IP Commission
Agriculture

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Theses

- The Report undervalues agricultural advance
- The Report undervalues agricultural IP
- Its proposals are generally not unreasonable
- But its emphasis is misplaced
Agricultural progress

Wheat Yield in France 1815 - 1998

Year

Yield (100kg/ha)
Agricultural progress

• Why?
• Advance in agricultural technology
  – improved plant varieties
  – improved pesticides
  – (about equal contributions)
• Important to maintain this progress
Sources of progress

• Publicly funded R&D
  – still important, but increasingly under pressure
  – Commission rightly calls for more support

• Private R&D
  – relatively well funded
  – produces useful products for the market
IP

• To breed a new variety (typically) takes up to 10 years
• To copy it takes (typically) one season.
• To recover investment requires protection against competition for a number of years
• Hence IP
Plant IP

- Patents
- Plant variety rights
- Trade secrets, Technological protection
Patents

• Well-established system - 100+ countries
• Protects generic ‘technical idea’ (may not exist yet - or ever)
• New, useful, **inventive**
  – new varieties not necessarily inventive
• Exceptions? For research? For farmer re-use?
• Not ideal for protecting breeders’ work
Plant variety rights

• Fairly new system - ~50 countries
• Specific, not generic - ‘bag of seed’
• Distinct, uniform, stable, novel
  – need not be inventive
• Exceptions for
  – further breeding (compulsory)
  – farmer replanting (‘optional’)

Trade secrets

• Based on:
  – Right to maintain confidential information - how something is done
  – Right to keep control of private materials

• Conflict with:
  – Public right to deal with what’s publicly available
  – Public interest in availability of information
Technological protection

• Hybrids
  – Crossing two ‘pure lines’ gives a uniform product with ‘hybrid vigour’
  – hybrid progeny are diverse (good and bad)

• GURTs
  – seeds rendered artificially sterile
  – useful in specific situations
  – have a bad name
What IP is best for plants?

- Without something, no private investment
- **Patents** - important for major advances - not always available, can be too strong
- **Trade secrets, GURTs** - hinder dissemination of technology
- **PVR** - the Goldilocks solution!
DO DCs need plant IP?

• Not if they have no market
• Otherwise Yes - right-holders will develop products the market requires - generally these differ from place to place
• Effective technology transfer requires co-operation - eg by incentive
Issues with the Report - Major

• Does not understand plant breeding
• Underplays importance of IP
“In the US a study from the 1980s suggested there was no evidence that total R&D activity had increased as a result of the introduction of PVP, although it appeared to have had some impact on soya beans, and perhaps wheat. The latter crops also accounted for the majority of PVP certificates issued. There was also evidence that PVP was used as a marketing strategy for product differentiation and that it had contributed to the large number of mergers that took place in the seed industry. But the evidence is inconclusive, in particular because of the difficulty in isolating the effect of protection from other ongoing changes. Even now research spending on hybrid crops as a share of sales continues to exceed that on non-hybrid crops, which are the principal object of PVP. A recent study found that PVP on wheat in the US had not contributed to increased investment in private sector wheat breeding, but may have done so in the public sector. Nor had it contributed to an increase in yields. But the share of wheat acreage sown to private varieties had increased markedly, reinforcing the suggestion that the main impact of PVP was as a marketing tool.”
Points for discussion

• “... the evidence is poor…”
• ‘No increase in total research’ - but, presumably, public to private transfer
• Emphasis on wheat and US - not a good test of PVP
• Implies PVP is only for ‘product differentiation’ and ‘planned obsolescence’
‘..contributed to mergers…’

- ??

- US Industry information suggests the reverse: between 1970 and 2000
  - more investment in research
  - more companies involved
  - more products, increasingly proprietary

- Wheat, maize and soya
Issues with Report - others

• P68: “..private research in developing countries is very low..” - partly because no IP!

• Inconsistent - to promote both stricter examination and utility model protection

• P70, criteria for awarding a PVP certificate.
  – ‘Distinctness’ is robustly applied
  – ‘Uniformity’ depends on production - populations can be protected
  – ‘Stability’ is essential - for scope of right
Issues with Report - Biodiversity

• P70, ‘how is biodiversity to be conserved?’
• Breeders promote objects of CBD
  – by preserving germplasm
  – by putting it to sustainable use
  – by sharing the benefits! (International Treaty on PGRFA)
  – (note that the Treaty does not require payment for varieties still available for breeding)
• Breeding increases biodiversity
Recommendations

- No patents for plants or animals; limited rights for micro-organisms, ag biotech.
  - H’m

- Specific exceptions for research and seed saving
  - absolutely

- Strengthen public sector research, competition law
  - absolutely

- Ratify PGFRA Treaty - definitely

- Implement Farmers’ Rights
  - H’m
Conclusion

• Strong Points
  – DCs at different points of development have different priorities
  – TRIPs is flexible enough to accommodate differing national needs