



# Public-private partnerships: the role of the private sector

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**Dominic Muyldermans**  
Senior Legal Consultant



# Private sector innovation: key figures

- R&D is key to enable agricultural growth:
  - To improve crop productivity;
  - to improve sustainable agricultural practices and empower farmers to adopt best practices;
  - To improve farmer incomes;
  - To improve the sustainable use of natural resources;
  - To reduce poverty and improve health and welfare.
- The private sector is a major contributor to agricultural R&D;
- The top ten plant science companies employ 15,000 scientists and spend US\$ 5 billion annually on R&D.



# Private sector innovation: key parameters

- Main objectives of private sector and public sector differ:
    - Private sector: profit
    - Public sector:
      - Providing solutions for identified public needs through non-profit research;
      - Generate profit to invest in non-profit research.
  - Intellectual property rights:
    - A reasonable marketing opportunity leads to projected return on investment, to be invested in R&D in new technologies;
    - Return on investment creates incentives to further invest in R&D in the same or similar technologies;
    - Free riding *per se* – a disincentive to invest – is avoided.
  - Return on investment in mature economic markets:
    - Farmers are willing to pay a premium due to higher profits;
    - Competitive market creates efficiency;
    - ROI in mature economic market enables R&D in a developing country or non-mature economic market;
    - No ROI would increase costs of public R&D spending substantially.
- The need to combine the objectives and abilities of the public and private sector.



# Public-private partnerships: examples

- “Developing Agriculture Project” in South Africa;
- “Integrated Pest Management” in Latin America, South East Asia and Africa;
- “HarvestPlus Challenge Program” in Asia and Africa;
- “Water Efficient Maize for Africa” in Tanzania;
- “Vitamin A Consortium” with IRRI in the Philippines;
- “Donation of Biotech eggplant technology” in India, Bangladesh and the Philippines;
- “BioCassava Plus Project” in Sub Saharan Africa;
- “Biofortified Sorghum Project” in Africa.



# Public-private partnerships: the synergy effect (1)

- Share the financial burden of R&D:
  - Enable ROI in mature market;
  - Focus on facilitated access in non mature market.
- Enable access to existing or new technology for local needs:
  - Making existing technology available:
    - ROI in mature market has enabled R&D in existing technology;
    - Access rights to technology in non mature market do not undermine IP rights *per se*.
  - Developing new technology:
    - Future ROI in mature market to enable R&D in new technology;
    - IP rights in new technology also create value for public partner.
- Create expert resources for capacity building + combine complimentary capacities:
  - Private sector:
    - Control of valuable technology;
    - Technical expertise, *p.e.* integrated pest management and stewardship.
  - Public sector:
    - Knowledge of local needs;
    - Close ties with local authorities and stakeholders.



## Public-private partnerships: the synergy effect (2)

- Increase leverage of a public-private knowledge base;
  - Share costs of infrastructure;
  - Increase the effectiveness of the technology per se;
  - Enhance quantity and quality of sectoral knowledge;
  - Increase and promote the effective and responsible use of the technology;
- The public and private sectors play different roles and have different abilities in the continuous cycle of innovation that is needed to ensure food security.



# Public-private partnerships: potential issues

- Increased liability exposure:
  - Decrease of control through broader dissemination;
  - Highly regulated environment;
    - Lack of legal certainty;
    - Need for specific skills and know how;
    - Substantial costs related to regulatory risk management.
  - Trade losses due to LLP issues;
  - Lack of expertise in laboratory or field trial practices.
- Erosion of IP rights:
  - Disincentive to invest further;
  - Substantial increase of funding by public sector required;
  - Lack of return on investment opportunity for public sector;
  - Less efficient and thus effective innovation.



# Public-private partnerships: conclusions

- Recognise the different main objectives of private sector and public sector/national governments;
- Acknowledge the need for return on investment in mature markets;
- Support intellectual property rights as a key incentive for innovation;
- Acknowledge the different roles and different abilities of public-private partnerships;
- Promote enabling, science-based and not prohibitive regulatory frameworks.
- Increase public investment in agricultural R&D.





***Thank You!***

