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ABSTRACTS OF AKI PUBLICATIONS

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Foreword

Once again, issue number 1 of *Studies in Agricultural Economics* is produced by AKI in cooperation with the European Rural Development Network (ERDN, www.erdn.eu). It includes selected papers from the fourteenth ERDN conference held in Budapest, Hungary on 3-5 October 2016. The conference explored several aspects of the topic *Knowledge sharing and innovation in agriculture and rural areas*, including setting the context for knowledge sharing and innovation; the potential for knowledge sharing and innovation; mechanisms/processes of innovation and knowledge sharing; the enabling environment for rural innovation; and impacts of knowledge sharing and innovation. Those papers not included in this issue are published in the conference proceedings.

The challenges faced by the post-socialist economies of the European Union (EU), such as the low uptake of innovation and modern technologies, and the low level of cooperation, are hindering the sustainable growth of the whole EU. A two-fold approach is needed to address these challenges. Firstly, through international cooperation, researchers from Eastern EU Member States must become more integrated into the European Research Area (ERA). Secondly, researchers and policy makers from the region should pro-actively influence the policy agenda, especially now that the debate on the shape of EU innovation policy post-2020 has started. The Budapest conference was designed to contribute to both of these objectives.

The EU FP7 project Impresa examined the impacts of scientific research on agriculture across the EU. Midmore reports that data availability in the post-socialist Member States is generally good but, in terms of funding research, the government sector seems to be declining in relative importance. Furthermore, the institutional structure in the region is not yet able to focus resources on farm-level needs in order to develop, disseminate and implement appropriate innovations.

In the Czech Republic, Hlavsa, Hruška and Turková found that farms supported by funds from the 2007-2013 Rural Development Programme have higher levels of economic performance and higher labour productivity than unsubsidised farms. They also have a higher level of fixed assets per hectare, suggesting that they have invested in new technology. A higher subsidy per hectare of UAS is evident in Less Favoured Areas (LFA) than in non-LFAs.

Székely used changes in commuting patterns between 2001 and 2011 as an indicator of the economic sustainability of territories covered by Slovakian LEADER Local

Action Groups (LAGs). While there are marked differences between individual LAGs, his analysis shows that the position and attractiveness of most LAGs as local labour markets has weakened over the ten-year period. This may in part be a consequence of weaknesses in LAG governance.

Four papers look at ways of stimulating innovation. The EU H2020 project AgriSpin is exploring approaches to innovation brokering. Wielinga, Koutsouris, Knierim and Guichaoua describe the results from the programme of 'cross-visits'. Successful innovations often arise from technical, organisational and institutional synergies, the first spark for an innovation can occur anywhere in a knowledge system, and networks have an important role in creating synergies and encouraging innovation.

Lessons learned from the triple helix (industry, knowledge workers and governments) cooperation in the different regional 'Greenport' clusters in the Netherlands are synthesised by Geerling-Eiff, Hoes and Dijkshoorn-Dekker. Partners firstly need to build a proper working relationship and a common language. Primary aims for innovation should not be formulated too ambitiously. Later collaboration can focus on taking the innovation ambition to a higher level.

In Wales, the Agrisgôp programme uses Action Learning, where groups of farmers and foresters are recruited and subsequently facilitated by an experienced facilitator, to enable organisational change. Owen shows that Agrisgôp group intervention resulted in participants having increased confidence; improved communication skills; greater ability to apply new information to their business; a more positive attitude to change; and were more likely to have a long term business strategy.

The experience of transferring the LEADER approach to Georgia, a non-EU country, is described by Oedl-Wieser, Dax and Fischer. Despite the short period of work with these ideas, there has been a high degree of acceptance and interest among rural stakeholders and residents to taking up such an approach. Tangible results in terms of strategy development, project establishment and employment creation are reported.

ERDN has now been established for over 15 years and is uniquely placed to play a major role in strengthening the ERA and shaping EU innovation policy. These points are explored further in a policy brief included in this issue of *Studies in Agricultural Economics*.

Andrew Fieldsend
Budapest, March 2017

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Policy brief

Knowledge sharing and innovation in agriculture and rural areas: more attention should be paid to regional differences across the European Union

On behalf of the European Rural Development Network (ERDN, www.erdn.eu), and as part of the 2016 Budapest Innovation Week, AKI hosted a conference on 3-5 October 2016 with the title 'Knowledge sharing and innovation in agriculture and rural areas'. This conference brought together 70 researchers, practitioners and policy makers from across the European Union, with a particular emphasis on participation from the Visegrad Group (Czech Republic, Hungary, Poland and Slovakia) and neighbouring countries. This policy brief was compiled from the debate that took place during the conference.

Andrew F. Fieldsend

Introduction

The European Union (EU) has introduced new policy instruments such as the European Innovation Partnership 'Agricultural Productivity and Sustainability' (EIP-Agri) and multi-actor partnerships in an attempt to stimulate innovation in agriculture. In addition, LEADER has been replaced by the multi-funded Community-Led Local Development approach. These initiatives are being implemented across the EU despite the great variety of agricultural and rural circumstances, and in particular the continuing differences between post-socialist Member States and other parts of the EU in terms of farm structure, social attitudes and so on. Can programmes that have primarily been developed from a western EU perspective ever be successfully implemented in the eastern EU Member States or is a different approach needed? Although it is still rather early to assess the degree of success in the implementation of the new approaches, the debate on the shape of EU innovation policy post-2020 has already started. Thus it is not too soon for researchers and policy makers in eastern central and south eastern Europe to share their experiences and ideas on how knowledge sharing and innovation can best be encouraged in agriculture and rural areas of the post-socialist Member States in order to influence the post-2020 agriculture and rural development agenda.

Conclusions from the conference

The conference pre-session reaffirmed that many farming systems in the region do not readily fit with the 'western' perception of a family farm as a commercially viable unit managed and run with family labour, producing entirely, or almost entirely, for the market. While in some post-socialist Member States, such as the Czech Republic and Slovakia, very large farming companies dominate, in others (such as Hungary) there is a dual farming structure, while in Poland and Romania, for example, the vast majority of farms are small and not economically viable. Indeed, many are subsistence or semi-subsistence farms. The conclusion from the conference was the EU's Common Agricultural Policy is intrinsically not able to address the needs of a substantial share of farms in the region. Reinforcing the role of small

farms in topics such as social cohesion and rural resilience may be better addressed through the EU's Structural Funds (European Social Fund and European Regional Development Fund).

The main geographical focus area of the conference, and of ERDN, namely eastern central and south eastern Europe, belongs mainly to the Continental and Pannonian Bio-geographical Regions¹. These regions not only have distinctive farming systems but are likely to be very sensitive to the impacts of climate change. Specific and extreme changes in the weather resulting from the very nature of these Regions (hot summers and cold winters) will lead to agriculture, forestry and freshwater aquaculture being particularly severely affected. The distribution of agricultural pests and diseases is likely to spread westwards and northwards across these territories. Research programming, including at EU level, must take into account the special needs of these regions with targeted topics, just as they do for the Alpine and Mediterranean Bio-geographical Regions, for example.

Much of the territory covered by the conference is composed of post-socialist economies that are still undergoing transition, and these economies continue to face unique challenges. These include the low uptake of innovation and modern technologies, the low level of cooperation, the consequences of the ageing population, the difference between the employment rate in predominantly rural regions and predominantly urban regions, and the extremely low level of consumer awareness. There is also a research and innovation divide in the EU that hinders both the unlocking of excellence in eastern central and south eastern Europe (not only the so-called 'New Member States' but also the countries of the Western Balkans, Belarus, Moldova and Ukraine), and the appearance of specific research topics in research programmes, including at EU level.

ERDN has now been established for over 15 years and represents a 'critical mass' of high-quality research expertise covering a broad range of disciplines including (but not only) agricultural production and competitiveness, environmental resource management, agri-food supply chain management, markets and marketing, international trade, econometrics, rural economic geography, rural economy and sociology. The annual ERDN conference is an opportunity for research-

¹ A bio-geographical region can be defined as an area of animal and plant distribution having similar or shared characteristics throughout.

ers in the region to ‘showcase’ their competences, not only to researchers in other parts of the EU but also to other organisations such as the Food and Agriculture Organization of the United Nations (FAO). Thus, ERDN has a major role to play in the integration of researchers from the region into the European Research Area.

In partnership with ERDN, the BioEast strategic research agenda, with its two themes of, firstly, *climate change challenges in the Continental and Pannonian Bio-geographical Regions*, and secondly, *policy and governance challenges in the economically less developed EU regions*, can ensure the integration of the specific needs of eastern central and south eastern Europe into the EU agricultural and policy agendas. Scientific expertise is not on its own sufficient. Skills and competencies in methods, organisation, presentation must be improved so that the region not only ‘is good’ but also ‘looks good’. It is necessary to be more innovative in science management and communication – how messages are sent to other scientists, farm advisors, farmers and politicians is very important indeed.

Agricultural and rural development in the region will, as elsewhere, be driven by innovation, which in turn depends on knowledge sharing between actors. Through the Agricultural (Knowledge and) Innovation Systems concept, the EU and FAO (and others) have adopted broadly similar understandings of how innovation takes place. Historically, knowledge flows were thought to be mainly linear, from researchers via advisors to farmers. It is now recognised that knowledge flows can be complex and take multiple forms. ‘Co-production’ of knowledge and innovation, for example between farmers, advisors and researchers is an important activity. The EU’s EIP-Agri is one approach to fostering co-production.

However, innovation also depends on a number of ‘soft’ factors that can be region-specific, including policies, informal institutions, practices, behaviours, mind-sets and attitudes, the so-called ‘enabling environment’. Some evidence was presented at the conference that the success of the LEADER approach in the region has been limited. The importance of these ‘soft’ factors plus the existence different farming systems in the region suggest that both the ‘problems’ of agricultural and rural development, and the ‘solutions’ are to some extent specific to the region and that tailored policy interventions are required.

Future direction of ERDN

ERDN has adopted a format for research cooperation that, over a 15-year period, has proved to have been outstandingly successful. No comparable organisation exists in the region. Any development of the network to further enhance its effectiveness must be evolutionary rather than revolutionary. In a similar way to AERIAS (<http://www.aeriasonline.org/>), a mechanism for formal affiliation of organisations to ERDN could be introduced. This will lead to stronger commitment from institute Directors that would ensure that ERDN has the freedom and resources it needs to increase its contribution to the European Research Area.

The fourteenth ERDN conference in Budapest was the most intensive effort to date by the network to engage fully with researchers across the EU (and beyond). Contact with the conference participants should be maintained with a view to future cooperation. In addition to further, similar events, ERDN should explore other ways to strengthen the position of researchers from eastern central and south eastern Europe in international projects by any available means, including sharing information on open calls and cooperating in forming consortia.

A purely reactive approach to the agricultural, bioeconomy and rural policy and governance challenges of eastern central and south eastern Europe will no longer suffice. ERDN can help to influence the various policy agendas to ensure that the needs of farming, the agri-food supply chain, rural areas and researchers in the region are recognised fully. But this can only be achieved as part of a multi-actor partnership², and not by ERDN alone. Thus, ERDN should work with initiatives such as BioEast to ensure that future EU policy takes full account of the specific development needs of the region.

Through steps such as these, ERDN can enhance its role in highlighting the fact that regional differences, especially in agriculture and rural development, continue to exist across Europe and that the failure to recognise and address these differences is hindering the sustainable growth of the whole EU.

For further information about ERDN please contact the Coordinator, Dr. Paweł Chmieliński, at pawel.chmielinski@ierigz.waw.pl.

² In other words, by bringing together all interested actors including researchers, policy makers, rural development practitioners, farmers’ organisations and so on.

Abstracts of AKI publications

The results of AKI's research work are presented in detail in a series of Hungarian language publications. English language abstracts are reproduced below. The publications may be downloaded from the AKI website (www.aki.gov.hu) or requested in printed form from aki@aki.gov.hu.

KEMÉNY Gábor, KISS Andrea and NEMES Anna

Operation report of the agricultural risk management system 2013

Agroeconomic Information, published 2014

In 2013, the second year of operation of the new agricultural risk management system established by Act No. 168/2011, the positive developments arising from the adoption of the new system have continued to improve. The number of participants in the first pillar has increased and for the most important crops compensation fund coverage has reached almost 100 per cent. The range of crops covered by subsidised insurance has also increased. The coverage is 10 to 15 per cent in the case of arable crops and important fruit species and 5 per cent in the case of vegetables. The growth of the second pillar due to the increasing type 'B' insurances has been caused mainly by the decreasing number of non-subsidised

insurances. In 2013 the volume of losses caused by weather conditions has decreased significantly, accordingly compensation payments have decreased significantly as well. Insurance payments from the second pillar have only increased due to the enlarging insured stock. Nevertheless, losses have been realised, especially in the first pillar. The reason why this has not occurred in the second pillar was that high payments were made on additional insurances which were not subsidised but could only be applied together with subsidised insurances. All in all the system has provided security for all participating farmers and the amounts of compensation fund and insurance premiums have accumulated due to the positive year.

ILLÉS Ivett and KEMÉNYNÉ HORVÁTH Zsuzsanna

The financial situation of agriculture and the food industry, 2014

Agroeconomic Information, published 2015

The aim of our analysis is to discuss the financial situation of corporations with double-entry bookkeeping in agriculture and food industry in 2014 compared with the previous year. The study basically relies on statistical ratios (share coefficient, comparative ratios over time). Representative indicators of assets, income and financial position as well as return and leverage indicators were used for discussing the activities of corporations to get a realistic view of the achievements and results of the sectors concerned.

The number of agricultural companies accounted for 4 per cent of the total number of companies. These companies represented 4.5 per cent of the profitable organisations in the examined year. The share of food industry corporations in

the national economy was 2.2 per cent in 2014. The number of profitable organisations in the food industry was 3030, which represented 2.2 per cent of all profitable companies. The increase in domestic sales by the agricultural corporate enterprises was outstanding while expenditures rose moderately. The growth of export income in the food industry was dynamic, however inputs barely increased. Compared to agriculture, food industry assets grew more slowly (by 6.3 per cent), relying on an even 50-50 per cent rate on internal and external sources. Agricultural corporations' profit before tax rose by HUF 36.4 billion to a total of HUF 164.7 billion and the profit before tax of the food industry increased by HUF 25.3 billion to HUF 95.4 billion in 2014.

KEMÉNY Gábor (ed.)

Operation report of the agricultural risk management system, 2014

Agroeconomic Information, published 2016

The weather conditions were favourable in 2014; no serious damage occurred that affected all of Hungary. Mitigation payments were primarily allocated to small farms that produce fruits and vegetables and are located in areas with unfavourable natural conditions. In Pillar II of the CAP the total amount of fee payments of farmers was significantly higher than the value of the mitigation payments of insurance due to the low level of damage. For the first time, the

source of insurance premium was not enough to cover the total premium needs incurred, therefore in 2014 the rate of premium decreased firstly from 65 per cent to 30 per cent in the case of 'C' type insurances, then from 65 per cent to 63 per cent in the case of 'B' type insurances. According to the analysis carried out, revision and reduction of current insurance fees can be proposed due to the low level (below 65 per cent) of damage in the last four years.

KEMÉNY Gábor and RÁCZ Katalin (eds)

The characteristics of small farms in Hungary and their development opportunities

Agroeconomic Book, published 2016

Among all agricultural holdings in Hungary, small farms have suffered the biggest setbacks both in terms of human and economic performance in recent decades. These subsistence or semi-subsistence farms play an important role by supplementing the household incomes produce a significant share of agricultural production. In our research the situation and future prospects of small, self-employed farms under EUR 4000 SO, which are typically not engaged in market production and are not professional, were examined. We present the major economic and social parameters of small farms, identify their types, border the circle of farms develop to market-oriented entities and draw up proposals with regard to the tools promoting their development. Small-scale farming is basically determined by eco-

conomic activity: full-time entrepreneurs produce substantial income in a profit-oriented way, with high asset deposition and effective work; while agricultural and non-agricultural workers, pensioners and people living from social benefits produce increasingly low production value and income with decreasing expenses. A few thousand farmers with entrepreneurial backgrounds that belong to the younger age group could become full-time market-oriented farmers. To develop the other small farms is desirable from the rural development and socio-political points of view but it is conceivable only through integrated programmes which enable regular supplementary income with small-scale projects, production coordination, expanding expertise and ongoing mentoring support.

KEMÉNY Gábor and LÁMFALUSI Ibolya (eds)

Evaluation of the operation of the agricultural risk management system, 2015

Agroeconomic Book, published 2016

After a year of favourable weather conditions (2014) the incidence of weather-related damage increased in 2015, so the value of mitigation benefits and of the insurance payments rose, as did the loss rates. The most significant damage was caused by drought, hail, spring freezing and thunderstorms, with plantations, vegetables and maize suffering the most damage. The insurance premium subsidy was temporarily financed from the central budget by HUF 3 billion. The number of subsidised insurance contracts increased by more

than 18 per cent. The income from insurance fees remained at the same level as in the previous year, so the income was HUF 5.7 billion. In 2015, 8,664 farmers required insurance subsidy and their claims for subsidies exceeded the above-mentioned HUF 3 billion, so it was necessary to pay back such as in 2014. In the case of 'A' type insurance, the premium intensity remained at 65 per cent, while for 'B' and 'C' type insurances the intensity fell to 52 per cent and 30 per cent respectively.

JANKUNÉ KÜRTHY Gyöngyi and TIKÁSZ Ildikó Edit

Analysis of the operation and success of the Austrian food economy

Agroeconomic Study, published 2016

The study explores the reasons for the success of the Austrian food economy. Our starting point was that an economy is successful if the stakeholders in the sector realise acceptable levels of profit. The research investigated how macroeconomic, environmental, social and administrative factors support the profitability of the sector. As a first step the effectiveness and profitability of agriculture and food processing in Austria and Hungary were compared, then the domestic consumption and external trade of the two countries were analysed. After this the Austrian tax and subsidy system, and the cooperation and the extension service were researched. During the analysis the value chain approach was used; in other words, both the production of raw materials and the

processing sector were investigated. Furthermore, the operation of the retail and the trademark system were described. Several databases were used during the analysis (Eurostat, HCSO, Austria Statistics, OECD etc.). The most important result from our research is that the Austrian food economy is successful as all the stakeholders in the sector achieve remarkable levels of profit, and in addition the multifunctional performance of the sector is at a high level. This is partly due to the favourable macroeconomic environment but also to the good tax and subsidy system, the cooperation of the stakeholders, the good horizontal and vertical integration in the sector, the well-performing trademark system, the extension service and the good level of education.

STUMMER Ildikó (ed.)

The market developments of the most important commodities in 2015

Agroeconomic Information, published 2016

This publication discusses the market developments of the most important commodities in 2015, mainly by presenting price trends. The material is based on the price information and data of the Market Price Information System of the Research Institute of Agricultural Economics and of various Hungarian and international sources. The producer price of milling wheat remained almost unchanged (HUF 48.5 thousand/tonne) in 2015 compared to 2014, while it increased for feed wheat by 6 per cent to HUF 44.7 thousand/tonne. The producer price of feed maize was HUF 41.5 thousand/tonne in 2015, a little above previous year's level. Sunflower seed was 13 per cent more expensive (HUF 108 thousand/tonne) in 2015 compared to 2014, and the producer price of rapeseed rose by 10 per cent to HUF 112 thousand/tonne. In Hungary 813 thousand tonnes of sugar beet were harvested in 2015, a decrease of 23.8 per

cent compared to the level of 2014. As in previous years, in 2015 Hungarian pork prices followed the trends of prices in the European Union. The pig producer price was HUF 428 per kilogramme warm carcass weight, 10.3 per cent lower than one year before. The producer prices of slaughter chickens decreased by 5 per cent to HUF 261 per kilogramme in 2015 compared to the previous year. In Hungary the cattle producer prices increased by 2 per cent in 2015. The producer prices of lambs decreased by 1.5 per cent and those of raw milk price decreased by 22 per cent compared to the previous year. The production of fruit and vegetables decreased in 2015 compared to 2014, and the producer prices increased by 30 per cent. The processors' sale prices of wines without geographical indication and wines with protected geographical indication (PGI) increased by 6 per cent in 2015 compared to the previous year.

JANKUNÉ KÜRTHY Gyöngyi, DUDÁS Gyula and FELKAI Beáta Olga (eds)

The current situation and the future of the Hungarian food industry

Agroeconomic Study, published 2016

The revenues of the Hungarian food industry increased almost by HUF 1000 billion between 2003 and 2013 at current prices, but at base prices they declined by HUF 360 billion, mainly as the result of the decrease in domestic sales (HUF -631 billion). The cause of this decrease is the low purchasing power of domestic consumers which is clearly demonstrated by the covariance of the real income per capita and the sales of fast moving consumer goods. Hungarian purchasing power is low by international comparison as well. According to Eurostat data, only Bulgaria has lower annual expenditures on food and non-alcoholic beverages per capita. Exports increased between 2003 and 2013, but the increase was driven mainly by non-traditional food products (bioethanol, pet food and tobacco). The Hungarian food industry reacted to the difficulties it faced by reducing both the number of employees and investments. The industry seri-

ously lags behind international competitors, mainly due to the lack of financial resources, lack of real pressure to innovate (relatively low cost of labour) and management issues (inaccurate understanding of capacity utilisation, efficiency and modernisation). The unfavourable situation of the Hungarian food industry arises from external (low purchasing power, macroeconomic factors) and internal (lack of technological developments and innovation ability) factors. While many of these problems are difficult to solve as they depend on factors that cannot be influenced by the players, the lack of conscious thinking in the supply chain makes the situation even more difficult. The solution can be found by precise planning, increasing cooperation along the supply chain, efficient use of subsidies, establishing a proper regulatory background, increasing adaptation to the market and by strengthening the cooperation between research and market players.

BÁBÁNÉ DEMETER Edit and VALKÓ Gábor (eds)

Hungarian Food and Agricultural Statistics 2015

Agroeconomic Information, published 2016

The publication provides information on the results achieved in 2015 in agriculture, forestry and food industry. We assured the comparability of time-series in connection with the pocketbooks published in recent years. Besides the national and branch indicators and data, the principal agricultural data are also given in detail by counties. The

international data are suitable to demonstrate the main trends. The published data are compiled on the basis of the publications of the Hungarian Central Statistical Office, EUROSTAT, the Food and Agriculture Organization of the United Nations and the Research Institute of Agricultural Economics.

ILLÉS Ivett and KEMÉNYNÉ HORVÁTH Zsuzsanna

The financial situation of agriculture and the food industry, 2015

Agroeconomic Information, published 2016

In this analysis we discuss the financial situation of corporations with double-entry bookkeeping in agriculture and the food industry in 2015 compared to the previous year. Agricultural corporations accounted for 4.1 per cent of all companies and 4.3 per cent of the profitable companies in this year. The share of food industry corporations in the national economy was 2.2 per cent in 2015, while the number of profitable companies was 3,036, representing 2.1 per cent of all profitable organisations. The profit before tax of the agricultural corporations decreased by HUF 60.1 billion, from HUF 165.3 billion to HUF 105.2 billion, while the

profit before tax of food industry companies rose by HUF 35.5 billion to HUF 129.8 billion in 2015. The decline experienced by agricultural corporate enterprises mainly arose from increases in expenditure, while incomes decreased. The sales revenue of the food industry was HUF 3,450.1 billion in the current year, and this was composed of 65.3 per cent in domestic sales and 34.7 per cent in exports. In contrast to agriculture, the assets of the food industry rose by 8.4 per cent. The value of assets was financed by 59.1 per cent from internal and by 36.9 per cent from external sources.

BENE Andrea, DOMÁN Csaba, FELKAI Bea and LÁMFALUSI Ibolya

The financial situation of the food industry

Agroeconomic Information, published 2016

This publication investigates the financial situation of the food industry using balance sheet and income statement data of companies belonging to the sector. In addition to reviewing the sectoral level the analysis also covers the main sub-branches and branches as well as the various size categories of companies. A rather negative picture emerged from our research regarding the financial situation of food processing. The period 2003-2013 can be characterised by disinvestment, indebtedness, loss of markets, deteriorating profitability and fragmentation of the food business. The food industry has found itself being squeezed from two sides. On one side

sectoral players faced increasing raw material prices determined by world market prices, but these costs could only be passed on through product price increases to a very limited extent because of the shrinking or stagnating consumption and weak effective demand side. In Hungary the food industry does not have enough resources and external support is needed for its development. Detailed examination of the finances of the food industry indicated that the negative trends did not affect all the sub-branches in the same way, although the number of exceptions is very low.

KESZTHELYI Szilárd

Results of the Farm Accountancy Data Network in 2015

Agroeconomic Information, published 2017

The publication contains the processed data of 1586 individual farms and 379 corporate farms. Farms selected for sampling represent agricultural producer enterprises in Hungary (nearly 110 thousand farms) according to farm type, size and legal status. At the national level individual farms produced 56.1 per cent of the total net added value, while corporate farms only 43.9 per cent. The previous year has also shown similar figures. The turnover and operating costs per hectare have increased similarly (by 3 and 4 per cent), however the level of direct support has decreased significantly (by 8 per cent) first time since the EU accession. Therefore, the profitability of agriculture has decreased by 7 per cent to the same level as in 2013. The sector analysis shows that the income change is the opposite: the profit

before tax of individual farms has not changed (HUF 140.1 thousand per hectare), of corporate farms has decreased by 28 per cent. The reason of this change to the opposite direction is related to development of policy support, as the basic support is eliminated in case of farms over 1200 hectares. In 2015 the incomes of grape producers (by 120 per cent), protected vegetable farms (by 31 per cent), fruit producers and field grown vegetable farms (by 8 per cent) have increased. The income of poultry farmers has not changed. Pig farm income has decreased - by 47 per cent - the most significantly. The income of dairy farms has also decreased significantly by 28 per cent, while of mixed, beef and sheep farms by 17 to 18 per cent. The income of arable crop farms has shown only a two per cent decrease.

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