

***Implementation of the European
Innovation Partnership
'Agricultural Productivity and
Sustainability' in Hungary***



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Rationale behind the EIP for agriculture

Source: COM(2012) 79 final, dated 29 February 2012

- World food demand is expected to increase by 70% by 2050;
 - This will trigger a supply reaction from EU agriculture;
- Agriculture has achieved major productivity gains in recent decades but this trend has slowed in recent years;
- These gains were achieved partly by putting serious strains on natural resources and the environment;
- Agriculture has made major strides in terms of reconciling production with environmental management but these positive developments may be undermined by the expected increase in agricultural output



Global yield growth rates for selected crops, 1961-2007

Average annual growth rate by period (%)




	Maize		Wheat		Rice		Soybeans	
	1961-90	1990-2007	1961-90	1990-2007	1961-90	1990-2007	1961-90	1990-2007
World	2.20	1.77	2.95	0.52	2.19	0.96	1.79	1.08
North America	2.20	1.40	2.23	0.01	1.67	1.54	1.05	0.04
Western Europe	3.30	1.81	3.31	0.63	0.38	0.55	1.64	0.05
Eastern Europe	1.91	0.97	3.18	-1.69	-0.41	1.07	1.90	2.29
Per capita income								
High	2.34	1.48	2.47	0.06	1.07	0.54	1.14	0.02
Middle	2.41	2.12	3.23	0.85	2.54	0.81	3.21	2.08
Low	1.07	0.65	1.32	2.15	1.46	2.16	2.63	0.00

Source: Table 3.3 in Chapter 3 of Alston et al. (2010), also in Alston et al. (2008).

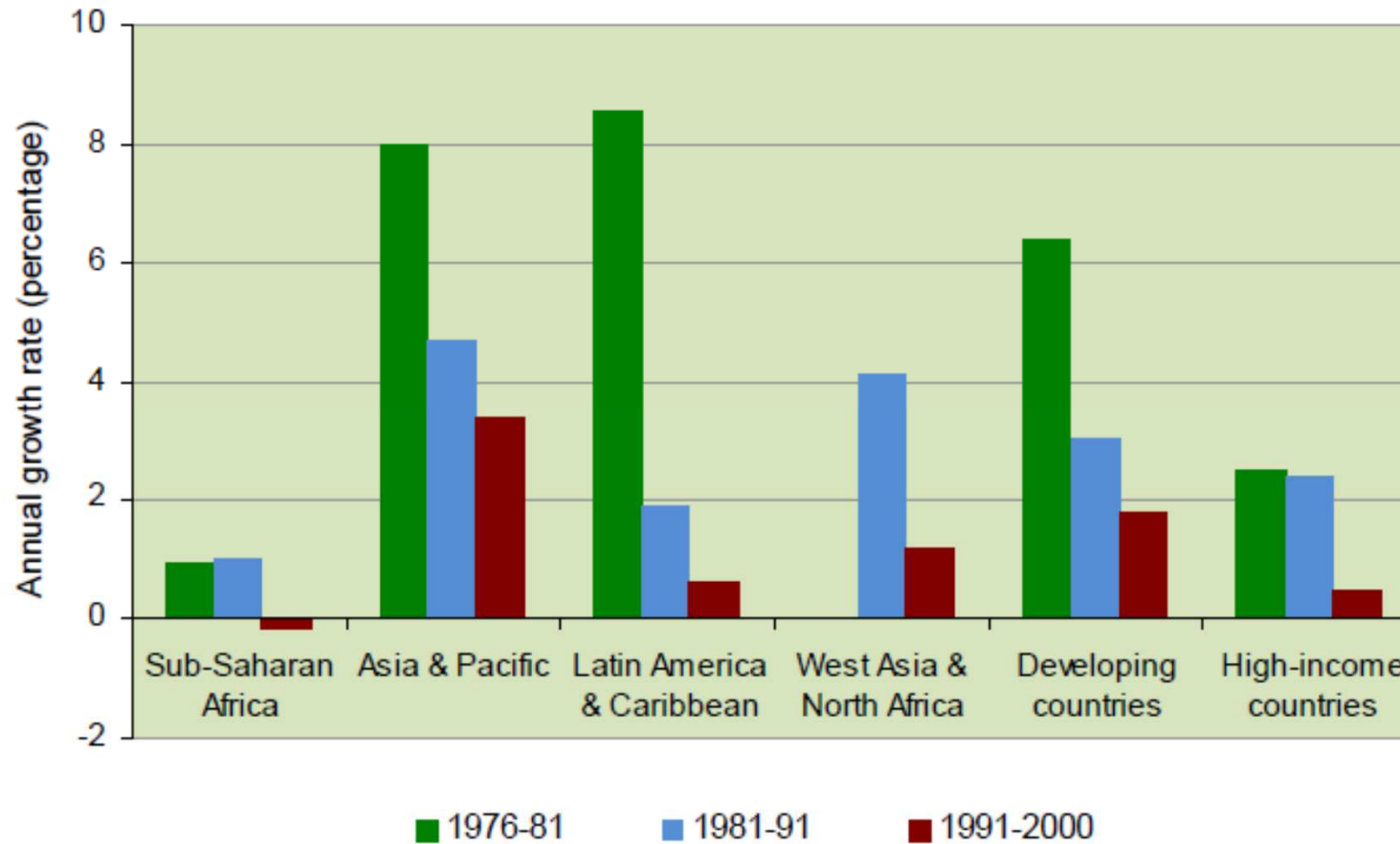
OECD Working Party on Agricultural Policies and Markets
PRODUCTIVITY AND COMPETITIVENESS IN AGRICULTURE:
THE ROLE OF RESEARCH AND DEVELOPMENT (2011)

Rationale behind the EIP for agriculture

Source: COM(2012) 79 final, dated 29 February 2012

- Increased and sustainable agricultural output requires major efforts in research and innovation;
- There is a gap between the provision of research results and application of innovation to farming practice;
- The needs of practical farming are not communicated sufficiently to the scientific community;
- Thus important innovations are not implemented on the necessary scale, and relevant research fields do not always receive the attention they desire
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Annual growth rates in agricultural research and development spending (source: FAO, 2011)



The role of the EIP for agriculture

- *New knowledge is generated by farmers, researchers and private companies. The old linear model of technology transfer should be replaced by an interactive model of networking systems, which integrates knowledge production, adaptation, advice and education.*
- Two headline targets:
 - promoting **productivity and efficiency** of the agricultural sector;
 - the **sustainability** of agriculture (securing soil functionality).
- ... in particular in bringing researchers, farmers and other players closer together so that we can accelerate the speed of technological transfer from science to farming practice, and provide more systematic feedback about practice needs from farming to science
- Consistent with the EU flagship initiative 'Innovation Union'
- 😊 ✓ 👍

The Agricultural Knowledge and Innovation System in Hungary : Research

Ministry of Rural Development (VM)

- *Nine institutes* covering: Agricultural economics; Animal breeding and nutrition; Small animal breeding and nutrition; Forests; Fisheries; Food; Biotechnology; Agricultural Engineering; Geodesy, Cartography and Remote Sensing

Hungarian Academy of Sciences

- *Six institutes* relevant to agricultural producers covering: Agriculture; Pest management; Soils and agrochemicals; Veterinary; Biological Research; Agricultural economics
- *Nine institutes* covering: Meat market; Peppers; Vegetables; Milk economy; Fruit and ornamental plants; Grain

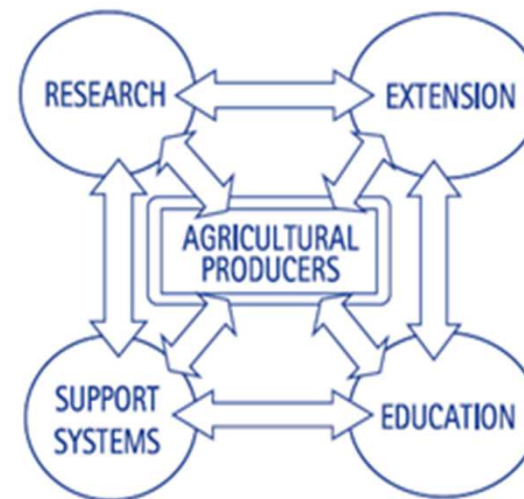
Other state owned institutions

Ministry of National Resources

- *21 institutes* belonging to agricultural universities and colleges

Private sector

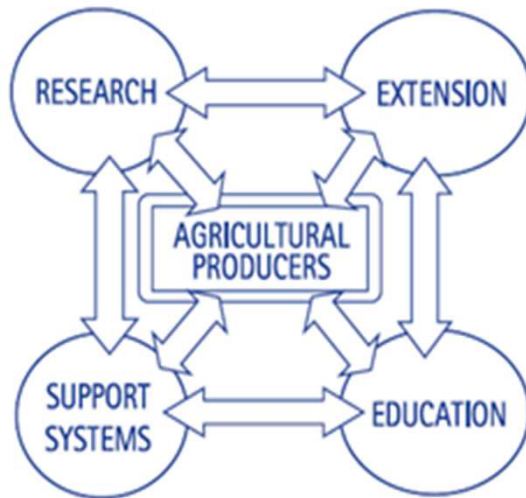
- *Various institutes*



The Agricultural Knowledge and Innovation System in Hungary : Extension

Farm Advisory System

- Set up in 2007; maintained, regulated and controlled by the VM and the NAKVI and mainly funded by the EAFRD; 643 registered active advisors in 2011; seven Regional Advisory Centres and 51 active Territorial Advisory Centres selected by tender which deliver upon-payment advice to farmers



Farm Information Service

- Set up in 2007; managed by the Hungarian Chamber of Agriculture; financed 71% by the EAFRD; provides free information to farmers about the CAP and direct payments; 205 consultants

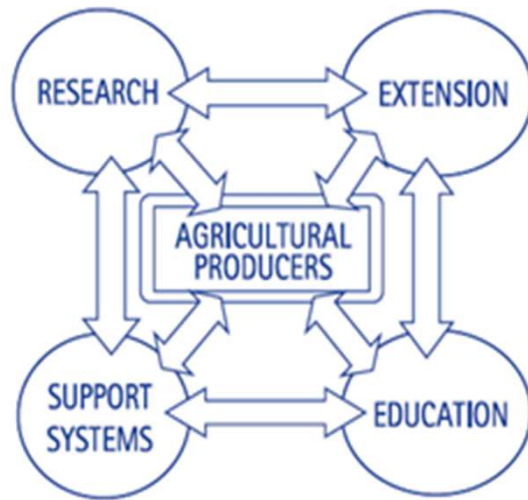
Network of village agronomists

- The Central Agricultural Office, which is directed by the NÉBIH (Hungarian National Foodchain Safety Authority), has a long-established network of village agronomists (588 in 2009) who have public administration tasks and also provide free advice to farmers

Commercial services

- Provided by professional advisers such as input suppliers, project proposal writers; in place since before 2007

The Agricultural Knowledge and Innovation System in Hungary : Education



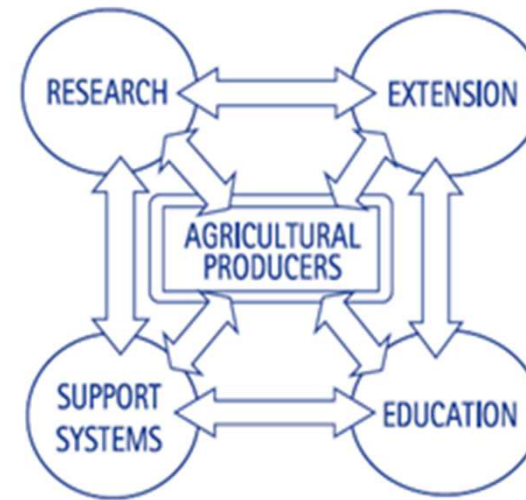
Ministry of National Resources

- **Universities:** major agricultural, horticultural and veterinary teaching centres in Debrecen; Szeged; Gödöllő; Budapest (Corvinus University); Kaposvár; Keszthely (University of Veszprém); Mosonmagyaróvár (University of West-Hungary)
- **Higher education colleges:** major agricultural and horticultural centres in Gyöngyös (Károly Róbert); Szarvas (Tessedik Sámuel); Kecskemét; Nyíregyháza and Mezőtúr (Szolnok)

Ministry of Rural Development

- **Vocational schools:** 19 institutes which are run by the VM covering agriculture, horticulture, food and related topics

The Agricultural Knowledge and Innovation System in Hungary : Support systems



Producers' associations

- Hungarian Chamber of Agriculture (11,000 members); MOSZ and MAGOSZ

Product boards

- Covering: Poultry; Fruit and vegetables; Meat; Grain and feed etc.

Agricultural Administration Office

- Associated with the VM; the Hungarian National Foodchain Safety Authority (NÉBIH) delivers regulatory, monitoring and accreditation services through local offices

Agricultural and Rural Development Agency

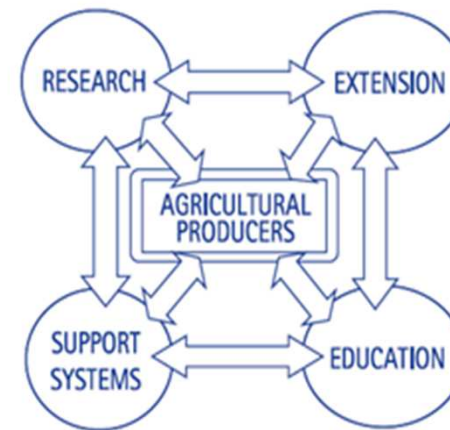
- Supervised by the VM; the sole paying agency of EAGF and EAFRD funds and national funds

Hungarian National Rural Network

- Operates within the Rural Development, Training and Consultancy Institute (NAKVI) of the VM

Examples of linkages between the different components of AKIS in Hungary

- The Ministry of Rural Development controls the Farm Advisory System, and funds both that and the Farm Information System mainly via EU funds, and the Network of Village Agronomists from its own budget (*support systems-extension*)
- The universities are the locations of the seven Regional Advisory Centres of the FAS and (with the colleges) are also the locations of some of the Territorial Advisory Centres (*education-extension*)
- Some of the FAS advisors are university and college staff or teachers of agricultural vocational schools (*education-extension*)
- The Hungarian Chamber of Agriculture manages the Farm Information System and the territorial chambers run 20 of the Territorial Advisory Centres (*support systems-extension*)
- 21 research institutes are part of the state universities and colleges (*education-research*)
- The Ministry of Rural Development owns nine research institutes, supervises the ARDA and HNRN and runs some of the vocational schools (*support systems-research; support systems-support systems; support systems-education*)
- The research institutes of the Ministry of Rural Development claim to have their own extension activities (*research-extension*)
- At some universities students can study advisory services as an optional subject for two years (*education-extension*)



Operational Groups will be the main 'delivery mechanism' under the EIP

- ... if we want to enhance innovation, main thing is to bring the specialist actors in a well balanced composition together and get a good interaction going;*
- ... the essential point of operational groups in EIP is not the FLOW of EXISTING information but the CREATION of new know-how.*

Innovative Food Cluster Ltd (www.pharmapiiek.hu/)

- Formed in 2009 (?) by universities, the local government of Debrecen, the Chamber of Commerce and Industry of Hajdú-Bihar County, the Pick Salami Factory and SMEs engaged in the development and production of functional food products.

The RÓNA-SHEEP Cluster (<http://ronajuh.hu/>)

- Set up in 2007 by sheep breeding and raising companies, educational and research institutions.

Tisza Valley International Agricultural Research and Development Cluster

- Formed in February 2013 by 34 Council, university and other organisations from five countries to establish common food production systems, to improve the level of food security and to create jobs.

Organisational preparations for the EIP in Hungary

- What will be the **objectives with regards to innovation** in the RDPs? What will be the areas for intervention?
- What will be the **key stakeholders** for the implementation of the EIP?
- How do you intend to **involve these stakeholders** in the preparatory phase of the rural development programmes?
- Do you see any particular **bottlenecks** in your country for the implementation of the EIP via the RDPs?
- What **measures** are you considering to achieve your objectives with regard to innovation and knowledge transfer?
- Will you create a **special national or regional EIP network** or will you would integrate this networking function in the NRDN?

**Thank you for your
attention**

Dziękuję za uwagę!

Köszönöm a figyelmet