Sea Biotechnology Association (BSBA)
8 Dragan Tsankov Blvd, fl,4
Sofia 1164,
Bulgaria
Tel: +35929635411
E-mail: atanas_atanassov@jgc-bg.org

Banpot Napompeth
Founder & Adviser
National Biological Control Research Center (NBCRC)
Kasetsart University, P.O. Box 9-52,
Chatuchak, Bangkok 10900,
Thailand
Tel: +66 2 579 3649
E-mail: agrban@ku.ac.th

Carmen de Vicente
Capacity building and enabling delivery Lead
The Generation Challenge Program,
c/o CIMMYT, Int APDO Postal 6-641,
06600 Mexico DF
Mexico
Tel: 52(55) 5804-2004 Ext. 1316
E-mail: c.devicente@cgiar.org

Carmen Wacher
Departamento de Alimentos y Biotecnología
Facultad de Química,
Universidad Nacional Autónoma de México (UNAM)
04510 México, D.F.
México
E-mail: wacher@servidor.unam.mx

Chanda Nimbkar
Director, Animal Husbandry Division,
Nimbkar Agricultural Research Institute
P.O. Box 23,
Phaltan 415 523, Maharashtra,
India
Tel: +919960940805
E-mail: chanda.nimbkar@gmail.com
Carlos Ramírez Serrano
Professor and Researcher
Departamento de Botánica y Zoología
Centro Universitario de Ciencias Biológicas y Agropecuarias (CUCBA)
Universidad de Guadalajara
Km 15.5 Carretera a Nogales
Las Agujas, Nextipac, Zapopan Jalisco
45101 México
Tel: (+52 33) 37 77 11 92 ext 3283
E-mail: cramirez@cucba.udg.mx

David Jasper Gilbert Rees
Professor of Biochemistry
Dept of Biotechnology,
University of the Western Cape,
Private Bag X17, Bellville, 8535,
South Africa
Tel: +27 21 959 3581 (office); +27 82 415 9295 (mobile)
E-mail: jasper@mail.biotech.uwc.ac.za

Doreen Kim Soh Goh
Group Manager
Yayasan Sabah Group
P. O. Box 11623, 88817 Kota Kinabalu,
Sabah,
Malaysia
Tel: +60-88-263-185
E-mail: dorngoh@hotmail.com

Dulce De Oliveira
Institute of Plant Biotechnology for Developing Countries (IPBO)
Department of Molecular Genetics
Ghent University
Ledeganckstraat 35
9000 Gent, Belgium
E-mail: Dulce.deOliveira@UGent.be

Dyana Ndiade-Bourobou
Researcher Assistant
Centre national de la recherche scientifique et technologique (CENAREST)
Institut de Recherches Agronomiques et

Forestières
BP 842 Gros-bouquet, Libreville
Gabon
Tel: +241 07628236
E-mail: dndiade@yahoo.com

E. Jane Morris
Director, African Centre for Gene Technologies
P O Box 75011, Lynnwood Ridge,
Pretoria 0040,
South Africa
Tel: +27 12 420 6007; +27 82 566 2210 (mobile)
E-mail: jmorris@csir.co.za or ejanemorris@gmail.com

Elizabeth Ruth Frampton
International Consultant
587 Springston-Rolleston Road,
RD 8, Christchurch 7678,
New Zealand
Tel: +64 3 3478085
E-mail: framptonr@critiquelimited.co.nz

Elsa Irma Quiñones
Professor and Researcher
Inocuidad de alimentos del Instituto Politécnico Nacional (IPN)
Mexico
Tel: +52 57296000 ext 62375
E-mail: elsairma46@yahoo.com.mx

Enriqueta Santamaría
Colegio de Postgraduados,
Mexico

Godelieve Gheysen
Professor
Ghent University
Coupure links 653, B-9000 Ghent
Belgium
Tel: +32 9 2645888
E-mail: Godelieve.Gheysen@Ugent.be

Guillermo Vega Valero
Gaviotas 135-11
Marina Vallarta
Mexico
E-mail: gvegava@gmail.com

Humberto Peralta Diaz
Academic Technician
Center for Genomic Sciences, National University of Mexico
PO Box 565-A Cuernavaca Morelos 62210
Mexico
Tel: +52-777-3290865
E-mail: peralta@ccg.unam.mx

Ivan L. W. Ingelbrecht
Programme Manager
Institute of Plant Biotechnology for Developing Countries
K.L Ledeganckstraat 35, B-9000 Ghent,
Belgium
Tel: +32 9 264 87 25
E-mail: ingelbrechti@gmail.com

Jawahir Lal Karihaloo
Coordinator, Asia-Pacific Consortium on Agricultural Biotechnology
c/o ICRISAT, NASC complex,
Dev Prakash Shastri Marg, Pusa Campus,
New Delhi 110012
India
Tel: +91-11-32472305
E-mail: j.karihaloo@cgiar.org

Jeremy Francis Taylor
Professor
S135B Animal Sciences, 920 East Campus Drive,
University of Missouri, Columbia, MO 65211-5300
United States of America
Tel: +1-573-884-4946
E-mail: taylorjerr@missouri.edu

Joachim Schiemann
Head of the Institute for Biosafety of Genetically Modified Plants

Julius Kühn Institute (JKI)
Federal Research Centre for Cultivated Plants
Erwin-Baur-Str. 27
D-06484 Quedlinburg
Germany
Tel: +49 3946 47 503
Fax: +49 3946 47 500
E-mail: joachim.schiemann@jki.bund.de

John Francis
Vice President, National Geographic Society
1145 17th St. NW Washington DC 20036
United States of America
Tel: +1 202 857 7655
E-mail: jfrancis@ngs.org

Jonathan Gressel
Department of Plant Sciences
Weizmann Institute of Science,
P.O.B. 26 Rehovot 76100,
Israel
Tel: (+972-8) 9343481
Fax: (+972-8) 9344181
E-mail: Jonathan.Gressel@weizmann.ac.il

Jorge Cabrera Medaglia
Legal Adviser
National Biodiversity Institute (INBio)
317-3015 San Rafael de Heredia
Costa Rica
Tel: +506 22677594
E-mail: jacmed@racsa.co.cr

Jorge E. Allende
Vice President of Research and Development,
Universidad de Chile
Independencia 1027, 3er piso, sector D,
Santiago
Chile
Tel: +56-2-9786255
E-mail: jallende@abello.dic.uchile.cl

José Arturo Ayala Monter
Colegio de Postgraduados,
Mexico

Joseph M. Russo
President and Chief Scientist,
ZedX Inc.
ZedX Inc 369 Rolling Ridge Drive
Bellefonte PA 16823
United States of America
Tel: +1 8143578490
E-mail: russo@zedxinc.com

Luz Amparo Fonseca
President
Confederación Colombiana del Algodón,
Carrera 12 No. 70 - 18, Primer piso, Bogota
Colombia
Tel: +571 3178081
E-mail: luz.fonseca@conalgodon.com.co

Marcos Algara-Siller
Researcher for the National System for Epidemologic Phitosanitary Surveillance
Professor of Environmental Engineering at the Engineering School
Universidad Autónoma de San Luis Potosí
Villa Madrid 112, Villas del Pedregal CP 78218,
San Luis Potosí
Mexico
Tel: +52 (444) 825-6045 (office); +52 (444) 825-7342
E-mail: malgara@uaslp.mx

María Cristina Chávez Sánchez
Researcher
Unidad Mazatlán en Acuicultura y Manejo Ambiental
Av. Sábalo Cerritos s/n,
Mazatlán, Sinaloa, Apdo Postal 711,
CP. 82010,
México
Tel: +52 (669) 9898700
E-mail: marcris@ciad.mx

Michelle Chauvet
Professor,
Universidad Autónoma Metropolitana (UAM)
Calzada del Hueso 1100, Col. Villa Quietud,
Delegación Coyoacán
04960 México, D.F.
México
E-mail: ecs@correo.azc.uam.mx

Mignouna Douwehan Hodeba
Director, Technical Operations
African Agriculture Technology Foundation (AATF)
P.O. Box 30709-00100
Kenya
Tel: +254 20 4223700
E-mail: h.mignouna@aatf-africa.org

Miguel Altieri
Professor
University of California, Berkeley
215 Mulford Hall
Berkeley, California 94720
United States of America
Tel: +1 510-642-9802
E-mail: agroeco3@berkeley.edu

Manuel T. Laveaga
Dirección de Proyectos
Risk Management and Resources
C/Fco. Petrarca, 133 Despacho 603 Col.
Chapultepec – Los Morales
C.P. 11570 Distrito Federal
Mexico
Tel: +52 9888 84
E-mail: mat@rmr-energias.com

Martha Kandawa-Schulz
Head of Dept of Chemistry
Faculty of Science, University of Namibia,
Private Bag 13301,
340 Mandume Ndemufayo Ave,
Pioneerspark, Windhoek,
Namibia
Tel: +264 61 206 3635
E-mail: kschulz@unam.na;
marthaks2001@yahoo.co.uk

Moises Burachik
Coordinador Dirección de Biotecnología,
Secretaría de Agricultura, Ganadería y Pesca,
Av. Paseo Colón 922,
Piso 2, of. 247 C1063ACW
Buenos Aires
Argentina
Tel: +54-11-4349-2074
E-mail: mburac@minprod.gov.ar

Osama Ahmed Momtaz
Deputy Director for Research,
Agricultural Genetic Engineering Research Institute (AGERI)
Agricultural Research Center (ARC)
9 Gamaa Street, Dokki, Giza 12619,
Egypt
Tel: +20122169318
E-mail: omomtaz@hotmail.com

Poh Chiang Chew
Freshwater Fisheries Research Center,
Glami Lemi, Jelebu, 71650 Negeri Sembilan
Malaysia
Tel: +6 06 6133028; +6 012 2712 838 (home)
E-mail: pcchew03@yahoo.com;
chew@dof.gov.my

Raimundo Ubieta Gomez
Director of Intellectual Property Department
Centre for Genetic Engineering and Biotechnology (CIGB)
Ave. 31 e/ 158 y 190 Cubanacán, Habana 10600, PO.Box 6162.
Cuba
E-mail: ubieta@cigb.edu.cu

Rafael Díaz Mares
Director Comercial
COPROBAMEX

Comercializadora de Productos
Básicos de Mexico, S.A. de C.V.
Cenit 1291-3
Col. Jardines del Bosque
44520, Guadalajara, Jalisco
Mexico
Tel: +52 33 3467 4726
E-mail: rdiaz@coprobamex.com.mx

Rodomiro Ortiz
International consultant
Martin Napanga 253, Apt. 101
Miraflores, Lima 18,
Perú
Tel: +51 1 358 5530
E-mail: r.ortiz@cgiar.org

Roy Bundi Mugiira
Senior Assistant Director of Research
National Biosafety Authority
Teleposta Plaza, 27th Floor
P. O. Box 30623-00100
Nairobi, Kenya
Tel: +254-20-310571; +254-20-710765529
E-mail: roybmugiira@gmail.com

Sandra Elizabeth Sharry
Secretaria de Investigaciones
Facultad de Ciencias Agrarias y Forestales
Universidad Nacional de La Plata,
calle 15 Nro. 1434 La Plata
Argentina
Tel: +54 221 4537421
E-mail: ssharry@gmail.com;
investigaciones@agro.unlp.edu.ar

Sarah Stokes Alexander
Director Sustainability and Leadership
Programs
The Keystone Center
1628 Sts John Road, Keystone, CO 80435
United States of America
Tel: +1 970-513-5846
E-mail: salexander@keystone.org

Sidi Sanyang
Program Manager
West and Central African Council for
Agricultural Research and
Development (CORAF/WECARD)
7 Avenue Bourguiba, B.P. 48,
Dakar,
Senegal
Tel: +221 772610724
E-mail: sidi.sanyang@coraf.org

Thomas Dubois
Scientist
International Institute of Tropical Agriculture
(IITA)
Carolyn House, 26 Dingwall Road,
Croydon CR9 3EE, UK
Tel: +256752787808
E-mail: t.dubois@cgiar.org

Walter S. Alhassan
Consultant
Forum for Agricultural Research in Africa
(FARA)
FARA Headquarters, No. 12 Anmeda Street,
Roman Ridge, P. O. Box CT 173, Accra,
Ghana
Tel: +233 21 772823; +233 20 8146668
E-mail: walhassan@fara-africa.org

Said Infante Gil
Profesor Investigador Titular
Colegio de Postgraduados,
Mexico
E-mail: said@colpos.mx

Susana Hernández Sánchez
Universidad EARTH
Guácimo, Limón,
Costa Rica
Tel: +506 713 0000
Fax: +506 713 0001
E-mail: arcazanas@gmail.com

Wendy Hollingsworth

Managing Director and Consultant
Policy NetWorks International Inc.
Free Hill, St. Lucy BB27131
Barbados
Tel: +(246) 439-2140/ 8184
E-mail: whollingsworth@caribsurf.com

Wilhelmina R. Pelegrina
Executive Director
Southeast Asia Regional Initiatives for
Community Empowerment (SEARICE)
29 Magiting Street, Teacher's Village,
Diliman, Quezon City
Philippines
Tel: +632 922 6710
E-mail: ditdit_pelegrina@searice.org.ph

FAO SECRETARIAT

Alicia Ituarte González
Programme Clerk
FAO Mexico
Farallón No. 130,
Col. Jardines del Pedregal,
México D.F., 01900
Tel: + (52 55) 2457 9970
E-mail: alicia.ituarte@fao.org

Andrea Sonnino
Senior Officer (Agricultural Research)
Office of Knowledge Exchange, Research and Extension
FAO, Via delle Terme di Caracalla,
00153 Rome
Italy
Tel: +39 06.570.564554
E-mail: andrea.sonnino@fao.org

Bárbara Lazcano
Communications
FAO Mexico
Mexico
Tel: +52 15554331240
E-mail: barbara.lazcano@fao.org

John Ruane
Biotechnology Coordination Officer
FAO Working Group on Biotechnology
FAO, Via delle Terme di Caracalla
00153 Rome Italy
Tel: +39 06 57052997
E-mail: john.ruane@fao.org

Karin Nichterlein
Agricultural Research Officer
Office of Knowledge Exchange, Research and Extension
FAO, Viale delle Terme di Caracalla
00153 Rome Italy
Tel: +39 06 570 55529
E-mail: Karin.Nichterlein@fao.org
María del Carmen Culebro Trejo
Assistant Representative, FAO Mexico
Farallón No. 130,
Col. Jardines del Pedregal,
México D.F., 01900
Tel: +52 55 2457 9970
E-mail: mariacarmen.culebro@fao.org

Masami Takeuchi
Food Safety Officer
Nutrition and Consumer Protection Division
FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +39 06 570 53076
E-mail: Masami.Takeuchi@fao.org

Matthias Halwart
Senior Fishery Resources Officer
Fisheries and Aquaculture Management

Division
FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +39 06 570 55080
E-mail: Matthias.Halwart@fao.org

Modibo Traoré
Assistant Director-General
Agriculture and Consumer Protection Department
FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +39 06 570 54523
E-mail: Modibo.Traore@fao.org

Nevena Alexandrova
Agricultural Research and Biotechnology Officer
FAO Regional Office for Europe and Central Asia
Benczur utca 34, H-1068,
Budapest,
Hungary
Tel: (+36-1) 8141257
E-mail: nevena.alexandrova@fao.org

Oudara Souvannavong
Senior Forestry Officer
Forest Conservation Service
FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +390657054750
E-mail: oudara.souvannavong@fao.org

Paul Boettcher
Animal Production Officer
Animal Production and Health Division
FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +39 006 570 55620
E-mail: paul.boettcher@fao.org

Preet Lidder
FAO Working Group on Biotechnology
FAO, Viale delle Terme di Caracalla,
00153 Rome, Italy
Tel: +39 06 570 56208
E-mail: Preetmoninder.Lidder@fao.org

Richard Ian Laing
FAO Consultant
39, 275 Woodridge Dr SW,
Calgary Alberta T244S4
Canada
Tel: +1 403-281 7414
E-mail: ips.laing@shaw.ca

Rosa Rolle
Senior Agro-Industry and Post-Harvest Officer
FAO Regional Office for Asia and the Pacific
Maliwan Mansion, 39 Phra Atit Road
Bangkok 10200
Thailand
Tel: (+66) 2 697 4000
E-mail: Rosa.Rolle@fao.org

Shivaji Pandey
Director
Plant Production and Protection Division
FAO, Viale delle Terme di Caracalla,
00153 Rome, Italy
Tel: +39 06 570 55004
E-mail: Shivaji.Pandey@fao.org

Sridhar Dharmapuri
Consultant
Nutrition and Consumer Protection Division
FAO, Viale delle Terme di Caracalla
00153 Rome, Italy
Tel: +39 06 570 53350
E-mail: Sridhar.Dharmapuri@fao.org