

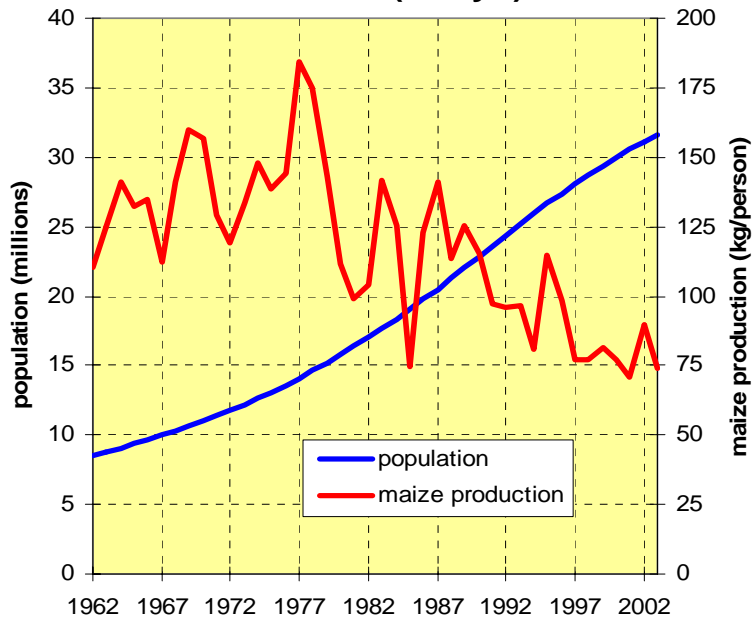
Private-Public Partnerships to Improve Access to New Maize Technologies in East and Southern Africa

David J. Spielman, IFPRI
Hugo de Groote, CIMMYT
Alpha Diallo, CIMMYT
Marianne Banzinger, CIMMYT

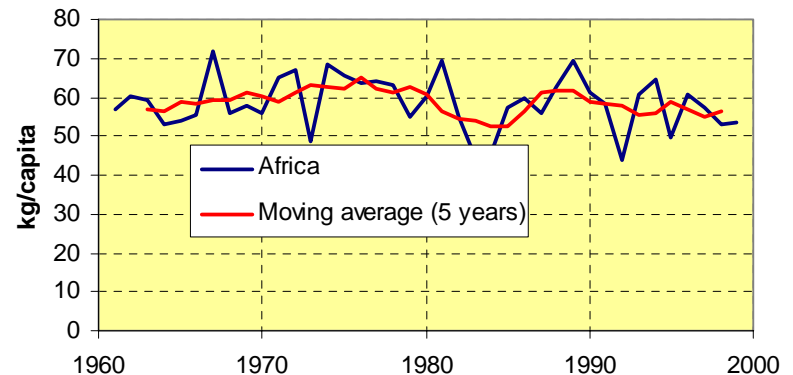


Maize yields and input use are stagnating

Evolution of Maize Production per Person (Kenya)



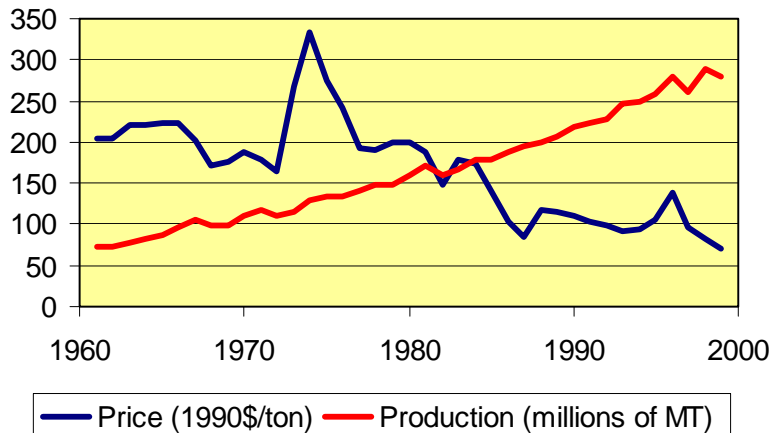
Maize Production/capita in Africa



- Maize production per capita is declining
- Use of improved seed is not increasing
- Fertilizer use is low and often decreasing

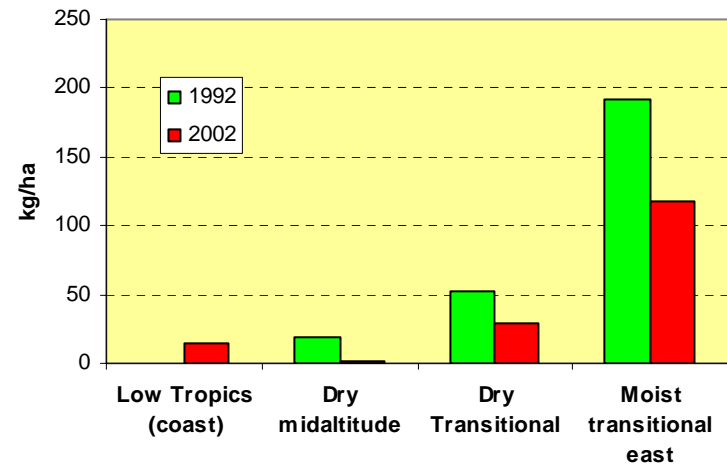
Global maize prices are dropping

International maize price and production



- Output/input price ratios less than half of Green Revolution ratios
- International maize prices are declining

Evolution of Fertilizer Intensity in Kenya



But maize seed markets are opening up

- Liberalization – too far or too little?
- New firms and varieties – but low adoption
- Declines in public spending on R&D
- Regulatory issues persist, eg rent-seeking
- Regional harmonization remains elusive

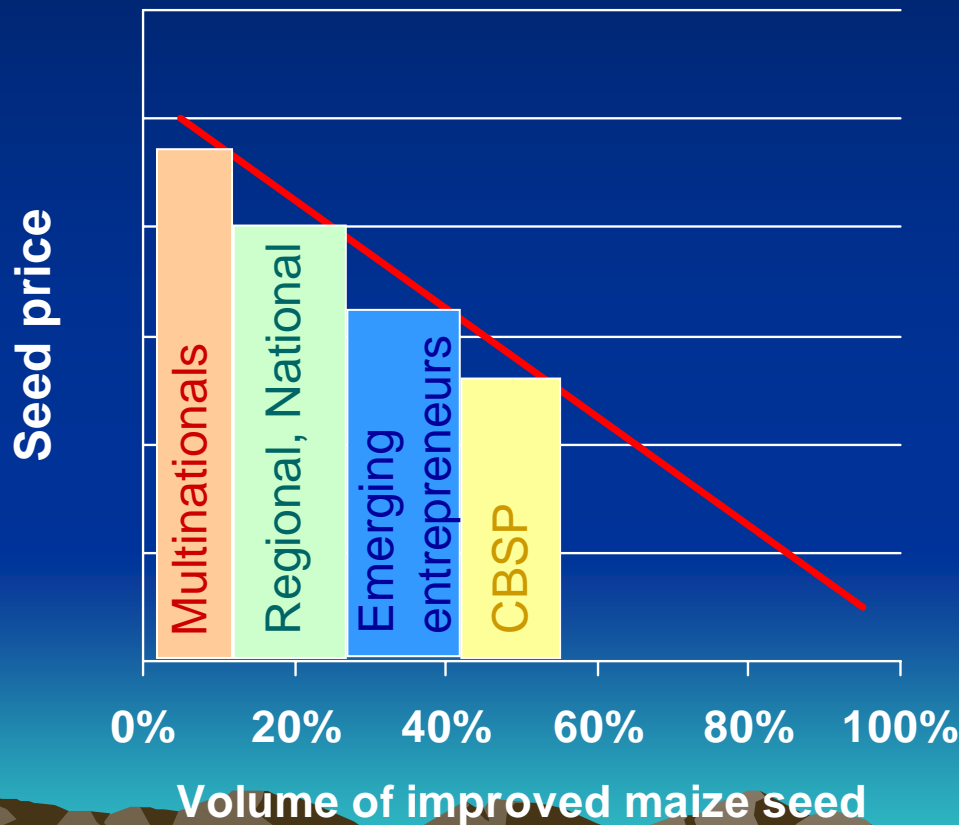


Innovating with maize

- New approaches to maize improvement are needed
 - Better understanding of the roles and dynamics of new players in the sector
 - Public-private research partnerships to develop and deploy new technologies
 - Organizational, institutional, and policy options to replicate similar approaches



PPPs can increase smallholder access to genetic gains



Seed price:

- + Research
- + Production
- + Transport
- + Processing
- + Marketing
- + Quality control
- + Training



PPPs have different goals

- Different PPPs for different objectives:
 - Co-innovate on the scientific frontier
 - Access proprietary information and materials
 - Navigate regulatory processes
 - Commercialize new technologies
 - Finance research activities



The result? Different projects

- Insect-resistant maize
 - Status: confined field trials
- *Striga*-resistant maize
 - Status: varieties released for multiplication
- Quality protein maize
 - Status: varieties released
- Drought-tolerant maize
 - Status: GM research put off for now; conventional varieties released



The partners

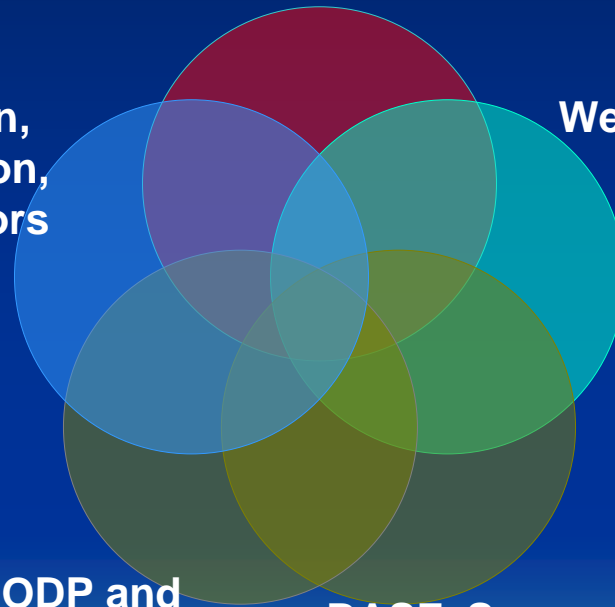
**CIMMT, KARI, EIAR, NARO, DRD
and other public sector organizations**

**Syngenta Foundation,
Rockefeller Foundation,
DFID, and other donors**

**Western Seed, Lagrotech,
Freshco and
other local firms**

**CRS, CARE, SCODP and
other non-governmental
and civil society organizations**

**BASF, Syngenta, Pioneer, Monsanto
and other global cropsience firms**



Scientific and regulatory issues

- IPRs and MTAs
 - Private → public: Research vs. commercial use exemptions
 - Public → private: Ensuring good stewardship
 - Sensitive issues, but not usually deal-breakers
- Regulatory processes
 - Complex, nascent, under construction
 - Need to draw on private sector expertise

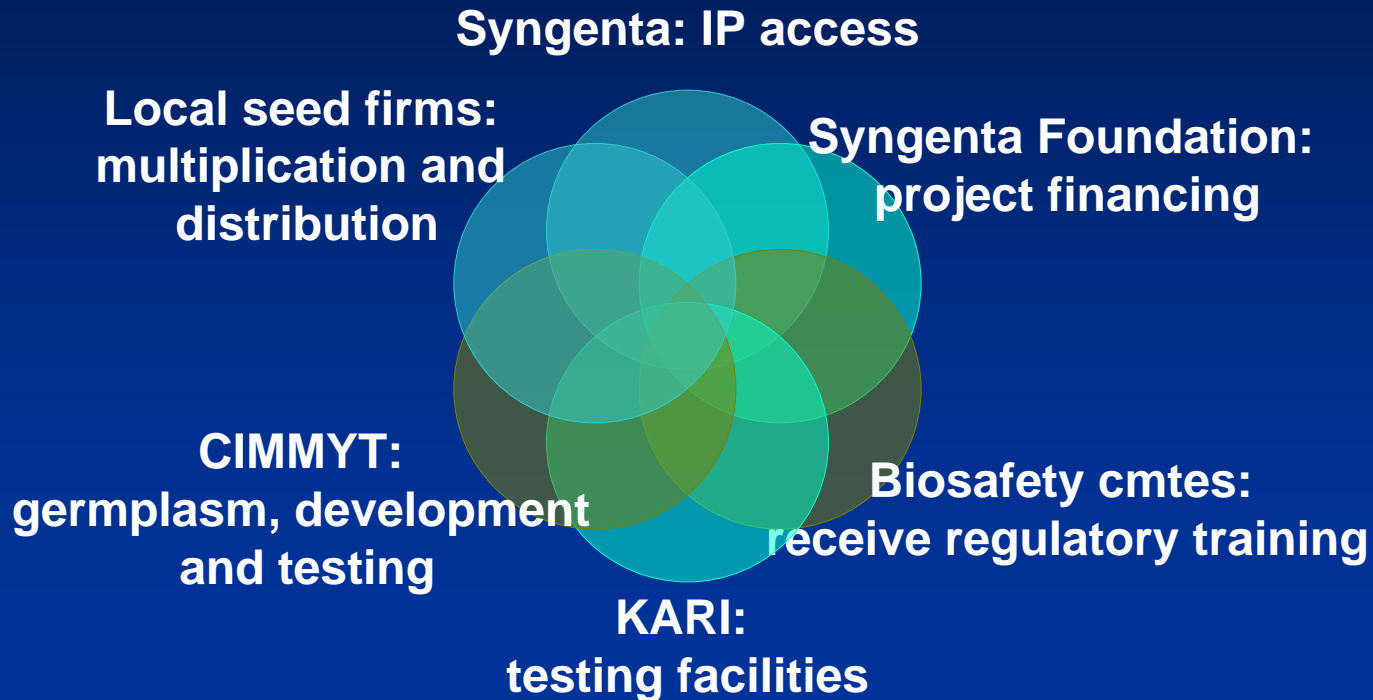


Coordination and risk issues

- Coordinating diverse partners
 - Misperceptions, distrust of motives are common
 - Absence of resources for building common platforms
- Managing and mitigating risk
 - Contested allocations of financial & reputational liability
 - Weak legal & communications strategies to address worst-case scenarios



Insect-resistant maize



Lessons:

- Progress & setbacks require partner flexibility
- High-profile technologies are risky, requiring proactive damage control strategies

Striga-resistant maize

CIMMYT:

germplasm, development, and testing

KARI:

testing facilities

BASF:

technology and IP

AATF:

legal/regulatory assistance

Weizmann Institute:

scientific leadership

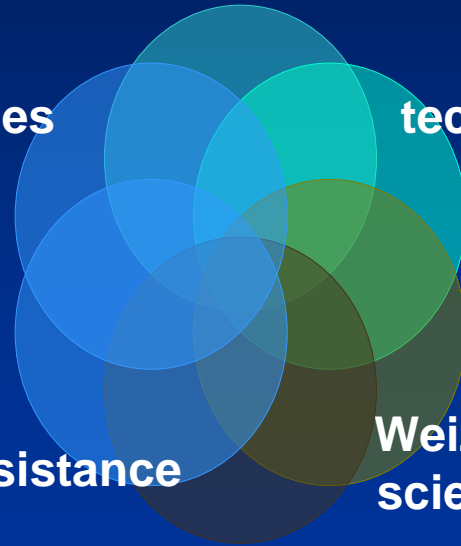
Local seed firms:

multiplication and distribution

Lessons:

→ Secure commitment and clarify roles ex ante

→ Establish clear lines of communication



Lessons learned

- Identify vital partners in unlikely places
- Be open and flexible, not dogmatic
- Invest in initial platform building *and* long-term commitment
- Chalk out roles and responsibilities ex ante
- Create in-built conflict resolution mechanisms
- Design pro-active risk management strategies
- Know that PPPs change how *everyone* does business



Thank you

