

Options of agricultural extension provision for rural development in Central Asian transition economies: the case of Uzbekistan

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Outlines

1. Importance of extension services (ES)
2. Efficiency of extension services worldwide
3. Extension in Uzbekistan
4. Options of improving agricultural ES for rural development
5. Conclusions

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Incentives for Research and Extension in Agriculture

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- Need for institutional and organizational changes in transitional period
- Complex of agro-ecological, socio-political and economic conditions
- **New class of land users with insufficient knowledge, experience and skills**
- Farmers unable to provide for rational resource use or efficient farm management
- Need for support farmers to adapt
- Lack of extension services *per se* and scarce knowledge
- **Low impact of existing AgSo**
- **Agriculture – 25% of GDP**
- **Rural population - >60% of total**



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Efficiency of research and extension worldwide

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Extension efficiency

Country	Efficiency Parameter	Increased value	Source:
Brazil	IRR	13 to 500 %	Birkhaeuster et al. 1992
India	IRR	14 to 15%	Birkhaeuster et al. 1992
Paraguay	IRR	75 to 90 %	Birkhaeuster et al. 1992
USA	IRR	100 %	Birkhaeuster et al. 1992
Sri Lanka	Rice yields	25%	Ekneligoda 1996
Bangladesh	Rice yields	8 to 13 %	Ramaswamy 1992
Sri Lanka	Profit	40%	FAO 2000
Thailand	Profit	30%	FAO 2000
China	Profit	10-25%	FAO 2000
Azerbaijan	Profit	52%	Lamers et al. 2008
Ivory Coast	Food crops yield	33%	Romani 2002

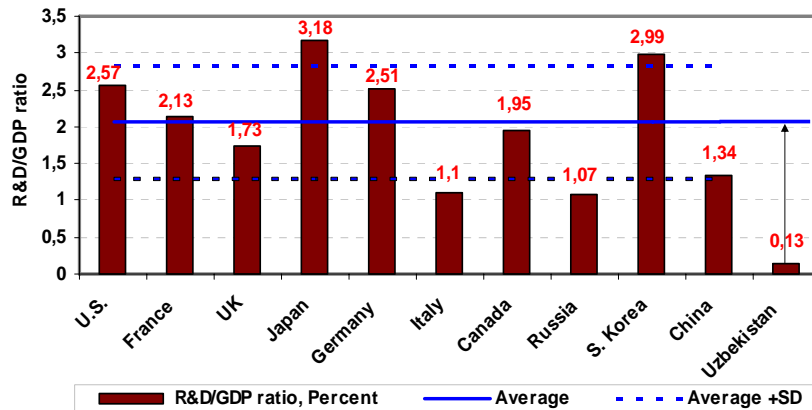
Extension efficiency – 58% **Research efficiency – 49%**
 An overview 289 studies of economic returns to AgR&D (Alston et al.)



Efficiency of research and extension worldwide



R&D/GDP ratio for selected countries compared to Uzbekistan:
2006 or most recent years



Source: NSB 2008, CEEP 2008, authors' calculations

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Efficiency of research and extension worldwide



Poor performance of extension & education systems

- Ownership form
- Land tenure
- Lack of credit facilities
- Access to information
- The availability and prices of inputs
- Inefficient market structures
- Bureaucratic inefficiency
- Deficient program design
- Publicly oriented, staff-intensive information delivery services
- “Top-down” approach in technology transfer**

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Extension Concept

Agricultural Knowledge and Information System for Rural Development

Education

Farmer

Research **Extension**

Agricultural extension provides nonformal – agriculturally related continuing adult education - for multiple audiences: farmers, spouses, youth, community, urban horticulturalists (continuing agricultural education and community development) and for various purposes (including agricultural development, community resource development, group promotion and cooperative organizational development) (IWMI 2008)

Source: FAO/WB 2000

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Extension Concept

Innovation transmission approaches:

Basic Research Applied Research Extension System User's Social System

a) Transfer of technology concept ("top-down")

Basic Research Applied Research Extension System User's Social System

b) Problem solving concept ("bottom-up")

Source: Albrecht *et al.* 1989



Extension Concept



Comparison of two approaches to extension delivery

Production-technology or Transfer of Technology approach	Problem-solving approach
✓Centralized, top-down, or blueprint approach	✓Decentralized, bottom-up, and process oriented
✓ Narrow technical view of development	✓ Broader socio-economic view of development
✓Commodity and production targets oriented	✓Adequate and location-specific answers to a farmer's problem
✓ One-way movement of messages	✓ Interaction between agent and client
✓Faith in science and commitment to modernization	✓Allows for the development of more appropriate content
✓Favors the larger, commercial farmers	✓Various categories of farmers
Interrelation of two concepts	
✓Generation and transmission of experiences from researchers, farmers and practitioners	
✓Selectivity with regard to clientele and respective goals	

Source: Authors' presentation




Research dissemination in Uzbekistan



Groups of AgSOs according to the type of knowledge dissemination

Explicit Knowledge (28%)	Knowledge embedded in technologies (28%)	Pure asset transfer (56 %)
<ul style="list-style-type: none"> •Association of Private Farmers (PFA) •Centers and projects supported by international donors •Water User Association •Ministry of Agriculture and Water Resources and its regional (local) departments 	<ul style="list-style-type: none"> •MTP (Machinery Tractor Parks), AMTP (Association of Machinery Tractor Parks) •“Kishlokhujalikkimyo” – sale-points for selling mineral fertilizers •Production and sale of seeds •Network for the sale of pedigree cattle and veterinary services 	<ul style="list-style-type: none"> •Network for the procurement of agricultural production •“Uzagrosugurta” insurance company •Commodity Exchange - Birja •Commercial banks – branches, mini-banks •“Urganch Neftbaza” – sale-points for selling oil products (fuel) •Communicational services


Source: Authors' presentation



The present of and future options for extension

The present	Future options
Looking at extension as public service	⇒ Seeing extension as a set of functions, to be performed by a variety of stakeholders, at different levels
Looking at extension to purely transfer technologies	⇒ Seeing a wider mandate for agricultural extension, that also includes farmer mobilization, organization and education and promotion of ecologically and socially sustainable farming practices
Looking at extension as a distinct, separate institution	⇒ Seeing a coherent, comprehensive knowledge system for the generation, transfer and uptake of knowledge and technology, that includes the farmers, research, extension and education

Source: Adapted from MANAGE 2009



The present of and future options for extension

The present	Future options
⇒ Using a linear, sequential and one-directional model of technology transfer	⇒ A problem solving oriented approach based on participatory extension methods whereby farmers, researchers, educators and extensionists are all engaged in the generation, transfer and use of new knowledge, as well as the development of social capital (trust and collaboration)
⇒ Designing activities from a teaching perspective, and budgeting for teaching efforts	⇒ Allowing activities to develop a collaborative learning mode, engaging all major stakeholders.
⇒ Paying lip service to the potential of information technology for rural development	⇒ Including experimental information technologies in activities to link research institutes, extension managers, farmer organizations and others to each other
⇒ Using existing AgSOs for functions they are ill-prepared for and that conflict with their prime mandate, which is becoming profitable	⇒ Training extensionists and councilors in appropriate communicable behavior for the sake of providing adequate extension delivery

Source: Adapted from MANAGE 2009



Concluding remarks



- Extension services play the role of a bridge between research organizations and farmers
- Communication mode is pivotally important for the success or failure of extension-type services
- An extension delivery system needs to be user-oriented and cost-effective
- Economic framework needs to become more favorable in Uzbekistan for the successful performance of extension services



Thank you for your attention