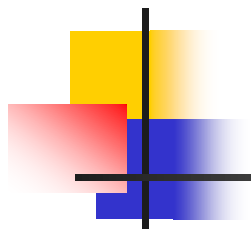


# Seeds of Control



QuickTime™ and a  
decompressor  
are needed to see this picture.

## Political Economy of Cereal Seed Systems in Africa





# Food system basics

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- Biological - ecological
- History - global restructuring
- Human needs - multi-dimensional
  - physiological
  - psychological
  - social
  - cultural



# Key trends

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- Economic Concentration
- Control
- Global markets



# Food System actors

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- **Input suppliers**
- Farmers
- **Traders**
- Workers
- **Processors / manufacturers**
- **Wholesalers / retailers**
- **Caterers**
- Consumers / citizens
- **Politicians, policy makers / influencers**



# Tools for control

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- Science
  - NB - correct understanding not necessary for technology dept
- Technology
- Information
- Management
- Laws, rules, regulations
  - The central battle ground



# Synthetic biology

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- Nanotechnology
- Biotechnology
- Information Technology
- Cognitive neuroscience
- Design and construct new biological parts, devices and systems
- Redesign existing biological systems

# Beyond terror

## - the real threats to our world

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- Climate change
- Competition over resources
- Marginalisation of the majority world
- Global militarisation





# Pingali: core points

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## Problems

- Rapid urbanisation
- Globalisation
- Information / communication technologies
- Rising food and energy prices
- Climate change

## Solutions

- Empower communities
- Empower local governments
- Transparency and accountability
- Democracy at all levels
- Protect from climate change



# Global rules, intellectual property and

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# The Future Control of FOOD

A GUIDE TO INTERNATIONAL NEGOTIATIONS  
AND RULES ON INTELLECTUAL PROPERTY,  
BIODIVERSITY AND FOOD SECURITY

Edited by  
**Geoff Tansey & Tasmin Rajotte**



# Importance of Intellectual Property



- Underpins
  - 'knowledge economy'
  - media & entertainment, software
  - pharmaceuticals / biotechnology
  - brand power
- Means to
  - Exclude others, capture and appropriate benefits



# Language and reality

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- monopoly (or exclusionary) privileges
  - IMPs not IPRs



# Costs of granting IMPs

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- Shift market power
- Higher consumer prices
- Increase cost of knowledge acquisition
- Facilitate anti-competitive practices
  - cross-licensing
  - tie-in sales
  - buy-up patents
  - threaten law suits



# The UPOV Convention

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- Turning plant varieties into intellectual property
  - International Union for the Protection of New Varieties of Plants
- European response to US patents
- 1961, 72, 78, 91, ??
- Debate about what is new, breeders exemption, farmers 'privilege'



# TRIPS at the World Trade Organisation (WTO)

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- Bringing minimum intellectual property standards into agriculture
  - The Agreement on Trade-Related Aspects of Intellectual Property Rights
- Kicking away the ladder (Ha Joon Chang)
- Requires patenting of microorganisms, plant variety protection
- Option not to patent plant and animals

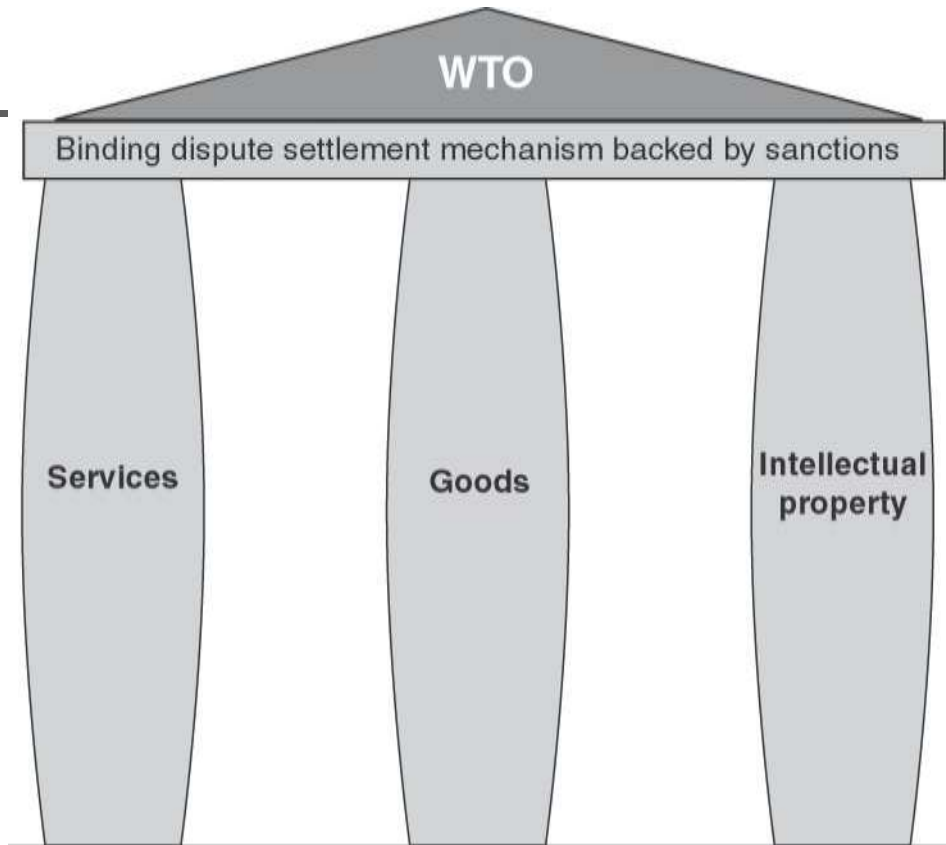




# WIPO - World Intellectual Property Organisation

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- Promoting and extending the reach of intellectual property
  - Development agenda
  - Genetic resources and traditional knowledge
  - Technical assistance





# Convention on Biological Diversity (CBD)

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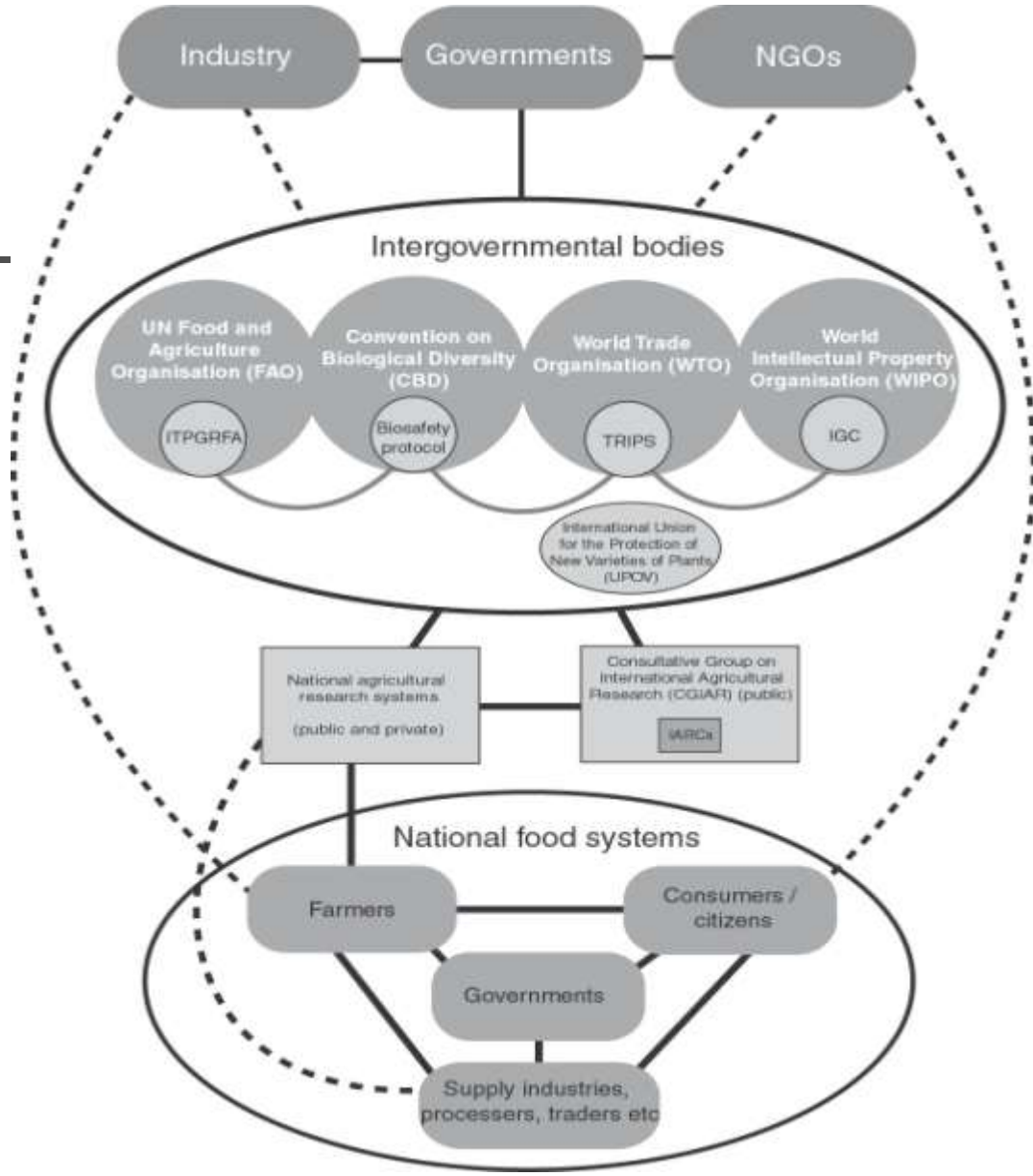
- Safeguarding biodiversity
  - conserve, sustain, share benefits
  - Access and benefit sharing regime?
- Biosafety Protocol
  - Living Modified Organisms (LMOs)
  - Labelling?
  - Liability and redress?



# The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

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- Giving Priority to the Commons
  - Facilitated access to listed food crops
  - Farmers' Rights
  - Standard Material Transfer Agreement





# Alternative futures

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- Which and whose future is enhanced?
  - Collapse (still a real danger: eg economic, WMD wars over resources/beliefs, disease, environmental disasters)
  - techno-dominance (the current approach to sustainability)
    - Bifurcation (rich 2 billion or so use all tech available to enhance / maintain their lifestyles, rest contained by technologies of control or killed off in disasters - the “Liddism” of Paul Rogers)
  - ecological balance (the desirable approach to sustainability), resilience, equity

# Key words

Power

Control

Risk

Benefits

