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DEVELOPMENT **STIFTUNG DES  
ÖFFENTLICHEN RECHTS**  
IN CENTRAL AND EASTERN EUROPE

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## Introduction

The Research Institute of Agricultural Economics (VÚZE) in Prague established contact with IAMO immediately upon its foundation in 1994, and there are many reasons our relationship has deepened during the intervening decade.

First is the statutory orientation of IAMO regarding problems in the agri-food sectors in the Central and Eastern European countries (CEECs). IAMO's research efforts and results have significantly contributed to extending our knowledge base as regards both information about the developments in the countries involved, as well as the methodological aspects of our own work. For transition countries, IAMO has been a great help, especially considering the countries' relative starting points at the beginning of the reforms. Second, I must stress the valuable activities of IAMO's staff in terms of direct professional development, especially that of young researchers from the Czech Republic and other transitional countries. Short- and long-term study stays by the researchers, accompanied by their active participation in IAMO conferences, seminars and workshops have had indisputably positive effects on their professional development, and, thereby, also on the institutional development of the CEECs themselves. Last but not least, the location of IAMO in the eastern part of Germany has led to mutual activities that have allowed us to provide comparative analyses of this part of Germany, using it as an incubator with respect to future developments in the Czech agri-food sector.

As a long-term member of IAMO's Scientific Advisory Board, I have had the remarkable opportunity of continuously assessing the positive impact of IAMO's activities on research and policy-making issues for the Czech Republic and other transitional countries. EU enlargement in 2004 strengthened the importance of IAMO's research findings not only for the incoming countries, but also for the EU-25 as a whole.

The transition processes in CEECs are far from finished. In fact, they have even been stimulated by EU accession and enlargement. There is still plenty of research ahead of us: to help, for example, guide our private sectors and policy-makers as they orient themselves in ever-changing markets.

In 2004, IAMO celebrated its 10<sup>th</sup> anniversary. The long-term contribution of IAMO to research and policy-making was presented at the IAMO Forum 2004, and I greatly appreciate that so many younger researchers from transitional countries were granted the opportunity to actively participate. Evidence of this is illustrated in IAMO's 2005 publication.

I would like to offer congratulations on IAMO's 10<sup>th</sup> anniversary, and hope that the institute continues to provide its excellent and irreplaceable help in all its future tasks and joint projects.



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## Foreword

It is now ten years ago that IAMO was founded, with the following responsibilities: to examine the economic and social implications of the processes of transition, provide guided assistance for those involved in transition, train and support the next generation of academics, and to act as a forum for the exchange of scientific information. Ten years is still a young age for a research institute. But time is relative. Particularly in the initial and developmental stages of an institute there are many crucial decisions to be made and implemented. Not only are there no laurels to sit on, there are no working structures or teams either.

When the founding directorate, consisting of Prof. Dr Klaus Froberg, Prof. Dr Monika Hartmann, Prof. Dr Dr h.c. Peter Tillack and Mrs Hannelore Zerjeski, began work in the spring and summer of 1995, IAMO only had use of a temporary building in which to work. The most urgent tasks were to develop an organisational framework and structures and to establish the principles underpinning the Institute's work. On a practical level this meant that academic and technical staff had to be sought and selected, offices equipped, and the technological foundations created. In addition, the first research assignments had to be outlined.

These are tasks that every new institute is faced with. In IAMO's case there were also some particular challenges. With its research area being the agricultural development in Central and Eastern Europe, the Institute first of all had to make the necessary contacts in the region concerned – not least to gain a better understanding of the object of its study, and to develop a database. It was of particular significance that the agricultural and food sectors in these countries were right in the middle of the transition process, and many countries were a long way off climbing out of an economic trough. The economic and social problems were thus immense. This provided many opportunities for IAMO at the time, as there was a great need for advice and consulting in the political and economic spheres, and it was an extremely difficult period for the research institutions in Central and Eastern Europe. This was particularly true of economic research in the region, as transition meant a paradigm change for the discipline, requiring the development of a fundamentally different theoretical and methodological apparatus.

A further challenge was posed by the fact that, prior to the beginning of the nineties, economic scientists had never seriously grappled with the specific problems of the transition of a centrally planned economy in a market-oriented system either. This meant that this field of study could only call on partially established theories and methods. The standard theoretical apparatus of the time was geared towards the marginal changes of western economies, the problems of developing countries, and proving the advantages of free-market principles. The path to a free-market economy was unclear, but there was also a lack of empirical knowledge, for example, whether and how agricultural enterprises with several thousand hectares and wage labourers can be managed successfully in market conditions. In addition there were few ideas as to how a sector previously structured along socialist principles would develop when it had to operate in a market economy.

Here is not the place to go into detail about IAMO's development and how the Institute surmounted the problems enumerated above. More important are issues relating to what has been



*Prof. Dr Alfons Balmann  
is IAMO's executive director*

achieved over the past ten years, where the Institute stands today, and which specific academic challenges it faces.

One should begin with the positive appraisal IAMO received from the Scientific Council at the start of 2000. In its report the Scientific Council described IAMO as a successful new institution. Within a short time it had succeeded in developing into an internationally recognised centre of expertise in its field. Of course there were also some criticisms and advice concerning possible improvements and further developments. The Institute took note of this advice and used it to shape future planning. An example of this is the revision of the medium-term plan from the beginning of 2002. This established four forward-looking, interdepartmental focal points for research in the coming years:

- Model-based policy analysis at the sector and enterprise level
- Agrarian institutions in the CEEC
- Marginalisation in rural areas
- Product and process quality in the agri-food chains

These topics are still current and highly relevant for agricultural development in Central and Eastern Europe. They reflect the fundamental challenges faced by the agricultural and food sector in Central and Eastern Europe in the context of globalisation, EU expansion, and increasing integration into global trade. At the same time interdepartmental cooperation within the Institute has been strengthened, and IAMO's profile has been developed further. This has also made possible the development of new, topical research areas within the focal points, such as analyses of EU agricultural reform, the development of methods for evaluating the multifunctionality of agriculture, the management of meteorological crises, the relations between social capital and the organisation of agricultural enterprises, and communication along value-added chains. A number of current findings can be found in the articles that follow.

Fairly soon after the publishing of the medium-term plan, however, there was a rupture in IAMO's history, in autumn 2002. The then executive director and head of the External Environment for Agriculture and Policy Analysis Department, Prof. Dr Klaus Frohberg, moved to the Centre for Development Research at Bonn University. Prof. Dr Hartmann, head of the Agricultural Markets, Marketing and World Agricultural Trade Department, accepted a chair at Bonn University. Having reached retirement age, Prof. Dr Dr h.c. Tillack resigned his post as head of the Structural Development of Farms and Rural Areas Department. He remained with the Institute until January 2004, however, in the role of executive director. For this and everything else he achieved at the Institute we owe him many thanks.

This meant that within a short period of time IAMO had lost its intellectual leadership, and there were widespread concerns for the Institute's future. However justified these may have been in theory, luckily the last two years have proved them largely unfounded. And this is in spite of the fact that, more than two years later, two of the three posts of departmental head have unfortunately not yet been refilled. Thanks to IAMO's former management team and staff, and its firm rooting in the academic landscape, the Institute was evidently well prepared to overcome this

critical situation. If one considers the issues highlighted in IAMO's appraisal, it is obvious that progress has been made. There has been a further improvement in the quantity and quality of our publications. Outside funding and the number of staff financed externally have increased dramatically. Moreover, the number of visits by guest researchers and joint research projects with other institutions has been continuously rising. With the IAMO-Forum 2003 on the subject of large-scale agriculture and the IAMO-Forum 2004 on the role of the agricultural sector in rural development, the Institute organised two internationally recognised conferences with a high number of the invitees attending. Each conference hosted well over 150 participants from more than twenty countries. There has also been great interest in the newly established PhD workshops on agricultural development in Central and Eastern Europe and the methodologically-oriented Learning-Workshops aimed at helping young scholars.

This steady development needs to continue in the future, if IAMO is to fulfil its remit, as the tasks and challenges it faces are still huge. Although in many Central and East European countries the process of transition is largely complete, the economic and social problems of the agricultural sector and rural areas are still a long way from being resolved. On the contrary, further structural, institutional and political adjustments seem unavoidable. Particularly in the new member states of the EU, it is less and less about typical issues of transition and more about modern questions of the agricultural and food economy, such as risk management, multifunctionality and sustainability. These are areas in which to some extent Central and Eastern Europe might even lead the way. A further issue is the state of agro-economic research in Central and Eastern Europe. Although many institutions have developed strongly, house a large number of ambitious young scholars, and act as our partners in joint projects, they also suffer from considerable structural weaknesses. There is still a shortage of teaching staff with adequate training in methodology and theory, access to the literature remains very limited, and many young academics face the threat of 'burn-out' due to high teaching burdens.

In addition to the tasks and challenges in Central and Eastern Europe, there is the question of IAMO's role in the academic landscape. At present, German agricultural research in particular is in a phase of painful cutbacks, and the time beckons when research excellence has a new meaning, in many places a loss in critical mass. IAMO is therefore seeking to strengthen its cooperation with faculties of agriculture. Current initiatives to intensify cooperation include joint efforts with university and research institutes in Halle, Berlin, Kiel, Brunswick and Göttingen to develop a structured agro-economic PhD programme.



*Best wishes for the new stage of life:  
retirement of Prof. Dr Dr h.c. Peter Tillack*

So that is where IAMO currently stands. There are a number of reasons why the Institute was able to make such positive progress, in spite of the aforementioned upheaval and its associated complications. Particularly important are:

- The high levels of motivation and commitment shown by both academic staff and those in administration, IT and the library. This motivation goes hand in hand with a strong sense of individual initiative and a readiness to accept responsibility.
- IAMO's strong international links and invaluable support from our partners both at home and abroad.
- And not least the excellent working conditions.

All this does not just get served up on a plate; rather it is the result of the cooperation of many organisations and people to whom we owe our gratitude. First one should mention the continued help and support provided by the central government and the federal states in Germany. In particular IAMO is very grateful to many members of staff at the German Ministry of Consumer Protection, Food, and Agriculture, at the Ministry of Education and Cultural Affairs for Saxony-Anhalt, and at the Ministry of Agriculture and the Environment for Saxony-Anhalt, for their personal involvement. The same debt is owed to the past and present members of the scientific advisory board and board of trustees, who have always been there to offer support and assistance. We should also like to thank the many research partners, especially those who set up IAMO and made it a viable institution. In particular we thank the foundation directorate and those members of staff of the first generation, many of who have been able to use their experience and qualifications from IAMO as a springboard into business and finance, or into domestic and international institutions for economics and administration.

Finally I'd like to say a few words about this seventh edition of the *IAMO Annual* which, like previous editions, is being published in German, English and Russian. The focus of this edition is the location of agricultural enterprises and budgets in their economic, institutional and social context. There is also a study of internal and external organisation using the example of agriholdings in Russia and Czech agricultural enterprises, as well as analyses of the economic perspectives of household production in Ukraine, and of Saxon milk production in comparison to that in Poland and the Czech Republic after EU expansion. The contributions are rounded off by an assessment of the potential of crop failure insurance as an instrument of risk management for Kazakhstani agricultural enterprises, and selected topics from the IAMO-Forum 2004 on the role of agriculture in rural development in Central and Eastern Europe.

I hope these contributions will give you an insight into some of the current projects of the Institute, and also show how the subjects of IAMO's research are changing. Topics such as the management of large agricultural enterprises, vertical integration, globalisation, and the social function of agriculture and rural development are gaining in importance. Of course, these articles can only be a selection. For a fuller picture of the work carried out at the Institute I'd like to recommend our Internet site. As well as details of IAMO staff and outlines of our projects there are a number of links to the Institute's publications. The *IAMO Discussion Papers*, and monographs and conference proceedings since 2003, which have appeared in the series *Studies on the Agricultural and Food Sector in Central and Eastern Europe*, can be downloaded from our site free of charge.



*A founding father leaves IAMO – Doz. Dr Eberhard Schulze celebrates his entry into a well-deserved retirement at the IAMO-Forum 2004*



*Young scholars with high ambitions at IAMO*

## Ownership and Performance Differences between Large-Scale Farms: Case of Czech Agriculture

JARMILA CURTISS, TOMÁŠ MEDONOS<sup>1)</sup>, TOMÁŠ RATINGER<sup>1)</sup>

European agriculture, especially when comparing Western European and Central and Eastern European countries, is characterized by significant structural heterogeneity. This heterogeneity has its roots in different market and institutional conditions all over Europe. Since these environments were to a degree characterised by market interventions and/or institutional imperfections, the farm structures are expected to be economically sub-optimal. It is still not known which farm structure will have an economic advantage in the agro-political conditions of the enlarged EU.

A number of studies indicated that large-scale farms which retained substantial representation in some new EU-member states have economic advantages, especially with respect to economies of scale from input acquisition and marketing. However, this can be an advantage of large-scale farms specific to transition economies, where small farming started almost from scratch and has not built the necessary market-supporting institutions, such as different forms of vertical and horizontal integration which are well-developed in Western Europe. Therefore, size is not necessarily an indicator of the economic success of farms in the EU market. Rather, organization and ownership forms which can have a significant effect on firm performance, and which notably vary within the group of large-scale farms, should earn higher consideration. These relationships in agriculture, however, have rarely been empirically explored in detail, especially in the case of transition countries.

This submission aims to analyse the differences in business strategies and performances of the different ownership forms of Czech agricultural enterprises. This is based on case studies and survey data of 102 Czech agricultural enterprises. First, to facilitate understanding of the current ownership structure in Czech agriculture, the privatisation of agricultural land and non-land assets will be shortly described. Following, the differences in ownership structures and general transformation and business strategies of the agricultural enterprises will be identified. Lastly, the enterprises' performance differences, and thus success potentials, will be discussed.

The current farm structure in the Czech Republic is an outcome of extensive restructuring which was triggered by privatisation and the introduction of new commercial laws. Privatisation took three forms: the restitution of expropriated and collectivized assets and land, the redistribution of assets of collective farms accumulated after collectivisation, and the sale of state assets. Restitution restored land ownership of about 70 – 75% of the total agricultural land. The remaining land was state owned and was, until 2000, excluded from privatisation. Almost 100% of agricultural assets were privatized by the respective privatisation forms. The intention of reforms was to individualize property rights and correct former injustices. Hence, the

***Structural differences within EU member states***

***Diverse ownership and organizational forms of large-scale farms***

***Fragmented ownership an outcome of privatization***

<sup>1)</sup> *Forschungsinstitut für Agrarökonomik (VÚZE), Prag.*

reforms resulted in a very fragmented ownership structure, with about 3.5 million landowners with an average land property of 1 hectare, and roughly the same number of claims to non-land assets.

***Emergence of new legal forms: increasing importance of Joint Stock Companies***

In the initial stage of transition, the total area cultivated by individual private farmers (IPF) expanded rapidly, but did not achieve the expected extent. From around 3.5 million restitution claimants who averaged about 1 hectare per claim, only 8% were active in agriculture in 1995 and this share has since decreased. The number of cooperatives decreased just slightly when compared to pre-transition. However, the cooperatives' average area decreased by 45 % to 1,450 hectares. Two new organisational forms emerged; Joint Stock Companies (JSC) and Limited Liability Companies (Ltd). The earlier established JSC mostly originated from voucher privatisation, while Ltd were mostly established by means of state farms' non-land assets sales in tenders. Ltd were also established by larger new owners with restored historical ownership rights, so called "restituents", or later by the merger of individual farmers.

***Cooperatives: Ownership claims not yet fully settled***

The most notable shift in the corporate sector between cooperatives and JSC was in the second phase of restructuring (after 1995), visible in Figure 1: this relates to the problems that successors of collective farms had in dealing with claims on assets by non-farming heirs of original owners, so called "eligible persons". These restitution claims were frozen until the end of 1999, when they became real liabilities, mostly to cooperatives. Since there has not been enough profit generated in cooperatives, monetary compensation has happened only rarely. Capitalisation of claims in a form of (non-tradable) co-operative membership suffers from the problem of future (monetary) withdrawal. Therefore, a transfer of restitution claims into "tradable" shares of JSC has been regarded as a pragmatic option. The future of cooperatives which have not yet settled their transformation claims is still not legally clarified.

***70 % of land cultivated by large-scale enterprises***

Czech agriculture is characterized by the coexistence of small and large-scale farms. The corporate sector, which represents around 5% of the farms, uses, however, over 70% of the total area of agricultural land. On the contrary, the share of farms with less than 10 ha amounts in number to 58.2%, but they use only 1.9% from the total area of agricultural land. IPF with more than 100 ha use more than 60% from the total IPF area. More than 90% of agricultural land is leased, while the remaining less than 10% of land is mostly cultivated by individual private farmers. This demonstrates the high discrepancy between the land ownership and land use, which is also analogous for ownership and use of agricultural capital.

***Consolidation of large-scale farming***

Since farm restructuring, especially in the initial stage of transformation, was affected by a highly politicized privatisation process, the established farm structures were unlikely to be economically optimal. The later structural processes were supposed to be driven by competition and realized through ownership share market, and thus be more efficient. However, as case studies suggest, the initial, as well as the later, structural development was constrained by various problems. Among these are problems with identification of plots in terrain, access to land and limited divisibility of non-land assets, owners' specialisation in jobs other than agricultural, and also information asymmetries advantaging, particularly, farms' former managers. The high costs of organisational change facilitated corporate purchases and/or rentals of agricultural assets the instant after their administrative acquisition by primary

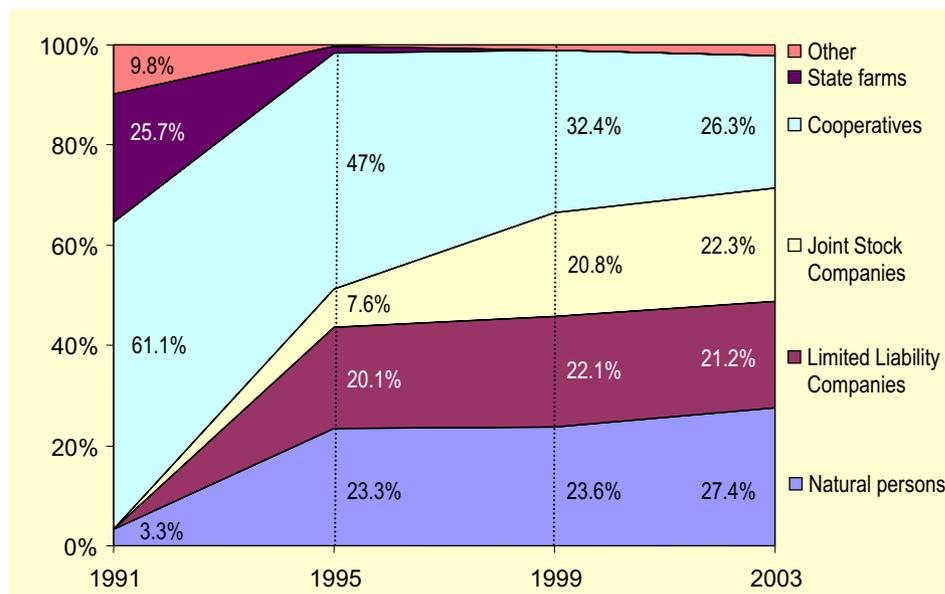


Figure 1:  
Land shares of agricultural enterprises with respect to legal form

Source: Green Report of the Ministry of Agriculture in the Czech Republic, 1993-2003.

restituents and other eligible persons, and thus supported the preservation of large scale farming. Not only were different strategies with respect to the legal form (ownership) chosen by these large scale farms (as shown in Figure 1), but they also realized various business strategies which might be decisive for the farms' future competitiveness.

In the following, we describe the analysis of ownership structures and business strategies of the surveyed agricultural enterprises, in particular cooperatives, JSC and Ltd. First, factor analysis was used to determine groups of variables for various business characteristics. These relate to ownership form and different types of business behaviour, which are in a way coherent and can be represented by one variable. Using the representative variables, cluster analysis divided the sample of 102 enterprises into four groups, to which between 15 and 40 enterprises belong. These groups are homogenous with respect to their ownership constellation and business strategy. The representative traits of these groups are presented in Table 1 and are shortly described in the following text.

The first group of enterprises is characterized by highly concentrated ownership which is defined as high average equity per owner. It is mostly represented by Limited Liability Companies with, on average, four to five owners. They were often established through a separation of the largest restituents from the former collective farms and in some cases by privatisation of the state farms in the earlier stage of transition. This allowed them to acquire better agricultural equipment. However, it also resulted in significantly smaller sizes than that of other

#### **Evaluation of 102 large-scale enterprises: Identification of four groups**

#### **Group 1: Ltd, relatively small, economically successful**

enterprises. At least one owner is always represented in the management, however, almost a third of the management consists, on average, of external (non-owners) management specialists. As case studies disclosed, these managers were often the initiators of the separation of the larger restitutions from the original cooperative, most likely when they expected low prosperity of the farm as a whole. The ownership and management structure became less complex and one manager now oversees fewer workers than was the practice in former cooperatives. This results in more effective decision-making and workers' control as supported by the managers' perception of lower problems with working moral, stealing or workers' respect toward management. Employment strategies prioritising the quality of labour rather than a socially motivated labour policy is reflected in the employment of significantly younger workers than in other enterprises. High profits (highest among the groups) achieved by these enterprises suggest that these are more efficient managerial practices and farm organisations when compared to the other three groups. However, compared to the other groups, these enterprises have a lower percentage of financially settled transformation claims on their assets. This temporary evasion of financial settlement allowed them more investment and better current performance. This statement is true, on average, of the sample, but not generally true for all farms in this group. In general, the enterprises in group 1 are well performing.

***Group 2: Primarily cooperatives with relatively low number of members***

The cluster analysis further establishes a group containing mostly enterprises with cooperative legal form. These enterprises have, on average, 100 members and larger ownership shares per owner when compared to groups three and four, but significantly lower than group one. A considerable share of enterprises in this group shows the expectation of further decreases in the owners' number in the future. A case study was used for the illumination of a possible way of ownership concentration in cooperatives. In the analyzed cooperative, by-laws were changed with the agreement of the members in such a way that doubled the required members' stock. Members had to invest into the cooperative or exit and become creditors of the cooperative, since complete financial settlement was not possible. The cooperative preferred to become a debtor than to further accept limitations through complex collective decision-making. It still remains unclear how such a by-law change can be realized. It seemed to be possible only due to the high level of managers' engagement and trust received from the members. The further business characteristics of these enterprises show less social concerns than when looking at labour employment or provision of non-agricultural activities for social reasons. This, and their high investment activity, refers to high longer-term economic concerns. Such concerns are, however, not traditional for the cooperative form of organisation, and suggests effective leadership of management under the roof of seemingly democratic legal form. Economic concerns, simpler decision-making structures and lower monitoring costs (fewer workers per manager) suggest higher economic performance of these enterprises. However, as the profitability indicator listed in Table 1 illustrates, these enterprises, compared to group 1, do not achieve profits, but rather serious losses comparable to enterprises in group three. This result could be influenced by the high degree of investment that temporarily decreases their profitability.

The third and largest group with respect to the number of observations represents enterprises with the smallest ownership shares; on average, 11,000 € per owner, and 300 owners. It is represented by both JSC and cooperatives. These companies have, on average, a higher share of external investors represented in the statutory body of the companies than other enterprises. As the low profitability, low investment activity and less suitable capital structure (high accountancy but low market value due to the low asset utility) imply, external investment is not a sign of high attractiveness of these companies, but rather a way for these companies to survive. The investors are mostly former eligible persons who capitalized their

**Group 3: JSC and cooperatives' large membership base and external investors**

Characteristics (No. of observations)	Group 1 (15)	Group 2 (15)	Group 3 (40)	Group 4 (32)
Ownership concentration (equity per owner)	Highest (220 thous. €/owner)	Higher (35 thous. €/owner)	Lowest (11 thous. €/owner)	Low (14 thous. €/owner)
Ownership form	Lower share of employee ownership, high individual owner's impact in decision-making	High degree of employee ownership, low individual owner's impact in decision-making	Higher share of effective investor ownership, owners with unequal impact in decision-making	Employee ownership, relatively high individual owner's impact in decision-making
Legal form	Mostly Ltd	Coops, then JSC	Coops and JSC	JSC, then coops
Aver. owners' number	4-5	100	300	460
Size	Smallest - 33 workers, 1160 ha, 465 LU	Smaller - 55 workers, 1400 ha, 615 LU	Smaller - 51 workers, 1360 ha, 770 LU	Largest - 140 workers, 2500 ha, 1520 LU
Resource management	Significantly younger workers, lower land rent prices, ambiguous strategies to wages	Younger directors and workers than average, ambiguous strategies to land and wages	Lowest wages	Higher wages, equal and highest land rent prices, highest share of own land
Share of managers non-owners	High (28%)	Highest (43%)	Low (12%)	Lowest (7%)
Investment activity (share of investments 1996-2003 on capital value 2003)	High investment activity, lower share of settled transformation claims	Highest investment activity (measure partially influenced by high capital depreciation)	Low investment activity (Sign. higher accountancy than market capital value)	Lowest investment activity, higher share of settled transformation claims
Social concerns	Rather low	Rather low	Rather low	High
Net value added/AWU	6.29 thous. €/AWU	6.08 thous. €/AWU	6.12 thous. €/AWU	8.11 thous. €/AWU
Profit/AWU	49 €/AWU	- 858 €/AWU	- 867 €/AWU	- 76 €/AWU

Table 1:

*Essential ownership and business characteristics of analyzed Czech agricultural enterprises*

Net value added: (total output + balance current subsidies and tax) – (intermediate consumption + depreciation);  
LU: Livestock unit; AWU: Annual Working Unit based on EU Commission FADN methodology.

Source: Own results.

shares or became members of the cooperatives due to the fear of shared value loss in the case of the companies' bankruptcy. The enterprises in this group are facing problems with workers' low respect to the management. This could relate to the unsatisfying economic situ-

ation of these enterprises and applied savings instruments in the form of low wages, as described in Table 1. Thus, the future survival potential (especially of cooperatives in this group, which will become a subject of the amended transformation law) is also rather questionable.

***Group 4: Formally well-performing enterprises with low degree of transformation***

Lastly, there is a group of enterprises whose joint characteristics are large scale (on average 460 owners and 140 workers) and production structure close to their pre-transition form. They are assigned by relatively small ownership shares and a high proportion of employee ownership. They have a larger number of workers per manager, which, as suggested by significant problems with stealing, appears to lead to high monitoring costs. These enterprises also exhibit a great deal of concern with social activities provisions. Not only do they frequently engage in non-agricultural operations for social reasons, but they also pay higher wages to their workers. This behaviour could imply that employee ownership is effective in its ownership rights (democratic decision-making), for which current consumption preferences and lower investment activities (future profits) are characteristic. On the other hand, these could be historically well-performing enterprises, with management trying to sustain the advantages of the existing enterprise structure (economies of scale from product marketing and realisation, and economies of production diversification) and maintain owners' support for the enterprise. Otherwise owners, due to their overall high age, might want to exit the cooperative or sell their stocks. The performance indicators, especially value added per annual working unit, indicate that the enterprises in this last group are well-performing. This supports the hypothesis that they were already well-performing during pre-transition, and explains their low degree of transformation.

***Various roads lead to economic success***

An analysis of the distinguishing enterprise characteristics' effects on performance disclosed that there is no single business strategy that secures high performance. One factor of high performance is larger enterprise size which is often associated with production diversification into non-agricultural productions. However, the size strategy required low organisational transformation and thus conserved its complex ownership relations. The further effect of this strategy is low owners' concern with investment and future prosperity. This implies that high current performance is not always associated with high investment and thus does not always mean future competitiveness. The other strategy successful in its performance effect was substantial restructuring of the original farms which resulted in simpler organisation structure. This strategy was often accompanied with ownership concentration and specific employment strategy preferring employment of external management specialists and younger workers. The high performance and high investment activity of enterprises which followed these strategies is an indicator of future prosperity. Nevertheless, there is still a large number of residuary enterprises which, in general, inherited little space for developing a progressive business strategy and have been mostly concerned with their (short-term) survival. This did not provide sufficient incentives for effective property rights transformation. Increasing competitive pressure within the EU and the amendment of the transformation law are expected to drive, especially those latter mentioned enterprises, out of the market. This will free substantial resources, thus stimulating of agricultural factor markets and further farm restructuring.

The performance analysis implies that ownership is an important factor of performance and suggests that the performance diversity and diversity of owners' business strategy choices relate to the pre-transition position of the enterprises with respect to their economic success, and their social environment.

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*Cooperative farm buildings in Rakovnik County, Middle Bohemia*

## The Competitiveness of Saxon Milk Production in Comparison to the Czech Republic and Poland

ANDREAS GRAMZOW

The expansion of the European Union in May 2004 did not just open up new markets for German milk producers. The total integration of the EU member states has also increased competition in the European internal market for raw milk and dairy products. With the entry of the ten new member states, milk production in the European Union rose by 21.8 million tonnes. This roughly equates to 15% of the sum of raw milk produced in the EU-15. The largest producers amongst the new member states are Poland and the Czech Republic; more than half of the milk from the new member states is produced in Poland alone.

Particularly on the former eastern border of the EU, milk producers from the old and new member states are competing for markets and, to a lesser extent, for production factors. This article will consider the extent to which milk producers in Saxony, a German *Land* sharing an external border with the Czech Republic and Poland, are remaining competitive in the face of the new competition. For Poland, particular attention will be paid to milk producers from the voivodship (region) of Dolnoslaskie (Lower Silesia) that borders Saxony. Given that the milk producers of all three areas under enquiry since EU entry face pretty much identical agropolitical external environments, an analysis of the conditions of production (know-how, production technology and size of holdings) as well as factor productivity, is appropriate in order to establish the competitiveness of the enterprises.

In all three regions milk production is one of the most important branches of agricultural production. It contributes about one-fifth of the total agricultural gross value added. There are huge differences in the production structures between the individual countries, however. In Poland the dairy sector is dominated by very small enterprises. In 2002, about 85% of milk holdings were family businesses with 1-4 cows. For the most part these small businesses produce milk for their own consumption, or sell their products directly to customers. Only about 300,000 of the 1.2 million dairy cow farmers deliver their milk to collection centres or dairies. Only two-thirds of the raw milk produced, therefore, is treated by processing businesses. The quality of the raw milk delivered to dairies has improved significantly over the last few years, even if not all of it yet meets EU standards. Milk production per cow is also relatively low. In 2003 the average was 4.292 kg, which corresponded to about half the level in Saxony.

Milk production in the Czech Republic shows a different picture, however. There, most milk is produced in large enterprises. More than 60% of Czech dairy cows belong to farms with more than 350 cows. The average holding of 140 animals is five times that of the EU-15 average. In the middle of the 1990s, the Czech Republic caught up with the EU-15 in terms of milk performance. In the last few years, however, the catch-up effect has considerably diminished. In 2003, average milk performance in the Czech Republic was 5.756 kg per cow. The Saxon enterprise structure is similar to that of the Czech Republic. There are also large differences

***Pressure of competition on dairy market has grown with EU entry***

***Poland: typically small enterprises with low milk production***

***Czech Republic: enterprise structure comparable with that in Saxony***

between Saxony and the Czech Republic on the one hand, and Poland on the other with regards to the legal forms of businesses. Thus in the Czech Republic and Saxony, respectively 86% and 75% of holdings are owned by legal entities, whereas in Poland over 94% of cows belong to family businesses.

### **Specialisation rare in Polish businesses**

To analyse the competitiveness of milk production in the three regions, farm data from farm surveys were used. The dairy side of the enterprises included in this study is represented in table 1. All the farms are in locations with average to good quality soil. The farms in Saxony and the Czech Republic have largely specialised in milk production, and more than half their earnings come from this area of production. By contrast, milk production in Dolnoslaskien farms only accounts for about 17% of total income. The main source of income for these farms is plant production. Considering Poland as a whole, the Dolnoslaskien farms analysed here are larger than average. But in comparison with Saxony and the Czech Republic the businesses are small.

Table 1:  
Average structure of the milk producers under analysis

	<b>Saxony</b>	<b>Czech Republic</b>	<b>Dolnoslaskie</b>
	<b>2001/02</b>	<b>2001/02</b>	<b>2000/01</b>
Number of cows	650	450	15
Replacement rate (%)	38,8	33,0	20,0
Milk yield (kg/cow)	8.219	5.205	4.300
Labour (WH/cow)	56	64	>100
Milk price (€/100 kg)	32,7	21,5	17,0
Total revenue (€/cow)	2.842	1.254	890
Direct costs inc. (calculated) labour costs (€/cow)	1.789	822	505
Gross margin inc. (calculated) labour costs* (€/cow)	1.053	432	304

Note: \*No costs for changing stocks were considered.

Source: Own data from BALMANN et al. (2004) and GRAMZOW (2004).

### **Polish enterprises are labour intensive**

Differences between Saxon and Polish enterprises exist particularly with regard to replacement rates and labour intensity. On average in Poland, the stock is renewed every five years, whereas in Saxony the average production life of a dairy cow is two and a half years. The high labour intensity in Polish family farms is predominantly due to deficient equipment, and partly because of a poorly qualified labour force. Manual feeding systems and in-churn milking plants, which are the norm on Polish farms, demand a far greater labour input than modern milking and feeding technology, which has been introduced in Saxony and also largely in the Czech Republic.

Because of the lower levels of milk performance and lower milk prices, Czech and Polish milk producers receive less income per cow than those in Saxony. On the other hand, direct costs in Czech and Polish enterprises are also far below those in Saxony. Given that the differences in labour intensity between businesses in the regions studied are very large, wages were included in the direct costs. Unpaid family workers in Dolnoslaskien farms were credited with the value of the average agricultural wage in this region. In spite of higher absolute direct costs, the Saxon farms achieved a higher gross margin per cow than their competitors from the new member states. As the gross margin per cow is greatly affected by the different raw milk prices and milk yields, this is not a suitable indicator for ascertaining competitiveness. More meaningful is a comparison of the production costs per unit of production. A breakdown of the cost positions also allows us to infer the causes of competitive advantages or disadvantages. We will therefore compare the direct cost positions relating to 100 kg milk.

**Higher turnover in Saxony, but also higher costs**

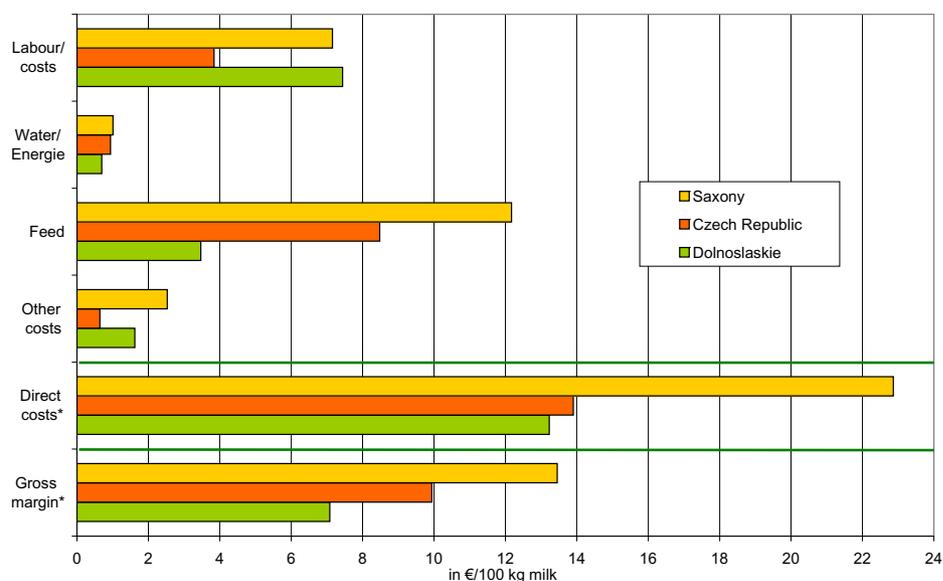


Diagram 1:  
Comparison of the direct cost positions per 100 kg milk

Note: \*Labour costs are included in the direct costs and gross margin.

Source: Own data from BALMANN et al. (2004).

Diagram 1 shows that labour costs in Polish enterprises are higher than those in Saxony due to the low level of productivity, even though the hourly wage in Saxony is three times higher than in Poland. In the Czech Republic on the other hand the labour costs are very low; here they are less than €4 per 100 kg of milk produced. There are also large differences between regions with regard to the prices for feed. The Dolnoslaskien milk producers only spend €3.50

per 100 kg milk for basic, mineral and concentrated feed. On average in this region only about 6 dt of concentrated feed is used per cow each year, meaning that only about 20% of the cow's energy requirements are met by concentrated feed. As the dairy cow's capacity for feed consumption is limited, and a higher level of milk production requires a higher concentration of energy per kg of dry feed, on Saxon farms about 40% of energy requirements are provided by concentrated feed. This translates into an annual figure of 25 – 30 dt concentrated feed per cow. In the Czech Republic and Poland, lower wages and costs of leasing land also mean that it is cheaper to obtain basic feed. In Poland, moreover, farms satisfy their animal's energy requirements for half the year by the cost-extensive method of allowing the cows to graze in pasture.

In spite of higher direct costs, Saxon dairy farmers have greater capital to cover fixed costs and profits (see diagram 1). In the Saxon farms included in this study the gross margin is 13.50 €/100 kg milk, which is twice as high as in Dolnoslaskie. This is also due to the higher milk prices in Saxony. The price difference is not as marked as it was a few years ago, however. It remains to be seen how prices will continue to become aligned and what effects this will have on the competitiveness of milk production.

***What happens with a unified milk price of 26 €/100 kg milk?***

Diagram 2 first depicts a base scenario: the gross margin of the farms in this study at current milk prices. Scenario I shows the development of the gross margin with a unified milk price of 26 €/100 kg and unchanged direct costs. For Polish milk producers, an increase in the milk price from 17 to 26 €/100 kg would more than double the gross margin. The Czech farms would also benefit from this price development. With the milk price dropping from 32.70 to 26 €/100 kg, the farms in Saxony, on the other hand, would have to count on a 40% loss of gross margin.

Scenario I highlights the income potential of Dolnoslaskien and Czech farms. Because of their low direct costs, milk producers in the Polish voivodship would achieve the same gross margin as in Saxony with a milk price of 23.30 €/100 kg, assuming that levels of milk performance and wage costs remained the same. The Czech milk producers would need a milk price of 24.80 €/100 kg to achieve this. This scenario seems completely realistic for the Czech farms, as since EU accession milk prices have risen sharply in the country, and in summer 2004 they reached 25 €/100 kg. By contrast, it is not expected that there will be a greater rise in producer prices in Poland over the next few years, as substantial qualitative deficits still exist. What is more, the small holdings of Polish farms lead to considerably higher collection costs, which also decrease producer prices.

***... and what happens when wages rise?***

Scenario II in diagram 2 shows the effects on Czech and Polish farms of a hypothetical wage increase of 50%. In Poland this would equate to a rise from 3.20 € to 4.80 €, and in the Czech Republic from 3.00 € to 4.50 €, per working hour (WH). Such a change would lead to a severe drop in gross margin, especially for Polish farms, which operate in a very labour-intensive way. In these enterprises the calculated labour costs per 100 kg milk, which in the base scenario corresponded with those in Saxony, would rise from 7.44 € to 11.20 €/100 kg milk, assuming the same levels of milk production. A wage of 6.24 €/LH in Polish farms would even produce the situation that, after deducting direct costs and calculated labour costs, there would be no financial means of covering fixed costs from the remaining income.

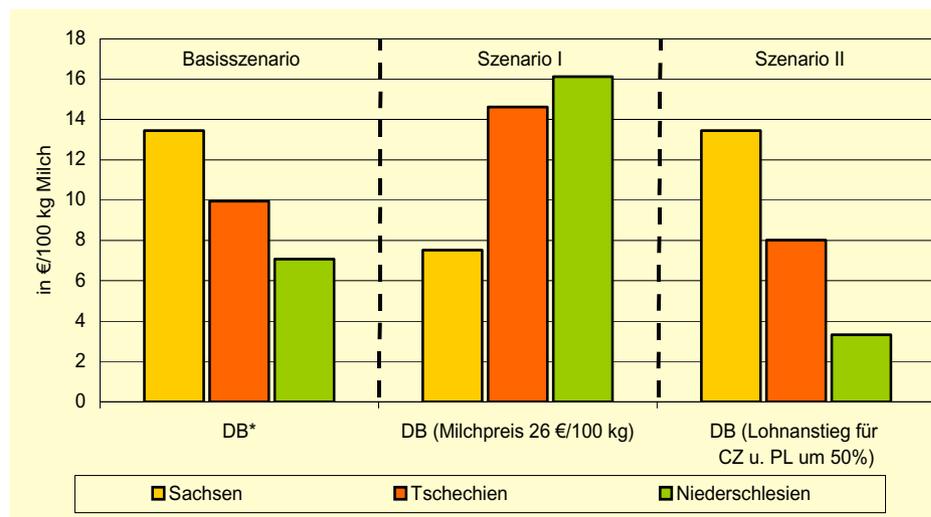


Diagram 2:  
Comparison of gross margins, assuming different producer prices and wage costs

Note: \*Labour costs are included in gross margin.

Source: Own data from BALMANN et al. (2004).

On Czech farms that would obtain with a wage of 7.34 €/LH. Generally one must assume that over the next few years wages in the Czech Republic and Poland will rise more steeply than in Saxony. Scenario II highlights clearly the competitive advantage for Saxon farms resulting from their high level of productivity.

The comparison of milk production between Saxony, the Czech Republic and Poland shows that, in the current market conditions, the intensive milk production in Saxony is competitive. The competitive advantage that Polish and Czech farms gain from their low factor costs is to a large extent compensated by the high levels of productivity in Saxon dairy farms. Moreover, the size of holdings in Saxon and Czech dairy enterprises means that they can exploit economies of scale. An increase in productivity will be very important for the future economic development of Dolnoslaskien farms, but also of those in the Czech Republic. The direct payments that have been made to Polish and Czech farmers since 2004, albeit at low levels, might also be of help in this regard. A greater availability of liquid funds in these farms could allow investment in production technology, animal stock, and farm buildings, which would result in an increase in productivity and raw milk quality. The rise in milk prices following accession could also step up investment activity. Further initiatives in training and education, to improve the qualifications of the workforce, including management skills, are also important. On the other hand, an obstacle to structural change, and thus also to an increase in productivity for Polish dairy farmers, is the low creditworthiness of the businesses. As securities and business development plans are often lacking, small farms frequently represent a high risk for banks. Many of these businesses will cease producing milk for the market. The extent to

## Summary and conclusion

which Czech dairy farmers can survive in the market in the future depends on whether they succeed in exploiting their size advantages more fully, and whether they continue to raise productivity levels. There seems to be great potential in the breeding and feeding sectors.

***Further literature***

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*Large dairy farm in Central Bohemia*

## The Situation and Development of Household Production in Ukrainian Villages

ANDRIY NEDOBOROVSKYY AND EBERHARD SCHULZE

The history of the individual household plots linked to large agricultural enterprises began in the Soviet Union – and thus also in Ukraine – with the forced collectivisation introduced in 1929. The farmer was left with a small piece of land (maximum 0.5 ha) and a few cattle to farm for his own needs. The vast majority of farmland was now operated by the newly established kolkhozes. Land, labour and capital were thereby concentrated into large-scale enterprises. However, the large socialist collectives did not maximise their profits; they had other functions to fulfil, principally the use of agricultural resources for the industrialisation of the country. On the one hand the kolkhozes and the sovkhozes were a part of the state control mechanism to secure the supply of agricultural products for the cities and towns, on the other a survival mechanism for the rural population, as resources flowed out of the large collectives into the individual household plots. During transition the first function of the large-scale enterprises became redundant, while the second was preserved. One can conclude, therefore, that the size of the household plots (0.25 – 0.5 ha) is insufficient to feed the number of animals that exist. To achieve this, 3 to 6 ha arable land would be necessary. It would therefore be impossible to keep this number of animals on the land available without the use of resources from the large-scale enterprises, so long as there are no alternative sources to obtain them. As diagram 1 shows, the share of total agricultural and animal production in Ukraine provided by household plots was, in 2003, 74% and 67% respectively. At the same time they only farmed 13% of all agricultural land. (These figures include all Ukrainian households, but most of them are households in rural areas.) The drastic decline in production volume in the large-scale enterprises between 1992 and 2003 has meant that, given an almost unchanged revenue for the household plots, their relative share of agricultural production has increased significantly.

**Individual household plots are the most important source of income**

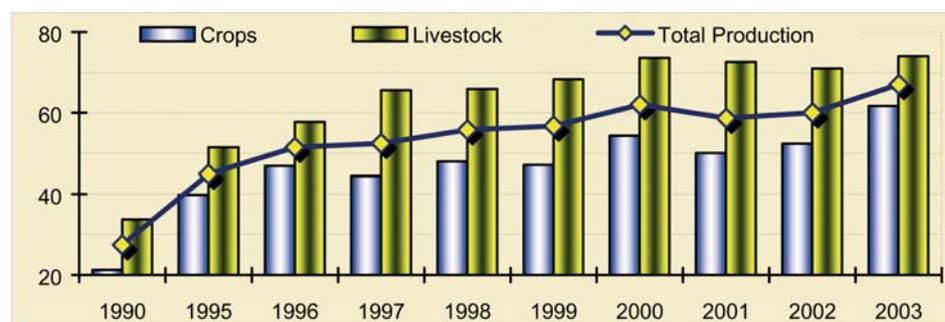


Diagram 1:  
Share of agricultural production provided by household plots (in %)

Source: STATISTICAL COMMITTEE OF UKRAINE (2003).

For many families the existence of the household plots is based on the need to supplement an otherwise insufficient household income. Home-produced food products save on household expenditure or add to income through sales. In some cases the individual household plots are the only income source, for example when large-scale enterprises have collapsed.

***Large-scale enterprises as an input source***

Household plots make considerable use of inputs from the large-scale enterprises, which are distributed in the form of payment in kind to those working for them. Also, one should not underestimate the illegal taking of products and services from the large enterprises. Some studies, however, show that the proportion of household plots that have farmed independently of the resources from the large-scale enterprises has risen in the last few years. There are two reasons for this trend: first, the increasing control of the management of large enterprises over the use of material resources; and secondly, the awareness in individual households that it is possible to operate independently. Although, according to official statistics, those in rural areas generally count as subsistence farms, some of them should already be seen as small family businesses linked into markets.

These results, as well as those described below, were obtained from a series of surveys of the owners of household plots. These were aimed at recognising development trends in household plots. The studies of the economic and social status of household plots were based on standardised questionnaires. The surveys took place in 1999, 2001 and 2003 in the Shitomir region (about 100 km west of Kiev) and concerned 90, again 90, and finally 204 individual household plots.

***Individual household plots form a heterogeneous group***

The household plots in this study are extremely diverse. They range from very small units, producing exclusively for their own consumption, to almost commercial enterprises with over-average sized plots of land. In 2003, the average age of the owners was 48 for men and 46 for women. Regarding their age structure, one can note that, between 1999 and 2003, the proportion of men over 45 rose from 57% to 85%, and amongst women from 57% to 75%. By contrast, the proportion of farmers between 21 and 40 in 2003 was, at 15%, relatively low, which can chiefly be explained by the migration of the young population to the cities in the last few years.

***High labour input***

The time spent working by the owner families on their individual household plots rose slightly between 1999 and 2003 (from 4.4 hours per day to 4.8 in winter, and from 6.4 to 6.8 in summer). The large-scale enterprises are frequently faced with the problem that far less than the contracted 42 hours per week is spent at the workplace. Precise data on this could not be obtained, but a large proportion of those surveyed said that there was a considerable discrepancy between the hours stipulated by the regulations and those actually worked. A major reason for this is the fact that wage payments are only sporadic and also low. On the other hand, the relatively high amount of labour time spent on the household plots is due to the high level of unemployment in rural areas. In the countryside, there are no opportunities for family income to be supplemented by other work, due to the lack of non-agricultural jobs or the poor qualifications of the owners of individual household plots. 6% of men and 12% of women did not complete their schooling; 75% of men and 87% of women completed school

but failed to obtain a vocational qualification. The opportunities for alternative work are therefore seriously limited.

In general, the output and productivity levels of the individual household plots in animal and crop production are considerably higher than in the large-scale enterprises where the owners of the household plots work (Table 1). Often, the household plots make use of some inputs (particularly concentrated feed) from the large-scale enterprises, and they exploit more efficiently the profit potential of their own animals by productivity-related feeding. At 86% of total revenue, animal products (milk and dairy products, eggs, pigs and pork, calves and beef) represent the most important source of sales income for individual household plots (2003). The reason for this is that the relationship between productivity and income is more direct in household plots than in economically weak large-scale enterprises. This increases the motivation to improve the animals' productivity in household plots.

**Output and productivity levels are higher than those of the large-scale enterprises**

	Individual household plots (average)			Large-scale enterprises (average based on 1999 and 2001)
	2000	2002	2004	
Milk production, kg per cow	3488	3842	3998	2542
Cattle's daily weight gain, g/day	390	512	510	304
Pig's daily weight gain, g/day	421	371	385	167
Eggs laid per year	242	204	223	246
Grain dt/ha	21	29	23	22
Potatoes dt/ha	89	80	136	112
Mangolds dt/ha	260	357	381	184
Vegetables dt/ha	200	279	240	148

Note: Percentages under 10% have been left out of the table. In each case the most significant source is highlighted in bold type.

Sources: Own study.

It is interesting to consider the main sources of inputs and the costs of purchasing them. Here, the term 'purchase prices' refers to the prices actually paid or the set values for the products and services provided by the large-scale enterprises as a substitute for wages (table 2). The values in the table show the various percentages relating to the different supply sources. The figures are a result of the relationship between the value (amount x price) of a resource from a particular source to the total value (all sources) of resources used by all household plots. Market prices were used to assess the own inputs of the households, as those sur-

Table 1:

*Selected indicators for the individual household plots and large-scale enterprises in Shitomir region*

veyed could not give an exact value of the input costs. For all other sources the purchase prices were used.

***A large proportion inputs are home-produced***

Table 2 highlights the main sources of inputs. The figures clearly show that the principal source of young animals (excluding piglets), seeds and plants is home production. Production costs in the household (taking the labour value as zero, as there is no alternative mechanism for estimating the value) are lower than the cost of purchasing these goods on the market or from large-scale enterprises. The households's own inputs have the largest share (1999: 45%, 2003: 41%), followed by large-scale enterprises (1999: 25%, 2003: 16%) and traders (1999: 12%, 2003: 18%).

*Table 2:*  
*Structure of input sources*  
*(in %)*

	Local markets		Large-scale enterprises		Traders		Own production	
	2000	2004	2000	2004	2000	2004	2000	2004
Fattened calves		10	15	22			<b>70</b>	<b>52</b>
Piglets	<b>54</b>	56	<b>35</b>	<b>19</b>				20
Chicks							<b>96</b>	<b>95</b>
Seed potatoes							<b>99</b>	<b>98</b>
Grain seeds			47	22			<b>52</b>	<b>63</b>
Vegetable seeds	<b>76</b>	<b>97</b>					18	
Fuel	10				<b>75</b>	<b>94</b>		
Compound feed	20	39	<b>76</b>	<b>51</b>				
Feed grain	18	26	<b>78</b>	<b>64</b>				
Other feed	12	25	<b>60</b>	<b>53</b>				
Insemination services			<b>88</b>	<b>94</b>				
Veterinary services			<b>76</b>	<b>85</b>				

*Note:* Percentages under 10% have been left out of the table. In each case the most significant source is highlighted in bold type.

*Sources:* Own study.

***Compound feed from large-scale enterprises at advantageous prices***

Compound feed, grain, other feed and certain services predominantly come from large-scale enterprises. Often these inputs are even obtained for free (illegally). Others are purchased from local markets or from traders, and paid for in cash, as there are still no alternatives for these input sources.

One can see from table 3 that the purchase prices for compound feed and grain feed are generally well below the market prices. This results from an indirect transfer of income to the members at the cost of the large farms. The individual household plots make use of this transferred income either directly – by selling the product to a third party – or indirectly as a cheap input for their own plot, and thus through the value of the product in the household or at the market.

The purchase prices of grain, milk, sugar, butter and vegetable oil, which are higher than the market prices, and which the owners of household plots receive as wage-in-kind from the large-scale enterprises, can be explained by legal circumstances: the household plots must accept payment in the form of overvalued goods, in order to avoid relinquishing payment altogether. A reason for this is that large agricultural enterprises still partly use barter in their commercial transactions. The large-scale enterprises receive some of the products listed above as payment for the inputs they deliver (sugar beet, raw milk etc.). Payments in kind offers an economic opportunity to make use of these goods, but it also leads to a reduction – in real terms – in the wages of those employed.

***Wage-in-kind from large-scale enterprises is often insufficient***

	Minimum			Maximum			Average		
	2000	2002	2004	2000	2002	2004	2000	2002	2004
Grain	0,1	2	1	200	175	200	80	<b>114</b>	90
Compound feed	0,01	0,1	0,1	75	150	200	31	10	30
Milk	66	67	50	144	115	134	<b>107</b>	94	78
Meat	66	40	62	133	120	105	93	60	80
Vegetable oil	82		125	91		133	87	-	<b>129</b>
Butter	34	95	-	120	116	-	<b>110</b>	<b>108</b>	-
Sugar	67	50	81	167	125	150	<b>114</b>	93	<b>104</b>

Note: Prices over 100% of the market price are highlighted in bold.

Source: Own study.

The analysis of the survey results also examined the extent to which the efficiency of household plots is affected by the employment of their members in large-scale enterprises. The measure of efficiency used was the difference between sales revenue and the value of the inputs used in household production. Consequently, depreciation, leases and estimated values of family-specific factors, particularly labour, were not taken into account. The total costs thus correspond to the 'variable costs'. Table 4 compares the proportions of households that cover their costs in the sense just defined at actual supply prices on one hand, and at market prices on the other. The data should be interpreted with care, however, as the figures for expenditure and sales given by those surveyed must be seen as rough estimates.

The proportion of households that were able to cover the variable (input) costs at the actual prices dropped from 84% in 1999 to 65% in 2003. In 2001, 89% of households covered their variable costs. At market prices, on the other hand, it can be seen that in 1999 only 39% covered the variable costs, in 2001 72%, and in 2003 53% (table 4). This means that, in the short term at least, these households are not dependent on the inputs from the large-scale

Table 3:

*Input prices used in individual household plots as a percentage of the market price*

***Only a part of households cover the variable costs***

enterprises. The remaining households need employment in the large-scale enterprises in order to cover the variable costs.

The reason why the share of individual households covering their costs has fallen is a basic increase in input prices over the last few years. A further increase in input prices could seriously burden the output of household plots if they do not substitute the additional purchases with their own production (this is particularly true for compound and raw feed). It is, however, difficult to predict the exact reactions of the individual household plots as they try to adapt.

*Table 4:*  
*Proportion of individual household plots that cover the input costs (in %)*

Proportion of household plots when buying inputs at	Relation of input costs to revenue					
	Actual price			Market price		
	2000	2002	2004	2000	2002	2004
≤100 %	84	89	65	39	72	52
> 100 < 200 %	16	7	24	33	19	21
≥ 200 %	0	4	11	29	9	27

*Source: Own study.*

### **Obstacles to converting household plots into farm enterprises**

The potential economic self-sufficiency of 53% of individual household plots suggested by these calculations may indicate that the owners are aiming at increasing the sizes of their household plots. The survey results show that 28% of them are actually seeking to do so. 80% of this group in turn wish to establish a (registered) farm enterprise and thus give themselves the platform for a sustainable existence. This would be a very positive move for the development of rural areas with economically weak large-scale enterprises. Amongst those who did not wish to set up their own farm enterprise, the reasons cited for this were as follows: a lack of technical support to mechanise the labour in the fields (71%), insufficient funds and poor credit opportunities (56%), and age (46%). Taking all those surveyed, 51% consider cheaper credit, 62% help with sales, and 54% the development of processing industries on site necessary to improve business results.

### **Individual household plots as the bases for successful farm enterprises**

The most important result of the study is that an unexpectedly high proportion of those surveyed, 22%, intend to develop their household plots into independent farm enterprises. That means that they are seeking to farm for themselves the land that was previously farmed by large-scale enterprises. The future will show to what extent that actually occurs, as obstacles to development still exist, such as the insufficiently developed technical infrastructure in rural areas and poorly developed credit, supply and sales markets.

### **Further literature**

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## The Potential of Crop Insurance as a Risk Management Instrument in Kazakhstan

OLAF HEIDELBACH AND RAUSHAN BOKUSHEVA

Since April 2003, in partnership with the Kazakhstani Agricultural University in Astana, IAMO has been running a project financed by the Volkswagen Foundation entitled 'Crop Insurance in Kazakhstan: Options for Building a Sound Institution Promoting Agricultural Production'. The aim of the project is to analyse the effects of a high risk exposure on the productivity of the agricultural sector, and to assess the possibilities of introducing an economically viable and market-oriented crop insurance under the conditions of transition.

As in most of the transition countries, a larger proportion of the population of Kazakhstan lives in rural communities compared with Western Europe, and employment in agricultural production represents an important source of income for households in rural areas. For these reasons the development of reform in the agricultural sector has a significant influence on the success of the transition process. According to current statistics, 43% of the population of Kazakhstan live in rural areas, while 32% of the national workforce are employed in agriculture, which accounts for about 8% of the gross domestic product.

Owing to its dependence on natural factors, agricultural production is tied up with a number of risks. The high burden of risk is one reason why agriculture, in comparison to other sectors of the economy, is less attractive to foreign investment. Ongoing investment in agriculture, however, can have a big influence on long-term production decisions and thus effect significant changes in the allocation of resources. This in turn has serious economic and social consequences for the overall development of an agriculturally oriented country.

In the continental-climatic vegetation conditions of Kazakhstan, plant production carries a particularly high risk burden. This manifests itself predominantly in the considerable inconsistency in yields. The following table gives an indication of the extent of these fluctuations, using regional variation coefficients for different plants. The coefficients for those regions of Kazakhstan included in the study are much higher than those of the comparable studies from various European countries, in which their values for wheat, for example, vary between 0.19 and 0.28.

In addition to price fluctuations, the production risk discussed here has the greatest influence on revenue and financial stability of businesses in a market environment. The potential economic peaks and troughs require suitable instruments of risk management on the part of the enterprises. To achieve certain political objectives, for example the reduction of income disparities between rural and urban areas, state regulation and government interventions can be justified subject to market failure. However, as negative examples from the USA and Canada demonstrate, these should be kept to a minimum. The introduction of instruments of income stability, particularly of a crop insurance scheme, requires, *inter alia*, an analysis of the existence and extent of the systemic risk in agricultural production, that is to say, of the non-diversifiable part of the total risk that affect large areas simultaneously. Other important areas

***First results of the project 'Crop Insurance in Kazakhstan'***

***Plant production subject to large yield fluctuations***

***Efficient crop insurance stabilises agricultural incomes***

of research are to determine the insurable risks, and an analysis of the conditions under which a crop insurance represents an efficient instrument of risk management and thus is attractive for agricultural producers.

Table 1:

*Variation coefficients for various plants and regions based on harvest data from 1974 to 2003*

CROP	REGION (Oblast)	MIN	MAX	MEDIAN
Wheat	Akmola	0.339	0.410	0.376
	Kostanai	0.228	0.611	0.444
	North Kazakhstan	0.239	0.393	0.326
	East Kazakhstan	0.227	0.468	0.234
	Aktobe	0.432	0.680	0.530
	South Kazakhstan	0.320	0.538	0.429
Barley	Kostanai	0.388	1.017	0.517
	North Kazakhstan	0.282	0.487	0.348
Cotton	South Kazakhstan	0.201	0.260	0.231

Note: The variation coefficients (quotient based on standard deviation and arithmetic mean) measure the distribution of per hectare yields at the district level across the period of the study. Minimum, Maximum and Median refer to the variation coefficients of the districts of the respective oblasts (regions).

### **Empirical research produces results ...**

These questions are being investigated with the help of a variety of quantitative and qualitative analytical methods. In the early stages of the project, a workshop was organised involving scientists and representatives of insurance businesses, state institutions and agricultural interest groups. Explorative interviews were also carried out by experts. Further information was obtained from structured interviews with enterprises and by collecting secondary statistical data. The following sections highlight the most important findings established till now.

### **... related to possibilities for development of a crop insurance , ...**

The workshop in Astana gave the participants the opportunity to learn about the basics of agricultural insurance schemes, their main problems, and the current approaches to resolving these. The workshop participants were also able to provide their opinions on the most important regional and national risks, preferred insurance schemes and possibilities for developing these.

In the opinion of the workshop participants, drought and early frosts present the greatest economic risks for all the regions included in the study. Other risks such as pests, plant diseases and hail play a more subordinate role in causing fluctuations in yields. The majority of those participants questioned, however, are calling for a comprehensive or multi-peril crop insurance. Similarly, many favour an income-related insurance over a yield-related one.

### **... the preferences of different interest groups ...**

The expert interviews brought similar results. They took place with the same target group that attended the workshop. A principal topic of discussion was the development of insurance products. Options that guarantee flexibility seem to be of great importance. Examples of this

are the possibility to choose the coverage level, a mechanism that allows weather conditions to be included in the development of the product, as well as a regional differentiation. The potential and suitability of products based on weather parameters were hotly debated by the experts, and the issues were not resolved by the end. Separate ongoing studies show that such products can offer a transition country realistic and efficient alternatives to conventional insurance schemes.

Also in dispute is the question whether compulsory insurance in Kazakhstan offers advantages over a voluntary variant with different choice options. Those in favour of a compulsory insurance have more faith in the traditional system, in which the state is a central authority that also regulates the insurance market and guarantees the agricultural sector a basic risk protection. There is also no clear agreement on the question of whether insurance contracts should be long term or only cover the period from sowing to harvest. Less contentious is the attitude towards deductibles. The representatives from the insurance companies, in particular, value the positive effect of this instrument in reducing the so-called moral hazard. This includes the insured party making less of an effort to avoid cases of damage to insured property once the contract has been concluded. The average excess rate that the experts suggest should be aimed for, and which businesses should be able to afford, is about 30% deductibles.

Another important issue that was keenly debated both during the workshop and in the discussions with experts is that of the monitoring mechanism. Essentially there are different variants of production control and damage checks. Besides remote sensing systems that necessitate a high level of technological expense, the insurance companies can send in experts. However, only a system of independent experts who are paid for by the state seems to be acceptable to all sides.

The findings of the farm survey confirm some of the expert opinions; at the same time in other areas the business leaders and managers are at variance with the ideas of the experts. The survey took place in autumn 2003 and summer 2004, comprising 74 agricultural businesses in the following 6 (out of a total of 14 in Kazakhstan) regions, selected for the workshop described above: North Kazakhstan, Qostanay and Aqmola in the north of the country, and Aqtöbe, East Kazakhstan and South Kazakhstan. The rayons and businesses were selected by means of a multi-stage process which took into account geomorphologic and agro-meteorological factors, the economic importance of strategic crops such as wheat and cotton, and farm size. The businesses surveyed comprise 26 individual farms, 32 limited liability companies, 15 cooperatives and one state concern. The average farm size is 9.687 ha, varying between 4.674 ha in South Kazakhstan and 25.583 ha in Qostanay. Wheat production is by far the most important production sector in Kazakhstani agriculture – for this reason the survey sample includes a large proportion of wheat producers (72%) and smaller numbers of cotton producers (18%) and mixed businesses (11%) that are predominantly found in the south of the country and produce fruits and vegetables. The natural production conditions, and thus the yields of agricultural crops, vary greatly across the individual regions (see table 1). The average land quality of the farms is 39 yield power points, and varies between 12 and 66 points.

*... and arguments that emerge when an insurance scheme is designed ...*

*The results of a farm survey show ...*

***... that conventional risk management is insufficient, ...***

The results of the farm survey show that past experiences with insurance have a decisive influence on the attitude of the farm managers. 64% of those surveyed would take out insurance to cover yield risks, if such a policy existed. Interest is particularly high in the northern regions (80%) where grain monocultures are the norm, and where conventional instruments of risk management are nowhere near adequate. The lowest level of interest (about 39%) is to be found in the South Kazakhstan region, where agricultural production is very diversified. Respondents who were negatively disposed towards taking out insurance cited as the main reasons for their attitude that insurance policies demand higher premiums than the indemnities they allow to be paid back, that they have had bad experiences with insurances, and that they do not possess sufficient liquidity to pay for insurance.

Most farmers (66%) are theoretically in favour of deductibles. On average they consider a deductible of 25% to be financially viable. A further possibility for modification concerns the type of risk that is to be insured against. Generally the possibility exists to insure against the price risk, the yield risk, or a combination of both, i.e. the income risk. The greatest proportion of those surveyed (48%) were in favour of an income insurance; a not much smaller amount (44%) preferred a yield-only insurance. Insuring exclusively against the price risk, therefore, was of far less importance for those surveyed. Looking at the number of natural risks that can be insured against, one has to distinguish between products that insure against all possible risks, and those that only insure against a group of risks or, in the most minimal case, only a particular risk. 71% are in favour of insuring against the most important risks, 15% prefer a comprehensive insurance, and 14% want an insurance that only covers one risk.

***... that insurance products must be adapted to regional conditions***

Agricultural production in Kazakhstan is still suffering from the consequences of poor allocation of production factors in the Soviet era. The specialisation in specific production areas was dictated by the central planning authorities, and the scope for the local farm managers to make decisions was limited. Today, the successor farms are struggling against problematic natural production conditions, outdated technological equipment, and problems of liquidity. In five of the six regions the farmers surveyed agreed that drought was the most serious natural risk, followed by hail and pest damage. Only in South Kazakhstan, where part of the agricultural land is irrigated and the production structure is set out better, other risks such as late frosts in spring are of greater significance. The magnitude of a natural threat is the determining factor when it comes to developing an insurance product. Whereas hail is restricted to a local area and can be efficiently insured against by the private insurance sector or reciprocally, drought extends over larger regions and affects many farms at the same time. In general private insurance refuses to insure against the systemic risk completely. Natural hazards do not just differ in their geographical extent, they also vary in their frequency and the size of crop losses. Farmers affected by drought in the regions examined are confronted with its consequences three to four times in ten years – on average droughts caused 58% harvest loss. The farm managers surveyed in South Kazakhstan suffer from extensive pest damage to their crops, causing on average a yield loss of 45%. Risk management instruments also depend on the type of natural hazard. Whereas none of those surveyed saw a possibility of reducing the risk of hail, insecticides and organic methods of combating pests are applied.

The instruments of risk management evaluated in the survey can be divided into three groups: on-farm risk management, marketing instruments, and finance planning. The last group, which includes instruments such as crop insurance, life insurance, diversification of investments and liquid asset management, is ranked highest in importance (3.40 on a five-point scale). Marketing instruments (3.04), such as forward transactions, and methods that are directly related to production (2.96), such as extending crop rotation, are considered less important. If one examines the entire list of individual instruments, the spending of capital reserves, low production costs – i.e. extensive production – and non-agricultural employment are seen as the most important.

As already highlighted, drought represents the most serious hazard in agricultural production, particularly in grain production in Northern Kazakhstan. If one considers the strategic importance of wheat and Kazakhstan's comparative advantages in wheat production, the development of a crop insurance could stabilise the farm incomes, and thus make an important contribution to the process of economic growth. Initial evaluations of a number of insurance products suggest that an insurance based on weather parameters such as temperature, rainfall, and soil moisture can reproduce the regional differences in yield fluctuations. At the same time it offers a mechanism that is hard to manipulate, making an expensive monitoring system redundant. Further investigations are required to quantify the potential and applicability of different insurance schemes. Any analysis must always take into account the specific conditions of a country in transition. In particular the 'insurance culture', which some experts remark is lacking, must be gradually established by the implementation of the right incentive mechanisms.

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### ***Evaluating instruments of risk management***

### ***Recommendations for insurance based on weather parameters***

### ***Further literature***



*Two Kazakhstani project workers interview a cotton producer in Turkestan, South Kazakhstan*

## Giant Enterprises in Russian Agriculture: a Promising Model for Russia?

HEINRICH HOCKMANN

In the Soviet Union the highly integrated structures, both vertical and horizontal, in the food chains were less the result of economic necessity, than the product of political or ideological considerations. With the collapse of the system of central planning the vertical structures, in particular, underwent a drastic transformation in the sense that, initially, there was greater coordination over barter, markets and contractual negotiations. A decade after the start of the transition process, however, a growing revival of quasi-centrally-planned organisation structures in the form of agrohholdings and agro-industrial complexes (AICs) is noticeable, particularly in Russia (for examples see table 1).

**Revival of centrally planned coordination structures**

	Agrohholdings			AIC
	MALINO	NIVA RJAZAN	AGROHOLDING	Kamenskaya Agroproyslennaja
Established	1998	1998	1992	1996
By	State	State	Private venture	State
Stage	Wholesaler, with forwards and backwards integration	New organisation, the entire value added chain	Input supplier, forwards integration	New organisation, almost all agrifood businesses of a district
Key activities	strategic and operative decisions	strategic and operative decisions	only strategic decisions	strategic and operative decisions
Governance	Ownership, contracts		Ownership	Ownership
Main shareholder	Private	State	Private	State

Source: Own depiction.

These organisational forms are entities of legal entities that are connected to each other by contractual or asset relationships. These range from land leasing and the provision of services, joint production planning and coordination, to the purchase of shares.

In many holdings the various forms of governance exist simultaneously, that is to say the members are linked to each other by a number of different connections. Often the partners come from all stages of the food chain, i.e. farms and upstream and downstream stages. Banks and other businesses, such as oil or metallurgy companies, are often members as well. In many cases the state is not an insignificant shareholder either.

Table 1:

Information relating to selected Agrohholdings and AICs

**Integration along the whole value added chain**

***Strategic and operative decision-making by a central enterprise***

Within the organisation one enterprise takes the central role and coordinates the activities of the other members. At the same time it is responsible for strategic decisions such as investments, employee development, production planning, marketing, distribution and use of profits. The major difference between agrohholdings and AICs is in their institutional make-up. The latter are registered associations in the trade register. The requirement for this is that a bank or other financial service provider is a member of the organisation. The advantage of registration is easier access to state subsidies and the granting of tax privileges.

***Increasing importance of giant enterprises in Russian agriculture***

Although these new developments have been extensively documented in the relevant literature, there is no detailed and consistent information about the importance of these forms of organisation. It is assumed that, in Russia in 2001, there was a total of 93 agrohholdings and 13 AICs. They operated about 1.4% of Russian agricultural land and employed 1.2% of the agricultural workforce. It should not be concluded from these figures that this is a marginal phenomenon, since there are significant differences between the Russian regions. Whereas in some oblasts (districts) no corresponding forms of organisation exist, in southern Russia, in particular, around one third of agricultural land is controlled by agrohholdings and AICs (37% in oblast Orel, 31% in oblast Belgorod). According to the Federal Association of German Farmers, in 2002 about 8% of agricultural enterprises were in the hands of these organisations. It is impossible to be certain how much the figure is based on a particular dynamic, another definition of holdings, or an over-optimistic estimate. The first interpretation is substantiated, however, by the fact that similar dynamic developments could be found in individual oblasts. In Oblast Moscow, for example, only a few agricultural enterprises belonged to holding groups at the start of 2002. Two years later, however, more than a third of the enterprises were members of these organisations. It is also difficult to assess how important the agrohholdings and AICs have become for the food economy in the meantime.

***Vicious circle of debt and passive acquisition***

The reasons for these developments are many and diverse. First one could point to the unsatisfactory experiences with the liberalisation of the markets in the first years of transition. An out-of-date capital stock, poor investment activity due to insufficient liquidity and credit-worthiness, and inadequate quality management resulted in low competitiveness. This led to a loss of national market share to foreign competitors. The situation was exacerbated by corruption and inadequate legal security, which made it extremely difficult for agricultural enterprises to demand claims for payment and legal titles from trading partners. The result was increased debt of agricultural businesses vis-à-vis the public sector (tax debts) and input suppliers. In some instances this development went so far that the debts owed to individual suppliers exceeded the value of the business and resulted in a passive acquisition. In this way GAZPROM, for example, acquired control over 93 agricultural enterprises.

***Rouble crisis: import substitution and the opening up of new export markets***

The establishment of agrohholdings and AICs accelerated following the Russian financial crisis in August 1998. Through the devaluation of the rouble, the profits of export-oriented raw materials industries (oil, gas and metallurgy) rose dramatically. The search for profitable investment opportunities quickly turned to agriculture where, owing to the drop in production of the 1990s, it was suspected that there was considerable economic potential. By taking advantage of production factors that had fallen into disuse, particularly land, it was expected

that the potential could be rapidly exploited through import substitution and the development of new export markets. In addition, involvement in agriculture was promoted by the state via the grant of tax privileges. The favourable exchange rate also led to a rise in demand for Russian agricultural raw materials that traders often could not satisfy. Consequently these enterprises started to develop or safeguard their raw materials supply by becoming involved in agriculture.

A further reason for the emergence of the highly integrated structures is the low concentration in the Russian food economy. By comparison with Western Europe, the Russian food industry until the end of the 1990s had a very fragmented structure. To succeed in the long term in national and international markets, concentration – with the concomitant exploitation of economies of scale – was indispensable. Correspondingly, by 2002 RAZGULIAY-UKRROS already controlled 12% of the Russian sugar market and about 5% of the grain market. RUSAGROKAPITAL is intending to increase its share of the Russian flour market from the approximately 10% it currently holds to 30%. Generally, concentration goes hand in hand with specialisation in selected areas of business. For example, in addition to the production of, and trading in, grain RAZGULIAY-UKRROS has become involved in poultry production. The feed needed for this is produced in special factories from grain and other ingredients. It is noticeable that, grain apart, the specialisation is in areas of production that are also characterised in western agricultural sectors by a relatively high level of vertical integration (sugar beet, oilseeds) or by a quasi-industrial method of production (pork, poultry) (see table 2). Interestingly, the dairy sector is little regarded by the agroholdings. Although there are market-dominant business such as WIMM BILL DANN with market shares of up to 50% for certain dairy products, the prevailing form of coordination is contractual arrangements between farms and processors.

The lack of progress in the restructuring of agriculture also led to an increased return to the mental models and ideological values that had developed over the 70 years of socialism. In this context the minimal emphasis on individual responsibility and placing trust in state institutions to coordinate individual trade have to be mentioned. Correspondingly, highly integrated structures had developed in the Soviet Union already in the 1980s with the agro-industrial associations. These have a great similarity to the organisational and decision-making structures of the agroholdings and AICs. The aim of these organisations was to intensify the vertical and horizontal relationships between members, coordinate production plans, and increase agricultural productivity through specialisation. A system of central financial management was introduced to coordinate the investment activity of members.

The extent to which agroholdings and AICs provide a promising model for Russian agriculture will depend on whether the resources used obtain a comparable factor income to those applied in alternative uses. The experiences of these organisational forms up till now, however, do not present a unified picture regarding how much the profit expectations of the mother companies have been fulfilled. On the one hand businesses are dropping out of agriculture.

***Making use of economies of scale through concentration and specialisation***

***Conventions and mental models passed down from the socialist era***

***Investment activity and management as factors of success***

Table 2:  
The specialisation of  
selected agroholdings, 2003

Agroholding	Land (1,000 ha)	Number of businesses	Specialisation					Processing
			Grain	Sugar	Oilseeds	Poultry	Red Meat	
RAZGULIAY-UKRROS	200							
RUSAGRO	57							
STOILENSKAYA NIVA	314							
OGO	9							
AGROS								
RUSAGROKAPITAL								
YOUNG ROUSI	142	14						
EFCO	46	19						
UFC								
AGROHOLDING	75							

Note: Cells blocked in grey denote specialisation

Source: ERNST & YOUNG (2003): *An Eye on Russia*, own depiction.

GAZPROM, for example, offered up half of its 91 agricultural enterprises for sale in 2002. TATNEFT, another oil company, wanted to sell 21 agricultural enterprises. RAZGULIAY-UKRROS is considering dropping out of grain production and concentrating on grain trade. A leading manager of PRODIMEKS, a trading company, reckoned that, if agriculture had been its only branch of business, the company would have been bankrupt a long time ago. To a large extent, on the other hand, there is still an unbroken trend of joining agroholdings and AICs, as the example of the Moscow oblast demonstrates. The evaluation of agroholdings commissioned by the governor of Belgorod oblast reveals a similarly differentiated picture. Of the fifteen holdings in the oblast, only eight fulfilled the expectations regarding the modernisation of their production equipment and the introduction of an up-to-date and more efficient management.

Besides these facts, economic theory can provide some indications as to the competitiveness of agroholdings and AICs. Here one should first look at transaction costs. Each exchange has three basic features. These are: the frequency of exchange, the uncertainty, and the range of transaction-specific investments. This refers to the extent to which investments are geared towards the specific needs of the exchange partner, or to which an alternative use of the capital is possible, if the planned transaction does not take place.

Specific investments are considered to be most important for the intensity of vertical integration. If one partner has already made a specific investment at some point in time, the other partner can put him under pressure to amend the original agreement. This is particularly true of the distribution of profits arising from the transaction. The partner without specific investments can exercise market power and reduce the transfers to the partner with specific investments to such an extent that his payment is equal to the opportunity costs. Specific investments are characterised by the fact that they possess limited alternative opportunities for use, and thus only low payments go to the investor. One possibility to counter this hold-up problem is for one transaction partner to acquire property or rights of disposal vis-à-vis the resources, that is to say in vertical integration.

The problem of specific investments becomes more serious the more uncertain the transaction environment is and the fewer third parties are able to evaluate the original agreement and identify the reasons for its failure. The low levels of market transparency and market integration, the inadequate legal protection, and the widespread corruption in Russia lead to great insecurity for the transaction partners. In this environment, acquiring property rights over the resources of transaction partners tends to become very attractive. It can therefore be assumed that the economic and institutional environment favours highly integrated structures. These are further strengthened by the institutions handed down from the socialist era.

This argument does not explain, however, why the upstream and downstream areas are integrated into agriculture, but agriculture is scarcely integrated into these complementary sectors in Russia. This means that besides an analysis of the advantages of integration, the distribution of property rights over resources within the organisation is also important, i.e. whether forwards or backwards integration is the most efficient form of coordination. In principle it is important to correct the investment incentives of that partner who, in the case of non-integration, would see the greatest reduction in investment activity. The direction of integration is thus determined by that partner whose investments are more specific, i.e. whose losses due to the hold-up problem are greatest. The coordination of exchange via markets remains beneficial so long as the additional revenues exceed the costs of integration.

If one looks at the organisation within the food chains in western countries, it seems that the optimal degree of integration is achieved where there is a distinction between acquisition and agricultural production, agricultural production and processing etc., up to wholesale and retail. The individual stages are more or less evident, depending on what is being produced. In plant production, for example, they can be pretty clearly distinguished, whereas particularly in poultry production, there is very intensive integration. In this interpretation agriculture should also be seen as a sector with optimal integration intensity, as several stages, from ploughing to harvesting take place within the same enterprise. The direction of integration can run in different ways, both within the stages and between them. Thus the farmer does not have to be the owner of the land, but can lease this factor. At the same time it should be noted that farmers often possess considerable shares of assets in the processing sector. Typical examples of this are sugar factories and dairies.

***Opportunity and specific investments promote integration***

***Uncertainty is producing a pull towards vertical integration***

***Potential losses determine the distribution of ownership rights***

***Intensity of integration dependent on what is being produced***

Looking at the agroholdings and AICs in Russia, it is clear that there is only little variability in the distribution of ownership rights. Typical is forwards or backwards integration, which often encompasses the whole value added chain. One of the main reasons for the difference vis-à-vis western countries is the malfunctioning of the capital market in Russia. In Western Europe the individual entities within the various stages enjoy relatively good opportunities to obtain credits. Investments are thus coordinated in a decentralised way within the value added chains, and made according to the profit potential.

***Failure of the capital market leads to more intensive vertical integration***

In Russia, on the other hand, no properly functioning capital market has yet become established. This means that those within the individual production stages can only invest if they have sufficient capital of their own. Because of the debt held by agricultural enterprises, however, only a few fell into this category. A capital structure like the one found in western countries could, therefore, not emerge. For the development of efficient value added chains, it was necessary to find financial resources from other sectors. These enterprises were not prepared, however, to make money available without securities or without taking over the functions of control and monitoring within the businesses. Given this situation, the formation of agroholdings can be interpreted as an answer to the failure of the capital market. Empirical proof for this thesis is the fact that it was primarily businesses with huge debts that joined an agroholding or an AIC.

***Specific consequences of transition favour the emergence of agroholdings***

The emergence of highly integrated structures can be seen as a reaction to the specific nature of the transition process in Russia. One might cite the mental models handed down from the socialist era, the high degree of economic and political insecurity and the inadequate functioning of the capital market. It is also the case that, with a rising improvement in the political and economic situation, the advantageousness of the holdings will decrease in favour of other forms of coordination. Whether a paradigm change towards decentralised coordination will occur cannot at this moment be predicted with certainty.

***Further literature***

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## The role of agriculture in Central and Eastern European rural development: engine of change or social buffer?

MARTIN PETRICK AND PETER WEINGARTEN

“When comparing rural and urban areas, the former are often associated with high environmental values, but even more with a backwardness in terms of income and employment opportunities, the migration of young, skilled people and a low population density. ... Often stated reasons for this backwardness are the lack of agglomeration advantages, the low endowment with infrastructure and human capital, as well as the effects of structural changes in the economy towards a growing importance of services and globalisation... In addition to these problems, which are characteristic for rural areas in many regions of the world, those in Central and Eastern Europe have also had to cope with the transition from the socialist central planning systems towards a democratic society and a market economy.” (NETWORK OF INDEPENDENT AGRICULTURAL EXPERTS IN THE CEE CANDIDATE COUNTRIES 2004, p 1).

Since the beginning of transition, income disparities between rural and urban areas have increased in Central and Eastern Europe (CEE). However, despite some common features, rural areas cannot be considered homogeneous. They are much more heterogeneous than a generalised comparison with urban areas might indicate and have specific characteristics which can differ within a country and even more across countries. During the “IAMO Forum 2004”, which took place at IAMO from 4 to 6 November 2004, more than 160 experts from approximately 25 countries discussed the challenges of rural development in CEE and the role agriculture plays in this process. In the following, we review a number of insights that emerged from the contributions on the conference. Selected papers are documented in full text in the proceedings volume of the conference (see “Further reading”).

One of the most crucial and controversially debated questions of agricultural development in CEE concerns the role of small farms in this process. WILKIN stressed that the social buffer function of small farms in Poland has been very helpful in easing socio-economic consequences of post-communist transformation. At the end of the 1990s, Polish farmers became more active in establishing self-organized institutions and in influencing the economic and political environment in which agriculture operates. In particular, the pre-accession aid SAPARD played the role of a mobilisation factor for farmers, food producers and local governments. As a result of EU accession, there have been increased investments as a result of better economic perspectives for farming and a shift in farmers’ opinion about Poland’s integration with the EU. WILKIN observed an increase of farmers’ prestige in the structure of society in the 1990s, and agriculture continues to be a source of myths, values and other virtues important for the whole country. However, according to WILKIN, the average Polish farmer in 2003 is still a poor farmer.

Productivity growth as a strategy to foster broad-based development of private household plots (PHP) was recommended by RODIONOVA for the Russian case. She argued that the potential of PHPs to alleviate rural poverty has not yet been exhausted and that it is essential to

*IAMO Forum 2004*

*Small farms: social buffer in times of economic crisis...*

*...and source of values for society*

*Private household plots: not only important for food production*

improve their access to local and urban markets as well as to improve the supply of affordable small agricultural machinery. According to the author, many PHP-owners could increase their production volumes by increasing labour intensity were they provided with better marketing opportunities. RODIONOVA sees an additional value for society in supporting PHPs: She is convinced that “the role of PHPs should not be limited to the volume of their production nor to being a survival strategy in times of economic crisis. Labour agility and sole proprietors’ skills obtained through PHP-related activities, as well as environmental friendliness, enable the national folk culture to be retained and allow valuable historical and cultural landscapes to be maintained. Therefore, PHPs should be supported even if their share of total agricultural production decreases.”

A quite different position was taken by ŹMIJA and TYRAN in their study of southeastern Poland: they do not concede agriculture any positive development role at all. During socialism, many rural households in Poland were actually worker households with a small farm cultivated in their spare time, so-called ‘farmer-workers’. Based on the argument that small farms had never been a sole or even major income source for these rural households, ŹMIJA and TYRAN saw the only solution to the problems of low rural incomes and hidden unemployment in the creation of non-agricultural jobs. As a guideline they recommended a multifunctional rural development based on the entrepreneurial spirit of local communities and individuals. Eventually, this might lead to the emergence of (few) profitable agricultural enterprises.

In summary, there seems to be no general answer to the question which role small farms should play in rural development. The specific socio-economic, cultural, and historical background suggests development paths that are specifically tailored to the region or country at hand.

***Effect of productivity growth on rural poverty***

GALUSHKO and VON CRAMON-TAUBADEL addressed the important question how productivity increases on large-scale farms affect rural poverty. Their econometric estimates for Ukraine revealed several pathways how productivity growth contributes to mitigate poverty: on the one hand in the form of increased real earnings from agricultural activities, reduced prices for agricultural commodities, and thus increased entitlement of the poor to food and, on the other, in the form of increased employment of skilled workers. At the same time, the authors showed that productivity growth and poverty alleviation involve trade-offs: productivity growth enhances the disparities between the richest and the poorest and reduces employment of unskilled labour. Due to these trade-offs, the poverty reduction resulting from productivity growth was only marginal, within two years a 1% rise in productivity decreases the incidence of rural poverty by 0.06%.

***Functioning agricultural factor markets necessary to foster structural change***

At the core of structural change are the markets for agricultural factors, in particular land, labour and capital. If these markets were functioning perfectly, there were no income disparity in agriculture versus other sectors of the economy and actual farm sizes were determined by technology differences only. On the other hand, factor market imperfections have been cited as reasons for varying farm-size productivity relationships, which in turn has implications for the desirable farm size in agriculture. The question therefore emerges to what extent real-world factor markets in CEE comply with the theoretical model.

SARRIS, SAVASTANO, and TRITTEN started with an investigation of the hypothesis that the relation between farm-size and land productivity in CEE is negative, as suggested by empirical work from various developing countries. Based on survey data, they tested for the inverse relationship between farm size and output per hectare for five CEE countries (Albania, Romania, Bulgaria, Slovak and Czech Republics). Their findings reject the negative relationship in all tested countries. The authors further explored whether there are credit market imperfections, and whether they operate in a differential way between different sized farm households. The empirical results support the hypothesis that there are indeed financial constraints among farmers in CEE countries, and that these constraints seem to operate more tightly for smaller farmers. A further finding was that the shadow prices of capital and labour are related to farm size in a way that suggests some form of polarisation.

***Lacking credit access hinders farm development***

CIMPOIEȘ and BALTAG investigated land lease relationships in Moldova. The agricultural sector in this country is characterised by a large number of peasant farms which emerged during the 1990's as a result of hesitant restructuring of former state farms. These peasant farms hardly allow to make a sufficient living from agriculture alone. CIMPOIEȘ and BALTAG showed the increasing and now major importance of land lease in Moldova. Demographic effects – many pensioners are no longer able to cultivate their plot – as well as the insufficient mechanisation of small farms led to an increasing willingness to lease out land and thus a re-emergence of large scale farms, now as corporate entities. Commercial farms larger than 100 ha are currently the major lessees. The dominating contractual form is short-term with in-kind payment.

***Increasing importance of land lease in Moldova***

Overall, the results suggest that the theoretical notion of factor markets equalising marginal productivities of labour, land and capital with assumedly constant factor prices is not consistent with empirical findings from CEE countries. Observed imbalances might be the result of market imperfections, government intervention, or measurement problems. However, CIMPOIEȘ and BALTAG showed that even under adverse economic conditions, a privately operated land lease market can result in structural change in the agricultural sector and the deliberate exit from active farming.

As a complement to the economic focus of the conference, HEILIG analysed demographic trends across rural Europe. Given current reproduction rates, the population, e.g., of the Czech Republic or Russia will almost halve within one generation (not considering migration). According to this author, in rural areas, reproduction rates are often lower than in urban areas. The author underlined that currently, there is still a positive structural effect as a result of the “baby boom” in the late 1950's and 60's. Even so, net increases in rural areas appear only in “wellness-tourism-holiday” regions such as coastal or certain mountains regions, and suburban areas. In general, rural areas will be affected by the overall depopulation trend much stronger and earlier than urban areas. Among others, the result will be a decline in public and private infrastructures. HEILIG also stressed that structural change in agriculture will be additionally fuelled by a lack of descendants.

***Dramatic demographic changes all over Europe***

Even without taking demographic effects into account, intensified structural change as a result of increased pressure on farm incomes has led to a notable drop in the number of full-time farms

***Non-traditional development paths for agriculture ...***

in the EU over recent decades. As the traditional production of 'food and fibre' alone often does no longer guarantee a sufficient income for operators, alternative sources have been sought. Two frequently mentioned options where agriculture could serve as an 'engine of change' are farm tourism and the cultivation of energy crops. However, new employment opportunities can also be created by raising the value added in rural areas, for example as the result of foreign direct investment (FDI) in upstream or downstream industries.

***... farm tourism: not more than a niche***

BOJNEC investigated the potential for farm tourism for the case of Slovenia. The pro's of farm tourism are that, by using existing farm capacities, farm tourism is inexpensive to set up and provides alternative accommodation facilities for different tourist demands such as social, heritage, green and eco-tourism. Currently, however, farm tourism in CEE is of little importance as compared to countries such as Austria, where tourist farms play an important role in employment and in income generation of agricultural households. According to BOJNEC, the challenges of farm tourism development should not be understated: experiences in Austria have shown that appropriate organisation at the regional and local levels for conducting product development, joint promotional and marketing activities and investment support are crucial for a successful establishment of this sector. Education and training in rural areas for farmers, as well as broader citizens' networks to create an appropriate investment and business climate, and to improve tourist services are other important issues. The author stressed that target customer groups require a tailored marketing approach. The entrepreneurial spirit and initiative have to come from farmers and other people living in rural areas. Networking, organisation, a critical volume of business and local factors in the tourist markets, as well as the innovativeness and quality of tourist services on the farm are crucial for farm holidays.

***... renewable energy in Poland: an example***

The possible benefits of biomass production in rural Poland for the purpose of energy generation was explored by SENCZYSZYN and BRELIK. The authors argued that biomass energy utilisation will help to reduce the dependence on coal and imported gas and will have positive ecological effects. Second, it will help farmers to productively use hitherto idle cropland and will boost rural economies by developing new local industries in the downstream sector, for example manufacturers of hard wood pellets or briquettes. According to SENCZYSZYN and BRELIK, a first power station in northwestern Poland which is fuelled by energy crops has started operation on an experimental basis. They expected that the project will possibly help foster the development of a biofuel or biomass industry and hence provide an alternative crop for farmers in the area.

***FDI in the food sector often located in urban areas***

The determinants of the regional distribution of FDI in CEE and their effects were analysed by JANSIK for the Visegrad countries. Foreign investors have acquired high shares in the food industries. However, from a rural development perspective, the determinants of regional choice are rather disappointing. The proximity to concentrated consumer markets (metropolis) seems to be more decisive than the proximity to the agricultural producers. Another important determinant is the location of the formerly existing food processing facilities. According to this author, it would be unrealistic to expect that the food industry in particular alone would provide a remedy for the problems of underdeveloped rural areas. JANSIK stressed that foreign investors in the food industry will not make miracles, however, he was convinced that once

they are settled in a region, they definitely make important contributions to increase the region's economic wealth in the long run. As a consequence, JANSIK recommended a multiple strategy: underdeveloped rural areas will have to find alternative sources of income, alternative ways to develop and other industries and services that together are capable of dragging them out of their current status. He concluded that the agri-food sector is one of these options, but cannot provide an exclusive solution.

According to SWINNEN, the transformation of agri-food supply chains has been driven by two major forces: foreign investment and the spread of global standards on food safety and quality. The author set out that demand for quality supplies has major impacts on the structure of the supply system, technology adoption, and vertical integration in the chain. These processes were supposed to be an engine of growth in most countries. SWINNEN stressed that many investors have become engaged in innovative contracting, input assistance, as well as technology and management assistance. This in turn enhanced quality and led to higher prices, increased productivity and investments, but also induced spillovers and contract replication by other companies. A major precondition for positive effects was, however, seen in the competition between processing companies.

In summary, non-traditional strategies to develop rural areas provide no blueprint for the successful transformation of these areas. However, raising awareness for these options is a first important step. The increasing demands concerning a multifunctionality of rural areas will fuel this awareness with increasing living standards in the overall society.

Given the diverse spectrum of issues discussed during the conference, it became obvious that policy making for rural areas is a complex task. At the same time, policies are designed on different administrative levels, for example regional, national and European. The CAP itself is in the midst of a fundamental reform process, which overlies the changes due to the accession of new members and the general approximation of CEE countries to the EU. Several authors therefore focussed on the effects and improvement of policies.

Against the background of the principles of rural development policy, AHRENS analysed policy effects on economic and environmental objectives in rural areas from a more general point of view. He was very critical with the traditional CAP. Not only is it supposed to preclude an efficient allocation of factors, it is regarded as being detrimental to innovative behaviour: according to the author, it encourages to preserve inefficient farm enterprises; interventions like guaranteed producer prices, quotas, or set-aside arrangements reduce the entrepreneurial and competitive spirit; and farmers are made increasingly dependent on public funds. Furthermore, the CAP is supposed to provide an incentive for what AHRENS called "an exploitation of the landscape". According to him, policies for less-favoured areas are hardly suited to help in the development of structurally weak rural areas. The 2003 reform of the CAP was therefore welcomed by the author, because it tends to reduce many of the drawbacks. However, he criticizes that it does not contribute sufficiently to rural development. The author favours a territorial approach of rural development compared to the hitherto dominating sectorial one, which would, however, imply a change in the philosophy of the 'second pillar' of the CAP.

### ***Benefits of FDI***

### ***Making policies for rural areas: a complex task***

### ***A plea for a territorial instead of a sectorial approach***

***Rural areas in the new EU Member States:benefiting from EU policies***

SEDIK investigated to what extent the CAP and its implementation in the new EU member states does actually provide a solution for the development problems of rural areas in CEE, notably low incomes from agriculture. His assessment was moderately positive. In particular, he welcomed the increasing rural development focus of the CAP. Moreover, he believed that the fall of all tariff and quota barriers provide positive opportunities for food exporters in the new member states. In addition, he regarded the CAP as being more transparent and probably more sensitive to efficiency concerns than many previous agricultural support policies in the CEE countries. According to SEDIK, if the CAP can now define the methods and levels of aid for CEE agriculture, the new member countries might have more political leeway to make more robust reforms in land tenure policies and eliminate soft budget payments to corporate farms. Finally, although CEE countries will enjoy less support per farm for the foreseeable future, this might at least have the positive effect that CEE land markets will be less distorted by agricultural policy than in the EU.

***Rural areas in Russia:still forgotten?***

A very similar position was taken by PETRIKOV with regard to rural Russia, who cited an illustrative example for the perceived agricultural bias: In 2002, the federal and regional livestock raising support programmes budgeted RUR 430 (approx. EUR 14) per livestock unit, while in 2003 the federal programme “Social Development of Rural Areas” in combination with twelve other federal programmes implemented in rural areas and funded from the federal and regional budgets envisaged only RUR 415 (approx. EUR 12) per rural resident. According to PETRIKOV, the Russian government shows a persistently narrow approach to rural development, which focuses too much on agrarian production, instead of supporting the creation of employment alternatives besides agriculture. Furthermore, he criticized the lack of inter-departmental co-ordination concerning the governance of rural areas and the insufficient development of civil society institutions in rural areas.

***Challenges for CEE***

With regard to CEE countries in general, CSAKI suggested that agriculture remains the dominant land use in rural areas, but rarely the dominant form of rural economic activity. According to him, enhancing employment opportunities in rural areas must be the main focus of rural development. The focus should be shifted from fostering production of commodities toward enhancing the productive capacity of rural people. CSAKI emphasised that rural areas must be fully integrated into the market economy. Linkages between smaller urban centres and surrounding rural areas should be fully recognized. He saw the challenges of rural development in CEE countries in pursuing a decentralised, multi-sectoral approach, in the financial engineering of mostly small to medium sized projects, a prioritisation based on technical and economic criteria, and the collaboration between public and private sectors.

***Proposals of the European Commission to reform rural development policy***

A striking result is thus that authors uniformly called for a more territorial rural development policy in CEE. This was taken up by AHNER, who outlined the Commission’s proposal for rural development policy in 2007-2013. This should embrace three core objectives: increasing the competitiveness of the farm and forestry sector through support for restructuring, modernisation and quality production; enhancing the environment and the countryside through support for land management; and enhancing the quality of life in rural areas and promoting diversification of economic activities; plus a separate LEADER axis. Furthermore, a single set of pro-

gramming, financing, monitoring, and auditing rules and a single rural development fund shall be established.

Agricultural production in CEE has a range of different functions, which to a considerable degree depend on the overall economic development stage of a country. The group of countries summarised as 'Central and Eastern European countries' is quite heterogeneous in many respects, e.g., in terms of national income levels and progress in the transition to a market economy. In our opinion, the conference particularly contributed the following insights concerning the role of agriculture in CEE rural development:

### **Conclusions**

- Also in countries where redistributive land reforms have resulted in an apparently very homogenous group of small farms, differentiation processes have already gained momentum. It is therefore likely that only a subgroup of initial landowners will continue farming in the future and that further concentration will take place. This process will be strengthened by the demographic changes leading to decreasing population all over Europe and particularly in rural areas.
- There is evidence that rural factor markets are increasingly capable of channelling the re-allocation of resources in the process of structural change. However, improvement of their coordination mechanism is still necessary, in particular with regard to credit and labour markets. Credit constraints are supposed to be responsible for the observation that – contrary to experience from developing countries – large farms in several CEE countries display higher land productivities than small farms.
- Non-traditional functions of agriculture beyond 'food and fibre' production have now begun to attract the attention of researchers in CEE countries, particularly in the new member states of the EU. Awareness of, for example, rural tourism or the cultivation of energy crops as development options has clearly risen. However, these strategies require a careful examination of their specific strengths and weaknesses, and practical experience with them exists only on a small or even experimental scale in CEE so far.
- Foreign direct investment is often of benefit for producers. In many cases, the commercial interests of investors also provide positive spillovers for farmers, for example by innovative contracting schemes.
- There is a broad consensus that the growing importance of the second pillar within the CAP of the EU and of decoupled direct payments is of benefit for the new member states. In particular, traditional forms of market and price support are not regarded as conducive to reach rural development goals. Several authors have therefore plead for a more territorial and less sectorial approach to rural development policy also in CEE. In Russia, too, there are voices that endorse this trajectory as a possible guideline for policy reform.

The conference also identified a number of areas where further research is needed. This holds, for example, for the analysis of structural change. In particular, it is still not clear how viable exit options for farmers who wish to leave the sector could be created and how the

### **Further research needed**

diversification of rural economies can be achieved best. Poverty alleviation strategies for rural areas are still badly needed. The operation of rural factor markets, in particular for credit and labour, deserves further attention. How to mobilise local and regional actors as well as to develop rural civil society institutions should also be further investigated. According to FAO statistics, there live some 112 million people in rural areas of CEE. To improve their well-being is in the interest of society at large.

### **Further reading**

PETRICK, M., WEINGARTEN, P. (eds.) (2004): The role of agriculture in Central and Eastern European rural development: engine of change or social buffer?, *Studies on the Agricultural and Food Sector in Central and Eastern Europe, Vol. 25*, Halle (Saale). [http://www.iamo.de/dok/sr\\_vol25.pdf](http://www.iamo.de/dok/sr_vol25.pdf) NETWORK OF INDEPENDENT AGRICULTURAL EXPERTS IN THE CEE CANDIDATE COUNTRIES (2004): The future of rural areas in the CEE candidate countries, Halle (Saale), < [http://europa.eu.int/comm/agriculture/publi/reports/ccurdev/index\\_en.htm](http://europa.eu.int/comm/agriculture/publi/reports/ccurdev/index_en.htm) >.

BAUM, S., WEINGARTEN, P. (2004): Interregionale Disparitäten und Entwicklung ländlicher Räume als regionalpolitische Herausforderung für die neuen EU-Mitgliedstaaten, *IAMO Discussion Paper No. 61*, Halle (Saale). <http://www.iamo.de/dok/dp61.pdf>. Presentations of keynote speakers can be downloaded from < [http://www.iamo.de/forum2004/pro\\_en.htm](http://www.iamo.de/forum2004/pro_en.htm) >.



*Countryside in the Ukraine*

## **IAMO – a Brief Portrait**

IAMO was founded in 1994 to monitor the development of the agricultural and food sectors in the transition countries of Central and Eastern Europe. A non-university research centre, IAMO is a member of the academic network 'Leibniz-Gemeinschaft' (WGL). It also maintains a close relationship with the Martin Luther University Halle-Wittenberg, particularly with the faculty of agriculture. The aim of the Institute is to extend the scientifically founded knowledge base for a successful development, both economically and socially, in the former socialist countries of Central and Eastern Europe. In its work IAMO focuses on the agricultural and food sector and the development of rural areas. The great complexity of the changes in the former centrally planned economic and social systems implies considerable research challenges. These changes do not only result from the transition to free-market and democratic systems, which is at different stages of development in the individual countries, but also from increasing globalisation. For the new and future EU members, integration into the European Union or preparation for accession provides an additional impetus.

The main tasks of the Institute are research into agricultural development in the Central and East European Countries (CEEC), and the training of German and foreign scholars. IAMO also sees itself as a forum for debate and a source of information on issues relating to the agricultural and food sector in the region. For this reason the Institute promotes the development of networks within the academic community.

In most of the countries of Central and Eastern Europe, the agricultural and food sector retains a high economic and social importance. This is demonstrated, for example, by the large proportion of people working in agriculture and the contribution this sector makes to the Gross Domestic Product. In many ways, agriculture acts as a reservoir for labour that is released through restructuring in other sectors. Together with the lack of alternative employment opportunities and insufficiently developed social security systems, this phenomenon, which exists in many transition countries, has led to the expansion of a subsistence economy. In this way it has been possible to ease the social hardships of the transition process. It is also a sign, however, that the agricultural and food sectors in many areas still face a long and difficult path of reforms and restructuring to improve their competitive potential. It is important, therefore, to rapidly push ahead with transition in all areas of the economy and society, paying consideration to the particular significance of the agricultural and food sector – especially regarding the development of rural areas – so that it can receive targeted support. It will also help counter the growing disparity between rural and urban areas that exists in many countries. Measures to develop rural areas must extend beyond agriculture, however, and create job opportunities in other sectors.

Even though the transition of the agricultural and food sector of Central and Eastern Europe is far from complete, and the individual countries are at different stages of development, much has already been achieved. An obvious sign of this is the accession of eight Central and East European countries to the European Union on 1 May 2004. For these states and the candidate countries, the fulfilment of EU quality standards is an absolute necessity to be

***IAMO's aims and core tasks***

***The agricultural and food sector in transition***

competitive in the Common Internal Market and in international agricultural markets. The implementation of the complex Common Agricultural Policy is a great challenge for the agricultural administrations of these countries.

### ***The research centre at Halle (Saale)***

The location Halle has a long and fruitful tradition in almost all areas of science. The institutes of the Martin Luther University, the non-university Max Planck, Fraunhofer, Leibniz and Helmholtz institutes, in addition to numerous smallish ventures undertaking research projects in the science and innovation park, provide a good basis for a network of training, research and practice. IAMO is part of this complex of scientific activity and expertise.

IAMO's work is closely tied up with the agricultural faculty of the Martin Luther University Halle-Wittenberg (MLU), specifically with the Institute of Agricultural Economics and Regional Planning. Our work has much in common in the area of research into transition, leading to joint research projects. The connections extend beyond research. We also collaborate in student education. The heads of IAMO's academic departments take part in MLU's teaching and committee work. The PhD student seminar and the agro-economic colloquium are jointly organised. There is also the summer school, organised jointly by MLU's agricultural faculty and IAMO, which in 2004 took place in Chisinau, Moldova (see 'summer school' section). Academic staff from IAMO regularly participate in the annual university conference on agricultural science, organised by the faculty. IAMO also has a close relationship with MLU's Institute for Co-operatives, founded in 1998. Individual connections strengthen the links between MLU and IAMO: Prof. Dr Heinz Ahrens from the Institute of Agricultural Economics and Regional Planning is a member of the scientific advisory board, while Prorektor Prof. Dr Hans-Joachim Solms is a member of the board of trustees.



*View of the inner courtyard at IAMO*

Regarding the cooperation with other institutes at MLU and other non-university research centres in Halle, there has been further collaboration over the last few years, not least as a result of the increasing amount of institutions moving to the science and innovation park. An example of this are the joint activities undertaken for the Long Night of Sciences.

### ***Cooperation with other university institutions***

IAMO works closely with faculties of agriculture and economic sciences from other universities, particularly those in Berlin, Bonn, Hohenheim and Göttingen. IAMO and the Institute for Agro-economics at the Catholic University in Leuven, Belgium, exchange a wide range of scientific information on a regular basis. We also have a large number of links with agro-economic chairs and institutes at agricultural colleges and universities in Central and Eastern Europe. These include: in Poland, the Agricultural University of Warsaw, the Agricultural University of Szczecin, and the Agricultural University of Cracow; in Russia, the Timiryazev Academy in Moscow and the State Agricultural University of Kostroma; in Kazakhstan, the

Agricultural University in Astana; in Slovakia, the Agricultural University of Nitra; in Hungary, the University of Economic Sciences in Budapest; in Bulgaria, the Thracian University of Stara Zagora and the University of National and Global Economics; in Ukraine, the National Agricultural University of Kiev, the National Agricultural University of Sumy and the State Agro-ecological University of Ukraine in Zhitomir; in Lithuania, the University of Vilnius; and in Slovenia, the University of Ljubljana.

The numerous contacts with non-university institutions are also very important for IAMO's work. We have links with the Institute of Farm Economics, of Rural Studies and the Institute of Market Analysis and Agricultural Trade Policy (MA) at the Federal Agricultural Research Centre (FAL) in Brunswick-Völkenrode, the Leibniz Centre for Agricultural Landscape and Land Use Research (ZALF) in Müncheberg, the Leibniz-Institute of Agricultural Engineering Bornim (ATB) in Potsdam-Bornim, the Max Planck Institute for Social Anthropology in Halle, the Institute for Regional Geography (IfL) in Leipzig, and Capacity Building International (InWEnt) in Zschortau. In Northern and Western Europe IAMO's partners are the Agricultural Economics Research Institute (LEI-DLO) in the Hague, Netherlands; INRA (Institut National de la Recherche Agronomique – France) in Paris, and the National Research Centre for Developing Countries (CIRAD) in Montpellier, France; and the Austrian Federal Institute of Agro-economics in Vienna. Relationships with non-university institutions in Central and Eastern Europe also enrich IAMO's research. Of note here are: in Russia, the Pan-Russian Institute for Agricultural Problems and Computer Science, the Research Institute for Agro-economics at the Russian Academy of Agricultural Sciences, the Institute for Transition Economics in Moscow and the North-west Institute for Agro-economics in St Petersburg-Pushkin; in Slovakia, the Research Institute for Agricultural and Food Economics in Bratislava; in the Czech Republic, the Research Institute for Agro-economics in Prague; in Ukraine, the Institute for Agro-economics at the Academy of Agricultural Sciences in Kiev; in Hungary, the Research and Information Institute for Agro-economics in Budapest; in Kazakhstan, the Research Institute for Agribusiness and Rural Development in Almaty; and in Belarus, the Institute for Agro-economics in Minsk.

In 2004 the third summer school took place on the topic 'Agriculture in the Transition Process'. It was held from 6 to 24 September 2004 in Chisinau, Moldova. In the two previous years it had taken place in Minsk (Belarus) and Kiev (Ukraine). As before, it was organised jointly by staff from the Institute for Agricultural Economics and Regional Planning (IAA) of the agricultural faculty at the Martin Luther University Halle-Wittenberg, and from IAMO, with the support of the DAAD (German Academic Exchange Service). In charge were Professor Grings and Dr Wandel (IAA). From Moldova, the State Agricultural University of the Republic of Moldova took part, and also provided excellent logistical support. Over the course, 20 young managers from the agricultural sector and lecturers from agricultural colleges expanded their specialist knowledge of agricultural policy, market development and business management. The course focused particularly on questions important to the free-market restructuring of Central and East European agriculture. Professors Ahrens, Grings, Petersen and Tillack, and Doctors Kopprasch, Wandel and Weingarten were responsible for the teaching.

### ***Cooperation with non-university institutions***

### ***Summer school 'Agriculture in the Transition Process'***

### Supporting young academics

The range of topics covered by the course included various aspects of agricultural policy (market, structural, social and environmental policy), the role of institutions, pricing in the agricultural and food sector, business organisation and management, structural change in agricultural enterprises, land markets, and investment financing. The educational programme was rounded off by several short excursions, the highlight amongst which was the visit to the wine cellar in Cricova. An examination was taken at the end of the course, which all students passed. The presentation of certificates for successful participation concluded the three-week summer school. In view of the positive experiences of the past three years, it is intended to hold the summer school on 'Agriculture in the Transition Process' again in 2005.

One of the core tasks of IAMO is to help develop the next generation of academics. In particular, the Institute promotes the study for doctoral degrees. In 2004, 15 theses were being supervised at IAMO. Over the last year, three PhD students successfully defended their theses.

- 'Auswirkungen des Transformationsprozesses auf die sozioökonomischen Funktionen ukrainischer Landwirtschaftsunternehmen' (Effects of the transition process on the socioeconomic functions of Ukrainian agricultural enterprises), Helga Biesold
- 'Russlands Weg vom Plan zum Markt: Sektorale Trends und regionale Spezifika' (Russia's path from central planning to the market: sectoral trends and regional features), Peter Voigt
- 'Structural, efficiency and income effects of agricultural policies – an agent-based analysis of the region Hohenlohe in southwest Germany', Kathrin Happe.

In 2004, Dr Ludger Hinners-Tobrägel accepted a post at Nürtingen College where he now has the chair for 'General business management, particularly enterprise leadership'.



As part of its educational programme, IAMO holds a regular seminar for doctoral students together with the Institute of Agricultural Economics and Regional Planning at the Martin Luther University, Halle-Wittenberg. The seminar serves as a forum for the exchange of ideas about research questions, methodological approaches and results. The agricultural economics coffee gatherings at IAMO also provide the opportunity to discuss early, often provisional findings.

From 17 to 19 June 2004 IAMO held the second doctoral and postdoctoral workshop on agricultural development in Central and Eastern Europe. This workshop gives an opportunity to doctoral and postdoctoral students from other universities and institutions to present their work on Central and Eastern Europe, and to make personal contacts.

Successful PhD students: (from top to bottom)  
Dr Kathrin Happe, Dr Peter Voigt, Dr Helga Biesold

Together with institutes for agricultural economics at a number of German universities and the Federal Agricultural Research Centre (FAL), IAMO is currently putting together a PhD study programme. Through block seminars, doctoral students will become acquainted with the key theoretical and methodological aspects of research in agricultural economics.

Over the last year the Institute has significantly extended its activities for students by organising learning workshops. One of these was the learning workshop on efficiency and productivity analysis in the transition process, which was first held from 22 to 26 March 2004 in Halle (Saale). IAMO also held this workshop in Kiev (Ukraine), Moscow and Omsk (Russia). At the end of 2004 (29 November to 3 December) a learning workshop on the simulation of complex systems and on multi-agent systems took place.

Dr V. **Valentinov**, Academy of Agricultural Sciences, Institute of Agricultural Economics, Kiev, Ukraine, 1/12/2003 – 31/3/2004

*Visiting scholars at IAMO*

J. **Choi**, National University Seoul, Institute for North Korean Agriculture, Seoul, South Korea, since 18/3/2003

P. **Liubetski**, Belarussian State Agricultural Academy, Faculty of Business and Law, Gorky, Belarus, 19/1-15/2/2004

L. **Kastnerova**, Research Institute of Agricultural Economics (VUZE), Prague, Czech Republic, 20/1-28/2/2004

A. **Ishankhodyav**, German Academy of Management, Lower Saxony (DMAN), Celle, Germany – Joint Stock Leasing Company Tashkent, Uzbekistan, 26/1-6/2/2004

M. **Szabó**, Agricultural Economics Research Institute (AKI), Budapest, Hungary, 1/2-28/3/2004

A. A. **Rakhimov**, Head of the Department of Strategic Development, Uzinvestproject, Republican Engineering Company, Tashkent, Uzbekistan, 2/2-13/2/2004

B. **Bota**, Agricultural University Astana, Kazakhstan, 9/3-11/4/2004

L. **Kharchenko**, Ukrainian Ministry of Agricultural Policy, Kiev, Ukraine, 15/3-16/5/2004

I. **Vlasenko**, Ukrainian Ministry of Agricultural Policy, Kiev, Ukraine, 15/3-16/5/2004

Dr G. **Oleksova**, Belarussian State Agro-Technical University, Minsk, Belarus, 16/3-13/6/2004

I. **Chayka**, All-Russian Institute of Agricultural Problems and Computer Sciences (VIAP), Russian Academy of Agricultural Sciences, Moscow, Russia, 20/3-28/3/2004

Dr E. **Gataulina**, All-Russian Institute of Agricultural Problems and Computer Sciences (VIAP), Russian Academy of Agricultural Sciences, Moscow, Russia, 20/3-28/3/2004

Dr V. **Saraykin**, All-Russian Institute of Agricultural Problems and Computer Sciences (VIAP), Russian Academy of Agricultural Sciences, Moscow, Russia, 20/3-28/3/2004

- Dr R. **Dzioumenko**, All-Russian Institute of Agricultural Problems and Computer Sciences (VIAPI), Russian Academy of Agricultural Sciences, Moscow, Russia, 20/3-19/6/2004
- Prof. Dr V. **Zelenyuk**, National University "Kiev-Mohyla Academy", Education and Research Centre for Economic Sciences, Kiev, Ukraine, 21/3-26/3/2004
- M. **Salnykov**, National University "Kiev-Mohyla Academy", Education and Research Centre for Economic Sciences, Kiev, Ukraine, 20/3-28/3/2004
- Dr D. **Cimpoies**, Moldovan State Agricultural University, Faculty of Economics, Chisinau, Moldova, 20/3-28/3/2004 and 30/9-30/11/2004
- V. **Galushko**, Institute for Economic Research and Policy Consulting, Kiev, Ukraine, 21/3-28/3/2004
- Prof. Dr V. **Andriychuk**, National University of Economics, Kiev, Ukraine, 21/3-28/3/2004
- T. **Medonos**, Research Institute of Agricultural Economics (VUZE), Prague, Czech Republic, 21/3-3/4/2004
- L. **Jelinek**, Research Institute of Agricultural Economics (VUZE), Prague, Czech Republic, 21/3-10/7/2004
- N. **Zinich**, National Agricultural University of Ukraine, Kiev, Ukraine, 10/4-30/4/2004
- Prof. Dr D. **Epstein**, North-west Institute of Agricultural Economics, St Petersburg-Pushkin, Russia, 18/4-20/6/2004 and 31/10-14/11/2004
- Prof. Dr O. **Kovtoun**, National Agricultural University of Ukraine, Kiev, Ukraine, 20/5-1/6/2004
- Dr S. **Kuzmin**, Belarussian State University, Faculty of Geographics, Minsk, Belarus, 1/6-24/7/2004
- Dr O. **Ivakhnenko**, Omsk State Agricultural University, Institute for Economy and Finance, Omsk, Russia, 5/6-5/8/2004
- S. **Petsevich**, Omsk State Agricultural University, Omsk, Russia, 5/6-30/8/2004
- Dr K. **Borodin**, All-Russian Institute of Agricultural Problems and Computer Sciences (VIAPI), Russian Academy of Agricultural Sciences, Moscow, Russia, 12/6-3/7/2004
- Dr V. **Rau**, Russian Academy of Sciences, Institute for Economics and Prognoses of Scientific and Technical Progress, Moscow, Russia, 12/6-3/7/2004
- O. **Ovcharenko**, Altai State Agricultural University, Barnaul, Russia, 15/6-10/8/2004
- E. **Vöneki**, Agricultural Economics Research Institute (AKI), Budapest, Hungary, 15/6-12/9/2004
- Dr O. **Luka**, National Agricultural University of Ukraine, Kiev, Ukraine, 23/6-2/9/2004 and 21/10-13/11/2004

A. **Lobianco**, University Ancona, Italy, 28/6-10/9/2004

A. **Studenets**, Ukrainian Ministry of Agricultural Policy, Kiev, Ukraine, 1/7-31/8/2004

T. **Likhter**, National Agricultural University of Ukraine, 1/7-31/8/2004

V. **Krayevskyy**, National Agricultural University of Ukraine, Faculty of Economics, Kiev, Ukraine, 10/7-31/8/2004

K. **Irgashev**, Agro-technical Production Centre, Tashkent, Uzbekistan, 4/8-3/9/2004

M. **Ramanovich**, Institute of Agricultural Economics, Minsk, Belarus, 3/10/2004-31/7/2005

Prof. Dr R. **Weaver**, The Pennsylvania State University, USA, 26/10-7/11/2004

Dr T. **Ratinger**, Research Institute of Agricultural Economics (VUZE), Prague, Czech Republic, 3/11-6/11/2004

J. **Pencakova**, Research Institute of Agricultural Economics (VUZE), Prague, Czech Republic, 3/11-6/11/2004

J. **Drlik**, Research Institute of Agricultural Economics (VUZE), Prague, Czech Republic, 4/11-6/11/2004

Prof. Dr O. **Patlassov**, Omsk State Agricultural University, Omsk, Russia, 3/11-30/11/2004

Dr S. **Vodolazski**, Omsk State Agricultural University, Omsk, Russia, 3/11-10/11/2004

Prof. Dr A. **Tkach**, University "ZIGMU", Melitopol, Ukraine, 15/11-30/11/2004

Prof. Dr T. **Tkach**, University "ZIGMU", Melitopol, Ukraine, 15/11-30/11/2004

D. **Ostrikova**, Institute for Agricultural Economics and Agricultural Management, Almaty, Kazakhstan, 20/11-23/12/2004

In 2004 IAMO was again successful in obtaining considerable external funding for research projects. Following the successful completion of the analysis of the effect on Saxony of Poland's and the Czech Republic's entry into the EU, the Saxon Ministry for Environment and Agriculture commissioned IAMO to undertake a second project, extending the study to Slovakia and Hungary. Two ongoing assignments were the project on harvest insurance in Kazakhstan, started in 2003 and financed by the Volkswagen Foundation; and the studies on the effects of transaction costs on the efficiency of agricultural enterprises in Central and Eastern Europe, funded by a Marie Curie grant. The IDEMA and MEASCOPE projects, financed by the 6<sup>th</sup> research framework programme of the EU, both began in 2004. The first of these looks at the effects on the agricultural sector of the decoupling of direct payments; the second, interdisciplinary project, is developing analytical tools which will allow an assessment to be made of the effects of agricultural production and agricultural policies on the many and diverse functions of agriculture in rural areas. The consultancy project, supported by the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL), on the continuing development of administrative structures in agriculture in the Ukraine, was completed in 2004 following a

***Selected externally funded projects***

*Transaction costs of agricultural enterprises*

renewed extension. The European Commission also approved the 'FOODCOMM' project, which will analyse the economic relations and communication in value added chains. Thanks to a Marie Curie grant, Dr Vladislav Valentinov will, over the coming two years, carry out research into the importance of civil society structures for the development of rural areas, taking eastern Germany and Ukraine as examples.

A four-year project has been examining structural change in agricultural businesses and the specific role of transaction costs within this process. For two years it has been supported by a Marie Curie Development Host Fellowship from the European Commission. Based on empirical data specially obtained for the project, it analyses the changes in Czech agriculture in transition. By examining transaction costs, the study is helping to expand the knowledge of agricultural restructuring in transition countries and its effect on the efficiency of farms.

The analysis is based on case studies carried out early in 2003, and on data compiled in 2004 from 200 large Czech agricultural enterprises and more than 100 smaller farms. The current focus of research is an analysis of the changes in ownership structure of the businesses, and the relationship between ownership structure and other business strategies. The findings show that businesses which were already very productive prior to transition have largely been able to preserve their size and structure. Smaller business units, in which a strategy of ownership concentration was often chosen as a solution to the principal-agent problems, evolved out of previously less productive large enterprises provided that the transaction costs of structural change were low. Large enterprises, in which a predominantly democratic decision-making system remained, balance high transaction costs of internal coordination by investing in social capital and creating economies of scale in factor acquisition, logistics and product marketing. Nevertheless, the future competitiveness of the largest businesses will be reduced owing to the relatively low investment activity linked to the ownership structure that is oriented towards current consumption. The general investment behaviour of Czech enterprises suggests that an improvement in their financial position would accelerate effective restructuring rather than slow it down. (See also the article 'Ownership and Performance Differences among Large-Scale Farms: Case of Czech Agriculture' on pages 11 to 18).

*Crop insurance in Kazakhstan*

Since April 2003, IAMO has been working on the project 'Crop Insurance in Kazakhstan: Opportunities for Developing a Sustainable Institution in Agriculture' in cooperation with the Kazakhstan Agricultural University in Astana. The aim of the project, financed by the Volkswagen Foundation, is to establish the effects of a high risk burden on the productivity of the agricultural sector, and to analyse the possibilities for introducing an economically workable and market-oriented crop insurance, taking into account the circumstances of transition. The initial findings of the project are described in the article 'The Potential of Crop Insurance as a Risk Management Instrument in Kazakhstan' on pages 31 to 36.

*Consultancy work to improve agricultural statistics in Ukraine*

The development of efficient administrative systems, adapted to the changed environment, was, and continues to be a big challenge for the countries in transition. For this reason, the Ukrainian Ministry of Agriculture approached the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL) with the request for help in the restructuring of its agricul-

tural administration. As part of a project financed by the BMVEL, IAMO has provided assistance to the Ministry for Agricultural Policy. In addition to the Ministry, the project partners in Ukraine are the National Agricultural University and the State Statistical Committee. On the express wish of our Ukrainian project partners, the project concentrated its efforts in 2004 – as it had in the previous year – on an important component of agricultural administration: improving agricultural statistics. More specifically, this included the development of an agricultural test farm network and of a department of agricultural statistics in the Ministry for Agricultural Policy in Kiev.

Positioned on the external border of the former EU-15, Saxony is a region particularly affected by the eastern enlargement of the EU. The opportunities and challenges that this entails for the Saxon agricultural and food sector were examined by the Institute in a study commissioned by the Saxon State Institute for Agriculture. In the study, IAMO collaborated with the Czech Research Institute of Agricultural Economics (VÚZE, Prague) and the Agricultural University of Warsaw. The study combines quantitative and qualitative analysis methods.

The findings show that the reform of the Common Agricultural Policy and the liberalisation of global markets exert a greater influence on Saxon agriculture than the accession of Poland and the Czech Republic to the EU. The agricultural and food sector in Saxony has obvious structural advantages over the Polish agricultural and food sector, and to a lesser extent over the Czech. Specifically, these are the use of economies of scale, a good provision of physical and human capital, the presence of a well-developed infrastructure, and experience of the common internal market. Cost advantages in Poland and the Czech Republic as far as the production factors labour and land are concerned, are easily cancelled out by a lower level of productivity. Regarding the effects of EU agricultural reform, it is expected that reactions of adaptation will differ, depending on the location of the farm. Particularly for less favourable locations, it is expected that many plots of land will be farmed or tended to the bare minimum in the future. The study is being published by the Saxon State Institute for Agriculture in early 2005 and can also be downloaded as a PDF file from <[www.iamo.de](http://www.iamo.de)>.

The decoupling of direct payments from production is a key element of EU agricultural reform. The aim of the IDEMA project (The impact of decoupling and modulation in the Enlarged Union: a sectoral and farm level assessment), started in 2004, is the development of methods and techniques to allow a comprehensive analysis of the effects of decoupling on the agricultural sector in the EU. In addition to the examination of different variants of decoupling on economic indicators, environmental effects form the focus of the study. The three-year project was coordinated by the Swedish Research Institute for Food and Agricultural Economics (SLI) in Lund. The nine project partners include: Imperial College London, the Czech Research Institute of Agricultural Economics (VÚZE), the Lithuanian Research Institute of Agricultural Economics (LAEI), the Research Institute for Agricultural and Food Economics of the Slovak Republic (VÚEPP) and INRA in Rennes, France. The project consists of three model levels: (a) by means of surveys, an analysis of strategic decisions made by farmers, (b) the simulation of agro-structural development in selected regions, and (c) the analysis at sectoral level

*EU Eastern enlargement: opportunities and challenges for Saxony*

*Decoupling of direct payments*

by means of a partial equilibrium model. Essentially, IAMO's contribution is to model the structural adjustment processes in the selected regions. In addition, the agent-based model AgriPoliS is being extended to take in the relevant factors, and adapted to the regions concerned. The aim is to reach conclusions about patterns of income and aspects of efficiency. IAMO is collaborating closely with other project partners in this endeavour.

#### *Multifunctionality of agriculture*

Another project forming part of the EU's 6<sup>th</sup> research framework programme involving IAMO is dealing with the development of methods to assess the effect of political measures on the multifunctionality of rural areas. The MEA-Scope project (Micro-economic instruments for impact assessment of multifunctional agriculture to implement the Model of European Agriculture) is being coordinated by the Leibniz Centre for Agricultural Landscape and Land Use Research (ZALF) in Müncheberg and is scheduled to run for three years. With a total of eleven partners from the EU the project has a broad regional basis. The approach is also very much interdisciplinary, taking in such different subjects as agricultural economics, soil science, ecology and geography. The aim of the project is to develop analytical tools to enable an assessment of the effects of agricultural production and agricultural policy on the many and diverse functions of agriculture in rural areas. Three different models will be combined to cover all important aspects of multifunctionality (environmental effects, landscape aspects, income and structural aspects). As in the IDEMA project, IAMO is also applying the agent-based agricultural structure model AgriPoliS. In particular, AgriPoliS is being extended to cover environmental aspects as well as a spatially explicit depiction of regions. The composite model which is being developed in MEA-Scope is being applied to seven regions in Europe with a focus on beef production. Since the project started in May 2004, a concept was developed to link the three models, and the modelling of the seven model regions has been started.

#### *Communication in European food chains*

The reform of the Common Agricultural Policy will lead to a reduction in market intervention and a further liberalisation of agricultural markets. To ensure that the efficiency, competitiveness and sustainability of the value added chains for agricultural products are preserved, those within the chains must be sufficiently prepared for the changes. Better coordination between the producers, processors, and distributors is one of the possibilities to use the reform as an opportunity for the sustainable development of the businesses and of relations with the consumers.

Economic relationships can be particularly improved by adapting the management within and between the stages of individual value added chains. Fundamental to this is the transfer of information between those involved. The social, economic and cultural factors that exert influence on communication and coordination in the food chains will be investigated in a research project financed by the European Commission: 'Key factor influencing economic relationships and communication in European food chains' (FOODCOMM). The project, coordinated by the University of Bonn, and which involves seven institutes from six countries, starts in March 2005. The primary goal is to establish recommendations for agricultural and food policy to improve the functioning capacity of food chains in the European Union.

The theoretical framework will be provided by theories of economic organisations, social networks, communication, supply chain management, as well as by market theories and those of consumer behaviour. An empirical study will be undertaken in the countries participating in the project, which should cover regionally specific, social and cultural factors that influence the efficiency of the food chains in the European Union.

For IAMO, conferences and seminars represent an important forum for the exchange of scientific knowledge with experts from Germany and abroad. The lectures and discussions, as well as the informal contacts on the fringe of these events, help forge new relationships or strengthen existing ones. The contact between experts and decision-makers from politics and the food economy frequently provides an important stimulus for the task of restructuring the agricultural and food sector.

As part of the 11<sup>th</sup> East-West Agricultural Forum at Green Week 2004 in Berlin, IAMO organised an 'Agricultural policy symposium' with the help of InWEnt gGmbH. In view of the forthcoming accession of Central and East European countries to the EU, the topic of the event was 'The enlarged EU and its new neighbours – challenges for agricultural production and agricultural commerce'. Political decision-makers, academics and representatives from business discussed the effects of the reform of the Common Agricultural Policy, EU enlargement, and the further liberalisation of global agricultural trade. The effects were examined of the accession the new EU members on trade flows and on national budgets. Whereas, in general, the effects on trade are expected to be minor, the effects of the additional premiums (top-ups) of new member states may be a considerable burden on the national budgets. According to Russian experts, the effects of expansion on the agricultural sector in Russia are negligible. This assumption is primarily due to the minor importance of the new member states for Russian agricultural imports and exports.

In 2003 the Institute established an event that we would like to see become a tradition: the IAMO Forum. The IAMO Forum 2004, which took place from 4 to 6 November 2004, had as its subject 'The Role of Agriculture in Central and Eastern European Rural Development: Engine of Change or Social Buffer?' The event focused on the following:

- Significance and development perspectives of small farms in Central and Eastern Europe.
- Obstacles to the functioning of rural factor markets.
- The significance of the socialist past for current problems of rural development.
- The extent of rural poverty and strategies for combating it.
- Joining forces to find solutions and the role of social capital.
- Non-traditional development paths for agricultural businesses.
- Political instruments and their effects.

### ***Conferences and seminars***

#### *Agricultural policy symposium at Green Week 2004*

#### *IAMO Forum 2004*



*View of the conference hall during the IAMO Forum 2004*



Participants at the IAMO Forum 2004 (from l. to r.):  
Dr Dirk Ahner, Directorate-General for Agriculture of the European Commission, Dr Rudolf Wendt, BMVeL, and Dr Martin Wille, former undersecretary of state.

More than 160 experts from around 25 countries took part in the IAMO Forum 2004, including many prominent representatives from science and politics (see the article, 'The Role of Agriculture in Central and Eastern European Rural Development: Engine of Change or Social Buffer?', pp. 43-50.) As in the previous year, in 2004 the first day was mostly dedicated to academic debate, while the second day focused more on providing a forum for discussion for representatives from science, politics and others in public life. On the third day the IAMO Forum was rounded off by a day-long excursion to the rural development project Konradsburg in Ermsleben, Saxony-Anhalt.

On 5 November 2004, as part of the IAMO Forum, the Institute's tenth anniversary was celebrated in the historic rooms of the Franckesche Stiftungen in Halle (Saale). Prof. Dr Jan-Hendrik Olbertz, Minister for Education and Cultural Affairs for Saxony-Anhalt, Dr Gerald Thalheim, parliamentary undersecretary of state in the Federal Ministry of Consumer Protection, Food and Agriculture, Mayoress Ingrid Häußler, Prof. Dr P. Michael Schmitz, deputy chairman of the

scientific advisory board, Prof. Csaba Csáki, of the University for Business Studies, Budapest, and the World Bank, Washington, and Prof. Dr Klaus Froberg, long-time executive director of IAMO were the event's speakers and they all praised the Institute's achievements in front of an audience of more than 130 guests.

#### *Doctoral students' workshop*

17 to 19 June 2004 saw the second IAMO workshop specifically aimed at PhD students on agricultural development in Central and Eastern Europe. It gave 14 doctoral students of different nationalities from eight German and Hungarian research institutes the opportunity to present their projects to a group of about 25 academics. The range of topics varied from questions of the competitiveness and organisation of individual businesses in the agricultural sector and in the food industry, analyses of factor and product markets, to communication processes in policy-making. Particular care was taken to ensure that there was



Minister for Education and Cultural Affairs  
Prof. Dr Jan-Hendrik Olbertz at the IAMO  
celebration

sufficient time for intensive discussion since most projects were still in their early stages. After each student had delivered their paper, a supplementary presentation from another researcher opened up the discussion. The supplementary presentations were given by staff from IAMO and from the Leibniz Institute for Regional Geography (IfL) in Leipzig. The programme was rounded off by a lecture, followed by discussion, on the topic 'The Ukrainian grain market: policy between global market and the weather', given by Prof. Dr Stephan von Cramon-Taubadel of the University of Göttingen. The evaluation that followed revealed that the participants viewed the workshop very positively. The students particularly appreciated the opportunity of a large-scale formal and informal discussion of their own research projects, which is otherwise provided only rarely. The workshop also aroused a strong interest amongst the participants in IAMO's work. The doctoral students' workshop has now become a fixed, annual event.

As part of its increased efforts to improve the training of PhD students, in 2004 the Institute organised the first five-day Learning Workshop for doctoral students from five German faculties of agriculture (Berlin, Kiel, Halle, Hohenheim and Göttingen) on 'Efficiency and Growth in Agriculture of Transition Economies'. Many Eastern European PhD students and guests of IAMO also took part. During the workshop, theoretical principles and practical approaches to measuring efficiency and productivity were presented and discussed. Particular emphasis was placed on modern processes of measuring efficiency, such as Data Envelopment Analysis and Stochastic Frontier Analysis and their application in transition countries. On the teaching side the Institute was able to secure the participation of Prof. Dr Subal Kumbahar (New York State University), Prof. Dr Valentin Zelenyuk (National University Kyiv-Mohyla-Academy, Kiev), and Dr Bernhard Brummer (University of Göttingen). IAMO also held the workshop in 2004 in Kiev (Ukraine), Omsk and Moscow (Russia).

*Learning Workshop:  
Efficiency and Growth in  
Agriculture of Transition  
Economies*

From 29 November to 3 December another *Learning Workshop* was held at IAMO on the subject 'The Simulation of Complex Systems – Agent-based modelling and the Management of Natural Resources'. The event, which had 20 participants from Germany and abroad, concentrated on the theory and application of agent-based modelling, specifically on the CORMAS simulation platform. The speakers, Dr Christophe Le Page and Dr Pierre Bommel of CIRAD in Montpellier (France), succeeded in making the workshop topic clear using a large number of applications and computer exercises. Those students beginning their doctoral studies during the summer semester of 2005 will be given a similar workshop on agent-based modelling.

*Simulation of complex  
systems*

Several important events have already been planned for 2005:

As part of the 12<sup>th</sup> East-West Agricultural Forum during Green Week in Berlin, IAMO is organising an 'Agricultural policy symposium' on 21 January 2005 on the subject 'Rural Areas in Central and Eastern Europe: Chances and Challenges.' The symposium aims to present current research findings and assessments to decision-makers from politics, administration and business, and to discuss these. It will continue IAMO's tradition of organising a subsidiary event at the East-West Agricultural Forum. The first part of the symposium will concentrate on the analysis of developments in rural areas of Central and Eastern Europe in general, and more specifi-

*Agricultural policy symposium at Green Week 2005*

cally on problems of demographic change and international experiences of political measures to support rural areas. In the second part, the discussion will turn to concrete, nationally effective policies, looking at Poland and Russia. Notable representatives from research institutes, the World Bank, the German Federal Ministry of Consumer Protection, Food and Agriculture, and from a Polish non-governmental organisation have agreed to act as speakers.

Another seminar during Green Week on a similar topic, 'The Future Opportunities for Agriculture and Rural Areas in Kazakhstan', is being organised jointly by the Institute and the 'Deutsche Gesellschaft für Technische Zusammenarbeit' GmbH (GTZ). Based on the findings of an IAMO project financed by the Volkswagen Foundation, there will be a presentation of the development potential of Kazakhstani agriculture, followed by a discussion of the possibilities of a dialogue with German agriculture and the food economy.

#### *IAMO Forum 2005*

The high point in the calendar of the Institute's academic events will again be the IAMO Forum, which in 2005 is taking place between 16 and 18 June. The subject of the 2005 Forum is 'How Effective is the Invisible Hand? Agricultural and Food Markets in Central and Eastern Europe.' In addition to examining the extent to which the markets allow efficient exchange, discussion will focus on the status of, and prospects for, the food industry and trade.

#### *3<sup>rd</sup> Doctoral students' workshop*

From 11 to 13 July 2005, the Institute will host the 3<sup>rd</sup> workshop for PhD and postdoctoral students on agricultural development in Central and Eastern Europe.

#### **Publications**

IAMO staff publish their findings in scientific journals, monographs and anthologies and discussion papers. A complete list of publications can be found on IAMO's web site on the Internet ([www.iamo.de](http://www.iamo.de)).

#### *Best journal article*

From all the journal articles written by IAMO staff, each year the research coordination group chooses the best one for special commendation. This year, two articles dealing with the developments in Polish agriculture and the food economy during the transition process, received a commendation. The principal focus of study in both papers is the functioning capacity of markets.

*PIENIADZ, A., HOCKMANN, H. (2004): Pricing behaviour on the Polish pork market, Cahiers d'economie et sociologie rurales 71, pp. 81-108*

Dr Agata Pieniadz and PD Dr Heinrich Hockmann looked at the Polish pork market in 1990s. Preliminary studies had shown that market transparency improved substantially during the transition process. As consequence of increased competition from domestic and foreign suppliers, it was to be expected that unified prices for homogeneous products would become established and that cost leadership would be the effective strategy to secure a market share. For products such as pork chops, loin of pork or bockwurst, however, there were considerable variations in price between processors, some of which clearly exceeded the price fluctuations over time. This phenomenon indicates that, using horizontal and vertical price differentiation, as well as price discrimination, the meat-processing enterprises have succeeded in positioning themselves in the product market and implementing corresponding price differentials. This hypothesis was confirmed by an empirical analysis. The findings also showed that the individual businesses employ a different marketing mix depending on their products,

in order to satisfy consumer desires, but also to counteract the negative income effects of strong competition.

Dr Martin Petrick's article is an empirical analysis of the effects of state-sponsored credits on the investment activity of credit-rationed farmers. The analysis uses an empirical investment function, which is calculated on the basis of cross-sectional data from 464 agricultural households surveyed in Poland. The econometric analysis presented in the article examines the factors determining credit rationing and assesses the marginal effect of credit access on investment volume, which for its part invites a judgement of the effectiveness of the state investment programme. The findings show that access to subsidised credits exerts a significant influence on the investment behaviour of those farmers who categorise themselves as exogenously credit rationed. This assessment is true of 45% of those surveyed. Fundamental grounds for credit rationing are the reputation of the borrower and the demographic composition of the household. In various specifications of the credit-investment relationship, including a cubic Tobit model, the average marginal effect of credit on investment was smaller than one. This implies that credit is partly used for other purposes than productive investment. In fact, every second borrower invests less than he borrows. Over a commonly observed range, however, the marginal effect increases with an increasing credit volume. Nevertheless, investment volume is negatively related to farm size. A government policy aimed at promoting productive investment should thus encourage lending in larger amounts without discriminating against small farms.

*PETRICK, M. (2004): Farm investment, credit rationing, and governmentally promoted credit access in Poland: a cross-sectional analysis, Food Policy 29, pp. 275-294.*

The Discussion Paper series continued in 2004 with the following publications that can all be downloaded free in PDF format from the IAMO web site ([www.iamo.de](http://www.iamo.de)):

#### Discussion papers

ВОКУШЕВА, Р., HEIDELBACH, O. (2004): Актуальные аспекты страхования в сельском хозяйстве [Aktuelle Aspekte des Versicherungswesens in der Landwirtschaft], *IAMO Discussion Paper No. 57*, Halle (Saale).

DERLITZKI, R., SCHULZE, E. (2004): Georg Max Ludwig Derlitzki (1889-1958), *IAMO Discussion Paper No. 58*, Halle (Saale).

VÖNEKI, E. (2004): Zur Bewertung des ungarischen SAPARD-Programms unter besonderer Berücksichtigung der Investitionen im Milchsektor, *IAMO Discussion Paper No. 59*, Halle (Saale).

СІМПОІЕС, D., SCHULZE, E. (2004): Основные экономические проблемы сельского хозяйства Молдовы [Wesentliche ökonomische Probleme der Landwirtschaft Moldawiens], *IAMO Discussion Paper No. 60*, Halle (Saale).

BAUM, S., WEINGARTEN, P. (2004): Interregionale Disparitäten und Entwicklung ländlicher Räume als regionalpolitische Herausforderung für die neuen EU-Mitgliedstaaten, *IAMO Discussion Paper No. 61*, Halle (Saale).

PETRICK, M. (2004): Can econometric analysis make (agricultural) economics a hard science? Critical remarks and implications for economic methodology, *IAMO Discussion Paper No. 62*, Halle (Saale).

SAUER, J. (2004): Rural Water Suppliers and Efficiency – Empirical Evidence from East and West Germany, *IAMO Discussion Paper No. 63*, Halle (Saale).

PETRICK, M., BALMANN, A. (Hrsg.) (2004): Beiträge des 2. Doktorandenworkshops zur Agrarentwicklung in Mittel- und Osteuropa 2004, *IAMO Discussion Paper No. 64*, Halle (Saale).

BOJNEC, S., HARTMANN, M. (2004): Agricultural and Food Trade in Central and Eastern Europe: The Case of Slovenian Intra-Industry Trade, *IAMO Discussion Paper No. 65*, Halle (Saale).

GLITSCH, K., EERITS, A. (2004): Der slowakische Markt für Milch und Milchprodukte – vom Beginn der Transformation bis zum EU-Beitritt, *IAMO Discussion Paper No. 66*, Halle (Saale).

FISCHER, C. (2004): Assessing Kosovo's horticultural potential – The market for fruit and vegetables on the balkans, *IAMO Discussion Paper No. 67*, Halle (Saale).

PETRICK, M., SCHREIBER, C., WEINGARTEN, P. (2004): Competitiveness of milk and wine production and processing in Albania, *IAMO Discussion Paper No. 68*, Halle (Saale).

STANGE, H., LISSITSA, A. (2004): Аграрный сектор России на подъеме?! Анализ технической эффективности аграрных предприятий [Russischer Agrarsektor im Aufschwung? Eine Analyse der technischen und Skalen-Effizienz der Agrarunternehmen], *IAMO Discussion Paper No. 69*, Halle (Saale).

SAUER, J. (2004): Die Ökonomie der (Ländlichen) Wasserversorgung, *IAMO Discussion Paper No. 70*, Halle (Saale).

HAPPE, K., BALMANN, A., KELLERMANN, K. (2004): The Agricultural Policy Simulator (AgriPoliS) – An agent-based model to study structural change in agriculture (Version 1.0), *IAMO Discussion Paper No. 71*, Halle (Saale).

BAUM, S., TRAPP, C., WEINGARTEN, P. (2004): Typology of rural areas in the Central and Eastern European EU new Member States, *IAMO Discussion Paper No. 72*, Halle (Saale).

PETRICK, M. (2004): Governing structural change and externalities in agriculture: Toward a normativ institutional economics of rural development, *IAMO Discussion Paper No. 73*, Halle (Saale).

RODIONOVA, O., SCHULZE, E., UERKOV, E., KARPOVA, G. (2004): Zur Besteuerung von Agrarholdings in Russland, *IAMO Discussion Paper No. 74*, Halle (Saale).

HEIDELBACH, O., BOKUSHEVA, R., KUSSAYINOV, T. (2004): Which type of crop insurance for Kazakhstan? – Empirical results, *IAMO Discussion Paper No. 75*, Halle (Saale).

BOKUSHEVA, R. (2004): Crop insurance in transition: A qualitative and quantitative assessment of insurance products, *IAMO Discussion Paper No. 76*, Halle (Saale).

RAMANOVICH, M., LAJTOS, I. (2004): Milchproduktion und -verarbeitung in Weißrussland: Eine Analyse der Wettbewerbsfähigkeit, *IAMO Discussion Paper No. 77*, Halle (Saale).

LUKA, O., LEVKOVYCH, I. (2004): Intra-industry trade in agricultural and food products: The case of Ukraine, *IAMO Discussion Paper No. 78*, Halle (Saale).



[www.iamo.de](http://www.iamo.de)

In the series of 'Studies on the Agricultural and Food Sector in Central and Eastern Europe' IAMO publishes monographs and conference proceedings that deal with agro-economic issues in Central and Eastern Europe. All publications from volume 21 onwards can be downloaded from the internet free of charge <[www.iamo.de/dok/sr\\_vol##.pdf](http://www.iamo.de/dok/sr_vol##.pdf)>. Until now in the studies-series 14 conference proceedings and 16 monographies have been published. In 2004 the following volumes were published:

NEDOBOROVSKYY, A. (2004): Pfadabhängigkeiten und Effizienz der Betriebsstruktur in der ukrainischen Landwirtschaft – Eine theoretische und empirische Analyse, Bd. 23.

*Studies on the Agricultural and Food Sector in Central and Eastern Europe*

DOLUD, O. (2004): Nichtmonetäre Transaktionen in der ukrainischen Landwirtschaft: Determinanten, Spezifika und Folgen, Bd. 24.

PETRICK, M., WEINGARTEN, P. (Hrsg.) (2004): The Role of Agriculture in Central and Eastern European Rural Development: Engine of Change or Social Buffer?, Bd. 25.

PETRICK, M. (2004): Credit rationing of Polish farm households – A theoretical and empirical analysis, Bd. 26.

NIKONOW, A. A., SCHULZE, E. (2004): Drei Jahrhunderte Agrarwissenschaft in Russland: Von 1700 bis zur Gegenwart, Bd. 27.

VOIGT, P. (2004): Russlands Weg vom Plan zum Markt: Sektorale Trends und regionale Spezifika, Bd. 28.

BIESOLD, H. (2004): Auswirkungen des Transformationsprozesses auf die sozioökonomischen Funktionen ukrainischer Landwirtschaftsunternehmen, Bd. 29.

HAPPE, K. (2004): Agricultural policies and farm structures – agent-based modelling and simulation, Bd. 30.

In its *Annual Reports* IAMO provides information about the academic work of the Institute, the current research activity of its staff, events in which IAMO has participated, projects, joint projects, and personnel and financial details. The '*IAMO annual*' series, to which this publication belongs, also provides an introduction to the Institute and it is published in English and Russian as well. Aimed at a wider public, it gives an overview of IAMO's work, and of the current situation and expected developments in the countries of Central and Eastern Europe.

*Other in-house publication series*

News and information about events, publications and other important matters relating to the Institute's work, are provided by the *IAMO Newsletter*, which since 2004 has been sent out by email several times a year. Those interested can subscribe to the German edition at <[www.iamo.de/html\\_seiten/news.htm](http://www.iamo.de/html_seiten/news.htm)>, or the English edition at <[www.iamo.de/web\\_englisch/html\\_seiten/news.htm](http://www.iamo.de/web_englisch/html_seiten/news.htm)>.

#### **Web site**

The newly revamped web site <[www.iamo.de](http://www.iamo.de)> is intended to publicise the Institute and act as a medium for circulating its publications. Information can be accessed from the *Institute*, *Research*, *Events*, *Publications* and *Portal* menus. The *Institute* menu leads to information about IAMO's core tasks, institutional structure, staff and library. Via the library page, online searches of the library catalogue can be made using OPAC. Current job vacancies can also be found via the *Institute* menu. The *Research* menu introduces the Institute's projects, with project descriptions, staff involved, and select publications.

The *Events* menu provides details of the annual IAMO Forum, as well as workshops and seminars. The web site has become an indispensable information and communication medium for advertising conferences and workshops, and for the organisational preparation of these events. Participants can find out about the papers in advance and view short abstracts that have been submitted. Early online registration leads to better logistical preparation and allows us to attend to the individual wishes and needs of participants and speakers.

The web site provides a comprehensive online service for in-house publications. This '*IAMO*' annual series can be downloaded in full in PDF form and in several languages, as can all the *Discussion Papers* and the *Annual Reports*. The same opportunity now also exists for all volumes from the series '*Studies on the Agricultural and Food Sector in Central and Eastern Europe*' appearing from 2004 onwards. There is also a complete catalogue of publications by IAMO staff, sorted chronologically.

The *Portal* menu leads to a structured collection of links. The Portal provides access to external web sites with information and statistical data on political, macroeconomic and agricultural questions for European countries and those of the CIS. The links are ordered under the headings Library, Research, Indicators, National statistical offices, Ministries of Agriculture and other data sources. The review of information available on the Internet accessible via the indicators is particularly user-friendly. In this option, data is interlinked by category. The user no longer needs to know which web site contains the desired information. They can search for specific data and will automatically be taken to the site of the relevant institution. The information portal thus allows even students and non-economists rapid access to the data they are looking for.

The web site provides every member of staff with a visiting card which links to private web pages. The technology of the interactive pages has made it possible to link up information in the individual categories easily and comprehensively.

#### **Institutional structure**

IAMO is a public foundation. It is made up of the board of trustees, the directorate and the scientific advisory board. Executive director of IAMO is Prof. Dr Alfons Balmann. In order to be able to cover a broad spectrum of areas of agro-economic research, the Institute is divided into three academic departments:

- External Environment for Agriculture and Policy Analysis; acting head of department is currently Dr Peter Weingarten;
- Agricultural Markets, Marketing and World Agricultural Trade; acting head of department is currently PD Dr Heinz Hockmann;
- Structural Development of Farms and Rural Areas; head of department is Prof. Dr Alfons Balmann.

The executive director, the heads of the academic departments, and the

- head of the department of Administration and Central Services, Hannelore Zerjeski,

form the directorate of the Institute. In co-ordination with the board of trustees, this collegiate body manages the Institute's business and directs the long-term research and development planning of IAMO. The scientific advisory board advises the directorate and the board of trustees on academic matters and carries out a regular appraisal of the Institute's work.

As of 1/1/2005, the following individuals are members of the board of trustees: MinDirig. Dr Jörg Wendisch (Chairman; German Ministry of Consumer Protection, Food and Agriculture), MinDirig. Dr Manfred Lückemeyer (Deputy chairman; German Ministry of Consumer Protection, Food and Agriculture), MinDirig. Dr Joachim Welz (Ministry of Education and Cultural Affairs of the state of Saxony-Anhalt), State secretary Dr Hermann Otto AeiKens (Ministry of Agriculture and the Environment of the state of Saxony-Anhalt), Prof. Dr Stephan von Cramon-Taubadel (Georg August University Göttingen), Prof. Dr Peter Michael Schmitz (Justus Liebig University Gießen), Prof. Dr Hans-Joachim Solms (Martin Luther University Halle-Wittenberg), Dr Franz-Georg von Busse (Director of Lemken KG).

As of 1/1/2005, the following are members of the scientific advisory board: Prof. Dr Stephan von Cramon-Taubadel (Chairman; Georg August University Göttingen), Prof. Dr Peter Michael Schmitz (Deputy Chairman; Justus Liebig University Gießen), Prof. Dr Heinz Ahrens (Martin Luther University Halle-Wittenberg), Prof. Dr Ernst Berg (Rhineland Friedrich Wilhelm University Bonn), Dr Tomáš Doucha (Research Institute for Agro-economics (VUZE), Prague), Prof. Dr Konrad Hagedorn (Humboldt University in Berlin), Prof. Dr Michael Kirk (Philipps University Marburg), Prof. Dr Ewa Rabinowicz (Swedish Institute for Food and Agricultural Economics (SLI), Lund), Prof. Dr Eugenia Serova, (Institute for Transition Economics (IET), Moscow).



*The IAMO directorate 2004 (from l. to r.): Prof. Dr Alfons Balmann, PD Dr Heinrich Hockmann, Dipl-Ök Hannelore Zerjeski, Dr Peter Weingarten*

### **Coordination at IAMO**

The weekly departmental meetings at IAMO have proved to be an efficient means of exchanging information. In these meetings academic and organisational matters are discussed. The regular Institute assemblies offer a forum for discussing matters at interdepartmental level. They allow all staff to contribute in a variety of ways to decision-making at IAMO. The six interdepartmental working groups deal with certain ongoing tasks or those that crop up periodically. These groups are: *Library*, *Electronic information systems*, *Funding*, *Appraisal*, *Public relations* and *Publications*.

### **Academic agenda**

Current research at IAMO revolves around three main concepts: *institutions*, *integration* and *rural areas*. These give a thematic and spatial limit to the areas under study. But even within this restricted focus, the analysis of the development of agriculture, the food economy, and rural areas in Central and Eastern Europe is a task that calls on the entire spectrum of research in agricultural economics. IAMO does not have the capacity, however, to cover this wide diversity. For this reason it selects specific areas; the Institute focuses its work on certain topics for a period of about six years. It is believed that these deal with the most important problems. For the medium-term work of the Institute, the following criteria were used when selecting areas of research: political relevance, urgency of the problems, acceptance and applicability of the findings, feasibility and long-term effects of the research projects. When selecting and devising new research projects the designated research areas act as a guide. They guarantee the coordination of work across departments and ensure that synergy effects are utilised.

The medium-term research agenda currently covers four areas of research:

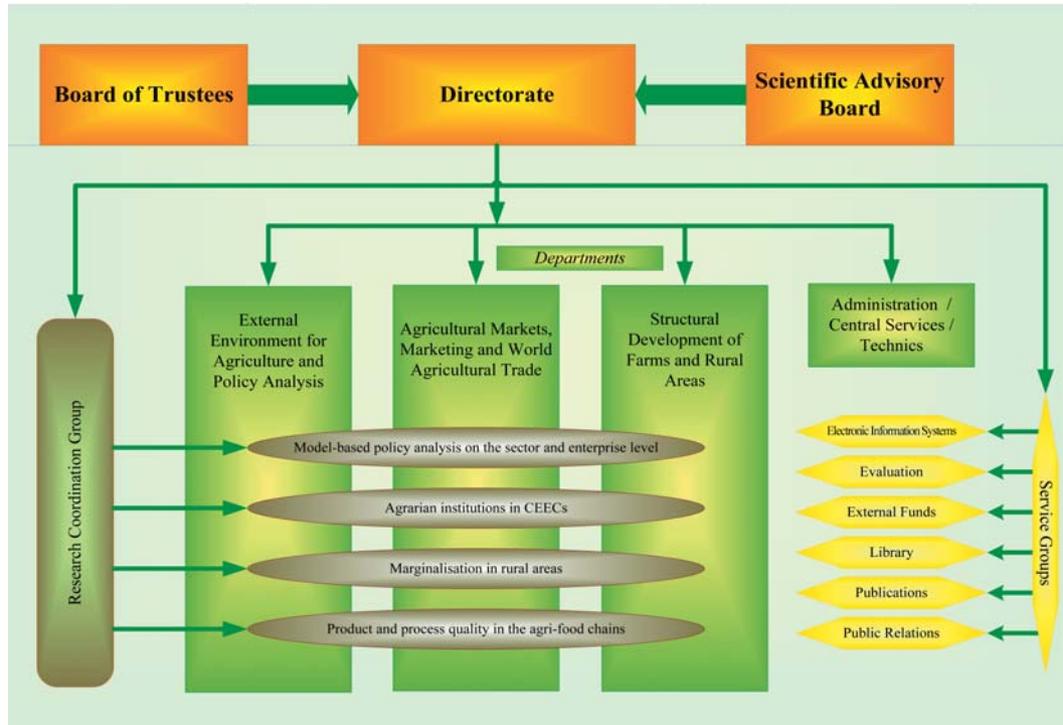
1. Model-based policy analysis at sector and business level
2. Agrarian institutions in CEECs
3. Marginalisation in rural areas
4. Product and process quality in the agri-food chains

The contact for each research area is a fully qualified academic. Together with the heads of academic departments, these contacts make up the *Research* coordination group. Its tasks are to select new research projects, organise interdepartmental and inter-institutional research activity, plan academic events, and to encourage further training for the Institute's staff.

### **Central services**

Academic work at IAMO relies on efficient support services. The IT staff are constantly developing, as well as maintaining and updating the Institute's hardware and software. Interdepartmental working groups coordinate services and optimise their use for research activity. Via the *public relations* and *publications* working groups, IAMO staff are involved in the process of publicising details of the Institute's work and communicating research findings. The *electronic information systems* working group co-ordinates decisions regarding the provision of computer software, and deals with the establishment and maintenance of a database relating to the agricultural and food sector of Central and Eastern Europe. The *library* working

## Organigramm des Institutes für Agrarentwicklung in Mittel- und Osteuropa



group helps ensure that the collection and organisation of the library are geared towards research needs. The *funding* working group examines the organisational and administrative-technical aspects of externally funded projects, and seeks to maximise the use of the experiences gained so for the benefit of the Institute. In preparation for appraisals of IAMO by its scientific advisory board or by the Leibniz-Gemeinschaft, the *appraisal* working group supports the directorate by organising the necessary documentation and by arranging the inspection by the appraisal committee.

## How to find us



### » By car

#### from the south

Take the motorway A9 (Munich-Berlin) to Schkeuditzer Kreuz. Then take the A14 in the direction of Halle/Magdeburg and leave at the Halle-Peißen exit. Follow the B100 to Halle until you reach the outskirts of the city (traffic lights at Dessauer Brücke). Get into the right-hand lane and turn left still following the B100, to 'Zentrum' (centre) and Magdeburg. Turn immediately to the right onto the B6 in the direction of Magdeburg and leave this at the next exit (Zoo, Wolfensteinstraße). Carry on straight along the Wolfensteinstraße (underpass, several traffic lights, Reilstraße / Große Brunnenstraße crossing) until you reach Burgstraße. Turn right (you have no other option) and at the next crossroads ('Zum Mohr' restaurant, Burg Giebichenstein) turn left and follow the main road over the bridge crossing the river Saale. Once over this bridge turn right, go right again under the bridge and continue along the river embankment. Turn left at the next crossroads into Weinbergweg towards the University, and follow the road until the next set of lights. Drive straight on into the Walter-Hülse-Straße. IAMO is the building on the right-hand side. Now turn right into Theodor-Lieser-Straße and you are in front of IAMO.

#### from the north

Leave the A9 at the Halle/Brehna exit and take the B100 towards Halle. See 'from the south' for further directions.

#### from the north-west

Coming from Magdeburg take the A14 (direction Leipzig or Dresden) to the Halle-Peißen exit and then take the B100 to Halle. See 'from the south' for further directions.

#### from the west (on the B80)

Follow the B80 to the Rennbahnring crossroads and follow the signs to Peißnitz/Kröllwitz. After about 2 km, after the third set of traffic lights, you will see the IAMO building (sandy-coloured with a red roof) to the left. Take the next left into the old barracks. At the other end of the large square turn left into Theodor-Lieser-Straße. IAMO is in the last building on the left-hand side.



### » By train

Leave the station by the main exit and follow the signs to the tram stop 'Riebeckplatz/Hauptbahnhof'. From here trams 5 and 5E go in the direction of Heide. Alight at 'Weinbergweg' (about 20 minutes from the station). The Institute is on the left-hand side of the road.



### » By plane

Halle-Leipzig Airport is 20km from Halle and is connected to the main German train network with its station. Take a train in the direction of Halle (Saale). Read the 'by train' advice to find the way from there.

